

# TARGET ANNUAL REPORT 2005













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# TARGET ANNUAL REPORT

2005

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#### INTRODUCTION

### 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, has been the market's preferred system for large-value payments in euro, making it one of the world's largest largevalue payment systems.

About 10,500 banks including branches and subsidiaries use TARGET to initiate payments on their own or on their customers' behalf. Close to 53,000 banks worldwide (and thus all the customers of these banks) can be addressed via TARGET. Consequently, TARGET is instrumental in promoting the integrated euro area money market, which is a prerequisite for the effective conduct of the single monetary policy, and furthermore contributes to the integration of the euro financial markets.

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

In 2005 TARGET traffic increased in comparison with the previous year. TARGET processed more than 76 million transactions with a value of more than €488 trillion. This corresponds to a daily average of 296,306 payments with a total daily value of €1.9 trillion. TARGET therefore accounted for 89% in terms of the value and 59% in terms of the volume of traffic that flowed through all the large-value payment systems operating in euro.

Owing to TARGET's pivotal role in maintaining financial stability in the European Union (EU), the Eurosystem pays very close attention to the reliability and safety of TARGET. In 2005 the availability rate improved further, reaching 99.83%. To manage events that could potentially reduce the TARGET service level as efficiently as possible, the Eurosystem ensures that its business continuity and contingency measures are fully operable. The TARGET risk management framework ensures the secure processing of TARGET payments. Finally, the compliance of TARGET with the "Core Principles for Systemically Important Payment Systems"<sup>1</sup> is verified as part of the TARGET oversight.

On 24 October 2002 the Governing Council of the European Central Bank (ECB) decided on the long-term strategy for TARGET, known as TARGET2. TARGET2 is designed to enable the Eurosystem to meet new demands from its users, including those from the ten new Member States that joined the EU on 1 May 2004. In December 2004 the Governing Council of the ECB approved the building of the Single Shared Platform (SSP) for TARGET2 on the basis of the joint offer made by three national central banks (NCBs) of the Eurosystem, namely the Banque de France, the Banca d'Italia and the Deutsche Bundesbank. In the meantime, all euro area NCBs have confirmed their participation in TARGET2. The development of the SSP is currently underway. Procedures for a sound migration to TARGET2 (including testing activities) are currently being elaborated. The go-live date for the first wave of countries migrating to the SSP is scheduled for 19 November 2007.

This report provides comprehensive information about TARGET's performance and outlines the main developments that took place in 2005. Chapter 1 provides information on the payment business in TARGET. Chapter II describes the various measures in place to ensure the robustness and resiliency of the system, and elaborates on the nature of TARGET oversight. New developments in TARGET are outlined in Chapter III. Finally, the annexes provide a selection of statistical data, a chronology of developments in TARGET, and an overview of its organisation and management structure.

Report on "Core Principles for Systemically Important Payment Systems", Committee on Payment and Settlement Systems (CPSS), Bank for International Settlements (BIS), January 2001.



## CHAPTER I

### PAYMENT BUSINESS

In 2005 TARGET contributed further to the integration of the euro money market and, because the Eurosystem's credit operations are processed via this system, continued to play an important role in the smooth implementation of the single monetary policy. The TARGET system also attracts a variety of other payments on account of its real-time settlement service in central bank money and its broad market coverage.

In the year under review, TARGET had a share of 89% in terms of value and 59% in terms of volume in all large-value payment systems operating in euro. The system is used to settle large-value and time-critical payments, and additionally processes a considerable number of relatively low-value commercial payments.

In 2005 TARGET had 1,072 direct and 9,322 indirect participants.<sup>2</sup> The overall number of banks that can be addressed through TARGET (including branches and subsidiaries) increased to 52,761 worldwide.

#### I PAYMENTS IN TARGET<sup>3</sup>

#### **DEVELOPMENT OF TARGET'S MARKET SHARE**

As the following figures show, TARGET is the market's preferred system for the processing of

large-value payments in euro. In 2005 TARGET's share of the traffic flowing through all large-value payment systems operating in euro rose slightly to 89% in value terms (compared with 88% in 2004) and 59% in volume terms (compared with 58% in 2004).

Compared with the previous year, market traffic (i.e. all payments processed in large-value payment systems operating in euro) increased by 10% in terms of value and by 8% in terms of volume, exceeding the overall market development in both respects.

#### **TARGET TRAFFIC IN 2005**

In 2005 TARGET as a whole processed a total of 76,150,602 payments with a total value of  $\notin$ 489 trillion. This corresponds to a daily average of 296,306 payments with a total value of  $\notin$ 1.9 trillion.

Average daily TARGET turnover rose by 11% in 2005 (after 4% in 2004). Intra-Member State

- 2 These figures are based on a survey of direct and indirect participants in 2005, and represent the situation at end-2005.
- 3 This analysis is based on 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 | TARGET payment flows

		2004 € b	2005 illions	Change %	2004 Number of	2005 payments	Change %
FARGET overall	Total	443,993	488,900	10	69,213,486	76,150,602	10
	Daily average	1,714	1,902	11	267,234	296,306	11
of which:							
ntra-Member State	Total	297,857	324,089	9	52,368,115	58,467,492	12
	Daily average	1,150	1,261	10	202,193	227,500	13
nter-Member State	Total	146,137	164,812	13	16,845,371	17,683,110	5
	Daily average	564	641	14	65,040	68,806	6
of which:							
Interbank	Total	139,016	156,667	13	8,185,586	8,502,879	4
	Daily average	537	610	14	31,605	33,085	5
Customer	Total	7,121	8,145	14	8,659,785	9,180,231	6
	Daily average	27	32	15	33,435	35,721	7

Source: ECB.

Note: There were 259 operating days in 2004, compared with 257 operating days in 2005.



#### 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	
2004 compared with 2003	4%	3%	5%	2%	0%	9%	
2005 compared with 2004	11%	10%	14%	11%	13%	6%	

Source: ECB.

#### Table 3 Payment value bands for TARGET as a whole

		TARGET overall				
	Equal or less than €50,000	> €50,000 ≤ €1 million	<pre>&gt; €1 million &lt; €1 billion</pre>	>€1 billion		
2004	65%	23%	12%	.> 0.1%		
2005	65%	24%	11%	.> 0.1%		

traffic showed an increase of 10% (after 3% in 2004), while inter-Member State turnover grew by 14% (after 5% in 2004) (see Table 2). In volume terms, TARGET traffic grew by 11% (up on 2% in 2004), with a 13% change at the intra-Member State level (after no change in 2004) and a 6% rise at the inter-Member State level (compared with 9% in 2004).

TARGET was primarily designed to settle largevalue payments. Nevertheless, in practice 65% of TARGET payments are for values less than  $\notin$ 50,000, and in 2005 payments above  $\notin$ 1 million only accounted for 11% of the traffic. On average there were 194 payments per day with a value above  $\notin$ 1 billion.

In 2005 TARGET flows remained concentrated within a few RTGS systems. As was the case in 2004, five RTGS systems processed as much as 83% of the TARGET total value and 82% of the TARGET total volume (see Statistical Annex 1, Tables 1.1 and 1.2).

An intra-year comparison shows that the level of activity in TARGET largely followed the usual trend, with increasing traffic levels in the first quarter, stable second and third quarters, and more activity in the final quarter (see Charts 1 and 2). It is noteworthy that the usual decrease in activity during the slower summer period was in 2005 limited to August. On the basis of the daily monthly averages, it appears that TARGET processed the highest values in June and December, whereas the highest volumes were processed in July and December.<sup>4</sup>

• The daily average number of payments processed in TARGET as a whole in July 2005 was 311,472 with a total value of €1,947 billion. In December 2005 it was 344,634 totalling €2,072 billion, while in June 2005 it was 304,938 totalling €2,013 billion.



### CHAPTER I Payment business





## TARGET INTRA-MEMBER STATE PAYMENT FLOWS <sup>5, 6</sup>,

In 2005 TARGET processed more than 58 million intra-Member State payments with a total value of  $\notin$ 324 trillion, which means an average of 227,500 payments with a total value of  $\notin$ 1,261 billion on a daily basis. This corresponds to a year-on-year increase of 10% in terms of value, and a 13% change in terms of volume (see Table 4).

The value of intra-Member State payment flows increased significantly at the end of the year, which is in line with the phenomenon generally observed in previous years. Intra-Member State traffic represented 66% in terms of the value and 77% in terms of the volume of overall TARGET traffic.

For an indication of the different usage of TARGET across countries, see Tables 1.1 and 1.2 in Statistical Annex 1.

The following observations can be made with regard to the concentration of intra-Member State payments in the different local TARGET components. In terms of volume, the German component processed more than half of intra-Member State payments., and more than twothirds if the German and Italian TARGET components are taken together. Together, six NCBs, namely the Banca d'Italia, the Banco de España, the Banque de France, De Nederlandsche Bank, the Deutsche Bundesbank and the Oesterreichische Nationalbank, processed 90% of intra-Member State payments, of which approximately 81% in terms of value was settled in France, Germany and Spain.

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

% change)		
		Number of
	€ billions	payments
	Intra-Me	mber State
004 compared with 2003	3%	0%
005 compared with 2004	10%	13%



FCB

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





In Germany and Italy, TARGET is extensively used to process low-value customer payments, resulting in a much lower average value of intra-Member State payments than the TARGET average ( $\in$ 3.1 and 2.6 million respectively, compared with  $\notin$ 5.5 million at TARGET level). In France or Spain, by contrast, such payments would typically be processed outside TARGET, and the average value of intra-Member State payments settled in TARGET is correspondingly significantly higher ( $\notin$ 44 million and  $\notin$ 11.7 million respectively).

The grouping of traffic figures for 2005 into value bands shows that TARGET is extensively used to process low-value payments. The distribution of payments according to value bands was almost unchanged from 2004 (see Table 5).

#### TARGET INTER-MEMBER STATE TRAFFIC<sup>7</sup>

In 2005 TARGET processed a total of 17,683,110 inter-Member State payments with a total value of  $\notin$ 165 trillion, a daily average of 68,806 payments totalling  $\notin$ 641 billion. This represents a year-on-year rise of 6% in terms of volume and 14% in terms of value (see Table 6).

Both customer and interbank payments increased in value terms by 15 and 7% respectively. In 2005 the share of inter-Member State traffic in TARGET as a whole was unchanged compared with 2004 (34% in terms of value and 23% in terms of volume).

7 Inter-NCB payments are included in the interbank figures in this report and not removed because they represent only 0.1% of the total turnover of inter-Member State payments.

		TARGET intra-Member State payments					
	Equal or less than €50,000	>€50,000 ≤€1 million	>€1 million ≤€1 billion	>€1 billion			
2004	66%	23%	11%	< 0.1%			
2005	65%	25%	10%	< 0.1%			

#### Table 6 Change in TARGET inter-Member State payment flows

		€ billions		N	imber of payment	s
	Inter-Member State					
	Overall	Interbank payments	Customer payments	Overall	Customer payments	Interbank payments
2004 compared with 2003	5%	5%	12%	9%	3%	15%
2005 compared with 2004	14%	14%	15%	6%	5%	7%

Source: ECB.





The intra-year development of TARGET inter-Member State traffic shows that throughout 2005, higher volumes were processed than in 2004, especially towards the end of the first semester and at the end of the year (see Charts 5 and 6), where the increase was more pronounced. The usual August dip in value and volume is attributable to the summer holiday period.

In 2005 interbank payments represented 95% of the total value of inter-Member State payments and 48% of the total volume, the remainder being customer payments. In 2004 these figures were 95% and 49% respectively, showing that the share of customer payments in inter-Member State traffic continued to grow. 2005 is the second consecutive year that customer payments have made up the majority of inter-Member State payments processed in TARGET.

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		TARGET inter-M	ember State			
		Customer payments				
	Equal or less than €50,000	>€50,000 ≤€1 million	>€1 million ≤€1 billion	>€1 billion		
2004	39%	35%	26%	< 0.1%		
2005	40%	33%	27%	< 0.1%		

#### Table 8 TARGET inter-Member State interbank payment value bands

		TARGET inter-	Member State		
		Interbank	payments		
	Equal or less than €50,000	>€50,000 ≤€1 million	>€1 million ≤€1 billion	> €1 billion	
2004	85%	12%	3%	< 0.1%	
2005	85%	12%	3%	< 0.1%	

Source: ECB.



The grouping of TARGET inter-Member State payment traffic into value bands shows that TARGET was extensively used to settle lowvalue payments. Compared with 2004, the distribution was almost unchanged.

## TREND IN THE AVERAGE VALUE OF TARGET PAYMENTS

The average value of individual transactions processed in TARGET as a whole increased by  $\notin 0.1$  million to  $\notin 6.5$  million (see Table 9). The average value of intra-Member State TARGET payments dropped by  $\notin 0.1$  million to  $\notin 5.6$  million, while the average value of inter-Member State payments increased by  $\notin 0.7$  million to  $\notin 9.4$  million.

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

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

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

# PATTERN OF INTER-MEMBER STATE INTRADAY FLOWS

In 2005 TARGET processed a daily average volume of nearly 16,500 inter-Member State payments in the first hour of operations (between 7 and 8 a.m.). Compared with 2004, this represents an increase of 10% (2% more customer payments and 21% more interbank payments). More than 50% of the volume was processed in the first three hours of operations (between 7 and 10 a.m.). By 2 p.m. almost three out of four payments (and at the customer payment cut-off time (5 p.m.), 99.4% 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. and 50% had been processed by 1 p.m. At 5 p.m. the ratio of processed payments was 93.0% of the total value (see Charts 7 and 8).

On an average day, the peak volume was processed between 7 and 10 a.m., and the peak value was processed between 4 and 5 p.m. In 2005 the peaks were comparable to 2004. This

(€ millions)										
			2004		2005					
	Q1	Q2	Q3	Q4	Average	Q1	Q2	Q3	Q4	Averag
TARGET overall	6.4	6.4	6.4	6.5	6.4	6.8	6.6	6.2	6.2	6.5
of which:										
Intra-Member State	5.6	5.8	5.6	5.7	5.7	5.9	5.7	5.3	5.3	5.6
Inter-Member State	8.7	8.4	8.7	8.9	8.7	9.4	9.3	9.4	9.3	9.4
of which:										
Interbank	16.7	16.7	17.1	17.4	17.0	18.0	18.3	18.3	18.7	18.4
Customer	0.8	0.8	0.8	0.9	0.8	0.9	0.9	0.9	0.9	0.9





can be attributed to the fact that a high number of relatively low-value, "warehoused" payments from previous days are released in the morning. Towards the end of the day, by contrast, highervalue liquidity management transfers predominate.

The hourly average value of an inter-Member State interbank payment steadily increased throughout the day, from  $\notin 6.7$  million in the first hour of operations to  $\notin 114.5$  million in the last hour (see Statistical Annex 2, Chart 2.2).

The high average value in the last hour of operations is a direct result of the liquidity shifts between banks that take place at that time. The average value of an inter-Member State customer payment rose from 0.2 million in the first two hours of operations, to 0.2 million in the last two hours before the customer payment cut-off time at 5 p.m. (see Statistical Annex 2, Chart 2.3). This suggests that the late high-value customer payments were mainly related to the cash management activities of corporate treasuries.



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



As in 2005, the analysis of intraday flows shows that credit institutions made TARGET payments early in order to provide the interbank market with sufficient liquidity and to ensure the coverage and sending of subsequent payments. Owing to TARGET's immediate and final settlement of individual payments, the liquidity of incoming payments can be reused to make outgoing payments, which considerably reduces overall liquidity needs. This is in line with the liquidity management guidelines issued by the European Banking Federation (EBF),<sup>8</sup> which have contributed greatly to the achievement of this pattern.

#### 2 FLUCTUATIONS IN TARGET PAYMENT FLOWS<sup>9</sup>

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

#### IMPACT OF PERIODICAL TRANSACTIONS

In 2005 the largest fluctuation in *overall TARGET flows* stemming from periodical transactions was observed on the last day of the half year, with a traffic increase of 44% in value terms and 40% in volume terms. On the last few days of each quarter, TARGET traffic grew on average by 30% in terms of value and 36% in terms of volume.

The largest fluctuation resulting from periodical transactions at the *TARGET intra-Member State level* was recorded on 30 June (the last day of the half year), with a traffic increase of 46% in value and 41% in volume. TARGET intra-Member State figures were significantly affected at the end of each quarter, showing average growth of 31% in terms of value and 38% in terms of volume.

Likewise at the *inter-Member State level*, the greatest fluctuation attributable to periodical transactions was recorded on the last day of the half year, with a rise of 40% in value and 37% in volume.

#### IMPACT OF PUBLIC HOLIDAYS IN THE US

In 2005, US public holidays had a less pronounced effect on TARGET, which as a whole experienced an average decrease in traffic of 12% in value terms and 9% in volume terms, compared with 19% and 17% respectively in 2004 (see Table 11). This, however, was to some extent compensated for by an average increase of 7% and 10% respectively on certain business days (see Table 12).

8 See the EBF's website (www.fbe.be).

9 Comparisons in this section are made with the daily average for 2004.

(% change on the last	t day of a quarter relative to	o 2005 daily aver	age)			
		Value			Volume	
	TARGET as a whole	Intra- Member State	Inter- Member State	TARGET as a whole	Intra- Member State	Inter- Member State
Q1 2005	25	27	22	24	23	27
Q2 2005	44	46	40	40	41	37
Q3 2005	28	28	29	43	45	37
Q4 2005	21	25	13	36	41	19
	30	31	26	36	38	30

Source: ECB.



#### Table || TARGET traffic on US holidays

		Value			Volume	
	TARGET as a whole	Intra- Member State	Inter- Member State	TARGET as a whole	Intra- Member State	Inter- Member State
	-9	-4	-20	-10	-7	-21
Washington's Birthday	-17	-11	-28	-17	-14	-28
Memorial Day	-22	-14	-38	-10	-5	-29
Independence Day	-16	36	-23	0	4	-12
Labour Day	-17	-15	-21	-13	-9	-23
Columbus Day	-12	-8	-19	-4	0	-19
Veterans Day	-27	-23	-35	-12	-7	-28
Thanksgiving Day	-12	-5	-26	-8	-4	-22
	-12	-5	-26	-9	-5	-23

(% change on US holiday relative to 2005 daily average)

Source: ECB.

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

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

#### **IMPACT OF TARGET HOLIDAYS**

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

(% change after a US holiday	relative to 2005 da	uly 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	10	7	16	2	-6	27
Washington's Birthday	-3	-4	0	-6	-11	11
Memorial Day	26	24	31	20	17	32
Independence Day	7	5	12	12	9	22
Labor Day	-1	-7	10	0	-3	13
Columbus Day	2	-1	7	13	11	19
Veterans Day	6	3	11	18	17	21
Thanksgiving Day	7	4	11	17	15	23
	7	4	12	10	6	21
	7	4	12	10	6	21

#### Table 12 TARGET traffic on the business day after US holidays

Source: ECB.



#### Table 13 TARGET traffic on the business day after TARGET holidays

		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	-8	-2	-21	-24	-22	-32
Easter Monday	11	10	12	35	33	44
Labour Day	-12	-14	-9	-1	3	-14
Christmas Day	-10	-5	-18	10	14	-2
	-5	-3	-9	5	7	-1

On the business day following a TARGET holiday, TARGET as a whole processed on average 5% more transactions with 5% lower value. These deviations are slightly different from those observed last year, which saw a 3% decrease in traffic and a 6% increase in value. The most considerable deviation was, as in previous years, observed after the Easter weekend, whereby Good Friday and Easter Monday create a four-day holiday period. At the intra-Member State level, the increase was 7% in terms of volume, but a decrease of 3% in terms of value was observed, while at the inter-Member State level, traffic dropped by 1% in volume terms and decreased by 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, but on such days, the average decrease in payment flows was 25% in terms of value and 36% in terms of volume.

On average, such decreases were not followed by similar significant changes in the opposite direction on the day after the regional public holiday (see Table 15). This can be attributed to a general reduction in economic and financial

(% change on a regional	public holiday relative t	to 2005 daily aver	rage)				
		Value		Volume			
	TARGET as a whole	Intra- Member State	Inter- Member State	TARGET as a whole	Intra- Member State	Inter- Member State	
Epiphany	-26	-31	-15	-39	-43	-24	
Whit Monday	-27	-30	-20	-45	-49	-32	
Ascension Day	-13	-16	-8	-35	-41	-17	
Assumption Day	-27	-35	-11	-25	-24	-28	
All Saints Day	-30	-38	-15	-37	-41	-25	
	-25	-30	-14	-36	-40	-25	

CHAPTER I Payment business



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

(% change on a regional public holiday relative to 2005 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	-6	-7	-3	-19	-21	-11		
Whit Monday	-1	-4	4	-8	-9	-3		
Ascension Day	0	4	-7	3	3	1		
Assumption Day	-9	-10	-8	-12	-10	-18		
All Saints Day	3	5	0	3	6	-4		
	-3	-3	-3	-7	-6	-7		

Source: ECB.

activity on these days, meaning that there was no need for TARGET to catch up on the following business day.

*Public holidays in individual euro area countries* had hardly any impact on TARGET flows in 2005.

#### **PEAK DAYS IN TARGET**

In 2005 the *highest volume* on a single day in *TARGET as a whole* was recorded on 30 September, with 424,805 processed payments. The *highest value* on a single day in *TARGET as a whole* was recorded on 30 June, at a total of €2,743 billion.

Intra-Member State flows peaked in terms of volume at 330,335 payments on 30 September 2005. In terms of value, they reached a peak on 30 November at a total of  $\notin$ 1,874 billion.

*Inter-Member State* flows reached an all-time high in terms of *volume* at 98,822 payments on 29 March 2005, the day after the Easter holidays. In terms of *value*, Inter-Member State flows peaked on 30 June at a total of €900 billion.

#### Box I

#### TARGET LONG-TERM CALENDAR APPLIED IN 2005

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 to prevent introducing uncertainties into the financial markets, a long-term calendar for TARGET closing days was established and has been applied since 2002. TARGET as a whole (i.e. including all national components) is closed, in addition to Saturdays and Sundays, on New Year's Day, Good Friday, Easter Monday, 1 May (Labour Day), Christmas Day and 26 December.



#### Table 16 Peak days in TARGET 2005 2004 Value (€ billions) TARGET as a whole 2,484 30 June 2,743 30 June Intra-Member State 1,715 30 June 1,874 30 Nov. Inter-Member State 30 June 900 30 June 769 Number of payments TARGET as a whole 380.842 20 Dec. 424.805 30 Sep. Intra-Member State 288,415 20 Dec. 330,335 30 Sep. Inter-Member State 94,299 98,822 29 Mar. 1 June Inter-Member State 87,900 28 Nov 94,299 1 June Source: ECB

The *lowest volume* on a single day for *TARGET* as a whole was recorded on 5 May (Whit Monday), when a total of 161,494 payments were processed (45% below the daily average). The *lowest value* on a single day for *TARGET* as a whole was recorded on 1 November (All Saints' day), with a total turnover of  $\notin$ 1,328 billion ( $\notin$ 575 billion below the daily average).

#### 3 INTERBANK STRAIGHT-THROUGH PROCESSING (STP)

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

TARGET uses the relevant SWIFT message types (MT103, MT103+ and MT202), which have been tailored to STP practices. The very low rate of payments rejected at the inter-Member State level proves the readiness and capability of TARGET users to support STP. In 2005 the rejection rate was further reduced to around 0.14% (down from 0.16% in 2004) of the total number of TARGET inter-Member State payments sent. This means that, on average, only 96 out of 68,800 inter-Member State payments per day had to be returned to the sending bank (see Chart 9).

Another indicator of the increased willingness of banks to support EU-wide STP is the use of the customer payment message type MT103+ in TARGET. MT103+ was introduced by SWIFT in November 2000 and was immediately available in TARGET. It is the STP version of the MT103 message, enhanced to comply with recent STP practices and to offer the recipient a higher level of assurance that the message can be processed without costly manual intervention. In particular, MT103+ requires the International Bank Account Number (IBAN) of the beneficiary and the Bank Identifier Code (BIC) of the beneficiary's institution. European banks,







which were at the time under pressure from both public authorities and the competitive environment to reduce the price of cross-border retail transactions in euro, found the MT103+ message a useful tool in their efforts to achieve STP. In 2005 the share of MT103+ in TARGET inter-Member State customer payments increased from 43% in the first quarter to 48% in the fourth quarter<sup>10</sup> (see Chart 10). In the first quarter of 2004, however, its share fell to 27%. It will be interesting to monitor future developments in the share of MT103+ in TARGET in order to obtain an idea of the progress being made towards pan-European STP.

10 The IBAN was created to identify uniquely the account of a customer at a financial institution.



## **CHAPTER II**

## **ROBUSTNESS, RESILIENCY AND OVERSIGHT**

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

- a very high operating level in terms of TARGET availability, and short processing times (as measured by the business performance indicator, for example);
- ii) the secure processing of payments in TARGET (including protection against any type of threat); and
- iii) compliance with the internationally agreed Core Principles for Systemically Important Payment Systems.

#### I TARGET SERVICE LEVEL AND AVAILABILITY

The overall availability of TARGET was 99.83% in 2005 compared with 99.81% in 2004 (see Chart 11). In addition to the overall figure for

TARGET, this report provides the availability figures for each local TARGET component (see Statistical Annex 4).

To give the user some idea of the real-time processing capability of TARGET, it is helpful to examine the time needed to process a payment. In the year under review, 95.60% of TARGET inter-Member State payments were processed in less than five minutes (compared with 95.87% in 2004), 3.58% were processed in five to 15 minutes (3.53% in 2004), and 0.40% in 15 to 30 minutes (0.31% in 2004). The processing time only exceeded 30 minutes in the case of 0.42% of payments (see Chart 12). This percentage does however represent a small increase on 2004, and is the result of failures that occurred in some local TARGET components.

A total of 99 incidents were recorded within the local TARGET components in 2005, an overall decrease of 12% in comparison with the 112 incidents recorded in 2004. The two main causes of incidents were linked to the system's connection to the SWIFT network and to software/hardware component failures, as before. Two of these incidents had a severe impact on the payment processing capabilities of local TARGET components:



#### **CHAPTER 2**

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- On Monday 18 January, between 7:07 a.m., and 2:21p.m., the Deutsche Bundesbank experienced a software problem. To allow participants to settle all their payments normally, the cut-off time for customer payments and the closing time of TARGET was delayed for one hour.
- On 22 June 2005 the TARGET service was severely impacted between 8:00 a.m. and 12:30 p.m. by an incident caused by a network outage at one of SWIFTNet's network service providers. As a result, the Deutsche Bundesbank was severely impacted as it lost its connection for a total of five hours and 25 minutes. The same incident also caused an interruption for the Banque de France and Sveriges Riksbank, but with a duration of less than two hours.

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

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

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#### Box 2

#### TARGET INFORMATION SYSTEM (TIS)

The TARGET Information System (TIS) provides standardised information on the operational status of the TARGET system via three of its providers (Reuters, Telerate/Bridge and Bloomberg). The TIS information is input by the ECB and simultaneously communicated by all three providers.

The TIS supplements the communication channels that already exist at the domestic level. The information is input by the ECB and simultaneously communicated by Reuters, Telerate/Bridge and Bloomberg.<sup>1</sup> Thus, the information is accessible to TARGET participants with access to these information services.

On 5 December 2005 an improved version of the TIS went live. The main improvements are found in the more detailed description in the event of an incident and the impact it may have on the closing time of TARGET.

1 Reuters, p. ECB46; Telerate/Bridge pp. 47556, 47557; and Bloomberg p. ECB17.

#### 2 TARGET BUSINESS CONTINUITY AND CONTINGENCY MEASURES

Business continuity and contingency measures are in place both in TARGET and in all its local components. 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. These were implemented when TARGET started operating, and have been further enhanced since then. The aim of these contingency measures is to ensure that all payments needed to avoid systemic risk can be processed in all circumstances. Box 3 below looks at those TARGET payments considered to be systemically important.

#### Box 3

#### THE CONCEPT OF (VERY) CRITICAL PAYMENTS

From the wide range of payments processed in TARGET, the Eurosystem – with the support of the European banking industry – first identified the types of payments it considered to be systemically important, i.e. payments that could trigger systemic risk if unprocessed or processed behind schedule. Depending on whether this risk could be caused on a global or a euro area scale, the Eurosystem, again with the support of the European banking industry, then further classified such payments as either "very critical" or "critical". 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 EURO1, 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 to be critical, as well as intra-bank liquidity transfers equal to or above €100 million.

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

As in previous years, regular trials were carried out in 2005 in order to verify that TARGET business continuity and contingency measures are fully operational, and that staff are familiar with them. Credit institutions often participate in these trials.

In the reporting period, the Eurosystem, in cooperation with the banks, improved the management of incidents that might occur during the last two hours of TARGET business. This period is critical for the banks because of the settlement of the EURO1 system, the cut-off for customer payments (5 p.m.) and the balancing of liquidity positions. Any operational disturbances could have a negative impact on liquidity distribution and thus the money market rates. In addition, poorly managed incidents at this critical time could affect the reliability of the system. In collaboration with the banks, the Eurosystem therefore drew up an incident management framework which addresses the needs of both the NCBs and the commercial banks. The core element of the new framework is that the possible actions of the Eurosystem are much more transparent for the banks. Should an incident occur, its possible impacts are more predictable for TARGET users, which reduces the risk of an erratic market reaction.

#### COOPERATION WITH TARGET USERS AND OTHER RTGS OPERATORS

TARGET business continuity and contingency measures form an important interface between TARGET and its users, and their effective functioning requires close cooperation and a sound understanding on the part of the latter. In 2005 the Eurosystem continued its dialogue with TARGET users at both the national and the European level. As the above example on cooperation on incident management shows, this initiative was very fruitful and helped to strengthen further TARGET operations.

TARGET business continuity and contingency issues are not just an issue internal to the euro area, as settlement problems in currencies other than the euro might also have negative knockon effects on the euro area. In particular, the global reach of CLS has created a direct link between different currencies that, if not appropriately addressed, could potentially lead to contagion. In 2005 the operators of the RTGS systems of currencies eligible for CLS tested the communication channel that allows RTGS operators to communicate irrespective of time and language differences. Furthermore, to take into account the new currencies that became CLS-eligible in 2005, the communication tool was extended to the respective RTGS systems.

#### **CONTINUOUS LINKED SETTLEMENT (CLS)**

CLS is a system designed for the settlement of foreign exchange (FX) transactions.<sup>11</sup> CLS largely eliminates FX settlement risk by settling FX transactions in its books on a paymentversus-payment (PvP) basis. The remaining balances of the CLS settlement members in the books of CLS Bank (CLSB) are squared by pay-

<sup>11</sup> The eligible currencies that are currently settled are AUD, CAD, CHF, DKK, EUR, GBP, HKD, JPY, KOW, NOK, NZD, SEK, SGD, USD and ZAR.

ins and pay-outs in central bank money for each of the eligible currencies.

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

In 2005 euro area credit institutions closely followed the recommendations. This, together with the established and trialled contingency measures, enabled the smooth processing of CLS-related payments, even in the event of an incident in the early hours of TARGET operations, and prevented any incident in the euro area from spilling over to other currencies.

#### **3 TARGET RISK MANAGEMENT**

Security and operational reliability are key assets of the TARGET system that need to be suitably protected. In order to meet this objective, a comprehensive risk management framework has been put in place for the TARGET system. This framework comprises, inter alia, a fact-finding analytical part as well as dynamic elements to ensure that the security of the system is continuously monitored and maintained.

The first part was accomplished by conducting an assessment of the risk profile of the 16 TARGET components towards the end of 2003. Work on security issues performed since then has centred on implementing additional safeguard measures, monitoring the effectiveness of existing controls, learning from incidents that affected system availability, and identifying new threats to the system.

The consistent use of the dynamic modules and processes of the TARGET risk management framework assure users that the overall security situation in TARGET will be kept at a satisfactory level.

#### 4 TARGET OVERSIGHT

The Eurosystem's TARGET oversight function is independent of the TARGET operation function. Whereas the TARGET operation also includes, for example, TARGET risk management activities. TARGET oversight pursues two major objectives. First, TARGET oversight has to verify that the TARGET system's present and future set-up and procedures are compatible with the "Core Principles for Systemically Important Payment Systems"<sup>12</sup> adopted by the Governing Council in 2001 as the minimum common standards for its oversight policy on systemically important payment systems. Second, any case of noncompliance with the Core Principles will have to be brought to the attention of the decisionmaking bodies of the ECB so that, when needed, measures can be considered and implemented by the TARGET operation function to ensure full compliance with the Core Principles.

The 2004 TARGET Oversight Guide is the comprehensive reference document for the NCBs and the ECB, and is designed to contribute to the consistent performance of the TARGET oversight function across the European System of Central Banks (ESCB). Building on this, the NCBs and the ECB have fully implemented the oversight function for the existing TARGET system at the national level.

12 Report by the Committee on Payment and Settlement Systems (CPSS) on the "Core Principles for Systemically Important Payment Systems", BIS, January 2001.

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In addition to the regular TARGET oversight activities - which, for example, include the regular analysis (and ESCB-internal reporting) of major incidents in national RTGS systems/ the ECB payment mechanism (EPM) from an oversight perspective - in 2005 the TARGET oversight function focused on four main issues: (i) the publication of the ECB's report on the assessment of the connection of SORBNET-EURO to TARGET via the Banca d'Italia and its national RTGS system BIREL; (ii) the assessment of follow-up work related to the 2004 oversight review of the status report on the TARGET risk situation; (iii) the launch of TARGET oversight activities related to the connection of additional RTGS systems from new EU Member States to the current TARGET system; and (iv) the analysis of whether or not the existing TARGET system should be subject to a second fully fledged oversight assessment before it ceases operation in 2007. Moreover, the framework for the organisation of TARGET2 oversight was elaborated.

#### **MAJOR TARGET OVERSIGHT ACTIVITIES IN 2005**

#### **SORBNET-EURO**

In June 2005, the ECB published its report on "Assessment of SORBNET-EURO and BIREL against the Core Principles: connection of SORBNET-EURO to TARGET via the Banca d'Italia and its national RTGS system BIREL". SORBNET-EURO was assessed as having achieved a high degree of compliance with all relevant Core Principles. Some minor deficiencies related to the legal soundness and the business continuity arrangements of the SORBNET-EURO system were identified, but have not been addressed. BIREL's compliance with the relevant Core Principles was assessed as not having been adversely affected by the connection of SORBNET-EURO.

## OVERSIGHT ON RTGS SYSTEMS THAT ENVISAGE CONNECTING TO THE CURRENT TARGET SYSTEM

Two new EU Member State NCBs plan to connect their own euro RTGS systems to the existing TARGET system in 2006 and early 2007. In accordance with the Eurosystem's oversight policy framework, these systems have to be assessed against the relevant Eurosystem oversight standards, notably the Core Principles for Systemically Important Payment Systems, prior to their connection going live. The Eurosystem launched the assessment process in 2005 in order to identify any potential issues in the design of the systems and to resolve them ex ante before the start of operations.

#### FOLLOW-UP TO THE 2004 OVERSIGHT REVIEW OF THE STATUS REPORT ON THE TARGET RISK SITUATION

Despite the very positive overall outcome of the 2004 oversight review of the status report on the TARGET risk situation, it should be recalled that the TARGET oversight function had identified some specific risk issues. In 2005, therefore, the TARGET oversight function focused on the appropriate implementation of follow-up measures aimed at further mitigating residual risks to the extent possible.

#### NO LONGER A FULLY FLEDGED OVERSIGHT ASSESSMENT OF THE EXISTING TARGET SYSTEM

Given the comprehensiveness of past TARGET oversight assessments – and in the light of the remaining life time of the existing TARGET system, which has reduced the number of changes to the system to the absolute minimum – the TARGET oversight function will no longer carry out a fully fledged oversight assessment for the existing TARGET system.<sup>13</sup> Instead, the overseers of the national RTGS systems participating in and connected to TARGET1 will closely monitor the implementation of all

<sup>13</sup> In line with the 2001 Governing Council decision to assess all systemically important payment systems in the euro area, all NCBs of the ESCB have conducted a fully fledged oversight assessment of their national RTGS systems against the Core Principles in 2002/2003. For the EPM and the 15 national RTGS systems participating in or being connected to the existing TARGET system at the time, assessments were based on the systems' status as at mid-2003. The ECB published a report entitled "Assessment of euro large-value payment systems against the Core Principles" in May 2004, summarising the assessments made by the NCBs and the ECB. The report also included the assessments of three non-RTGS systems, notably PNS, POPS and SPI (which has meanwhile ceased operations). The EURO1 system was considered to lie outside the scope of the exercise, as the ECB, in cooperation with the IMF, had already assessed it in 2001.

relevant follow-up measures identified in the first and only comprehensive oversight assessment of the current system, and they will continue to conduct relevant TARGET oversight activities soundly and efficiently.

# FRAMEWORK FOR THE ORGANISATION OF TARGET2 OVERSIGHT

The Eurosystem has established a general organisational framework for the oversight of the TARGET2 system. Since TARGET2 will have not only central but also decentralised features, the NCBs participating in TARGET2 will have primary responsibility for performing oversight activities on the decentralised features of the system, whenever such features are only relevant for the national environment. In the spirit of cooperation that governs the working attitude within the Eurosystem, NCBs will also participate in the central oversight activities. The ECB will lead and coordinate all central decentralised TARGET2 oversight and activities.

The development and design of the TARGET2 system has been monitored by the TARGET oversight function and will continue in accordance with the development of the project. The future TARGET2 system will naturally have to comply with the Eurosystem's oversight standards in the same way as any other largevalue euro payment system in the euro area.

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## **CHAPTER III**

### TARGET DEVELOPMENTS

In 2005 preparations continued for TARGET2, the new generation of TARGET, which is scheduled to go live in 2007. NCBs 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.

#### I ENLARGEMENT OF THE EU

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

In 2004 Narodowy Bank Polski (NBP) decided to connect to TARGET in advance of Poland joining the euro area, and prepared for connection via one of the elaborated options. NBP chose to connect its own national euro RTGS system (SORBNET-EURO) to TARGET via a bilateral link established with the Banca d'Italia; this connection went live on 7 March 2005.

NBP's connection to TARGET represents the first enlargement of the system since it was launched. In addition to the operational preparations, the TARGET legal framework has also had to undergo certain changes, with the TARGET Guideline and the TARGET Agreement being revised in order to cover the specificities of the type of connection chosen by NBP. Even though this option differs technically from other NCBs connected via the interlinking mechanism, NBP is a full member of TARGET with all the associated rights and obligations. In addition, Slovenian banks can also be reached via TARGET, participating since July 2005 by means of remote access to the German TARGET component.

The new Member States will be able to use the Single Shared Platform (SSP) of TARGET2, which is due to begin operations after November 2007, without prior connection to the present TARGET system. However, the Eurosystem and the NCBs of the new Member States are preparing fallback solutions to bridge the possible period between new Member States joining the euro area and the availability date of TARGET2.

#### 2 TARGET2

In 2005, The Governing Council of the ECB communicated to the market that the period of extensive user consultation had been concluded, and that the go-live date for the first migration window would be 19 November 2007. NCBs connecting to the new system will be split into three groups, each with a different migration date. All NCBs, together with their national banking communities, are expected to be using TARGET2 by May 2008, with the exception of Sveriges Riksbank and the Bank of England.

The main principle of TARGET2 is to provide users with a homogeneous service across countries with a single price structure. Nonetheless, each NCB will continue to manage its local clients' accounts. A partnership between the Deutsche Bundesbank, the Banque de France and the Banca d'Italia is responsible for building the single technical platform for TARGET2 on behalf of the Eurosystem, and will be in charge of its daily running.

#### FUNCTIONAL SPECIFICATIONS

An interim version of the User Detailed Functional Specifications (UDFS) was published on the TARGET2 website at the end of August 2005. After settling all remaining issues, Version 2.0 of the UDFS was available to users on 30 November 2005 (see Box 6 for details of TARGET2 main functionalities).



#### **PRICING SCHEME**

In October 2005, the Governing Council presented a pricing scheme for the TARGET2 core service to be finally decided upon after discussion with the banking community. The envisaged scheme aims to meet two main objectives. First, it should ensure broad access to the system, which means that it should not discourage smaller institutions from direct participation. Second, the pricing should be attractive to the major market players, who account for a very large share of the current TARGET transactions. In the scheme presented, the participants may choose between either i) a small monthly fee of €100 plus a flat transaction fee of €0.80, or ii) a monthly fee of €1,250 plus a volume-based degressive transaction fee ranging from  $\notin 0.60$  to  $\notin 0.20$ . The monthly fee is a fixed amount payable by each participant per individual RTGS account. The average fees under the envisaged pricing scheme are considerably lower than the current TARGET average fees in almost all countries. To ensure a level playing-field, however, the Governing Council also decided in October 2005 that all central banks, irrespective of their individual migration dates, should apply the TARGET2 prices when the third migration group joins the shared platform, i.e. as from 19 May 2008. In the meantime, the Eurosystem has discussed the proposed pricing scheme with the banking community and is currently assessing the feedback received before taking a final decision on the pricing scheme.

#### MIGRATION

The migration to the new system will be split into three waves, each consisting of a group of national banking communities, with an additional wave being reserved for contingency purposes only (see Table 17). The planned dates of each migration wave are as follows: 19 November 2007, 18 February 2008, 19 May 2008 and – in the event that the contingency window has to be activated – 15 September 2008.

In May 2005, the Eurosystem published the national migration profiles (NMPs), which

## Table 17 Composition of migration groups and changeover dates

composition o	r migiunon group	is and enangeon	or dates
Group 1 19 Nov. 2007	Group 2 18 Feb. 2008	Group 3 19 May 2008	Group 4 15 Sep. 2008
Austria	Belgium	Denmark	
Cyprus	Finland	Estonia	
Germany	France	ECB	Reserved
Latvia	Ireland	Greece	for
Lithuania	The Netherlands	Italy	contingency
Luxembourg	Portugal	Poland	
Malta	Spain		
Slovenia			

describe the set-up from the NCB side as from the date they connect to TARGET2 (including the optional modules they use). The NMPs also provide a list of ancillary systems and information on the envisaged settlement procedures. They will be subsequently enhanced to include information on the account usage and on the expected changes during the four-year transition period.<sup>14</sup>

With respect to the routing of payments during the phased migration, TARGET1 users will only have to rely on the TARGET1 directory for routing their payments, regardless of whether the receiving institution is still in TARGET1 or has already migrated to TARGET2. TARGET2 users will likewise only have to rely on the TARGET2 directory. Only a few restrictions apply for payment flows from TARGET2 to TARGET1 (as stated in the UDFS).

#### TESTING

On 21 October 2005, a detailed description of planning and organisational aspects for usertesting activities was published on the TARGET2 website and the websites of the NCBs. Testing

#### **CHAPTER 3**

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<sup>14</sup> Transactions between market participants and transactions stemming from the settlement of ancillary systems, as well as payments related to open market operations, should ultimately be settled in the Payments Module (PM) of the SSP. However, for those types of transactions the domestic set-up in some countries may not allow these operations to be immediately shifted to the SSP at the start of its operations. As a result, the Eurosystem agreed on a maximum transition period of four years (from the moment the relevant NCB joins the SSP) for settling these payments in the PM of the SSP.

activities are planned to start upon NCB internal acceptance in early 2007. Testing will then be carried out with TARGET2 users according to the migration waves. For each wave, tests will be split into different streams: at institution level, at the level of national banking communities, and at European level. While users belonging to the first migration group will be working to a tight time-frame (five months starting in May 2007), those in subsequent migration groups will have several months more to complete their tests.

The testing strategy of the Eurosystem will give due consideration to the specific situations faced by multi-country players. In particular, testing slots will be offered (with the assistance of all involved NCBs) so that they can from an early stage organise multilateral tests between their different locations and simulate the different scenarios they will be confronted with (e.g. group 1 migrated; groups 1 and 2 migrated; groups 1, 2 and 3 migrated).

#### **OPERATIONAL DAY**

Another major area of work in 2005 revolved around the definition of the TARGET2

operational day (see Table I8) so that it meets the business needs of its users and complies with the Eurosystem accounting and monetary policy procedures. In TARGET2, the deadline for requests to standing facilities will be earlier at 6:15 p.m. (15 minutes after closing time). On the last day of the reserve maintenance period, the deadlines for requests to access standing facilities will be delayed by 15 minutes to 6:30 p.m.

Unlike the current operational day for TARGET, TARGET2 will start the new business day in the evening of the previous day. The night-time window will be available from 7.30 p.m. to 6.45 a.m. the next day, with a technical maintenance period of three hours between 10 p.m. and 1 a.m. The night-time window<sup>15</sup> will facilitate the night-time settlement of the different ancillary systems in central bank money with finality, and will also support cross-system settlement during the night. During the night-time window, liquidity transfers to and from the RTGS accounts will,

15 Only Model 6 (settlement on dedicated liquidity accounts) of the generic settlement procedures of the SSP's ancillary systems interface (ASI) will be offered during the night-time window.

	Time	Description
Day time	6.45 a.m 7 a.m	Business window to prepare day time operations.
	7 a.m 6 p.m.	Day trade phase.
	5 p.m.	Cut-off for customer payments.
	6 p.m.	Cut-off for bank-to-bank payments.
	6 p.m. + 15 min.	General cut-off for the use of standing facilities.
End of day	6 p.m. + 30 min.	Cut-off for the use of standing facilities on the last day of a minimum reserve period.
	(shortly after) 6.30 p.m. <sup>1)</sup>	Data to update the accounting system will be available for central banks.
Start of day &	6.45 p.m 7 p.m. <sup>1)</sup>	Start-of-day processing.
	7 p.m 7.30 p.m. <sup>1)</sup>	Provisioning of liquidity (from standing facilities, intraday credit, home accounts) until start of procedure for AS.
Night time window for AS	7.30 p.m. <sup>1)</sup> - 10 p.m.	Automated start of procedure message to set aside liquidity until start of cycle message of AS, and ancillary system night-time processing (ancillary system settlement procedure 6).
	10 p.m 1 a.m.	Technical maintenance period of 3 hours. The system is shut down.
	1 a.m 6.45 a.m.	Night-time processing (ancillary system settlement procedure 6).

#### Table 18 Operational day for TARGET2

1) 15 minutes later on the last day of the minimum reserve period



in principle, be possible. Ancillary systems and their participants will be able to choose whether or not to enable this liquidity transfer functionality, or to limit the functionality, thus relying exclusively on the liquidity posted in specific mirror accounts or sub-accounts before night-time settlement starts (i.e. there are no liquidity transfers during the night). Banks may alternatively decide not to participate in nighttime settlement. The Governing Council of the ECB believes that the night-time window will generally increase the efficiency of night-time settlement and will favour initiatives such as cross-system delivery versus payment. It should be noted that the Eurosystem might implement restrictions on night-time settlement through operational procedures at a later stage.

#### CHAPTER 3

TARGET Developments

#### Box 4

#### THE MAIN FUNCTIONALITIES OF TARGET2

TARGET2 will use the SWIFT services (FIN, InterAct, FileAct and Browse) which enable standardised communication between the system and its participants. Each direct participant will be able to submit and receive payments on its own behalf or on behalf of other institutions via the payment interface. There will be three different payment priorities (normal, urgent and highly urgent), and it will be possible for participants to reserve liquidity for urgent and highly urgent payments as well as to dedicate liquidity for the settlement of ancillary systems. Participants will also be able to define bilateral and multilateral sender limits and actively to manage their payment queues (e.g. by changing the priority or the order of queued transactions). Furthermore, the increased time-criticality of payments will be taken into account as TARGET2 will enable timed transactions to be submitted, such as those needed in the context of CLS.

The availability of sufficient liquidity is of high importance for the execution of payments. The following sources of liquidity can be used in TARGET2: balances on RTGS accounts, provision of intraday liquidity, and offsetting payment flows (i.e. the use of algorithms to settle a number of queued payments). As in the current TARGET system, intraday credit will be granted to participants against eligible collateral by the respective NCB.

The Information and Control Module (ICM) will provide direct TARGET2 participants with access to comprehensive online information and easy-to-use control measures to suit to their individual business needs. In particular, the ICM will provide participants with a "single window access" to the Payment Module (PM) and, depending on whether the NCB in question decides to use the optional services available in TARGET2, participants will also have access via the ICM to the Home Accounting Module (HAM) and the modules for Reserve Management and Standing Facilities.

TARGET2 will provide cash settlement services in central bank money for all kinds of ancillary systems (currently more than 100 individual systems), including retail payment systems, large-value payment systems, foreign exchange systems, money market systems, clearing houses and securities settlement systems (SSS). Ancillary systems can connect to TARGET2 via the ancillary systems interface (ASI) or the PM., The Eurosystem will provide the ancillary systems with a number of standard settlement procedures via the ASI.



The resilience and business continuity concept of TARGET2 is based on a multi-region/multisite architecture. There will be two regions for payment processing and accounting services, each with two distant sites. This will be combined with the principle of regional rotation in order to ensure the presence of skilled staff in both regions. TARGET2 will be based on a stateof-the-art business continuity concept designed to cope with failures that require immediate on-site recovery, as well as with failures that require a switch to a different region. During the time needed to activate the alternate site/region, the Contingency Module (CM) can be used to settle systemically important payments. The CM will be used by each NCB for its own credit institutions.

#### **FALLBACK SOLUTION**

The participation of new Member State NCBs in TARGET is mandatory when the new Member State in question joins the euro area. The Eurosystem has worked on potential fallback solutions enabling connection to TARGET in case the TARGET2 system is not yet available when new Member States join the euro area. Therefore, the NCBs of those countries that joined the Exchange Rate Mechanism (ERM II) in June 2004 (Estonia, Lithuania and Slovenia) and are expected to join the euro area on 1 January 2007 have to prepare for either the implementation of a fallback solution, or early connection to the current TARGET system. NCBs of countries that joined ERM II in the second wave in May 2005 (Cyprus, Latvia and Malta, who are assumed to adopt the euro at the beginning of 2008) will participate directly in TARGET2 as from the first migration window when joining the euro area.

#### **OTHER ISSUES**

The work already started by the Eurosystem on contractual and other legal issues related to TARGET2 and the business framework (e.g. the risk management framework, contingency arrangements and interaction with ancillary systems) should be completed in 2006.

The Eurosystem will continue its fruitful dialogue and close cooperation with the TARGET community for the remainder of the project, and will report regularly on the progress made.

### ANNEXES

## I TARGET STATISTICS

It should be noted that the statistics on domestic payments collected by the NCBs reflect the different practices followed with regard to the use of RTGS systems – some NCBs included transactions related to intraday credit, liquidity transfers, central bank operations and the settlement of ancillary systems, whereas others did not. Therefore, caution is recommended when comparing the number and value of domestic payments processed by the different national TARGET components. With the introduction of TARGET2, the successor system of TARGET, these restrictions will disappear.

#### CONTENTS OF THE STATISTICAL ANNEX

- Distribution of payment flows in TARGET
   1.1 Distribution of payment flows in TARGET – 2004
  - 1.2 Distribution of payment flows in TARGET 2005
- 2 Average value of a TARGET inter-Member State payment – intraday pattern
  - 2.1 Average value of a TARGET inter-Member State payment – intraday pattern
  - 2.2 Average value of a TARGET inter-Member State interbank payment – intraday pattern
  - 2.3 Average value of a TARGET inter-Member State customer payment – intraday pattern

- 3 TARGET inter-Member State intraday pattern
  - 3.1 Intraday pattern of interbank payments value
  - 3.2 Intraday pattern of customer payments value
  - 3.3 Intraday pattern of interbank payments volume
  - 3.4 Intraday pattern of customer payments volume
  - 3.5 Intraday pattern of interbank payments, cumulative – value and volume
  - 3.6 Intraday pattern of customer payments, cumulative – value and volume
- 4 TARGET availability per NCB and the EPM

#### ANNEXES



#### I DISTRIBUTION OF PAYMENT FLOWS IN TARGET

### Table I.I Distribution of payment flows in TARGET - 2004

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

Source: ECB.

1) EUR billions.

### Table 1.2 Distribution of payment flows in TARGET - 2005

		T	otal		Iı	ntra-Me	ember State		I	nter-Me	mber State	
	Value <sup>1)</sup>	%	Volume	%	Value <sup>1)</sup>	%	Volume	%	Value <sup>1)</sup> )	%	Volume	%
ARTIS (AT)	6,974.3	1.4	2,931,421	3.8	3,529.5	1.1	2,387,796	4.1	3,444.8	2.1	543,625	3.1
ELLIPS (BE)	17,268.3	3.5	1,766,576	2.3	3,685.1	1.1	826,935	1.4	13,583.2	8.2	939,641	5.3
RTGSplus (DE)	138,497.6	28.3	35,773,093	47.0	97,203.1	30.0	30,751,752	52.6	41,294.5	25.0	5,021,341	28.4
KRONOS (DK)	3,774.1	0.8	105,754	0.1	29.7	0.0	7,885	0.0	3,744.4	2.3	97,869	0.6
SLBE (ES)	74,856.9	15.3	6,760,959	8.9	69,015.7	21.3	5,898,755	10.1	5,841.2	3.5	862,204	4.9
EPM (ECB)	3,802.3	0.8	39,622	0.1					3,802.3	2.3	39,622	0.2
BOF-RTGS (FI)	3,235.9	0.7	291,948	0.4	1,479.3	0.5	144,163	0.2	1,756.6	1.1	147,785	0.8
TBF (FR)	121,913.6	24.9	4,323,477	5.7	97,757.7	30.2	2,172,901	3.7	24,155.9	14.6	2,150,576	12.2
CHAPS Euro (GB)	37,786.9	7.7	5,082,598	6.7	8,915.5	2.8	1,484,175	2.5	28,871.4	17.5	3,598,423	20.3
HERMES (GR)	5,615.9	1.1	1,394,138	1.8	3,158.0	1.0	1,078,621	1.8	2,457.9	1.5	315,517	1.8
IRIS (IE)	5,607.4	1.1	1,098,317	1.4	2,779.2	0.9	672,831	1.2	2,828.1	1.7	425,486	2.4
BI-REL (IT) The												
figures of BI-REL												
(IT) include the												
figures of SORBNET												
EURO (PL).	32,822.9	6.7	10,384,356	13.6	22,472.6	6.9	8,411,253	14.4	10,350.3	6.3	1,973,103	11.2
LIPS-Gross (LU)	6,638.1	1.4	516,943	0.7	2,735.9	0.8	109,567	0.2	3,902.3	2.4	407,376	2.3
TOP (NL)	24,571.5	5.0	4,488,897	5.9	9,781.6	3.0	3,694,950	6.3	14,789.9	9.0	793,947	4.5
SORBNET EURO (PL)												
The figures of												
SORBNET EURO												
(PL) are included in												
the figures of BI-REL (IT)	78.8	0.0	13,979	0.0	0.3	0.0	4,700	0.0	78.5	0.0	9,279	0.1
SPGT (PT)	3,449.0	0.7	1,085,727	1.4	1,490.8	0.5	809,477	1.4	1,958.2	1.2	276,250	1.6
Euro RIX (SE)	2,086.3	0.4	106,776	0.1	55.3	0.0	16,431	0.0	2,031.0	1.2	90,345	0.5
	488,900.9	100	76,150,602.0	100	324,088.9	100	58,467,492.0	100	164,812.0	100	17,683,110.0	100
Sauraa, ECD												

Source: ECB.

1) EUR billions.



ECB

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



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







#### ANNEXES

#### **3 TARGET INTER-MEMBER STATE INTRADAY PATTERN**





Chart 3.3 Intraday pattern of interbank payments – volume



## Chart 3.4 Intraday pattern of customer payments – volume






#### TARGET AVAILABILITY PER NCB AND THE EPM 4

Table													
(in %)	_	_	_	_	_	_	_	_	_	_	_	_	
							2005						
NCB	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Average Ytdl
Belgium	99.10	100.00	99.84	99.32	100.00	100.00	98.62	99.78	100.00	99.55	100.00	99.75	99.66
Denmark	99.71	99.87	99.31	100.00	99.71	100.00	100.00	100.00	100.00	99.60	100.00	100.00	99.85
Germany	96.03	100.00	99.68	99.00	100.00	97.76	99.56	100.00	100.00	100.00	98.84	100.00	99.24
Greece	99.72	98.75	100.00	99.47	100.00	99.62	100.00	100.00	100.00	100.00	100.00	100.00	99.80
Spain	99.67	99.85	100.00	100.00	100.00	99.88	100.00	100.00	100.00	100.00	99.91	99.88	99.93
France	100.00	100.00	100.00	100.00	99.86	99.28	96.43	99.91	100.00	100.00	99.91	100.00	99.62
Ireland	100.00	100.00	99.54	100.00	100.00	100.00	99.60	100.00	100.00	100.00	100.00	100.00	99.93
Italy	100.00	99.60	100.00	100.00	100.00	100.00	100.00	99.91	99.13	100.00	100.00	100.00	99.89
Luxembourg	100.00	100.00	100.00	99.16	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.93
The Netherlands	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
Austria	99.54	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.17	100.00	100.00	99.57	99.86
Poland			100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Portugal	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.66	100.00	100.00	100.00	99.97
Finland	100.00	100.00	99.77	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.98
Sweden	100.00	100.00	100.00	99.31	100.00	99.35	100.00	100.00	100.00	100.00	100.00	100.00	99.89
United Kingdom	100.00	100.00	100.00	100.00	100.00	100.00	99.67	100.00	100.00	100.00	100.00	100.00	99.97
ECB payment													
mechanism	99.02	99.50	98.58	99.49	100.00	100.00	99.28	99.85	99.50	99.92	99.72	99.41	99.52
Overall TARGET													
Availability	99.55	99.85	99.81	99.75	99.97	99.76	99.60	99.97	99.85	99.94	99.90	99.92	99.83

ANNEXES



# **2 STRUCTURAL ORGANISATION OF TARGET**

TARGET ensures the smooth implementation of the single monetary policy, facilitates the efficient functioning of the money market, and improves the soundness and efficiency of largevalue payments in euro. The system commenced live operations on 4 January 1999.

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

# ORGANISATION

The TARGET system is the real-time gross settlement system for the euro. It is a decentralised system composed of 16 national RTGS systems, the EPM and the interlinking mechanism. The interlinking mechanism designates the infrastructure and procedures which link domestic RTGS systems and the EPM in order to enable the processing of inter-Member State payments within TARGET.

#### **LEGAL FRAMEWORK**

The rules governing TARGET and its functions are laid down in the Guideline of the European Central Bank on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET Guideline) and the sets of rules and procedures in national regulations and/or contractual provisions (national RTGS rules) applicable to each of the national RTGS systems and the EPM. The TARGET Guideline came into effect on 1 January 1999, the starting date of Stage Three of Economic and Monetary Union (EMU). The ultimate decision-making body for TARGET matters is the Governing Council of the ECB, consisting of the governors of the euro area NCBs 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, the currency unit, pricing rules, the 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, as long as they adhere to the rules and procedures referred to above and 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. 72-86).

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 ECB Guideline 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<sup>1</sup> and which

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.

are established in the European Economic Area (EEA) can be admitted as direct participants in a national RTGS system. In addition, by way of exception, the following entities may also be admitted as participants in a national RTGS system, subject to the approval of the relevant NCB:

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

The criteria for participation in a national RTGS system are set out in the RTGS rules and are available to all 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.<sup>2</sup> However, remote participants can only participate in TARGET on the basis of available funds and cannot have recourse to intraday or overnight credit facilities.

# **TYPES OF TRANSACTIONS HANDLED**

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

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

#### **TECHNICAL INFRASTRUCTURE**

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

TARGET allows credit institutions to use the same connection for both intra-Member State and inter-Member State payments, i.e. no separate communication channel is required. The TARGET directory lists all credit institutions which are addressable through TARGET; approximately 53,000 addressable banks and branches are currently provided.

In order to initiate an inter-Member State payment, the ordering TARGET participant simply sends the payment order to the national RTGS system in which it participates. Since domestic formats can vary from country to country, the national RTGS systems may offer conversion features to convert intra-Member State payments into the interlinking format and vice versa. This means that the sending and receiving participants each use their own intra-Member State format<sup>3</sup>.



<sup>2</sup> 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.

<sup>3</sup> Information about the mapping of intra-Member State payment 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 (financial application) service is used as a communication network for the interlinking system. However, 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 merging 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, 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, and sometimes only takes a few seconds.

While the above-mentioned subsets of SWIFT message types are used for payment system purposes, a specific interlinking mechanism has been created for interlinking messages.<sup>4</sup>

#### **SETTLEMENT PROCEDURES**

TARGET is an RTGS system, which means that payments are settled individually on a continuous basis in central bank money with intraday finality. TARGET thus provides immediate and final settlement of all payments, assuming 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 irrevocable5.

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

- 4 TARGET messages exchanged via the interlinking system are classified either as requests, notifications, free format or as statistical information messages: request messages are used when a specific action on the part of the receiving NCB/the 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, and can be either positive or negative. A notification message completes the communication cycle initiated by a request. Interlinking free format messages (IFFMs) 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. Interlinking statistical information messages (ISIMs) contain statistical information on the interlinking traffic between NCBs/the ECB. 5
- For national RTGS systems which apply a blocking-of-funds procedure, payment becomes irrevocable at the moment blocking takes place.

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

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

### LIQUIDITY

As 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 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. To ensure the availability of intraday liquidity in their euro RTGS systems, non-euro area NCBs have to make intraday deposits with the ESCB. The provision of collateralised intraday credit in euro to participants in national euro RTGS systems is subject to the following conditions: (i) the maximum amount of intraday credit granted by the non-euro area NCB is €3 billion for the Bank of England, €0.650 billion for Danmarks Nationalbank, €0.5 billion for Sveriges Riksbank, and €0.350 billion for Narodowy Bank Polski; (ii) after the liquidity deadline, which is set at 5 p.m. C.E.T., non-euro area participants are only allowed to make outgoing payments out of positive balances (participants facing a debit position at the liquidity deadline must therefore 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 must meet the same quality standards and be subject to the same valuation and risk control rules as prescribed for collateral which is eligible for ESCB credit operations.

#### PRICING

The price charged for inter-Member State payments (excluding VAT) through TARGET between direct participants is based on the number of transactions sent by a participant



# 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 Member States which did not adopt the euro from the outset (Denmark, Sweden and the UK) 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 European Monetary Institute (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 that 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 must implement the modifications and specifications appropriate for the non-euro area NCBs. Via the TARGET Agreement, any changes made to the TARGET Guideline are also directly applicable to the non-euro area NCBs (see the section entitled "Legal Framework" in Annex 2).

Turning to 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 are 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.

In October 2002 the Governing Council decided that, following EU enlargement, new EU Member State NCBs would be allowed - but not obliged - to connect to the current TARGET system upon joining the EU. Given the limited remaining lifetime of the current TARGET system and in order to save costs, the Eurosystem has developed alternatives to full integration which allow the new Member States' NCBs to be connected to the current TARGET system.

Poland was the first new Member State to join TARGET. On 7 March 2005 NBP's euro RTGS system (SORBNET-EURO) was connected to TARGET via the Banca d'Italia's RTGS system (BIREL).



within a single RTGS system according to the following digressive scale:

€1.75 for each of the first 100 transactions per month;

€1.00 for each of the next 900 transactions per month; and

Fees are only charged by the sending NCB/the ECB to the sending participant in the national RTGS system/the 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 nondiscrimination. 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 two main parts: 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 coordinated by the TARGET coordinator nominated by the ECB. The settlement managers and the TARGET coordinator communicate via a teleconference or other means of communication several times a day.

Problems that cannot be addressed at the settlement manager level are passed on to the TARGET crisis managers. This group is coordinated 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 Working Group (TMWG). 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 cooperation with TARGET users plays an important role. In 2005, 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 with the principal aim of ensuring 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.

Building on the 2004 TARGET Oversight Guide, which is the comprehensive reference document for the NCBs and the ECB which has the overall goal of contributing to the consistent performance of the TARGET oversight function across the ESCB, the NCBs and the ECB have fully implemented the oversight function for the existing TARGET system at the national level.

In 2005, the TARGET oversight function focused on two major aspects: firstly, on the conduct of several oversight activities, and secondly, the establishment of the framework for the organisation of TARGET2 oversight. Activities as part of the former include (i) the publication of the ECB's report on the assessment of the connection of SORBNET-EURO to TARGET via the Banca d'Italia and its national RTGS system BIREL, (ii) the assessment of follow-up work related to the 2004 oversight review of the status report on the TARGET risk situation, (iii) the launch of TARGET oversight activities related to the connection of additional RTGS systems from new EU Member States to the current TARGET system, and (iv) the analysis of whether or not the existing TARGET system should be subject to a second fully fledged oversight assessment before it ceases operation in 2007.



# **3 CHRONOLOGY OF DEVELOPMENTS IN TARGET**

#### **NOVEMBER 1994**

In this month the EMI published a report entitled "The EMI's intentions with regard to crossborder payments in Stage Three", which laid down the basic principles and objectives as well as the approach to be adopted by EU NCBs and the EMI in creating a new cross-border payment arrangement for Stage Three of EMU. A system for Stage Three would be set up by linking the domestic RTGS facilities. Only the NCBs would hold settlement accounts for banks, although the ECB would also be connected to the NCBs through the interlinking 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 (which were not identified at that stage) could be connected to TARGET, but only to process euro. Any participant in any RTGS system connected to TARGET would be entitled to send payments via TARGET and would be obliged to accept any such payment processed through TARGET. Domestic RTGS systems would retain their specific features insofar as this was compatible with the single monetary policy of the Eurosystem and a level playing-field for credit

institutions. A certain level of harmonisation was considered necessary, especially in the following three areas: (i) the provision of intraday liquidity, (ii) operating time, and (iii) pricing policies.

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



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<sup>1</sup> 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.<sup>2</sup>

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

With regard to operating times, it was decided that, in order to meet market and risk management needs, TARGET should have long operating hours and 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.<sup>3</sup>

With regard to relations with other fund transfer systems, it was decided that all large-value net settlement systems (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 a single transaction fee would be set within the range €1.50 to €3.00. In addition, a price differentiation based on volume was anticipated.4

With regard to one of the possible mechanisms for the provision of intraday liquidity to noneuro area NCBs, namely an earlier closing time for non-euro area NCBs connected to TARGET, the EMI Council agreed that the earlier cut-off



Namely: 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.) 2

EMI Annual Report 1996, EMI, April 1997.

<sup>3</sup> Ibid.

<sup>4</sup> See also the EMI Annual Report 1997, EMI, May 1998.

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 European 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, a price structure for cross-border TARGET payments was agreed upon, ranging from €0.80 to €1.75 between direct participants, depending on the number of transactions.<sup>5</sup> The way in which banks' customers would be charged for TARGET payments was left to the discretion of the commercial banks.

#### **JULY 1998**

The Governing Council decided to grant access to TARGET to NCBs and participants in euro RTGS systems located in 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 noneuro area NCB would have to make an intraday deposit with the Eurosystem.<sup>6</sup>

#### **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 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.<sup>7</sup>

Unlimited, but fully collateralised, intraday credit would be provided to RTGS participants fulfilling the general counterparty eligibility criteria of the ESCB.<sup>8</sup> Unlimited intraday credit could also be granted to treasury departments of central or regional governments active in the money markets, as well as to public sector bodies authorised to hold accounts for customers, provided that no spillover to overnight credit was possible. At their own

- 5 See also the annex entitled "Organisation of TARGET and Its Management Structure" and the ECB's press release of 10 June 1998.
- 6 See also the annex entitled "Organisation of TARGET and Its Management Structure" and the ECB's press release of 8 July 1998.
- 7 See also annex entitled "Organisation of TARGET and Its Management Structure".
- 8 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.



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 an NCB grants in specific circumstances intraday credit to organisations providing clearing or settlement services would have to be approved in advance by the Governing Council.

# **4 JANUARY 1999**

On this day TARGET successfully went live<sup>9</sup>, linking 15 national RTGS systems and the EPM.

However, since the banks needed some time to adapt to the new payment system 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 these extended opening hours.<sup>10</sup>

# **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 2000, the Governing Council decided that, as an exception, TARGET would also remain closed on 31 December.<sup>11</sup>

# 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 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.<sup>12</sup>

# MAY 2000

The Governing Council decided on the TARGET operating days for 2001. These were the same as for 2000, with the exception of one additional closing day on 31 December, which was introduced in order to safeguard the smooth transition of retail payment systems and internal bank systems to the euro banknotes and coins.<sup>13</sup>

#### **OCTOBER 2000**

The TARGET Information System (TIS) was introduced, providing users of TARGET with information on the status of the system.<sup>14</sup>

# **NOVEMBER 2000**

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

- 10 See also the ECB's press release of 11 January 1999 and ECB Monthly Bulletin, March 1999.
- 11 See also the ECB's press releases of 3 September 1998 and 31 March 1999.
- 12 See also the ECB's press release of 15 July 1999.
- 13 See also the ECB's press release of 25 May 2000.
- 14 See also Box 4.

<sup>9</sup> For an overview of TARGET developments in 1999, see ECB Annual Report 1999, ECB, April 2000.

#### **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 CCBM for the cross-border use of collateral will also be closed on TARGET closing days.15

### **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 now a member of the Eurosystem and participates in TARGET, bound by the same rules as the NCBs of the other participating Member States and the ECB.<sup>16</sup>

#### 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. 72-86). 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, and lays down the rules governing TARGET and its functions as they apply to the Eurosystem.

#### **NOVEMBER 2001**

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

The global TARGET 2001 maintenance release successfully went live on 19 November 2001. The release consisted mainly of the introduction of the new SWIFT standards, the validation of negative payment settlement message notifications (PSMNs)<sup>17</sup>, and the introduction of a time indication (field 13C, debit stamp) to be transported through the interlinking mechanism 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.

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 EU. Participation in TARGET will be compulsory only when they join EMU.

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



<sup>15</sup> See the ECB's press release of 14 December 2000.

<sup>17</sup> A negative PSMN provides the rejection code (reason for the rejection).

#### **NOVEMBER 2002**

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

The Governing Council decided on the policy framework for the TARGET compensation scheme applicable in the event of a TARGET 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.<sup>18</sup>

# **JANUARY 2003**

On 9 January 2003, the Governing Council of the ECB decided to establish an oversight framework for TARGET. In this respect, two operational objectives for TARGET oversight were identified. First, TARGET oversight will have to verify that the 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 can be 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, was published on the ECB's website on 14 July 2003.<sup>19</sup> 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 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 feature of the release was the removal of the customer transfer message type MT100 from the TARGET system. SWIFT stopped supporting this message type and, as TARGET is based on SWIFT messaging standards, TARGET had to follow suit.

### **JUNE 2004**

The 2004 TARGET release successfully went live on 14 June 2004. This release took into account a change in the SWIFT validation rule



<sup>18 &</sup>quot;TARGET2: Principles and Structure".

<sup>19 &</sup>quot;Summary of Comments Received on TARGET2: Principles and Structure".

for IBAN, which came into force on the same day. The change consisted in adding a further six countries.

# **DECEMBER 2004**

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

# **MARCH 2005**

Poland was the first new Member State to join TARGET. On 7 March 2005 NBP's euro RTGS system (SORBNET-EURO) was connected to TARGET via the Banca d'Italia's RTGS system (BIREL).



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# **4 GENERAL TERMS AND ACRONYMS**

Countries		EUR	Euro
		EURO1	EU-wide payment system of the
AT	Austria		EBA
BE	Belgium	FIN	Financial application; store and
DE	Germany		forward messaging service on the
DK	Denmark		SWIFT network
ES	Spain	FIN copy	Function of the SWIFT network
FI	Finland		whereby instructions may be
FR	France		copied and optionally authorised
GR	Greece		by a third party before being
IE	Ireland	-	released to the beneficiary
IT	Italy	Forex (FX)	•
LU	Luxembourg	GFS	General functional specifications
NL	Netherlands	HAM	Home Accounting Module
PL	Poland	IBAN	International Bank Account
PT	Portugal		Number
SE	Sweden	ICM	Information and Control Module
UK	United Kingdom	IFFM	Interlinking free format message
		IMF	International Monetary Fund
Others		ISIM	Interlinking statistical information Message
ASI	Ancillary systems interface	ISO	International Organization for
BIC	Bank Identifier Code		Standardisation
BIS	Bank for International	ITES	Interlinking Test Environment
	Settlements		System
CCBM	Correspondent Central Banking	MAC	Message authentication code
	Model	MT103	Message types
CET	Central European time	103 +	
CLS	Continuous Linked Settlement	202	
СМ	Contingency Module	NCB	National central bank
CPSS	Committee on Payment and	NMP	National migration profile
	Settlement Systems	NSS	Net settlement system
EAF	Euro Access Frankfurt	PM	Payment Module
EBA	European Banking Association	PSMN	Payment settlement message
EC	European Community		notification
ECB	European Central Bank	PSMR	Payment settlement message
ECBS	European Committee for Banking		request
	Standards	PSPWG	Payment Systems Policy Working
EEA	European Economic Area		Group
ELS	Euro Link System	PSSC	Payment and Settlement Systems
EMI	European Monetary Institute		Committee
EMU	Economic and Monetary Union	PvP	Payment-versus-payment
EONIA	Euro Overnight Index Average		mechanism
EPM	ECB payment mechanism	Repo	Repurchase operations
ERM II	Exchange Rate Mechanism	ROSC	Report on the Observance of
ESCB	European System of Central		Standards and Codes
	Banks	RTGS	Real-time gross settlement
EU	European Union	SSP	Single Shared Platform

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SSS	Securities settlement system
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
TMWG	TARGET Management Working
	Group
UDFS	User Detailed Functional
	Specifications



# **5 GLOSSARY**

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

**ASI:** The ancillary system interface is a standardised interface to the TARGET2 Payment Module which can be used by ancillary systems to perform the cash clearing of their business.

**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:** The Continuous Linked Settlement (CLS) Bank. The CLS Bank provides global multicurrency settlement services for FX transactions, using a 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 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, an NCB acts as custodian for the other NCBs with regard to the securities held in its domestic SSS.

# ANNEXES



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

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

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

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

**Credit transfer system:** A fund 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 an 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 EU in three stages. Stage One of EMU started in July 1990 and ended on 31 December 1993; it was mainly characterised by the dismantling of all internal barriers to the free movement of capital within the EU. Stage Two began on 1 January 1994, and provided for, inter alia, the establishment of the EMI, the prohibition of financing of the public sector by the NCBs, the prohibition of privileged access to financial institutions by the public sector. and the avoidance of excessive government deficits. Stage Three started on 1 January 1999 with the transfer of monetary competence to the ECB and the introduction of the euro. The cash changeover on 1 January 2002 completed the set-up of EMU.

**EONIA (Euro Overnight Index Average):** A measure of the effective interest rate prevailing in the euro interbank overnight market. It is calculated as a weighted average of the interest rates on



unsecured overnight lending transactions denominated in euro, as reported by a panel of contributing banks.

**ERM II (Exchange Rate Mechanism):** The exchange rate arrangement that provides the framework for exchange rate policy cooperation between the euro area countries and the EU. Member States that are not participating in Stage Three of EMU.

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

Final (finality): Irrevocable and unconditional.

Final settlement: Settlement which is irrevocable and unconditional.

**Final transfer:** An irrevocable and unconditional transfer which effects a discharge of the obligation to make the transfer. The terms "delivery" and "payment" are both defined as a final transfer.

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

**Financial risk:** A term covering a range of risks incurred in financial transactions – 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. (Sometimes it is additionally 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 fund 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.

**Information and Control Module:** A mandatory and unique functional interface between the TARGET2 direct participants and the Single Shared Platform.



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

**International Bank Account Number (IBAN):** The IBAN concept was developed by the European Committee for Banking Standards (ECBS) and by the International Organization for Standardisation (ISO), and is an internationally agreed standard. It was created as a international bank identifier, used uniquely to 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 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 fund transfer system:** A fund transfer system through which large-value and highpriority fund 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 fund transfer systems are also known as wholesale fund transfer systems.

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

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

**Liquidity risk:** The risk that a counterparty will not settle an obligation at its full value when due, but instead on some unspecified date thereafter.



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

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

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

**Obligation:** A duty imposed by contract or by law.

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

**Oversight of payment systems:** A central bank task, principally intended to promote the smooth functioning of payment systems. The objectives of oversight are to protect the financial system from the possible domino effects which may occur when one or more participants in the payment system 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 fund 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 fund transfer systems which facilitate the circulation of money.

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

**Payment settlement message request (PSMR):** The settlement of TARGET 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 PSMN from the receiver.

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



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

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

**Real time:** 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 NCB of the second country without necessarily having established a branch or subsidiary in that country.

**Repurchase agreement:** An agreement to sell an asset and to repurchase it at a specified price on a predetermined future date or on demand. Such an agreement is similar to collateralised borrowing, although it differs in that the seller does not retain ownership of the assets.

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

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

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

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

**RTGS system:** A settlement system in which processing and settlement take place on an orderby-order basis (without netting) in real time (continuously).

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



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

**Single Shared Platform:** TARGET2 is based on a single technical platform, known as the Single Shared Platform, which includes Payment and Accounting Processing Services and Customer-related Services.

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

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

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

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

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

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

**TCP/IP** (Transmission Control Protocol/Internet Protocol): A set of commonly used communications and addressing protocols; TCP/IP is the de facto set of communication 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, with the goal of enabling normal operations to resume within the shortest time possible.

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



**TARGET market share:** The percentage processed by TARGET of the large-value payments in euro exchanged via all euro large-value payment systems. (The other systems are EURO1 (EBA), PNS (Paris Net Settlement), SPI (Servicio de Pagos Interbancarios), and Pankkien On-line Pikasiirrot ja Sekit-järjestelmä (POPS).

**TARGET2:** The new generation of the TARGET system in which the decentralised technical structure of TARGET1 has been replaced with an SSP offering a harmonised service with a uniform pricing scheme.

**Transfer:** Operationally, the sending (or movement) of funds or securities or of rights relating to funds or securities from one party to another party by (i) the conveyance of physical instruments/ money; (ii) accounting entries on the books of a financial intermediary; or (iii) accounting entries processed through a fund 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 fund transfer systems and exchange-for-value systems.



# TARGET-RELATED DOCUMENTS PUBLISHED BY THE ECB

This section provides 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 EMI, please visit the ECB website (www.ecb. int).

# THE ECB'S ANNUAL REPORT

"Annual Report 1998", April 1999. "Annual Report 1999", April 2000. "Annual Report 2000", May 2001. "Annual Report 2001", April 2002. "Annual Report 2002", April 2003. "Annual Report 2003", April 2004. "Annual Report 2004", April 2005. "Annual Report 2005", April 2006.

#### THE ECB'S MONTHLY BULLETIN

TARGET payment flows and new developments are published in the Monthly Bulletin on a quarterly basis (in March, June, September and December).
Other TARGET-related articles published in the Monthly Bulletin:
"TARGET and Payments in Euro", November 1999.
"Recent Developments in International Co-operation. A New Key Component of International Co-operation: Standards and Codes", February 2002.
"The Role of the Eurosystem in Payment and Clearing Systems", April 2002.
"Electronification of Payments in Europe", May 2003.
"Future Developments in the TARGET System", April 2004.

#### THE TARGET ANNUAL REPORT

"TARGET Annual Report 2000", May 2001. Covering the main issues and developments for the years 1999 and 2000. "TARGET Annual Report 2001", May 2002. "TARGET Annual Report 2002", April 2003. "TARGET Annual Report 2003", April 2004. "TARGET Annual Report 2004", May 2005.

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"Third Progress Report on the TARGET Project", November 1998. "Payment Systems in the European Union: Addendum Incorporating 1997 Figures", January 1999.

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"Payments and Securities Settlement Systems in the European Union: Addendum Incorporating 2000 Figures", July 2002.

"TARGET Interlinking Specification - November 2002 edition", November 2002.

"TARGET Interlinking Data Dictionary - November 2002 edition", November 2002.

"The Long-term Evolution of TARGET", October 2002.

"Public Consultation on TARGET2: Principles and Structure", December 2002.

"Terms and Conditions Governing the Use of the EPM", April 2003.

"Guideline of the European Central Bank of 4 April 2003 Amending Guideline ECB/2001/3 on TARGET, as Amended on 27 February 2002 (ECB/2003/6)", April 2003.

"TARGET Compensation Claim Form", June 2003.

"TARGET2: Principles and Structure – Call for Contributions from Interested Parties and Responses Received", July 2003.

"Information Guide for Credit Institutions Using TARGET", July 2003.

"Payment and Securities Settlement Systems in the European Union – Addendum Incorporating 2002 figures", April 2004.

"Payment and Securities Settlement Systems in the Accession Countries – Addendum Incorporating 2002 figures", April 2004.

"TARGET Compensation Claim Form", April 2004.

"The Use of Central Bank Money for Settling Securities Transactions", May 2004.

"Assessment of Euro Large-value Payment Systems against the Core Principles", May 2004. "Progress Report on TARGET2", February 2005.

"Payment and Securities Settlement Systems in the Accession Countries – Addendum Incorporating 2003 Figures", February 2005.

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"Progress Report on Target2", February 2005

"Correspondent Central Banking Model (CCBM) – Procedure for Eurosystem Counterparties", May 2005



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