EUROPEAN CENTRAL BANK

TARGET ANNUAL REPORT 2003

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INTRODUCTION

TARGET, the Trans-European Automated Real-time Gross settlement Express Transfer 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.

Some 3,350 banks use TARGET to initiate payments on their own or their customers' behalf. More than 43,000 banks worldwide (and thus all the customers of these banks) are addressable in TARGET. Consequently, TARGET is instrumental for 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 settle in other interbank funds transfer systems (such as CLS or EURO 1) and to settle money market, foreign exchange and securities transactions, but also for smaller-value customer payments.

In 2003, TARGET processed some 67 million transactions with a value of more than €420 trillion. This corresponds to a daily average of 261,208 payments with a total daily value of €1.65 trillion. Hence, TARGET accounted for almost 87% in terms of value and 58% in terms of volume of the traffic of all large-value payment systems operating in euro.

Owing to TARGET's pivotal role for financial stability in the European Union, the Eurosystem pays very close attention to the reliability and safety of TARGET. In 2003, an availability rate of 99.79% was achieved for TARGET. To efficiently manage events that could potentially reduce the TARGET service level, the Eurosystem has continuously improved and trialled its business continuity and contingency measures. Furthermore, a new TARGET risk management framework based on internationally recognised standards has been established to ensure the secure processing of TARGET payments. Finally, as part of TARGET oversight, the compliance of TARGET with the "Core Principles for Systemically Important Payment Systems"[1] is verified.

With a view to meeting customer needs, guaranteeing cost efficiency and being prepared for EU enlargement, the Governing Council of the ECB decided on 24 October 2002 on a long-term strategy for the next generation of TARGET, called TARGET2. According to this strategy, the pre-project phase for TARGET2 started in 2003. It will be completed in 2004 and followed by the project/system development phase. At the beginning of 2006, the testing/migration phase for TARGET2 will start. It is envisaged that TARGET2 will go live in January 2007.

All initiatives on the current and future TARGET system have benefited significantly from the close cooperation and communication with the banking industry at the national and European levels.

This report provides comprehensive information about TARGET performance and developments in 2003. Chapter 1 provides information on the payment flows in TARGET. Chapter II describes the various aspects contributing to and ensuring the robustness and resiliency of the system. 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 FLOWS[2]

TARGET PAYMENT FLOWS SHOWED AN UPWARD TREND IN 2003

In the year under review, TARGET had a share of 87% in terms of value and 58% in terms of volume in all large-value payment systems operating in euro. It is used for the processing of large-value and time-critical payments, as well as the settlement of a considerable number of relatively low-value commercial payments.

TARGET had 1,525 direct and 1,826 indirect participants.[3] The overall number of banks addressable in TARGET (including branches and subsidiaries) increased to 43,450 worldwide.

1 PAYMENT TRAFFIC[4] IN TARGET

DEVELOPMENT OF TARGET'S MARKET SHARE

In 2003, TARGET's share of the traffic of all large-value payment systems operating in euro rose to 87% in value terms (compared with 85% in 2002) and remained almost unchanged at 58% in volume terms (59% in 2002). This development confirms the market perception that TARGET is the core system for large-value payments in euro.

Compared with 2002, market traffic (i.e. all payments processed in large-value payment systems operating in euro) increased by 4% in terms of value and by 6% in terms of volume. Growth in TARGET traffic exceeded the overall market trend in value terms, whereas it was slightly below market performance in volume terms.

TARGET TRAFFIC IN 2003

In 2003, TARGET as a whole processed a total of 66,608,000 payments with a total value of €421 trillion. This corresponds to a daily average of 261,208 payments with a total value of €1.65 trillion.

Average daily TARGET turnover rose by 6% in 2003 (after 20% in 2002). Intra-Member State traffic showed an increase of 4% (after 35% in 2002), while inter-Member State turnover grew by 11% (after falling by 4% in 2002) (see Table 2). In volume terms, TARGET traffic

2 It should be noted that domestic TARGET traffic is now referred to as intra-Member State payments and cross-border TARGET traffic as inter-Member State payments (where "Member State" refers to EU membership in 2003).

3 These figures are based on a survey of direct and indirect participants in 2003 and represent the status at end-2002.

4 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

		2002	2003	Change	2002	2003	Change
		€ billions		%	Number of payments		%
TARGET overall	Total	395,635	420,749	6	64,519,000	66,608,000	3
	Daily average	1,552	1,650	6	253,016	261,208	3
of which:							
Intra-Member State	Total	271,914	283,871	4	50,785,315	51,354,924	1
	Daily average	1,066	1,113	4	199,158	201,392	1
Inter-Member State	Total	123,721	136,878	11	13,733,685	15,253,076	11
	Daily average	485	537	11	53,858	59,816	11
of which:							
Interbank	Total	118,434	130,634	10	7,439,676	7,848,527	5
	Daily average	464	512	10	29,175	30,779	5
Customer	Total	5,286	6,244	18	6,294,009	7,404,549	18
	Daily average	21	24	17	24,682	29,037	18

Source: ECB.
Note: There were 255 operating days in both 2002 and 2003.

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
2002 compared with 2001	20%	35%	-4%	20%	20%	19%
2003 compared with 2002	6%	4%	11%	3%	1%	11%

Source: ECB.

Table 3 Payment value bands for TARGET as a whole

	TARGET as a whole			
	≤ € 50,000	> € 50,000 ≤ € 1 million	> € 1 million ≤ € 1 billion	> € 1 billion
2002	63%	24%	13%	< 0.1%
2003	64%	25%	11%	< 0.1%

Source: ECB.

grew by 3% (after 20% in 2002), with a 1% increase at the intra-Member State level (compared with 20% in 2002) and an 11% rise at the inter-Member State level (compared with 19% in 2002).

The growth in TARGET payment flows in 2003 was mainly due to a rise in inter-Member State traffic. The high growth rates seen in 2002 were related, inter alia, to the closing-down of EAF and the launch of the RTGS^{plus} system in Germany.

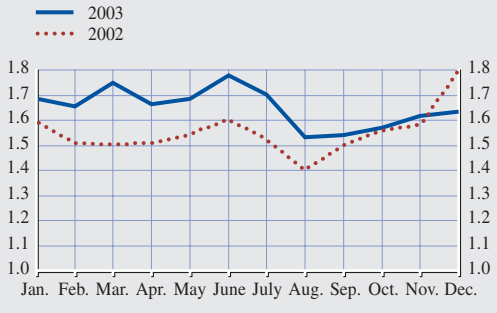
TARGET is mainly used to settle large-value and time-critical payments. Nevertheless, 64% of TARGET payments were for values less than or equal to €50,000. For TARGET payments ranging from €1 million to €1 billion, the share was 11%. TARGET payments with a value above €1 billion accounted for less than 0.1%.

In 2003, TARGET flows remained concentrated within a few RTGS systems. Five RTGS systems processed as much as 83% of the TARGET total value (84% in 2002) and 82% of the TARGET total volume (83% in 2002) (see Statistical Annex 1, Tables 1.1 and 1.2).

As in previous years, the level of activity in TARGET declined during the third quarter of the year (see Charts 1 and 2). The development of volumes followed the seasonal pattern of previous years though at a higher level. The decrease in activity was most evident in August owing to the summer holidays. The increase in TARGET turnover towards the end of the year was notably smaller in 2003 due to a decrease in the value of intra-Member State payments in December 2003. Comparing the daily averages

Chart 1 TARGET as a whole – value of payments

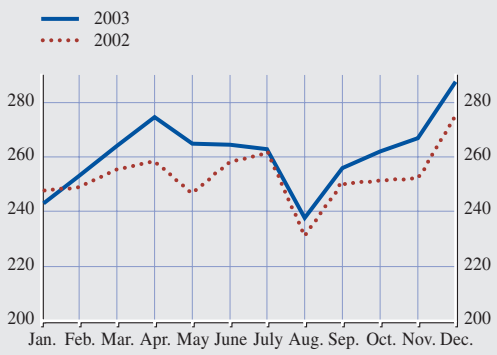
(daily averages per month, trillions)



Source: ECB.

Chart 2 TARGET as a whole – volume of payments

(daily averages per month, thousands)



Source: ECB.

of each month, TARGET processed the highest values in March and June[5] (see Chart 1). The highest volume was processed at the end of the year.[6]

TARGET INTRA-MEMBER STATE PAYMENT FLOWS[7,8]

TARGET processed more than 51 million intra-Member State payments with a total value of €284 trillion in 2003. On a daily basis an average of 201,392 payments with a total value of €1,113 billion were processed. This corresponds to an increase of 4% in value terms and 1% in volume terms compared with 2002 (see Table 4).

Contrary to previous years, the value of intra-Member State payment flows did not considerably increase in December 2003. In fact, a slight decrease from November 2003 was recorded. The intra-Member State volume did, however, develop in accordance with previous years.

Intra-Member State traffic represented 67% in terms of value and 77% in terms of volume of overall TARGET traffic. The respective figures for 2002 were 69% and 79%.

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

In terms of volume, the local TARGET component in Germany processed more than half of intra-Member State payments. The German and Italian TARGET components combined processed more than two out of three intra-Member State payments. Six NCBs (Banca d'Italia, Banco de España, Banque de France, De Nederlandsche Bank, Deutsche Bundesbank and Oesterreichische Nationalbank) together processed nine out of ten intra-Member State payments. About 83% of the value of intra-Member State payments was settled in France, Germany and Spain.

Although the local TARGET components in Germany and Italy processed a very high number of intra-Member State payments, the average

5 The daily average number of payments processed in TARGET as a whole in March 2003 was 263,951 with a total value of €1,747 billion, while in June 2003 it was 264,349 totalling €1,777 billion.

6 The daily average number of payments processed in TARGET as a whole in December 2003 was 287,701 with a total value of €1,633 billion.

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

8 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

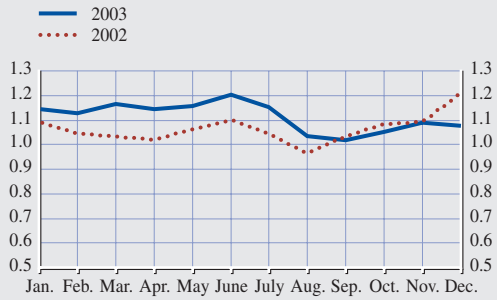
(% change)

	€ billions	Number of payments
	Intra-Member State	
2002 compared with 2001	34%	20%
2003 compared with 2002	4%	1%

Source: ECB.

Chart 3 TARGET intra-Member State payments – value

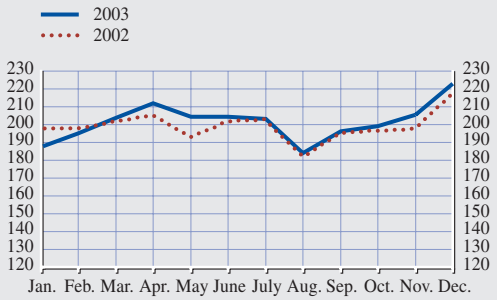
(daily averages per month, € trillions)



Source: ECB.

Chart 4 TARGET intra-Member State payments – volume

(daily averages per month, thousands)



Source: ECB.

value of an intra-Member State TARGET payment in these countries was lower than the TARGET average (of €5.5 million) or, for instance, the average in France or Spain (€3 million in Germany and €2 million in Italy, against €36 million in France and €24 million in Spain). This can be explained by the fact that in Germany and Italy, TARGET was also largely used to process time-critical corporate intra-Member State payments, while in France and Spain such payments are typically processed by PNS and SPI respectively.

The grouping of traffic figures for 2003[9] 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 remained almost unchanged from 2002 (see Table 5).

TARGET INTER-MEMBER STATE TRAFFIC[10]

In 2003, TARGET processed a total of 15,253,076 inter-Member State payments with a total value of €137 trillion. There was a daily average of 59,816 inter-Member State payments with a total value of €537 billion. Compared with 2002, this represents a rise of 11% in terms of both volume and value (see Table 6).

The growth in the volume of inter-Member State payments was in particular due to the high number of customer payments, reflecting the further migration of commercial payments from correspondent banking to interbank systems such as TARGET. Both customer and interbank payments increased in value terms. The value of interbank payments rose by 10%, which was twice as fast as the growth in the respective volume. The turnover of customer payments increased at almost the same rate as their volume.

9 UK intra-Member State figures were not included for the whole year as these were not available broken down into value bands for the first quarter of 2003.

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

Table 5 TARGET intra-Member State payment value bands

	TARGET intra-Member State payments			
	≤ € 50,000	> € 50,000 ≤ € 1 million	> € 1 million ≤ € 1 billion	> € 1 billion
2002	65%	24%	11%	< 0.1%
2003	65%	23%	12%	< 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
2002 compared with 2001	-4%	17%	-5%	19%	40%	6%
2003 compared with 2002	11%	17%	10%	11%	18%	5%

Source: ECB.

In 2003, the share of inter-Member State traffic in TARGET as a whole was 33% in terms of value (31% in 2002) and 23% in terms of volume (21% in 2002).

The analysis of the intra-year development of TARGET inter-Member State traffic shows that the traffic was consistently higher in 2003 than in 2002 (see Charts 5 and 6). Only in December was the TARGET inter-Member State value lower than the comparable figure for the previous year. The drop observed in August in value and volume was due to the summer holiday period.

In 2003, interbank payments represented 95% of the total value of inter-Member State payments and 51% of the total volume, the remainder being customer payments. In 2002, these figures were 96% and 54% respectively. Thus, the share of customer traffic in inter-Member State traffic continued to grow.

The grouping of TARGET inter-Member State payment traffic[11] into value bands shows that TARGET was also extensively used for the settlement of time-critical low-value payments. Compared with 2002, the distribution remained almost unchanged.

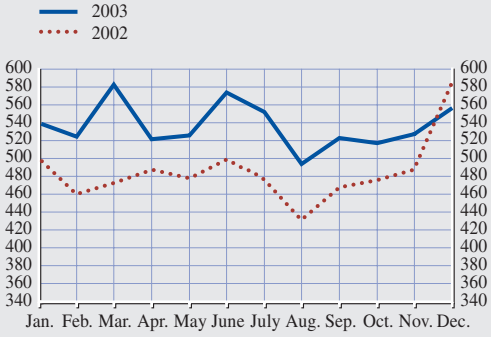
TREND IN THE AVERAGE VALUE OF TARGET PAYMENTS

The average value of individual transactions processed in TARGET as a whole increased by €0.2 million to €6.3 million (see Table 9). The average value of intra-Member State TARGET payments rose by €0.1 million to €5.5 million,

11 UK inter-Member State figures were not included as these were not available per value bands.

Chart 5 TARGET inter-Member State payments – value

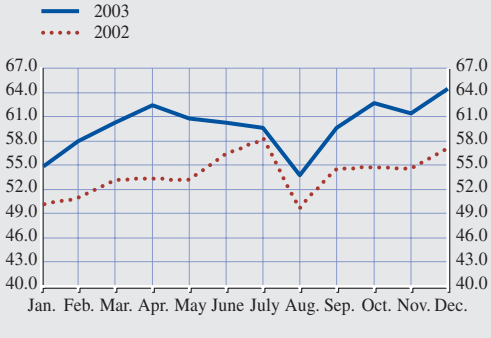
(daily averages per month, € billions)



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 payments			
	Customer payments			
	≤ € 50,000	> € 50,000 ≤ € 1 million	> € 1 million ≤ € 1 billion	> € 1 billion
2002	86%	11%	3%	< 0.1%
2003	85%	12%	3%	< 0.1%

Source: ECB.

Table 8 TARGET inter-Member State interbank payment value bands

	TARGET inter-Member State payments			
	Interbank payments			
	≤ € 50,000	> € 50,000 ≤ € 1 million	> € 1 million ≤ € 1 billion	> € 1 billion
2002	32%	38%	30%	< 0.1%
2003	33%	38%	29%	< 0.1%

Source: ECB.

while the average value of inter-Member State payments remained €9.0 million. The inter-Member State interbank payments had an average value of €16.6 million, while the average value of customer payments was €0.8 million. A striking development was the drop in the average value in all categories of TARGET payments recorded in the fourth quarter of 2003.

The use of TARGET for intra-Member State payments varies considerably among the different local TARGET components. In some countries TARGET is used to process especially high-value payments, while in others it is also heavily used for low-value payments. In fact, three RTGS systems account for 78% of the volume, but only 42% of the value. In other words, these RTGS systems process high numbers of lower-value intra-Member State

Table 9 Average size of TARGET payments

(EUR millions)

	2002					2003				
	Q1	Q2	Q3	Q4	Average	Q1	Q2	Q3	Q4	Average
TARGET overall	6.1	6.1	6.0	6.3	6.1	6.7	6.4	6.3	5.9	6.3
of which:										
Intra-Member State	5.3	5.3	5.2	5.5	5.4	5.9	5.7	5.5	5.1	5.5
Inter-Member State	9.3	9.0	8.5	9.3	9.0	9.6	8.9	9.1	8.5	9.0
of which:										
Interbank	16.1	15.9	14.6	17.3	15.9	17.4	16.0	16.7	16.4	16.6
Customer	0.9	0.8	0.8	0.9	0.8	0.9	0.8	0.9	0.8	0.8

Source: ECB.

payments. This reduces the average value of intra-Member State payments for TARGET as a whole. If, for instance, the data of these three RTGS systems were to be taken out of the calculation, the average value of intra-Member State payments would be €14.5 million instead of €5.5 million.

At the inter-Member State level, TARGET is used to process time-critical low-value customer payments and in particular interbank payments related to money market transactions, securities settlement transactions, foreign exchange transactions and liquidity transfers resulting from the centralisation by banks of their liquidity management. The use of TARGET for these interbank payments explains the high average value of interbank payments at the inter-Member State level.

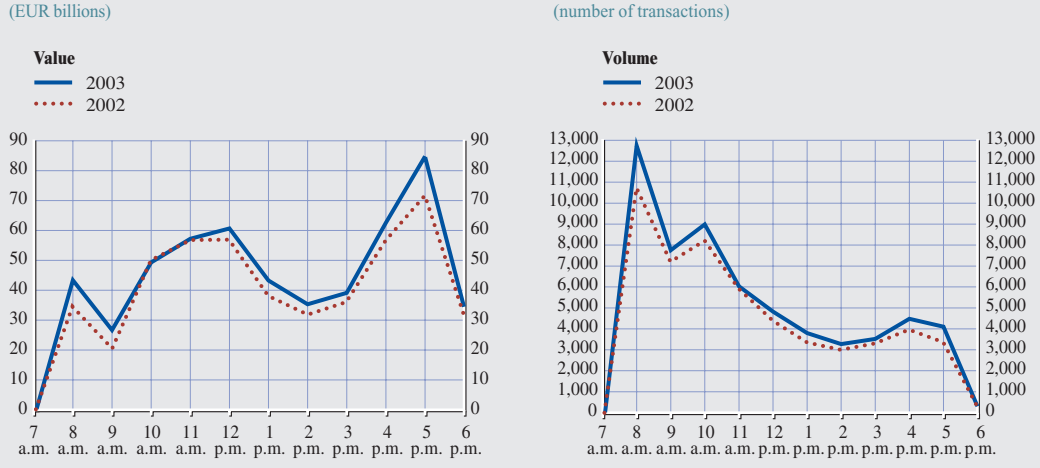
Banks make full use of the last hour of operations to balance liquidity surpluses or deficits in the money market. This is reflected by the high average value of interbank payments settled in the last hour (between 5 and 6 p.m.) (see Statistical Annex 2, Chart 2.2). At the inter-Member State level, the average value in the last hour peaked at €113 million per payment (compared with €105 million in 2002).

PATTERN OF INTER-MEMBER STATE INTRADAY FLOWS

In 2003, TARGET processed a daily average volume of nearly 12,700 inter-Member State payments in the first hour of operations (between 7 and 8 a.m.). Compared with 2002, this represents an increase of 18% (26% more customer payments and 11% more interbank payments). Nearly 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, 22% of the inter-Member State turnover had been processed by 10 a.m., while 52% had been processed by 1 p.m. At 5 p.m. the ratio of processed payments was 93.4% of the total value (see Charts 7 and 8).

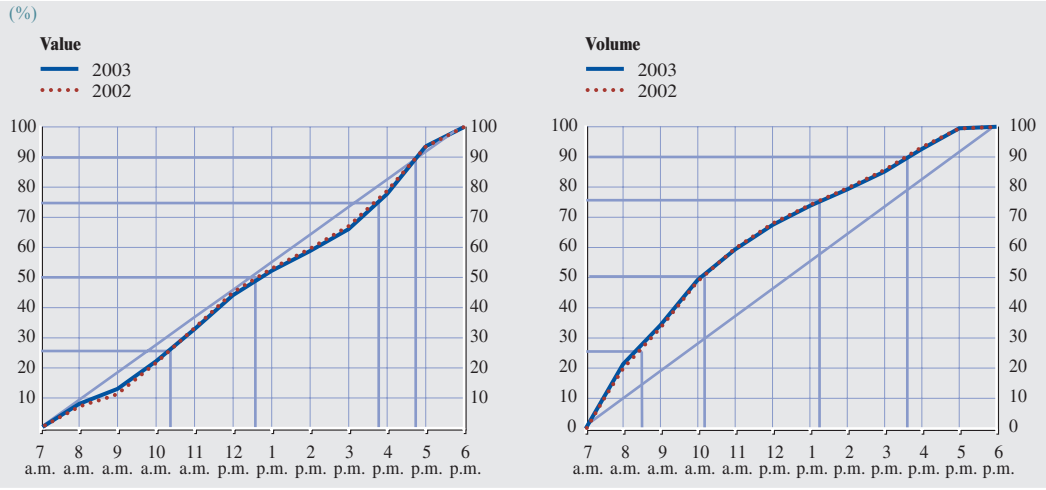
Two volume peaks were visible during the average day: the first between 7 and 8 a.m. and the second between 9 and 10 a.m. These peaks were higher in 2003 than in 2002. The highest values were processed between 10 a.m. and midday and in particular between 4 and 5 p.m. Again, the peaks were more pronounced than in 2002. Overall, the highest volume was processed at the beginning of the day, whereas the highest value was processed towards the end of the day. The significant volume in the

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.

morning was related to the release of a high number of "warehoused" payments from previous dates, whereas at the end of the day liquidity management transfers were 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 €116.1 million in the last hour of operations (see Statistical Annex 2, Chart 2.2). In the last hour, the bulk of liquidity shifts between banks took place. The average value of an inter-Member State customer payment rose from €0.2 million in the first two hours of operations to €1.8 million and €1.4 million respectively 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 late high-value customer payments were mainly related to corporate cash management activities.

As in 2002, the analysis of intraday flows shows that credit institutions made TARGET payments early, which provides the interbank market with enough liquidity and ensures the coverage and sending of subsequent payments. This helps to avoid that payments are retained until later in the day and alleviates possible liquidity frictions. This is in line with the liquidity management guidelines issued by the European Banking Federation (EBF),[12] which have contributed a great deal to the achievement of this pattern.

2 FLUCTUATIONS IN TARGET PAYMENT FLOWS[13]

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

IMPACT OF PERIODICAL TRANSACTIONS

In 2003, traffic in TARGET increased in the middle of the month and at the end of the month, quarter or half-year in both value and volume terms compared with the TARGET daily average (see Table 9). The development observed in December was exceptional as the usual increase did not occur.

12 See the EBF's website (www.fbe.be).
13 Comparisons in this section are made with the daily average for 2003.

Table 10 Impact of periodical transactions on TARGET traffic

(% change on the last day of a quarter relative to 2003 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 2003	16.2	18.9	10.7	24.9	27.0	17.6
Q2 2003	41.4	37.9	48.6	39.3	40.4	35.5
Q3 2003	20.5	15.3	31.3	28.9	30.6	23.0
Q4 2003	-15.7	-18.5	-9.9	-24.1	-28.1	-10.7
	15.6	13.4	20.2	17.2	17.5	16.3

Source: ECB

The largest fluctuation due to periodical transactions for TARGET as a whole was observed on the last day of the half-year, with a traffic increase of 41% in value terms and 39% in volume terms. On the last days of the quarters, TARGET traffic grew on average by 16% in terms of value and 17% in terms of volume. If the fourth quarter, which showed an exceptional development, were not to be taken into account, the increase would have been 26% in value and 28% in volume. On the last day of the year, TARGET traffic dropped by 16% in value and 24% in volume.

The largest fluctuation owing to periodical transactions at the TARGET intra-Member State level was recorded on the last day of the half-year, with a traffic increase of 38% in value and 40% in volume. In addition, TARGET intra-Member State figures were significantly affected at the end of each quarter, showing growth of 13% in terms of value and 18% in terms of volume. Disregarding the fourth quarter, the growth rates would have been 24% and 33% respectively.

At the inter-Member State level, the strongest fluctuation due to periodical transactions was also recorded on the last day of the half-year, with a rise of 49% in value and 36% in volume.

Table 11 TARGET traffic on US holidays

(% change on a US holiday relative to 2003 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	-11.3	-3.4	-27.7	-14.8	-9.9	-31.3
Presidents Day	-8.3	1.1	-27.7	-12.6	-7.0	-31.7
Memorial Day	-15.6	-8.5	-30.2	-16.3	-9.8	-38.2
Independence Day	-16.5	-11.2	-27.4	-12.7	-8.8	-25.7
Labor Day	-17.2	-11.6	-28.9	-9.4	-3.7	-28.4
Columbus Day	-25.4	-21.8	-32.7	-15.9	-12.4	-27.9
Veterans Day	-27.0	-20.5	-40.4	-23.2	-18.5	-38.9
Thanksgiving Day	-17.3	-13.2	-25.8	-9.6	-4.7	-26.2
	-17.3	-11.2	-30.1	-14.3	-9.3	-31.1

Source: ECB

Table 12 TARGET traffic on the business day after US holidays

(% change on a US holiday relative to 2003 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	15.4	11.5	23.7	5.6	2.7	15.3
Presidents Day	8.9	8.0	10.7	4.4	-2.3	27.1
Memorial Day	11.3	7.5	19.1	11.4	7.8	23.7
Independence Day	12.0	7.8	20.8	15.2	10.8	29.9
Labor Day	-10.2	-15.0	-0.2	1.5	-2.6	15.2
Columbus Day	-4.1	-9.8	7.6	8.1	3.5	23.6
Veterans Day	-1.8	-4.1	3.0	5.5	2.5	15.6
Thanksgiving Day	24.1	21.2	30.1	35.8	32.4	47.0
	7.0	3.4	14.4	10.9	6.9	24.7

Source: ECB

IMPACT OF PUBLIC HOLIDAYS IN THE UNITED STATES

On US public holidays, TARGET as a whole experienced an average decrease in traffic of 17% in value terms and 14% in volume terms (see Table 11). An average increase of 7% and 11% respectively on the following business day compensated to some extent for this decrease (see Table 12).

US public holidays affect in particular TARGET inter-Member State traffic. On average, inter-Member State traffic fell by 30% in terms of value and 31% in terms of volume on such days. On the next TARGET business day, the value and volume of inter-Member State payments increased by 14% and 25% respectively.

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 reduced 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 13 TARGET traffic on the business day after TARGET holidays

(% change after a TARGET holiday relative to 2003 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	3.9	8.0	-4.6	-9.8	-5.2	-25.4
Easter Monday	20.0	17.8	24.6	35.7	36.8	32.0
Labour Day	-4.8	-8.0	1.9	17.8	17.5	18.8
Christmas Day	7.5	4.8	13.0	35.2	40.2	18.4
	6.7	5.6	8.7	19.7	22.3	10.9

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

In addition to Saturdays and Sundays, TARGET was closed on six days in 2003; the latter days are referred to as TARGET holidays (see Box 1). TARGET holidays are non-settlement days for the euro money and financial markets, as well as for foreign exchange transactions involving the euro.

On the business day following a TARGET holiday, changes were more significant. On the first business day after a TARGET holiday, TARGET as a whole processed on average 20% more transactions with a 7% higher value. At the intra-Member State level, the increase was 22% in terms of volume and 6% in terms of value, while at the inter-Member State level traffic rose by 11% in volume terms and 9% in value terms (see Table 13).

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 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 22% in terms of value and 36% in terms of volume. Obviously, intra-Member State traffic was affected to a larger degree and its value fell by 26% and its volume by 39%. At the inter-Member State level, 26% less payments were processed with a 15% lower value.

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

Box 1

TARGET LONG-TERM CALENDAR APPLIED IN 2003

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 is closed, in addition to Saturdays and Sundays, on New Year's Day, Good Friday, Easter Monday, 1 May (Labour Day), Christmas Day and 26 December. On these days, TARGET as a whole (i.e. including all national components) is closed.[1]

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

Table 14 TARGET traffic on regional public holidays

(% change on a regional public holiday relative to 2003 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	-16.1	-23.7	-0.3	-38.6	-41.5	-28.9
Whit Monday	-27.7	-28.8	-25.2	-39.3	-43.6	-24.6
Ascension Day	-5.0	-6.1	-2.6	-37.7	-42.5	-21.3
Assumption Day	-40.9	-46.0	-30.4	-28.3	-27.6	-30.7
	-22.4	-26.2	-14.6	-35.9	-38.8	-26.4

Source: ECB.

the fact that TARGET is open on these regional public holidays and thus all relevant transactions can be performed. Of course, there is also a general reduction in economic activity on these days and therefore no need for TARGET to catch up on the following business day.

A public holiday in a single country of the euro area had hardly any impact on TARGET flows in 2003. However, Germany Unity Day on 3 October was an exception as TARGET turnover decreased by 13% in terms of value and 25% in terms of volume. At the inter-Member State level, this German public holiday did not have an impact.

PEAK DAYS IN TARGET

As shown above, in 2003 the highest volume and value on a single day in TARGET as a whole were recorded on 30 June. This was also the peak day for intra-Member State traffic.

Inter-Member State flows peaked in terms of volume at 87,900 payments on 28 November 2003, the day after a bank holiday in the United States (Thanksgiving Day). In terms of value, cross-border flows peaked on 30 June, the last business day of the half-year, at a total of €798 billion.

The lowest volume on a single day for TARGET as a whole was recorded on 29 May (Ascension Day), when a total of 158,637 payments were processed (almost 103,000 payments below the daily average). The day with the lowest value was 15 August (Assumption Day), with a total turnover of €975 billion (€675 billion below the daily average).

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

(% change after a regional public holiday relative to 2003 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	-1.9	-2.1	-1.3	-18.6	-18.1	-20.4
Whit Monday	18.2	20.4	13.7	24.8	21.3	36.7
Ascension Day	17.5	19.3	13.8	6.5	6.9	5.0
Assumption Day	1.4	2.1	-0.2	-10.7	-9.7	-14.3
	8.8	9.9	6.5	0.5	0.1	1.7

Source: ECB.

Table 16 Peak days in TARGET

(EUR billions)

	2002		2003	
TARGET as a whole	2,172	28 June	2,333	30 June
Intra-Member State	1,489	29 June	1,536	30 June
Inter-Member State	689	29 Nov.	798	30 June
Number of payments				
TARGET as a whole	371,758	28 June	363,835	30 June
Intra-Member State	289,706	28 June	282,803	30 June
Inter-Member State	82,079	29 Nov.	87,900	28 Nov.

Source: ECB.

The lowest volume of TARGET intra-Member State traffic was also recorded on 29 May (Ascension Day), with 113,517 payments. In terms of value, the lowest day was also 15 August (Assumption Day), with €601 billion. Inter-Member State traffic was the lowest on 11 November (a public holiday in Belgium, France and the United States), with 36,550 payments with a total value of €320 billion.

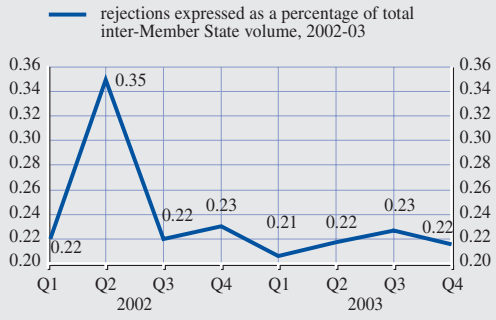
3 INTERBANK STRAIGHT-THROUGH PROCESSING

Since TARGET started operations, it has allowed fully automated straight-through processing (STP) 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.

In this respect, TARGET uses the relevant SWIFT message types (MT103, MT103+ and MT202), which have been customised so that they ensure full interbank STP in TARGET. The very low rate of rejected payments at the inter-Member State level proves the readiness and capability of TARGET users to support STP. In 2003, the rejection rate was reduced to around 0.22% of the total number of TARGET inter-Member State payments sent (from 0.26% in 2002).[14] This means that on average about 130 out of 60,000 inter-Member State payments per day had to be returned to the sending bank (see Charts 9 and 10).

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

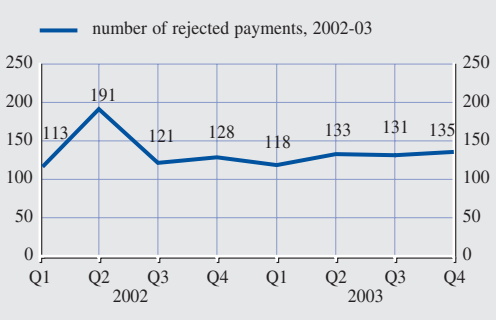
Chart 9 Percentage of rejections in TARGET



Source: ECB.

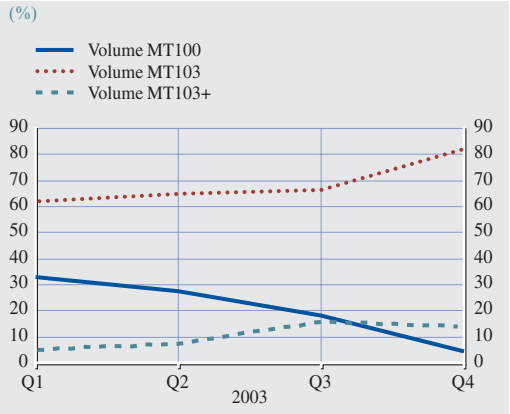
Chart 10 Number of rejected payments in TARGET

(daily averages on a quarterly basis)



Source: ECB.

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



Source: ECB.

Another figure indicating the increased willingness of banks to support EU-wide STP concerns the use of the customer payment message type MT103+[15] in TARGET. In 2003, the share of MT103+ in TARGET inter-Member State customer payments increased from 5% in the first quarter to 14% in the fourth quarter, meaning that such payments could be automatically routed to the account of the final beneficiary as they carry the IBAN[16] (see Chart 11).

It will be interesting to monitor developments in the share of MT103+ in TARGET as an indicator of the progress towards pan-European STP.

15 The message types MT103 and MT103+ are used for customer payments and were implemented in November 2000. Several measures have been taken regarding the MT103 to ensure higher STP rates for the receiver's application, e.g. fields with instruction codes instead of free text. The MT103+ is a subset of the core MT103. The number of fields and field options are limited to those that cater for full STP.

16 The international bank account number (IBAN) was created to uniquely identify the account of a customer at a financial institution.

CHAPTER 2

ROBUSTNESS AND RESILIENCY

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 a negative impact immediately on systemic stability and the euro area money market and eventually on the single monetary policy. Therefore, the Eurosystem strives to ensure:

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

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

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

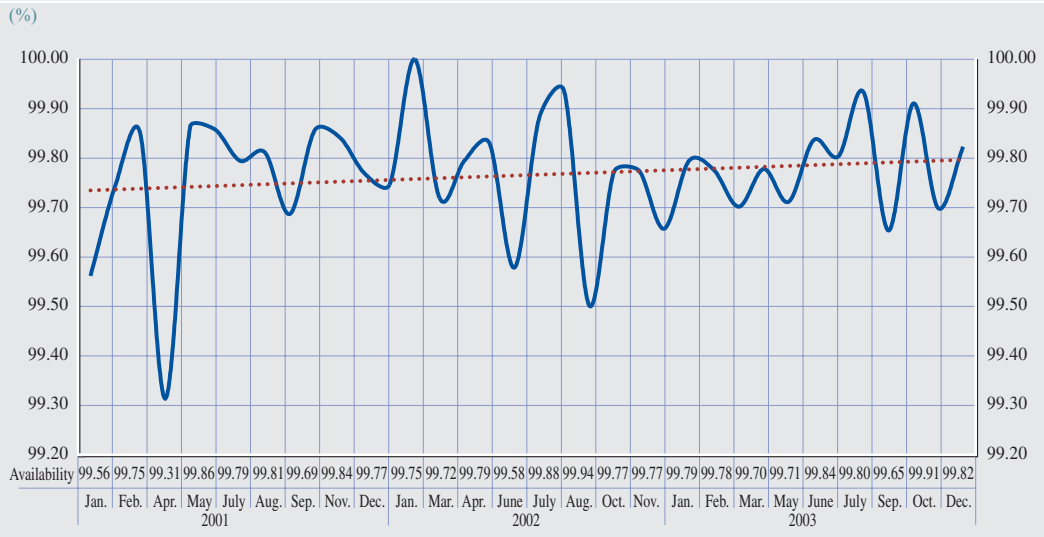
1 TARGET AVAILABILITY AND SERVICE LEVEL

The overall availability of TARGET was 99.79% in 2003 compared with 99.77% in 2002 (see Chart 12). In addition to the overall figure for TARGET, this report provides in the Statistical Annex 4 the availability figures for each local TARGET component.

In 2003, a further performance indicator was introduced providing information on the processing time of TARGET inter-Member State payments. This gives the user a good idea of the real-time processing capability of TARGET. In the year under review, the vast majority of payments (95.78%) were processed in less than 5 minutes, 3.61% were processed in 5 to less than 15 minutes and 0.32% in 15 to less than 30 minutes. As a result of failures, 0.28% needed more than 30 minutes (see Chart 13).

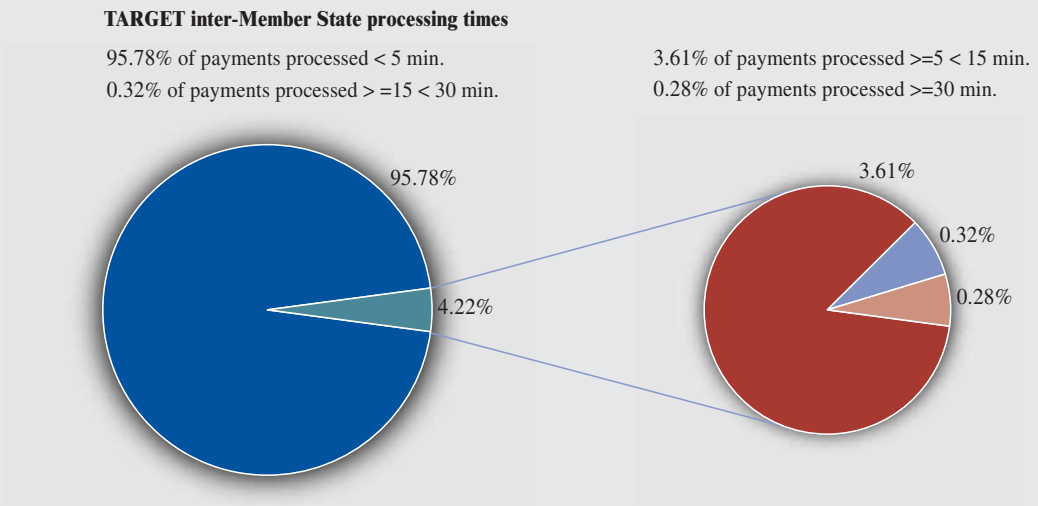
A total of 148 incidents were recorded within the local TARGET components in 2003 (against 108 incidents in 2002). The increase compared with 2002 is due to the counting of all service interruptions exceeding 10 minutes instead of 20 minutes as done in 2002. The number of incidents in 2003 would decrease to 101 if the former rule were to be applied. The two main causes of incidents in TARGET were problems in the system's connection to the SWIFT network and software/hardware component failures.

Chart 12 TARGET availability



Source: ECB.

Chart 13 TARGET inter-Member State payment processing times



Source: ECB.

In 2003, five incidents noticeably affected the payment processing capabilities of local TARGET components.

– On Friday 11 April, De Nederlandsche Bank experienced a hardware problem, which led to a delay in the closing time of TARGET until 7 p.m.

– On Monday 1 September, Sveriges Riksbank was not addressable in the SWIFT network for three hours because SWIFT accidentally removed its BIC from the database.

– On Monday 15 September, the Bank of England encountered a software problem affecting the validation of outgoing TARGET payments, which lasted for almost four-and-a-half hours.

– On Tuesday 30 September, De Nederlandsche Bank experienced a hardware failure, which led to a delay in the closing time of TARGET until 7 p.m.

– On Wednesday 26 November, the SWIFT FIN service was partially unavailable for two-and-a-half hours leading to a slowdown in some local TARGET components.

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

One incident resulted in the application of the new TARGET compensation scheme (see Chapter 11, Section 3). On 3 July, the Bank of England experienced a failure of its connection to SWIFT three minutes before TARGET closing time. As it was too late to invoke contingency measures, a few inter-Member State payments could not be processed on the same day.

Box 2

TARGET INFORMATION SYSTEM

The TARGET Information System (TIS), which started operating on 23 October 2000, is a common information tool allowing 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 national TARGET components, showing users whether TARGET is fully operational and, if not, stating which component has failed and the estimated duration of this malfunction. It is provided in addition to the communication channels 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 having access to those information services.

The Eurosystem reviewed the TIS in 2003, taking into account its own experience and requirements expressed by the European banking community.

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

In order to help users cope with TARGET incidents, the ECB publishes continuous information about the availability of all local TARGET components through 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 further improved in the course of 2003. The contingency measures were developed with the aim of processing all payments that are needed to avoid systemic risk; hence they cater for the processing of all (very) critical payments. The extension of the measures to critical liquidity transfers has been discussed in cooperation with the banking industry and is now being tested. Box 3 below looks at which TARGET payments are considered to be systemically important.

Regular trialling exercises are carried out to verify that both TARGET business continuity and contingency measures are fully operational and that staff are familiar with the use of such tools. Credit institutions often participate in these trials. In 2003, the trialling exercises confirmed that TARGET's measures to cope with failures are functioning in accordance with requirements.

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 2003, the Eurosystem continued its dialogue with TARGET users at both national and European levels. The

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

Very critical payments: CLS-related payments;
Critical payments: 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. Moreover, the inclusion of intra-bank liquidity transfers equal to or above €100 million has been discussed and is now being tested.

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.

cooperation was very fruitful and helped to strengthen the TARGET contingency measures and to enhance the implementation of the recommendations for CLS payments in euro.

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, which interlinks several currencies, has created a direct connection that, if not appropriately addressed, could potentially lead to contagion. The operators of the RTGS systems of currencies eligible for CLS addressed this issue at an early stage and established a channel enabling communication between all the relevant RTGS operators irrespective of time and language differences. In the absence of a failure, the channel is used for the regular exchange of information.

CONTINUOUS LINKED SETTLEMENT

On 9 September 2002, Continuous Linked Settlement (CLS) – a system designed for the settlement of foreign exchange (FX) transactions[17] – started live operations. CLS largely eliminates FX settlement risk by settling FX transactions in its books on a payment-versus-payment (PvP) basis.[18] 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.

For the euro, the squaring in central bank money is done via TARGET. For this purpose, CLSB holds an account with the ECB and the

17 The eligible currencies that are currently settled are USD, EUR, JPY, GBP, CHF, CAD, AUD, SEK, DKK, NOK and SGD.
18 For further information, see the article entitled "CLS – purpose, concept and implications" in the January 2003 issue of the ECB's Monthly Bulletin.

Box 4

RECOMMENDATIONS FOR CLS PAYMENTS IN EURO

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

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

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

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

CLS settlement members or their nostro agents hold an account in their respective national RTGS system. The banks fund a debit position in euro by transferring money from their RTGS account to the CLSB account held with the ECB and vice versa if CLSB has to fund a euro credit position of a bank.

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 (see Box 4).

In 2003, euro area credit institutions followed the recommendations to a very large extent. This, together with the established and trialled contingency measures, enabled the smooth processing of CLS-related payments in the event of an incident and prevented any incident in the euro area from spilling over to other currencies.

3 TARGET COMPENSATION SCHEME

The new 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 TARGET and covers both intra- and inter-Member State TARGET payments. A malfunctioning in the ECB payment mechanism (EPM) affecting TARGET participants would be covered by the compensation scheme too. The scheme does not, however, apply to customers in the EPM. Its procedures are largely standardised in order to keep the administrative burden low.

Within the compensation scheme, a malfunctioning is defined as technical difficulties, defects or failures in the technical infrastructure, computer systems or interlinking connections or any other event which makes it impossible to execute or complete same-day processing of TARGET payments.

The application of the compensation scheme for the submitter of a payment is subject to the fulfilment of two conditions: (i) a TARGET malfunctioning must have occurred; and (ii) the sending participants must have sent (or had the intention to send) a payment which could not be executed on the same day owing to the malfunctioning. For receiving participants, compensation can be paid where an expected payment was not received and recourse to the Eurosystem standing facilities was necessary.

The Governing Council of the ECB carries out the final assessment of all claims received and decides on the compensation offers to be made. A compensation offer consists of interest compensation and an administration fee and is the only compensation offered by the European System of Central Banks (ESCB) in cases of malfunctioning.[19]

The EBF will amend its European Interbank Compensation Guidelines to take into account the implementation of the TARGET compensation scheme.

4 TARGET RISK MANAGEMENT

Risk management is a vital and integral part of RTGS systems. It represents a particular challenge for TARGET due to its decentralised set-up. In order to cope with this challenge, a new methodological framework for risk management has been developed and applied to TARGET.

A methodology for assessing the risk situation has been in place since the development phase of the TARGET system. This methodology has been applied several times, but over time has become outdated. It was thus decided to revise the existing risk management approach.

The new TARGET risk management framework is based on the internationally recognised standard ISO/IEC 17799:2000 and has a hierarchical, three-layer structure from a high-level policy to operational procedures. The first layer comprises an information security policy for TARGET, which embraces at a generic level the security policy principles and further relevant aspects related to security management. In the second layer, the TARGET security requirements and controls are specified. They define the common minimum security requirements for the TARGET system. In the third layer, the TARGET Risk Management Manual describes in detail the TARGET risk management process.

The new methodology allows for flexible responses to new threats, learning from incidents and the assessment of risks resulting from changes to the system. Moreover, regular reviews at defined intervals will ensure that all implemented safeguards continue to comply with the approved information security policy for TARGET.

In conclusion, TARGET risk management follows a structured, consistent and dynamic approach in order to ensure the secure processing of payments via the TARGET system.

19 Procedural information on the use of the compensation scheme can be found in Annex 3 on the organisation of TARGET and its management structure and in particular on the ECB's website.

5 TARGET OVERSIGHT

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. In this regard, TARGET oversight will follow the development of TARGET. 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. In meeting these objectives, the oversight function of the Eurosystem will continue to pay the same attention to TARGET as to any other systemically important interbank funds transfer system operating in euro.

To achieve the above goals, a structured and comprehensive TARGET oversight methodology has been developed with a focus on stringent TARGET oversight requirements that all NCBs and the ECB should as a minimum fulfil in conducting TARGET oversight. A TARGET Oversight Guide will specify in more detail the common TARGET oversight requirements set out in the TARGET oversight methodology. In particular, it will give detailed guidance on how the local TARGET overseers can meet these requirements. As it is intended to serve as a comprehensive reference document for the conduct by the NCBs/ECB of their TARGET oversight duties, the TARGET Oversight Guide will help to ensure the consistent performance of the TARGET oversight function across the ESCB.

Following the logic of the oversight approach, the assessment of all domestic TARGET components, as well as the EPM, against the Core Principles has been carried out by the NCBs and the ECB. The results of the assessment will be published shortly. Furthermore, in the context of the design and development of the TARGET2 system, the TARGET oversight function has provided input on the requirements that TARGET2 should fulfil from an oversight perspective.

CHAPTER 3

DEVELOPMENTS IN TARGET

In 2003, the future of the TARGET system took shape. The plan is for the new generation of TARGET, TARGET2, to go live in 2007. Central banks and credit institutions will have to prepare thoroughly for this migration. In the meantime, the performance of the current system has to be maintained at a high level.

1 DEVELOPMENTS IN THE CURRENT SYSTEM

POLICY FOR MAINTAINING THE CURRENT SYSTEM

The work on the second generation of TARGET and the ambitious target of going live in 2007 demands that investments in the current system remain limited. In particular, this will be the case for investments related to new functionality or upgrades. However, it goes without saying that, due to the pivotal role TARGET plays, its smooth running remains the Eurosystem's top priority in the field of payment systems. Thus, all investments necessary to maintain the achieved service level will of course be made.

Bearing this approach in mind, regular TARGET releases will be needed to keep up with changes in SWIFT standards. Furthermore, TARGET will need to migrate to SWIFTNet FIN and to integrate overnight settlement processing, and may have to cope with the connection of new EU Member States to the current TARGET system.

2003 TARGET RELEASE AND FUTURE RELEASES

Being based on SWIFT messaging standards, TARGET has had to follow related developments. In November 2003 SWIFT stopped supporting the MT100 customer transfer message, hence it had to be removed from the TARGET system in November 2003 too. In June 2003, NCBs started testing their RTGS systems using the ECB's Interlinking Test Environment System (ITES). Group trials were conducted in a number of sessions from end-June until mid-October. Furthermore, various end-to-end test sessions took place in September and October to allow credit institutions to test the functionality of the 2003 TARGET release. Finally, all RTGS systems were fully certified as complying with 2003 TARGET specifications. The 2003 TARGET release went successfully live on 17 November 2003.

In 2004, SWIFT messaging changes will be limited, but TARGET will have to follow them. In 2002, it was agreed that SWIFT should validate the mandatory presence of a correct IBAN in MT103 STP messages when they are exchanged between EU countries. As TARGET is part of the EU payment infrastructure, the validation also had to be done by TARGET. As they will be joining the European Union, the acceding countries have also accepted the European validation rule. Therefore, the TARGET validation rules need to be updated. In a first wave, the validation of the mandatory presence of a correct IBAN in MT103 STP messages will be extended to six acceding countries (Cyprus, Hungary, Lithuania, Malta, Slovakia and Slovenia) in June 2004. An interim release will be implemented before June 2004. In 2005, four further acceding countries will follow (Latvia, Estonia, Poland and the Czech Republic). Accordingly, another interim release for this change is scheduled for May 2005. These changes are the only ones foreseen for the 2004 and 2005 TARGET releases.

SWIFTNET FIN MIGRATION

The SWIFTNet FIN migration is a technical migration, moving the FIN messaging service from X.25 to IP technology. This migration is mandatory for the entire SWIFT community. Although the FIN functionality and message standards are not affected, migrating to SWIFTNet FIN implies major adaptations to the local SWIFT users' operational environment.

For TARGET, a coordinated but phased approach has been chosen, which enables the national components to migrate at their own pace. As for any change to national TARGET components, a local security assessment and specific tests are thoroughly performed to ensure a smooth and successful migration process.

The first national TARGET components successfully completed the migration during 2003. It is planned that all national TARGET components will have migrated before the end of 2004.

OVERNIGHT SETTLEMENT PROCESSING

In 2003, the Eurosystem responded to a market move towards settling transfers of financial instruments in securities settlement systems (SSSs) during the night, in what are known as overnight settlement cycles. In these settlement cycles, SSS operators bring forward to the previous night some of the activities that would typically occur on the following business day. However, the value date for those transactions is still the following business day.

European SSSs in cooperation with local NCBs have implemented several arrangements for the settlement of night batches in central bank money at the national level. The SSS can settle the cash leg of securities transactions either through the national RTGS (in this case the latter would open earlier than TARGET) or through transfers between dedicated NCB accounts directly managed by the SSS. When none of the previous models have been envisaged, a third model has been implemented, in which the SSS is provided, for each participant, with a guarantee by the local NCB. This guarantee is backed by earmarked liquidity in the participants' cash accounts deposited with its NCB (which also contain amounts deposited for the fulfilment of minimum reserve requirements) and/or earmarked pre-deposited collateral. Thus, the guarantee indicates for each participant the maximum liquidity available for its respective settlements. The SSS will then process, in the overnight settlement cycle, any participant's transactions up to the liquidity limit as specified in the NCB guarantee.

Overnight settlement has two main advantages. First, SSS participants can better calculate their actual positions at the start of daytime operations. Second, SSS operators can eliminate the risk of unwinding which would occur if a participant were to be unable to settle the full value of its obligations on the following business day.

In response to a specific market request, the Eurosystem has decided upon a model which supports the cross-border settlement of the payment legs of overnight settlement cycles in central bank money for participants established outside the country of the system in which they participate.

Since remote access to central bank credit is not allowed in TARGET, remote participants wishing to settle securities trades in overnight settlement cycles would have been excluded from accessing the full central bank settlement facilities provided by the home NCB of the SSS to domestic participants. This would be the case, for instance, for intraday credit provided with next-day value that can be used to fund the overnight settlement process. The solution developed by the Eurosystem relies on a system of bilateral guarantees between the local NCB of the SSS and the home NCBs of the remote participants. This makes it possible for remote participants to use their central bank reserve balances (and/or obtain credit) at their home NCBs to facilitate the overnight settlement processes run by the SSS in which they participate remotely. In more detail, according to the agreed solution, the remote participant's NCB provides the NCB of the SSS with a guarantee based on the participant's available liquidity (cash and collateral). Then, the NCB of the SSS provides the SSS with a further guarantee reflecting the corresponding inter-NCB guarantee. The solution presented above has been implemented so far by the Deutsche Bundesbank with De Nederlandsche Bank and the Oesterreichische Nationalbank for the settlements of Dutch and Austrian remote participants in Clearstream Frankfurt.

2 EU ENLARGEMENT

On 24 October 2002, the Governing Council decided that acceding country central banks

(ACCBs) will have the possibility – but not the obligation – to connect to TARGET as from the date of their joining the European Union. Participation in TARGET will be compulsory only when the acceding countries join EMU. Different technical options for such connections, including scenarios avoiding the need for their own euro RTGS platforms, have been elaborated and discussed with the ACCBs.

Despite the fact that acceding countries have been offered the possibility to connect to TARGET upon joining the European Union, in general they envisage connecting to the system only at the time of their entry to the euro area. This is because there is no business case for an early connection to TARGET as a non-participating Member State.

Acceding countries will be able to use the single shared platform (SSP) of TARGET2, which should start operating on 1 January 2007, without a prior connection to the present TARGET system. However, since, on the one hand, the envisaged go-live date for TARGET2 is a very ambitious objective and, on the other hand, TARGET access is mandatory for acceding countries having adopted the euro, the Eurosystem and the ACCBs are preparing fallback solutions in order to be able to bridge the possible period between the first acceding countries joining the euro area and the availability date of TARGET2. Given the fact that they may never be used, the fallback solutions for connecting the acceding countries to the current TARGET system will have to be low-cost solutions.

3 TARGET2

The decision on the structure of the current TARGET system was made back in 1994. It was based on the principles of minimum harmonisation and interconnection of existing IT infrastructures as the best way of ensuring that the system would be operational from the very start of EMU. In view of the increasing financial integration within the euro area and the fact that the business needs of TARGET users are becoming increasingly similar, the system needs to be enhanced.

On 24 October 2002, the Governing Council of the ECB set out the principles which have since guided the preparation of the TARGET2 system. The new system must: (i) provide an extensively harmonised service level; (ii) apply a single TARGET-wide price structure to these harmonised services; and (iii) guarantee cost-effectiveness. At the same time, the NCBs will remain responsible for the accounts of, and business relations with, credit institutions in their respective Member States. As regards the technical infrastructure of TARGET2, central banks will be able to share a technical platform, the single shared platform (SSP), supporting the RTGS services that they offer to their banks.

The TARGET2 project is divided into three main phases: the pre-project phase; the project phase; and the testing and trial operations phase. 2003 was dedicated to the pre-project phase, in which three main work streams had to be completed before the technical development work could start in the course of 2004. The first work stream is the definition of the core features and functions of TARGET2 (e.g. payment processing and settlement services, interface issues, liquidity management, information services, business continuity and security). The second work stream on cost and pricing issues consists mainly of the finalisation of a common cost methodology for TARGET2. The third work stream focuses on issues specifically related to the SSP.

As a first step in the definition of the core features and functions of TARGET2, the Eurosystem launched a public consultation in 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.[20] A summary of all replies, together with the individual contributions, was

20 "TARGET2: principles and structure".

made available on the ECB's website on 14 July 2003.[21] 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. Current preparations are also focused on ensuring the full compliance of the future TARGET2 system with the Core Principles for Systemically Important Payment Systems, which were adopted as minimum standards by the Governing Council in January 2001.

With regard to the second work stream, a common cost methodology for TARGET2 to be applied by all central banks had to be developed. This methodology, which will be further refined over time, will serve as the basis for the determination of the single TARGET2-wide price structure and will also be used to establish whether the strict cost-recovery principle has been complied with.

As for the third work stream, which focuses on issues related to the SSP, the ECB has coordinated the discussions between the central banks interested in participating in the SSP. In the course of 2003, the Eurosystem started to address issues related to the governance structure of the SSP, its financing by the participating central banks and the choice of the service provider(s). As far as the last aspect is concerned, the Deutsche Bundesbank, Banque de France and Banca d'Italia have made a joint proposal for the development and operation of the SSP. As soon as the concept put forward by these three central banks has been evaluated by the Eurosystem against the required core services and functionalities, it will be presented to and discussed with the TARGET user community.

In addition to these three work streams, an adequate project organisation will have to be established in 2004 to ensure both the effective organisation of the development work in the project phase and an appropriate level of involvement of and control by all central banks that intend to participate in the SSP. As previously mentioned, it is currently envisaged to start TARGET2 operations on 1 January 2007.

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

ANNEXES

I TARGET STATISTICS

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

CONTENTS OF THE STATISTICAL ANNEX

I. DISTRIBUTION OF PAYMENT FLOWS IN TARGET

Table I.1 Distribution of payment flows in TARGET – 2002

	Total				Intra-Member State				Inter-Member State			
	Value*)	%	Volume	%	Value*)	%	Volume	%	Value*)	%	Volume	%
ELLIPS (BE)	13,339	3.4	1,731,435	2.7	3,844.2	1.4	858,174	1.7	9,494.7	7.7	873,261	6.4
RTGSplus (DE)	124,784	31.5	31,892,792	49.4	91,818.1	33.8	27,595,630	54.3	32,966.1	26.6	4,297,162	31.3
SLBE (ES)	63,444	16.0	3,085,706	4.8	58,898.3	21.7	2,644,216	5.2	4,545.9	3.7	441,490	3.2
TBF (FR)	90,877	23.0	3,814,367	5.9	73,298.6	27.0	2,164,206	4.3	17,577.9	14.2	1,650,161	12.0
IRIS (IE)	4,886	1.2	582,260	0.9	3,088.1	1.1	313,889	0.6	1,797.7	1.5	268,371	2.0
BI-REL (IT)	25,150	6.4	9,612,596	14.9	16,355.5	6.0	8,038,490	15.8	8,794.5	7.1	1,574,106	11.5
LIPS-Gross (LU)	4,427	1.1	347,506	0.5	1,229.8	0.5	81,749	0.2	3,197.4	2.6	265,757	1.9
TOP (NL)	21,080	5.3	4,563,454	7.1	9,599.7	3.5	4,002,184	7.9	11,480.3	9.3	561,270	4.1
ARTIS (AT)	4,811	1.2	2,608,179	4.0	2,342.4	0.9	2,144,792	4.2	2,468.1	2.0	463,387	3.4
SPGT (PT)	2,326	0.6	921,236	1.4	1,274.5	0.5	650,603	1.3	1,051.0	0.8	270,633	2.0
BOF-RTGS (FI)	3,260	0.8	260,386	0.4	2,002.5	0.7	143,004	0.3	1,257.5	1.0	117,382	0.9
EPM (ECB)	2,932	0.7	32,327	0.1	-	-	-	-	2,932.4	2.4	32,327	0.2
KRONOS (DK)	1,921	0.5	109,261	0.2	56.3	0.0	10,377	0.0	1,864.7	1.5	98,884	0.7
HERMES euro (GR)	2,683	0.7	1,209,903	1.9	1,425.3	0.5	901,343	1.8	1,257.9	1.0	308,560	2.2
Euro RIX (SE)	1,468	0.4	83,211	0.1	82.7	0.0	8,715	0.0	1,385.3	1.1	74,496	0.5
CHAPS Euro (UK)	28,247	7.1	3,664,381	5.7	6,597.7	2.4	1,227,943	2.4	21,649.2	17.5	2,436,438	17.7
	395,634.3	100.0	64,519,000	100.0	271,913.7	100.0	50,785,315	100.0	123,720.6	100.0	13,733,685	100.0

*) EUR billions
Source: ECB.

Table I.2 Distribution of payment flows in TARGET – 2003

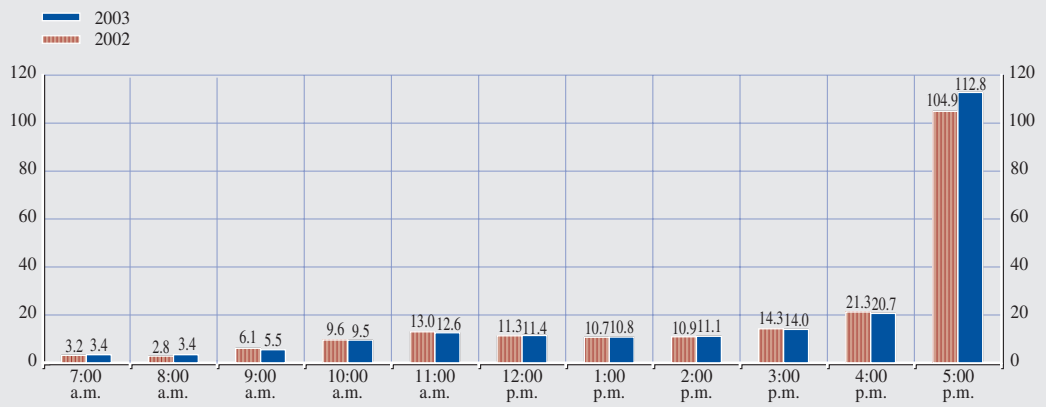
	Total				Intra-Member State				Inter-Member State			
	Value*)	%	Volume	%	Value*)	%	Volume	%	Value*)	%	Volume	%
ELLIPS (BE)	13,558.2	3.2	1,752,802	2.6	3,330.9	1.2	826,070	1.6	10,227.3	7.5	926,732	6.1
RTGSplus (DE)	128,543.7	30.6	32,792,174	49.2	92,710.6	32.7	28,194,981	54.9	35,833.1	26.2	4,597,193	30.1
SLBE (ES)	70,208.3	16.7	3,345,946	5.0	65,080.8	22.9	2,749,566	5.4	5,127.5	3.7	596,380	3.9
TBF (FR)	96,326.9	22.9	3,863,830	5.8	77,081.3	27.2	2,128,859	4.1	19,245.6	14.1	1,734,971	11.4
IRIS (IE)	5,502.1	1.3	802,875	1.2	3,359.7	1.2	469,482	0.9	2,142.4	1.6	333,393	2.2
BI-REL (IT)	24,760.7	5.9	9,423,103	14.1	16,303.1	5.7	7,704,057	15.0	8,457.6	6.2	1,719,046	11.3
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	7.1	9,494.4	3.3	4,088,579	8.0	11,871.0	8.7	628,263	4.1
ARTIS (AT)	5,177.3	1.2	2,380,100	3.6	2,374.1	0.8	1,880,998	3.7	2,803.2	2.0	499,102	3.3
SPGT (PT)	3,254.8	0.8	1,021,046	1.5	1,279.8	0.5	686,489	1.3	1,975.0	1.4	334,557	2.2
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
EPM (ECB)	4,023.8	1.0	41,103	0.1	0.0	-	0	-	4,023.8	2.9	41,103	0.3
KRONOS (DK)	3,207.5	0.8	102,560	0.2	41.8	<0.1	10,011	<0.1	3,165.7	2.3	92,549	0.6
HERMES euro (GR)	3,343.1	0.8	1,324,274	2.0	1,723.5	0.6	984,492	1.9	1,619.6	1.2	339,782	2.2
Euro RIX (SE)	1,897.0	0.5	96,994	0.1	73.4	<0.1	10,580	<0.1	1,823.6	1.3	86,414	0.6
CHAPS Euro (UK)	31,180.4	7.4	4,292,282	6.4	7,362.4	2.6	1,387,507	2.7	23,818.0	17.4	2,904,775	19.0
	420,749.3	100.0	66,608,000	100.0	283,870.7	100.0	51,354,924	100.0	136,878.6	100.0	15,253,076	100.0

*) EUR billions
Source: ECB.

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

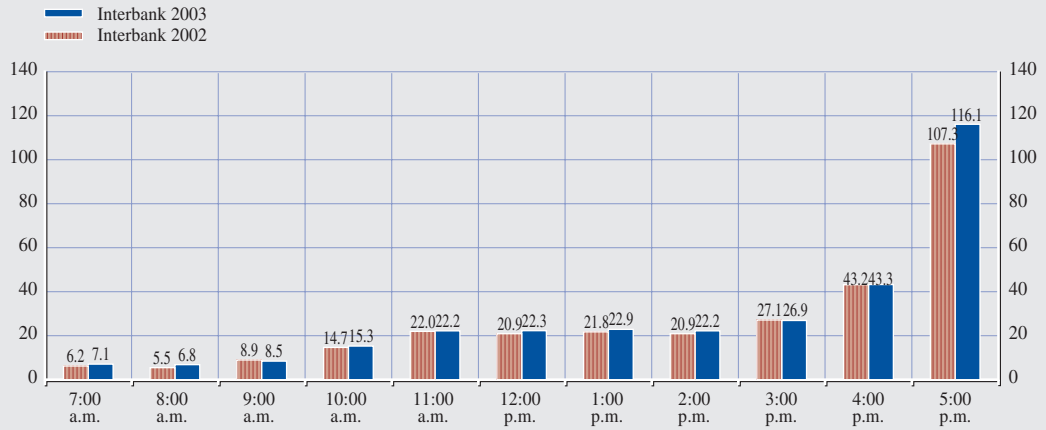
(EUR millions)



Source: ECB.

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

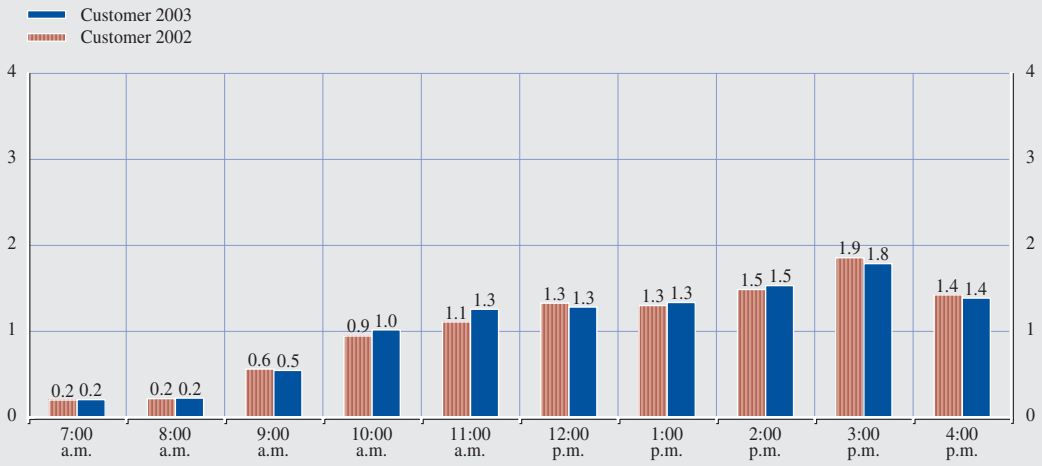
(EUR millions)



Source: ECB.

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

(EUR millions)

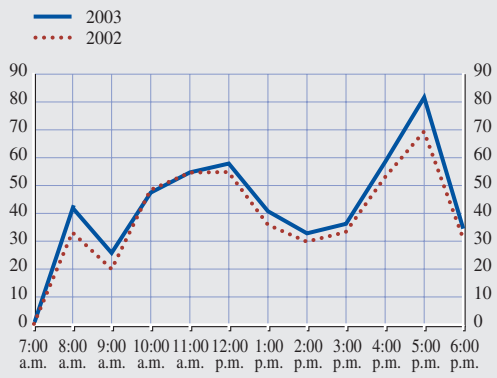


Source: ECB.

3. TARGET INTER-MEMBER STATE INTRADAY PATTERN

Chart 3.1 Intraday pattern of interbank payments – value

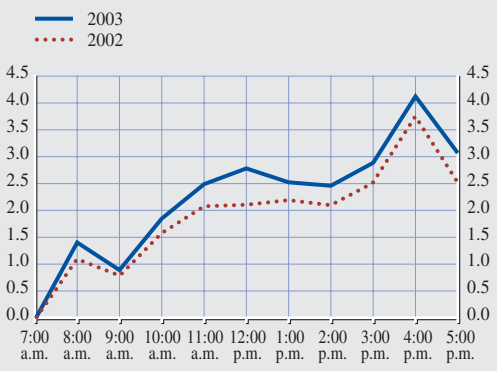
(EUR billions)



Source: ECB.

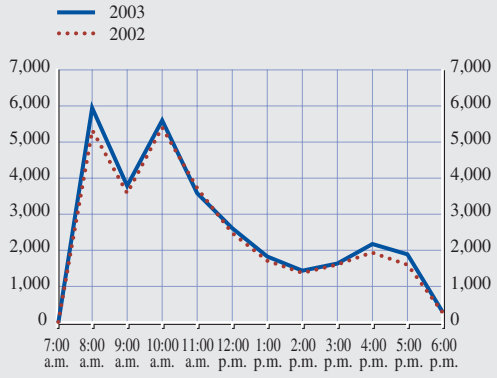
Chart 3.2 Intraday pattern of customer payments – value

(EUR billions)



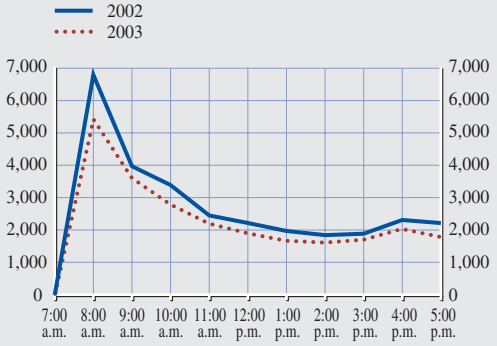
Source: ECB.

Chart 3.3 Intraday pattern of interbank payments – volume



Source: ECB.

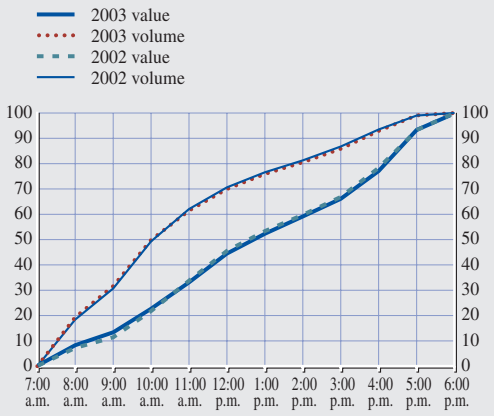
Chart 3.4 Intraday pattern of customer payments – volume



Source: ECB.

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

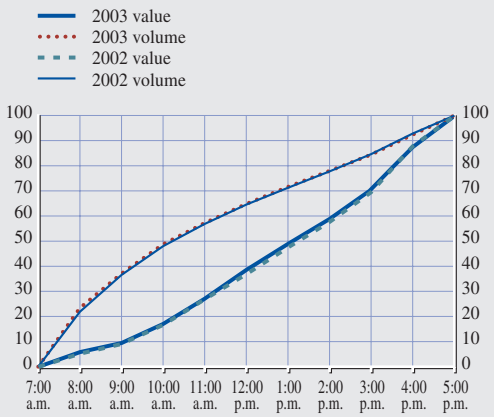
(%)



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 %)

	2003												
Central Bank	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	total
AT	100.00	99.38	99.24	99.89	99.74	100.00	100.00	100.00	99.58	100.00	99.38	99.27	99.71
BE	100.00	99.50	99.49	99.43	99.87	99.70	99.68	100.00	99.81	99.61	99.08	99.49	99.64
DE	99.63	99.80	99.31	100.00	99.53	100.00	99.53	100.00	100.00	100.00	100.00	99.87	99.81
DK	100.00	99.69	100.00	100.00	100.00	100.00	99.84	99.83	98.20	99.89	98.72	100.00	99.68
ES	100.00	100.00	100.00	99.74	99.39	100.00	100.00	99.38	100.00	99.58	99.87	100.00	99.83
EU	100.00	99.83	99.81	99.71	99.62	99.48	100.00	99.86	100.00	99.49	99.64	100.00	99.79
FI	100.00	100.00	99.76	99.81	99.86	100.00	99.62	100.00	100.00	100.00	100.00	100.00	99.92
FR	100.00	100.00	100.00	99.92	98.85	100.00	100.00	100.00	100.00	100.00	99.49	100.00	99.86
GB	100.00	99.57	100.00	100.00	100.00	99.52	99.90	99.88	97.74	100.00	100.00	100.00	99.72
GR	99.74	100.00	100.00	100.00	99.50	99.75	99.90	100.00	100.00	100.00	99.61	99.60	99.84
IE	100.00	100.00	99.85	100.00	100.00	100.00	99.37	100.00	100.00	100.00	100.00	100.00	99.94
IT	99.64	99.75	99.17	99.13	100.00	99.35	99.41	100.00	99.61	100.00	99.55	100.00	99.63
LU	100.00	100.00	98.59	100.00	99.14	100.00	99.74	100.00	100.00	100.00	100.00	99.46	99.74
NL	99.11	98.90	100.00	98.81	100.00	100.00	100.00	100.00	99.52	100.00	99.84	100.00	99.68
PT	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
SE	98.59	100.00	100.00	100.00	99.89	99.58	99.87	100.00	100.00	100.00	100.00	99.48	99.78
Overall Availability	99.79	99.78	99.70	99.78	99.71	99.84	99.80	99.93	99.65	99.91	99.70	99.82	99.79

Source: ECB.

2 CHRONOLOGY OF DEVELOPMENTS IN TARGET

NOVEMBER 1994

The European Monetary Institute (EMI) published a report entitled "The EMI's intentions with regard to cross-border payments in Stage Three", which laid down the basic principles and objectives as well as the approach to be adopted by EU central banks and the EMI in creating a new cross-border payment arrangement for Stage Three of Economic and Monetary Union (EMU). A system for Stage Three would be set up by linking the domestic real-time gross-settlement (RTGS) facilities. Only the NCBs would hold settlement accounts for banks, although the European Central Bank (ECB) would also be connected to the NCBs through the Interlinking system for the purpose of making payments for its own account or for the account of its customers. To ensure a level playing field for the banks, and to facilitate the creation of a single money market, some harmonisation of the operating features of the domestic RTGS systems was deemed necessary.

MAY 1995

Based on the decision of the EMI Council to establish the TARGET system, the report entitled "The TARGET system – Trans-European Automated Real-time Gross settlement Express Transfer system, a payment system arrangement for Stage Three of EMU" was published. In this report the EMI Council defined certain basic principles of the system and confirmed that linkages would be established between national RTGS systems. These linkages (the Interlinking system), together with the national RTGS systems, would form the TARGET system. In addition, the RTGS systems of non-participating countries (not identified at that stage) may be connected to TARGET, but only to process euro. Any participant in any RTGS system connected to TARGET would be entitled to send payments via TARGET and would be obliged to accept any such payment processed through TARGET. Domestic RTGS systems would retain their specific features insofar as this was compatible with the single monetary policy of the Eurosystem and a level playing field for credit institutions. A certain level of harmonisation was considered necessary, especially in three areas: (i) the provision of intraday liquidity, (ii) operating time; and (iii) pricing policies.

With regard to intraday liquidity, in order to provide equal access to central bank credit throughout the euro area it was necessary to harmonise the definition of assets which can be accepted by the NCBs as collateral and the conditions under which their value will be taken into account. With regard to operating hours it was recognised that there would be a need for the Interlinking system and the national RTGS systems to be open for a large part of the day. Finally, the pricing policies should satisfy three requirements: (i) avoiding unfair competition with the private sector, (ii) avoiding the 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[22] 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.[23]

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.[24]

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

SEPTEMBER 1997

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

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

In the area of pricing policies, it was decided that a common transaction fee for cross-border TARGET transfers would be charged, based on the principle of full cost recovery and in line with EU competition policy. The pricing of domestic RTGS transfers in euro would continue to be determined at the national level, taking into account that the price of domestic and cross-border transfers in euro should be broadly similar. With regard to the cross-border leg, it was agreed that the single transaction fee would be set within the range €1.50 to €3.00. In addition, a price differentiation based on volume was anticipated.[25]

22 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.)

23 EMI Annual Report 1996, EMI, April 1997.

24 EMI Annual Report 1996, EMI, April 1997.

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

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

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

For the provision of settlement services to cross-border large-value NSSs, the EMI Council agreed on a method for the settlement of the future Euro Banking Association (EBA) clearing system within the euro area. This envisages that the EBA will open a central settlement account at the ECB and may also open settlement accounts with NCBs which agree to do so.

JUNE 1998

All the EMI Council decisions referred to above were adopted by the Governing Council. Furthermore, the price structure for cross-border TARGET payments was agreed upon. The fee to be charged for cross-border payments through TARGET between direct participants would range from €0.80 to €1.75, depending on the number of transactions.[26] 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.[27]

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.[28]

Unlimited, but fully collateralised, intraday credit would be provided to RTGS participants fulfilling the general counterparty eligibility

26 See also the annex entitled "Organisation of TARGET and its management structure" and the ECB's press release of 10 June 1998.
27 See also the annex entitled "Organisation of TARGET and its management structure" and the ECB's press release of 8 July 1998.
28 See also annex entitled "Organisation of TARGET and its management structure".

criteria of the ESCB.[29] 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.[30] 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.[31]

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.[32]

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.[33]

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.[34]

OCTOBER 2000

A TARGET Information System (TIS) was introduced, providing users of TARGET with information on the status of the system.[35]

29 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.
30 For an overview of TARGET developments in 1999, see ECB Annual Report 1999, ECB, April 2000.
31 See also ECB's press release of 11 January 1999 and ECB Monthly Bulletin, March 1999.
32 See also ECB's press releases of 3 September 1998 and 31 March 1999.
33 See also ECB's press release of 15 July 1999.
34 See also ECB's press release of 25 May 2000.
35 See also Box 4.

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.[36]

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.[37]

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[38] 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.

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.

36 See the ECB's press release of 14 December 2000.
37 See the ECB's press release of 28 February 2002.
38 A negative PSMN (Payment Settlement Message Notification) provides the rejection code (reason for the rejection).

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.[39]

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.[40] 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 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.

39 "TARGET2: principles and structure".
40 "Summary of comments received on TARGET2: principles and structure".

3 THE ORGANISATION OF TARGET AND ITS MANAGEMENT STRUCTURE

TARGET allows for the smooth implementation of the single monetary policy, facilitates the efficient functioning of the money market and improves the soundness and efficiency of large-value payments in euro. The system successfully commenced live operations on 4 January 1999.

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

ORGANISATION

The TARGET system is the real-time gross settlement system for the euro. It is a decentralised system composed of 15 national RTGS systems, the EPM and the Interlinking 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[41] and which are

41 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.

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

TYPES OF TRANSACTIONS HANDLED

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

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

TECHNICAL INFRASTRUCTURE

TARGET is a decentralised system consisting of one RTGS system in each EU Member State and the EPM. Only certain functions are performed centrally by the ECB. To enable the processing of cross-border payments within TARGET, i.e. processing payments from one system to another, these individual components are interconnected via the Interlinking system.

TARGET allows credit institutions to use the same connection for both 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 43,000 addressable banks and branches are currently provided.

In order to initiate a 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 vice versa. This means that the sending and receiving participants each use their own intra-member State format.[43]

42 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.

43 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".

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

The design of the messages exchanged via the TARGET system is based on the widely used SWIFT message standards 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.[44]

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.[45]

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

44 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.

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

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. This is reflected in the business performance indicator as described in chapter 2 and chart 13.

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 to any single participant in its respective national RTGS system will be €3 billion for Bank of England, €0.650 billion for Danmarks Nationalbank, and €0.5 billion for Sveriges Riksbank; (ii) after the liquidity deadline, set at 5 p.m. C.E.T., non-euro area participants are allowed to make outgoing payments out of positive balances only (participants facing a debit position at the liquidity deadline must square their positions so that they do not incur an overnight overdraft in euro); (iii) should a participant, for any reason, be unable to square its position by the close of TARGET, it will be subject to penalties; iv) the rate at which non-euro area NCBs may remunerate the end-of-day euro balances held by participants with them will be the rate of the ESCB's deposit facility; and v) the assets which can be used by non-euro area credit institutions to collateralise intraday credit will meet the same quality standards and be subject to the same valuation and risk control rules as prescribed for collateral which is eligible for ESCB credit operations.

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 3).

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

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 degressive scale:

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

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

The 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 2003, 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 2003, the TARGET oversight activities of the PSPWG focused on two aspects: (i) the evaluation of the current TARGET system against the Core Principles for Systemically Important Payment Systems, which were adopted by the Governing Council in January 2001 as the minimum oversight standards for the Eurosystem; and (ii) the implementation of the TARGET oversight function at the local and ESCB levels. In addition, input has been provided on the oversight requirements for TARGET2.

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
PT	Portugal
SE	Sweden
UK	United Kingdom

Others

BIC	Bank Identifier Code
BIS	Bank for International Settlements
CCBM	Correspondent Central Banking Model
CET	Central European Time
CLS	Continuous Linked Settlement
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
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
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 103 103+ 202	Message Types
NCB	national central bank
NSS	Net settlement system
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
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
TCP/IP	Transmission Control Protocol/ Internet Protocol
TIS	TARGET Information System

5 GLOSSARY

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

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

Business continuity: a payment system or securities settlement system arrangement which aims to ensure that it meets agreed service levels even if one or more components of the system fail or if it is affected by another abnormal event. This includes both preventive measures and arrangements to deal with these events. See **TARGET contingency measures.**

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

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

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

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

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

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

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

Credit institution: an institution covered by the definition in Article 1(1) of Directive 2000/12/EC of the European Parliament and of the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions, as amended by Directive 2000/28/EC of the European Parliament and of the Council of 18 September 2000. Thus, a credit institution is: (i) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credit for its own account; or (ii) an undertaking or any other legal person, other than those under (i), which issues means of payment in the form of electronic money. "Electronic money" shall mean monetary value, as represented by a claim on the issuer, which is: (a) stored on an electronic device; (b) issued on receipt of funds of an amount not lower in value than the monetary value issued; and (c) accepted as a means of payment by undertakings other than the issuer.

Credit risk/exposure: the risk that a counterparty will not settle an obligation in full, either when due or at any time thereafter. In exchange-for-value systems, the credit risk is generally defined as including the replacement cost risk and the principal risk.

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

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

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 (or participant in a settlement system) will not settle an obligation for full value when due. Liquidity risk does not imply that a counterparty or participant is insolvent, since it may be able to settle the required debit obligations at some unspecified time thereafter.

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

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

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

Obligation: a duty imposed by contract or by law.

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

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

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

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

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

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

Payment Settlement Message Request (PSMR): the settlement of TARGET 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 ownership of the securities is not retained by the seller. Repurchase agreements are included in M3 in cases where the seller is a monetary financial institution (MFI) and the counterparty is a non-MFI euro area resident.

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

Reserve requirement: the requirement for credit institutions to hold minimum reserves with the central bank. In the minimum reserve framework of the Eurosystem, the reserve requirement of a credit institution is calculated by multiplying the reserve ratio for each category of items within the reserve base by the amount of those items on the institution's balance sheet. In addition, institutions are allowed to deduct a lump-sum allowance from their reserve requirement.

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

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

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

Settlement: an act which discharges obligations in respect of funds or securities transfers between two or more parties. A settlement may be final or provisional. See **gross settlement system**, **net settlement system**, **final settlement**.

Settlement risk: a general term used to designate the risk that settlement in a transfer system will not take place as expected. This risk may comprise both credit and liquidity risk.

Standing facility: a central bank facility available to counterparties on their own initiative. The Eurosystem offers two overnight standing facilities: the marginal lending facility and the deposit facility.

Straight-through processing (STP): the automated end-to-end processing of trades/payment transfers including the automated completion of generation, confirmation, clearing and settlement of instructions.

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

SWIFT (S.W.I.F.T. s.c.r.l.) (Society for Worldwide Interbank Financial Telecommunication) a co-operative organisation created and owned by banks which operates a network to facilitate the exchange of payment and other financial messages between financial institutions (including broker-dealers and securities companies) throughout the world. A SWIFT payment message is an instruction to transfer funds; the exchange of funds (settlement) subsequently takes place through a payment system or through correspondent banking relationships.

Systemic risk: the risk that the failure of one participant in a transfer system, or in financial markets generally, to meet its required obligations will cause other participants or financial institutions to be unable to meet their obligations (including settlement obligations in a transfer system) when due. Such a failure may cause significant liquidity or credit problems and, as a result, might threaten the stability of financial markets.

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

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

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

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.

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.

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.

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.
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"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.
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"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.

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"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.