



EUROPEAN CENTRAL BANK

EUROSYSTEM

TARGET ANNUAL REPORT 2007

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EUROSYSTEM



TARGET ANNUAL REPORT

2007

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INTRODUCTION

TARGET, the Trans-European Automated Real-time Gross settlement Express Transfer system, is the RTGS (real-time gross settlement) system for the euro and, since it started live operations back in 1999, has been the market's preferred system for large-value payments in euro, making it one of the world's largest large-value payment systems.

About 10,400 banks including branches and subsidiaries use TARGET to initiate payments on their own or on their customers' behalf. Over 52,000 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 funds transfer systems (e.g. Continuous Linked Settlement (CLS) or EURO1), and to settle money market, foreign exchange and securities transactions. It is also used for smaller-value customer payments.

In 2007 TARGET traffic increased in comparison with the previous year. TARGET processed more than 93 million transactions with a value of almost €617 trillion. This corresponds to a daily average of 366,179 payments with a total daily value of €2.4 trillion. TARGET therefore accounted for 89% in terms of the value and 61% 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 2007 the availability rate improved further, reaching 99.90%. 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"¹ 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 new Member States that joined the EU in the last years. In December 2004 the Governing Council 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. On 19 November 2007 TARGET2 was successfully launched with the connection of the first migration group composed of the national central banks and the respective TARGET user communities in Austria, Cyprus, Germany, Latvia, Lithuania, Luxembourg, Malta and Slovenia.

This report provides comprehensive information about TARGET's performance and outlines the main developments that took place in 2007. Chapter I provides information on the payment business in TARGET. Chapter II describes the various measures in place to ensure the robustness and resiliency of the system, and elaborates on 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, an overview of its organisation and management structure, as well as a list of acronyms and a glossary.

¹ Report entitled "Core Principles for Systemically Important Payment Systems", Committee on Payment and Settlement Systems, Bank for International Settlements, January 2001.

CHAPTER I

PAYMENT BUSINESS

In 2007 TARGET continued to be the backbone 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 61% in terms of volume in all large-value payments in euro. The system is used to settle large-value and time-critical payments, as well as to process a considerable number of relatively low-value commercial payments.

In 2007 TARGET had 1,072 direct and 9,322 indirect participants.² The overall number of banks that can be addressed through TARGET (including branches and subsidiaries) reached 52,761 worldwide.

I PAYMENTS IN TARGET³

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 2007

TARGET's share of the traffic flowing through all large-value payment systems operating in euro remained at the same high level of 89% in value terms and rose to 61% in volume terms (compared with 60% in 2006). Compared with the previous year, market traffic (i.e. all payments processed in payment systems operating in euro) increased by 15% in terms of value and by 12% in terms of volume.

TARGET TRAFFIC IN 2007

In 2007 TARGET as a whole processed a total of 93,375,701 payments with a total value of €616,731 trillion. This corresponds to a daily average of 366,179 payments with a total value of €2.4 trillion.

Average daily TARGET turnover rose by 16% in 2007 (after 10% in 2006). Intra-Member State traffic showed an increase of 13% (after 8% in 2006), while inter-Member State turnover grew by 20% (after 13% in 2006; see Table 2). In volume terms, TARGET traffic grew by 12%

2 These figures are based on a survey of direct and indirect participants in 2006, and represent the situation at end-2006.

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 (CET). For more detailed information, please refer to the tables provided in Statistical Annex 1.

Table 1 TARGET payment flows

		2006	2007	Change	2006	2007	Change
		EUR billions		%	Number of payments		%
TARGET overall	Total	533,541	616,731		83,179,996	93,375,701	
	Daily average	2,092	2,419	16	326,196	366,179	12
<i>of which:</i>							
Intra-Member State	Total	348,764	395,412		64,162,211	72,574,446	
	Daily average	1,368	1,551	13	251,617	284,606	13
Inter-Member State	Total	184,777	221,319		19,017,785	20,801,255	
	Daily average	725	868	20	74,580	81,574	9
<i>of which:</i>							
Interbank	Total	175,681	209,198		9,030,410	9,739,430	
	Daily average	689	820	19	35,413	38,194	8
Customer	Total	9,096	12,121		9,987,375	11,061,825	
	Daily average	36	48	33	39,166	43,380	11

Source: ECB.
Note: There were 255 operating days in 2006 and 2007.

Table 2 Change in TARGET payment flows

(% Change)	Value of payments			Number of payments		
	TARGET overall	Intra-Member State	Inter-Member State	TARGET overall	Intra-Member State	Inter-Member State
	2006 compared with 2005	10	8	13	10	11
2007 compared with 2006	16	13	20	12	13	9

Source: ECB.

Table 3 Payment value bands for TARGET as a whole

(%)	TARGET overall			
	Equal or less than €50,000	> €50,000 ≤ €1 million	> €1 million ≤ €1 billion	> €1 billion
2006	63	25	11	< 0.1
2007	64	25	11	< 0.1

Source: ECB.

(after 10% in 2006), with a 13% increase at the intra-Member State level (after 11% in 2006) and a 9% rise at the inter-Member State level (compared with 8% in 2006). The increase was therefore higher than last year in all categories.

TARGET was primarily designed to settle large-value payments. Nevertheless, in 2007, in practice 64% of TARGET payments were for values less than €50,000 and payments above €1 million only accounted for 11%

of the traffic. On average, there were 270 payments per day with a value above €1 billion. All these figures are very stable compared with 2006.

In 2007 TARGET flows remained concentrated within a few RTGS systems. As observed in previous years, five RTGS systems processed more than 80% of the TARGET total value and volume (see Statistical Annex 1, Tables 1.1 and 1.2).

Box I

TARGET VOLUME DEVELOPMENT SINCE 2004

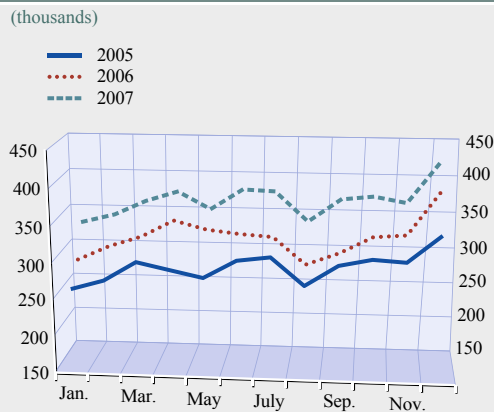
How has TARGET traffic evolved over the last three years?

Over the last three years, TARGET traffic showed a significant increase as illustrated in Chart A, which gives the average daily volume calculated on a monthly basis. It demonstrates that, beyond the seasonal effect traditionally observed within a given year, TARGET traffic has continuously progressed and kept roughly the same pattern. On a yearly basis, TARGET traffic increased by 10% in 2005, 10% in 2006 and 12% in 2007.

Is the 2007 increase linked to external events or to a more general trend?

Chart B provides part of the answer. In order not to pollute the result with insignificant country data only those RTGS components accounting for 2% or more of the TARGET

Chart A Evolution of TARGET daily traffic over the last three years



Source: ECB.

the remaining five tended to follow a more regular trend (Austria, Belgium, France, Germany and Spain).

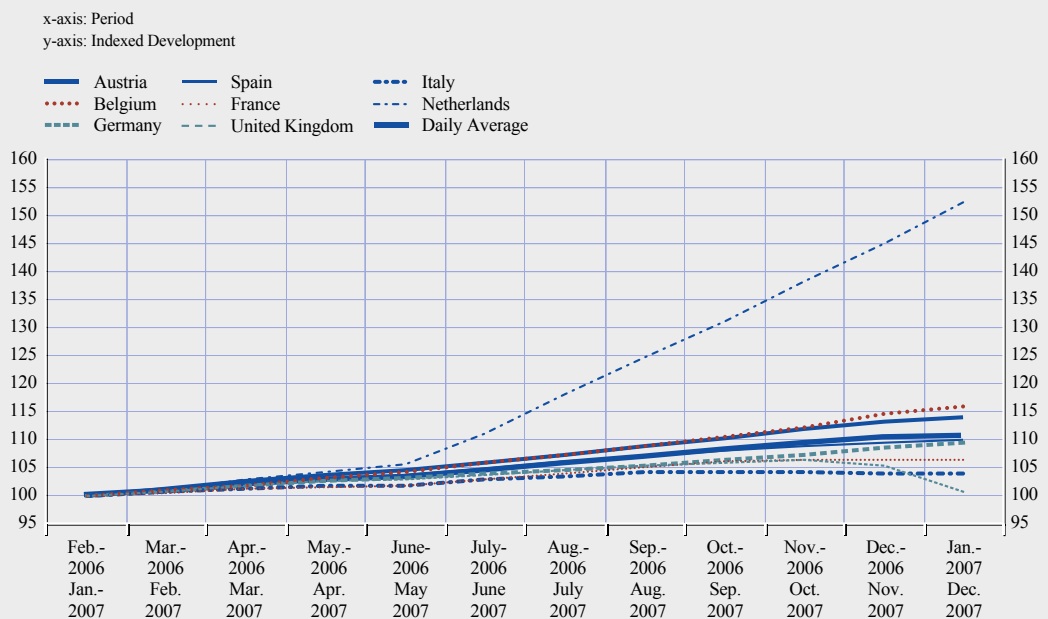
traffic were taken into consideration (the eight selected countries still account for more than 90% of the overall volume). In order to eliminate the strong yearly pattern in TARGET, only yearly moving averages (i.e. the average of the last twelve months) were taken into account. Lastly, given the very different sizes of the countries even within the top eight, the comparison of their traffic was done on the basis of an index, where the traffic in 2006 was taken as the reference.

The graph shows that, out of the eight main countries, one had a slight decrease of traffic over the period (the United Kingdom), one saw a limited increase (Italy) and one recorded a considerable increase (the Netherlands), whilst

What elements explain the specific country situations?

Complementary investigations conducted with the respective central banks helped to explain some specific country situations:

Chart B Indexed developments in the top eight countries in 2007



Source: ECB.

- For the Netherlands, the large increase observed from June onwards can be explained by the introduction of a special scheme for urgent retail payments in TARGET. These transactions were previously processed in the Dutch system “Telegiro” operated by the ACH Equens, which only settled net balances in TARGET. The new system “Telegiro Nieuwe Stijl” (TNS), which opened in June, is now splitting and routing all individual payments either to TARGET or EURO1. As a net effect, TNS increased the volume in the Dutch TARGET component by 10,000 to 20,000 payments per day.
- In the United Kingdom, the traffic of the British TARGET component sharply decreased from November onwards. This was strongly linked to the decision of the Bank of England not to join TARGET2 and to terminate its connection to TARGET by the end of the migration period. Therefore, a number of CHAPS Euro participants anticipated this termination and already migrated to TARGET2 with one of the Eurosystem central banks from the first country wave. The same phenomenon is also expected for the second country wave in February 2008.

An intra-year comparison shows that the level of activity in TARGET largely followed the trend observed in previous years, 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). There were some exceptions: June recorded a sharp increase in volume, August saw an unusual increase in value, and in October a small decrease in value was observed. TARGET processed the highest values in September and December, whereas the highest volumes were processed in June and December.⁴

TARGET INTRA-MEMBER STATE PAYMENT FLOWS^{5,6}

In 2007 TARGET processed more than 72 million intra-Member State payments with a total value of €395 trillion, which means

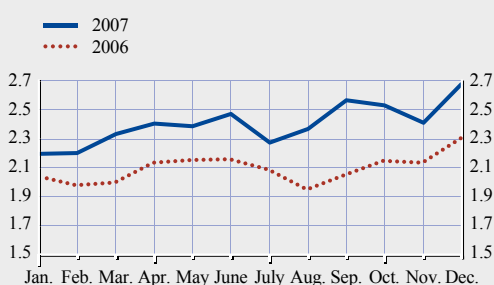
an average of 284,606 payments with a total value of €1,551 billion on a daily basis. This corresponds to a year-on-year increase of 13% in terms of value and volume (see Table 4).

The volume and 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-

- 4 The daily average number of payments processed in TARGET as a whole in December 2007 was 424,856 with a total value of €2,686 billion. In June 2007 it was 380,455 totalling €2,473 billion, while in September 2007 it was 368,849 totalling €2,566 billion.
- 5 At present, only inter-Member State payments can be analysed by payment type (i.e. interbank or customer payments).
- 6 The intra-Member State figures for Germany, Spain and France also include participants’ liquidity transfers to and from their RTGS accounts.

Chart 1 TARGET as a whole – value of payments

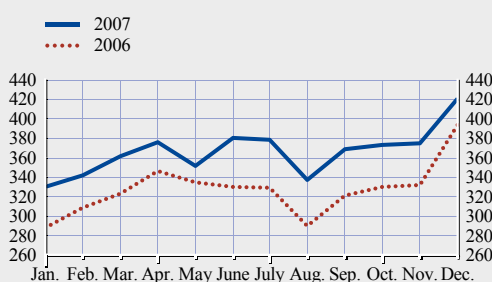
(daily averages per month, € trillions)



Source: ECB.

Chart 2 TARGET as a whole – volume of payments

(daily averages per month, thousands)



Source: ECB.

Table 4 Change in TARGET intra-Member State payment flows

(% Change)	Value of payments	Number of payments
	Intra-Member State	
2006 compared with 2005	8	11
2007 compared with 2006	13	13

Source: ECB.

Member State traffic represented 64% in terms of the value and 78% in terms of the volume of overall TARGET traffic.

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 half of the intra-Member State payments.
- In Italy and the Netherlands, 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 (€2.9 and 1.9 million respectively, compared with €5.4 million at TARGET level).
- In France, by contrast, such payments would typically be processed outside TARGET, and the average value of intra-Member

State payments settled in TARGET was, at €53 million, thus significantly higher.

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

The grouping of traffic figures for 2007 into value bands shows that TARGET is extensively used to process low-value payments. In the distribution of payments according to value bands, one can observe a slight shift of 1% from the medium-sized to lower-sized payments compared with 2006 (see Table 5), but in general the distribution across value bands is similar to previous years.

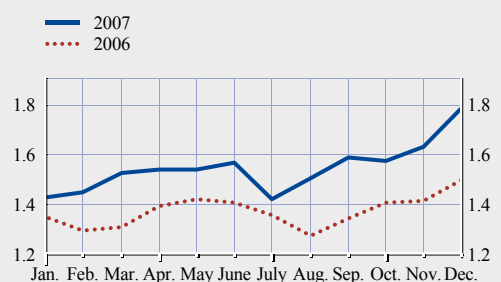
TARGET INTER-MEMBER STATE TRAFFIC⁷

In 2007 TARGET processed a total of 20,801,255 inter-Member State payments with

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

Chart 3 TARGET intra-Member State payments – value

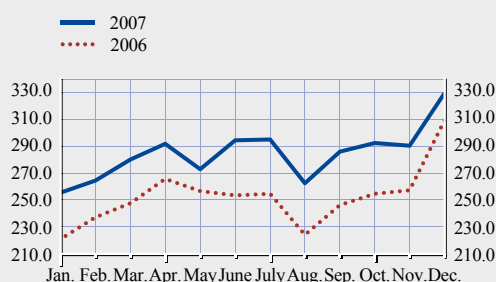
(daily averages per month, € trillions)



Source: ECB.

Chart 4 TARGET intra-Member State payments – volume

(daily averages per month, thousands)



Source: ECB.

Table 5 Payment value bands for TARGET intra-Member State payments

(%)	TARGET intra-Member State payments			
	Equal or less than €50,000	> €50,000 ≤ €1 million	≤ €1 million > €1 million	≤ €1 billion > €1 billion
2006	63	27	10	< 0.1
2007	64	26	10	< 0.1

Source: ECB.

Table 6 Change in TARGET inter-Member State payment flows

(% change)	Value of payments			Number of payments		
	Inter-Member State					
	Overall	Interbank payments	Customer payments	Overall	Interbank payments	Customer payments
2006 compared with 2005	13	13	13	8	7	10
2007 compared with 2006	20	19	33	9	8	11

Source: ECB.

Table 7 Payment value bands for TARGET inter-Member State interbank payments

(%)	TARGET inter-Member State payments			
	Equal or less than €50,000	> €50,000 ≤ €1 million	> €1 million ≤ €1 billion	> €1 billion
2006	42	31	26	< 0.1
2007	44	30	26	< 0.1

Source: ECB.

a total value of more than €221,319 trillion, i.e. a daily average of 81,574 payments totalling €868 billion. This represents a year-on-year rise of 9% in terms of volume and 20% in terms of value (see Table 6).

Both interbank and customer payments increased in value terms by 19% and 33% respectively. In 2007 the share of inter-Member State traffic

in TARGET as a whole remained quite stable compared with 2006 at 36% in terms of value and 22% in terms of volume.

The *intra-year* development of TARGET inter-Member State traffic shows that throughout 2007, higher volumes and values were processed than in 2006, especially during the second half of 2007.

Table 8 Payment value bands for TARGET inter-Member State customer payments

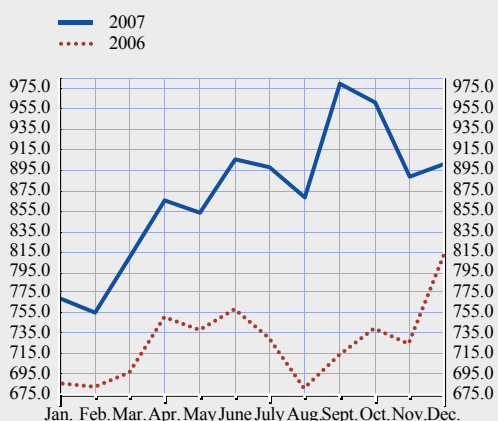
(%)	TARGET inter-Member State payments			
	Equal or less than €50,000	> €50,000 ≤ €1 million	> €1 million ≤ €1 billion	> €1 billion
2006	84	13	3	< 0.1
2007	84	13	3	< 0.1

Source: ECB.



Chart 5 TARGET inter-Member State payments – value

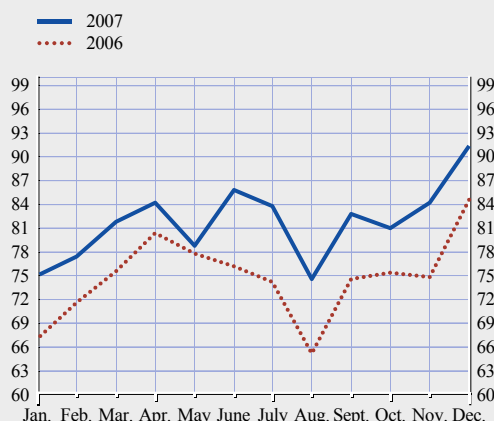
(daily averages per month, € billions)



Source: ECB.

Chart 6 TARGET inter-Member State payments – volume

(daily averages per month, thousands)



Source: ECB.

In 2007 *interbank payments* represented 95% of the total value of inter-Member State payments and 47% of the total volume, the remainder being *customer payments*. The figures are unchanged from 2006, showing that the share of customer payments in inter-Member State traffic stopped rising after three years of growth.

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

TREND IN THE AVERAGE VALUE OF TARGET PAYMENTS

The average value of individual transactions processed in TARGET as a whole increased by €0.2 million to €6.6 million (see Table 9). The average value of intra-Member State TARGET payments remained stable at €5.5 million, while the average value of inter-Member State payments increased by €1 million to €10.7 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

Table 9 Average size of TARGET payments

(€ millions)

	2006					2007				
	Q1	Q2	Q3	Q4	Average	Q1	Q2	Q3	Q4	Average
TARGET overall	6.5	6.4	6.5	6.3	6.4	6.5	6.6	6.8	6.6	6.6
<i>of which:</i>										
Intra-Member State	5.6	5.4	5.5	5.3	5.5	5.4	5.4	5.5	5.5	5.5
Inter-Member State	9.6	9.6	9.9	9.7	9.7	10.0	10.6	11.2	10.8	10.7
<i>of which:</i>										
Interbank	19.2	19.1	20.0	20.0	19.6	19.9	21.1	22.2	22.1	21.3
Customer	0.9	1.0	0.9	0.9	0.9	1.1	1.1	1.1	1.1	1.1

Source: ECB.

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

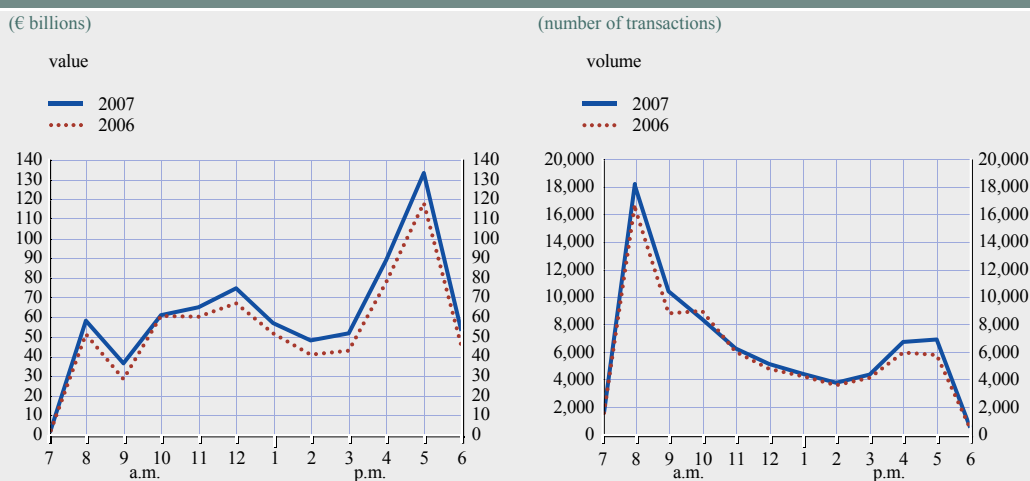
In 2007 TARGET processed a daily average **volume** of more than 18,500 inter-Member State payments in the first hour of operations (between 7 and 8 a.m.). Compared with 2006, this represents an increase of 3% (unchanged for customer payments and 8% more for interbank

payments). Almost half the volume was processed in the first three hours of operations (between 7 and 10 a.m.). By 2 p.m. 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 48% by 1 p.m. At 5 p.m. 93% of the total value of payments had been processed (see Charts 7 and 8).

On a typical day, the peak volume is processed between 7 and 10 a.m., and the peak value is processed between 4 and 5 p.m. This 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, higher-value liquidity management transfers predominate.

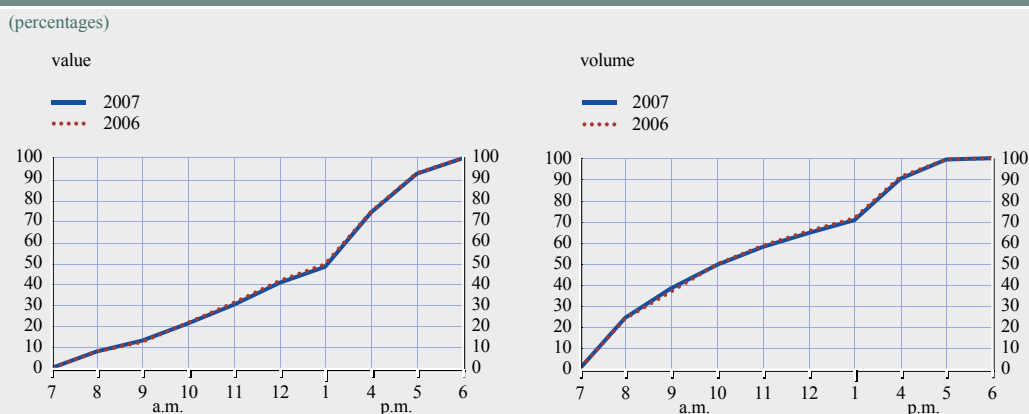
The hourly average value of an inter-Member State interbank payment steadily increased throughout the day, from €6.6 million in the first hour of operations to €122.2 million in the last hour (see Statistical Annex 2, Chart 2.2). The high average value in the last hour of operations is a direct result of the liquidity shifts between banks that take place at that time. The average value of an inter-Member State customer payment rose from

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



Source: ECB.

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



Source: ECB.

€0.3 million in the first two hours of operations, to €2.2 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.

The analysis of intraday flows shows that, as in 2006, 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),⁸

which have contributed greatly to the achievement of this pattern.

2 FLUCTUATIONS IN TARGET PAYMENT FLOWS⁹

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.

⁸ See the EBF's website (www.fbe.be).

⁹ Comparisons in this section are made with the daily average for 2005.

Table 10 Impact of periodical transactions on TARGET traffic

(% change on the last day of a quarter relative to the 2007 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Q1 2007	20	22	18	34	29	50
Q2 2007	29	30	28	42	41	45
Q3 2007	40	36	47	41	40	44
Q4 2007	0	4	-8	-5	-8	8
Average	22	23	21	28	25	37

Source: ECB.

Table 11 TARGET traffic on US holidays

(% change on a US holiday relative to 2007 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Birthday of Martin Luther King, Jr.	-11	-5	-21	-9	-7	-18
Washington's Birthday	-28	-23	-38	-21	-21	-18
Memorial day	-40	-35	-49	-48	-47	-53
Independence day	-1	3	-10	-6	-4	-12
labor day	-8	-4	-17	-7	-4	-17
Columbus day	-10	-10	-11	-7	-4	-21
Thanksgiving day	-12	-5	-26	-11	-10	-17
Average	-16	-11	-24	-16	-14	-22

Source: ECB.

IMPACT OF PERIODICAL TRANSACTIONS

As in previous years fluctuations of TARGET flows stemming from periodical transactions are observed on the last day of each quarter. On average on those days, TARGET flows grew by 22% in terms of value and 28% in terms of volume. These growth rates were comparable to previous years, although not quite as strong.

The largest fluctuation resulting from periodical transactions at the *TARGET intra-Member State* level was recorded on 28 September (i.e. the last day of the third quarter), with a traffic increase of 36% in value terms and 40% in volume terms.

At the *inter-Member State level*, the greatest fluctuation attributable to periodical transactions

was also recorded on the last day of the third quarter, with a rise of 47% in value terms and 44% in volume terms.

IMPACT OF PUBLIC HOLIDAYS IN THE US

In 2007 US public holidays had a similar effect as in previous years on TARGET, which as a whole experienced an average decrease in traffic of 16% in value and volume terms (see Table 11). This, however, was to some extent offset by an average increase of 3% in both value and volume terms on business days following these holidays (see Table 12).

On US public holidays, no EUR/USD foreign exchange transactions or USD securities transactions are settled. In addition, CLS-related payments are lower as CLS does not settle

Table 12 TARGET traffic on the business day after US holidays

(% change after a US holiday relative to 2007 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Birthday of Martin Luther King, Jr.	-3	-3	-3	-2	-5	8
Washington's Birthday	-9	-6	-14	-8	-9	-1
Memorial day	5	1	12	19	21	11
Independence day	5	0	14	5	3	10
Labor day	4	-5	20	-1	-3	6
Columbus day	11	4	22	2	1	5
Thanksgiving day	10	11	9	10	6	21
Average	3	0	9	3	2	9

Source: ECB.

Table 13 TARGET traffic on the business day after TARGET holidays

(% change after a TARGET holiday relative to 2007 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
New Year's Day	-5	0	-15	-9	-7	-18
Easter Monday	10	8	12	29	29	30
Labour Day	8	5	14	16	15	19
Christmas Day	12	13	11	36	38	32
Average	6	7	5	18	19	16

Source: ECB.

Table 14 TARGET traffic on regional public holidays

(% change on a regional public holiday relative to 2007 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Ascension Day	-26	-26	-26	-39	-45	-19
Whit Monday	-40	-35	-49	-48	-47	-53
Assumption Day	-16	-21	-7	-35	-35	-34
All saints Day	-22	-32	-3	-35	-38	-26
Average	-26	-28	-21	-39	-41	-33

Source: ECB.

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. Nevertheless, the effect of US holidays has diminished over the years. This is particularly visible for inter-Member State volume, which in 2003 decreased on average by 31% on a US holiday, while in 2007 the average decrease was only 22%.

Public holidays in other countries outside the euro area continued to have little impact on TARGET activity. For example, public holidays in the UK or 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.

On the business day following a TARGET holiday, TARGET as a whole processed on average 18% more transactions and recorded an average increase in value of 6%. These changes are different from those observed last year, when there was a 21% increase in traffic without an increase in value.

The largest percentage change was observed after Christmas (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 and 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

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

(% change after a regional public holiday relative to 2007 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Ascension Day	-5	-5	-6	-5	-4	-7
Whit Monday	5	1	12	19	21	11
Assumption Day	1	-4	8	-12	-12	-15
All Saints Day	-1	-2	0	4	8	-7
Average	0	-2	4	2	3	-4

Source: ECB.

decrease in payment flows was 26% in terms of value and 39% in terms of volume.

On average, such decreases were not offset by significant increases on the day after the regional public holiday (see Table 15). This can be attributed to a general reduction in economic and financial 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 hardly had any impact on TARGET flows in 2007.

PEAK DAYS IN TARGET

In 2007 the *highest volume* on a single day in *TARGET as a whole* was recorded on 21 December, with 574,840 processed payments, representing an increase of 4% versus the peak day in 2006 and a 57% rise against the 2007 daily average. The *highest value* on a single day in *TARGET as a whole* was recorded on 28 September, at a total of €3,387 billion, corresponding to an increase of 22% versus the peak day in 2006 and a 40% rise against the 2007 daily average.

Intra-Member State flows also peaked in terms of *volume*, at 466,422 payments, on 21 December 2007, corresponding to an increase of 3% versus

Box 2

TARGET LONG-TERM CALENDAR APPLIED IN 2007

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

	2006		2007	
EUR billions				
TARGET as a whole	2,772	30 June	3,387	28 Sep.
Intra-Member State	1,794	30 June	2,146	30 Nov.
Inter-Member State	993	29 Sep.	1,280	28 Sep.
Number of payments				
TARGET as a whole	553,962	27 Dec.	574,840	21 Dec.
Intra-Member State	453,945	27 Dec.	466,422	21 Dec.
Inter-Member State	115,002	18 Apr.	129,677	20 Dec.

Source: ECB.

the peak day in 2006 and a 64% rise against the 2007 daily average. In terms of *value*, these flows reached a peak on 30 November 2007, at a total of €2,146 billion, representing an increase of 20% versus the peak day in 2006 and a 38% rise against the 2007 daily average.

Inter-Member State flows reached an all-time high in terms of *volume*, at 129,677 payments, on 20 December 2007, representing an increase of 13% versus the peak day in 2006 and a 59% rise against the 2007 daily average. In terms of *value*, these flows peaked on 28 September, at a total of €1,280 billion, corresponding to an increase of 29% versus the peak day in 2006 and a 47% rise against the 2007 daily average.

The *lowest volume* on a single day for *TARGET as a whole* was recorded on 28 May, when a total of 188,556 payments were processed, which was 48% below the 2007 daily average. The *lowest value* on a single day for *TARGET as a whole* was recorded on 15 August (Assumption Day), with a total turnover of €1,456 billion, which was 40% below the 2007 daily average.

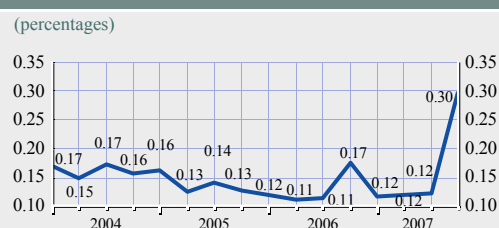
3 INTERBANK STRAIGHT-THROUGH PROCESSING

TARGET enables fully automated straight-through 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.

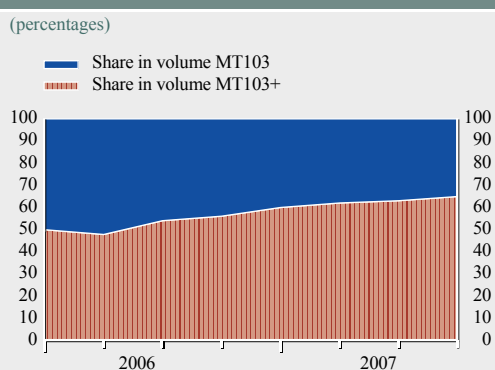
TARGET uses the relevant SWIFT message types (MT103, MT103+ and MT202, and since the go-live of TARGET2, also MT204), which have been tailored to STP practices. The very low payment rejection rate at the inter-Member State level proves the readiness and capability of TARGET users to support STP. In 2007 the rejection rate, up to the go-live date of the SSP on 19 November, saw a further reduction to around 0.12% (down from 0.13% in 2006) of the total number of TARGET inter-Member State payments sent. After the introduction of the SSP the rejection rate, as expected, increased to an average of 0.30% per day for about four weeks after which it stabilised. All in all, the average number of rejections in 2007 reached 0.16%, i.e. on average only 133 out of 81,574 inter-Member State payments per day had to be returned to the sending bank (see Chart 9).

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



Source: ECB.

Chart 10 TARGET inter-Member State payment volume per customer message type



Source: ECB.

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 2007 the share of MT103+ in TARGET inter-Member State customer payments increased from 60% in the first quarter to 65% in the fourth quarter¹⁰ (see Chart 10). The ECB will 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 strives to ensure:

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

I TARGET SERVICE LEVEL AND AVAILABILITY

The overall availability of TARGET was 99.90% in 2007, compared with 99.87% in

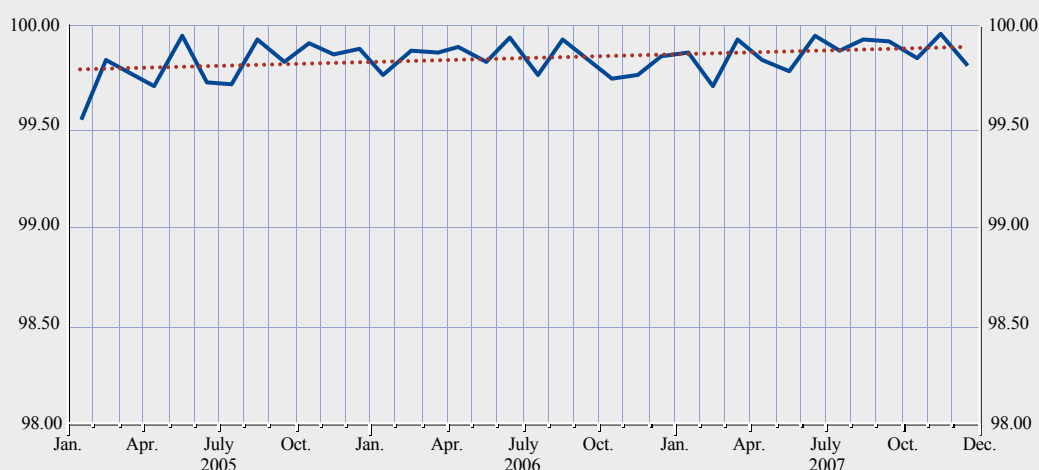
2006 (see Chart 11). In addition to the overall figure for TARGET, this report provides the availability figures for each local TARGET component (see Statistical Annex 4). Since its start-up in 1999, there has been an improvement from year to year in the TARGET availability rate.

To get an 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, 97.89% of TARGET inter-Member State payments were processed in less than five minutes (compared with 96.75% in 2006), 1.91% were processed in 5 to 15 minutes (2.67% in 2006), and 0.11% were processed in 15 to 30 minutes (0.46% in 2006). The processing time only exceeded 30 minutes for 0.09% of the payments, i.e. only 73 payments per day, which should be seen in the context of the 81,574 inter-Member State payments processed on average every day (see Chart 12).

– A total of 48 incidents were recorded within the local TARGET components in 2007, an overall decrease of 23% in comparison with the 62 incidents recorded in 2006. The

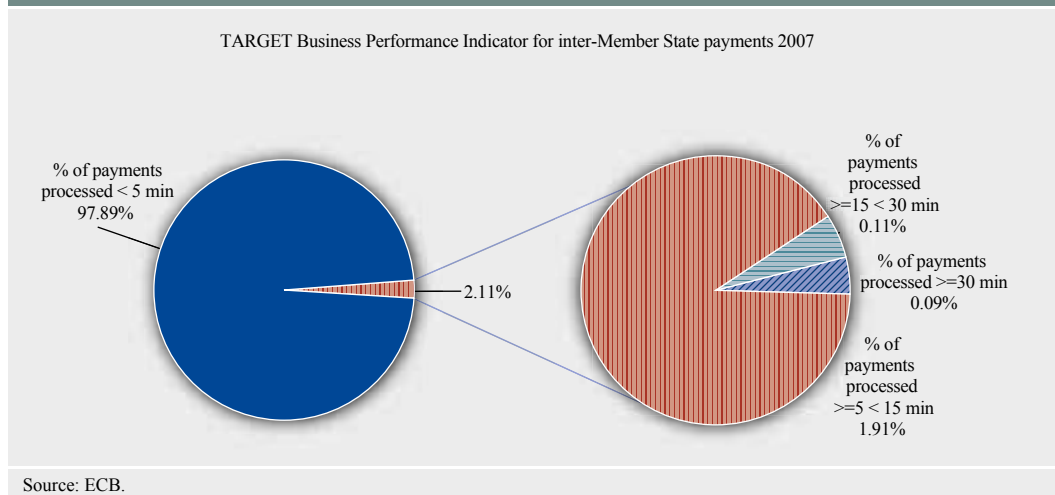
Chart 11 TARGET availability

(percentages)



Source: ECB.

Chart 12 TARGET inter-Member State payment processing times



incidents were mainly caused by software component failures, as before. Only one of these incidents had a severe impact on the payment processing capabilities of local TARGET components and led to a delay of the TARGET closing:

- On 20 September between 4.37 p.m. and 5.35 p.m. the French TARGET component experienced a hardware problem. As a consequence, the closing of TARGET was delayed by half an hour.

During this and all other 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 them in 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 4).

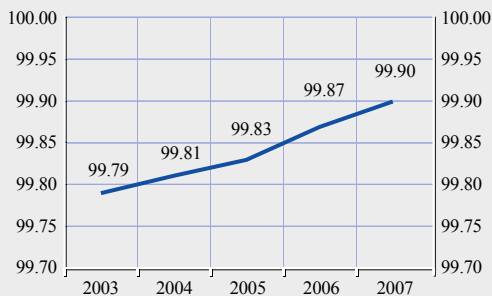
Box 3

EVOLUTION OF TARGET'S RELIABILITY SINCE 2003

To ensure the highest possible reliability, business continuity and contingency measures are in place in all TARGET local components. The risk management framework developed for TARGET in 2003 requires each of them to be able to switch to a secondary site and to continue operations normally from there within the shortest time possible. This framework, as well as the regular trialling of the contingency arrangements, contributed to a significant improvement of TARGET availability, as shown in Chart A:

Chart A TARGET availability

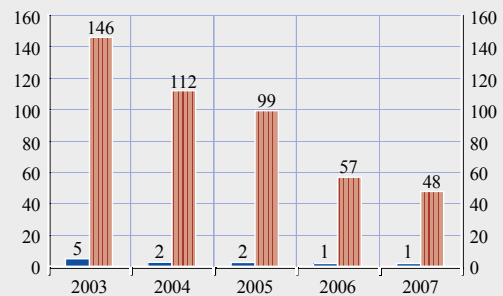
(percentages)



Source: ECB.

Chart B Incidents/major incidents in TARGET

■ number of major outages
■ number of incidents (total)



Source: ECB.

Chart B is another illustration of TARGET's improving reliability. It shows the total number of TARGET incidents having an effect on TARGET availability within a year, as well as the number of major outages which had a severe impact on payment processing and led to a delay of TARGET closing.

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 5 looks at those TARGET payments considered to be systemically important.

As in previous years, regular trials were carried out in 2007 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.

Box 4

TARGET INFORMATION SYSTEM

The TARGET Information System (TIS) provides standardised information on the operational status of the TARGET system via the financial information providers Reuters¹ and Bloomberg. The TIS information is input by the ECB and simultaneously communicated by both providers.

¹ Reuters: page ECB46 and Bloomberg: page ECB17.

The TIS shows users the operational status of each local TARGET component (either as “operational”, “failure” or “slowdown”) and indicates the time of the next TIS update. As not all users have access to Reuters and Bloomberg, the users have requested that the Eurosystem provide the same information on the ECB’s website as well. Therefore, since 1 October 2007 the information given via Reuters and Bloomberg on the status of the TARGET system has also been shown on the ECB’s website under “Payment and Markets – TARGET” (<http://www.ecb.europa.eu/paym/target/html/index.en.html>).

In the year under review, the Eurosystem – in cooperation with 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 time 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 on 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.

Box 5

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 and POPS); payments needed for settling in securities clearing and settlement systems; start/end-of-day liquidity transfers to/from EU countries which have not yet adopted the euro; and 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.

COOPERATION WITH TARGET USERS AND OTHER RTGS SYSTEM 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 2007 the Eurosystem continued its dialogue with TARGET users at both the national and the European level. As the above example of cooperation on incident management shows, such dialogue can be very fruitful and can help to strengthen further TARGET operations.

TARGET business continuity and contingency issues are not just an issue internal to the euro area, as settlement problems in currencies other than the euro might also have negative knock-on effects on the euro area. In particular, the global reach of CLS has created a direct link between different currencies that, if not appropriately addressed, could potentially lead to contagion. In 2007 the operators of the RTGS systems of currencies eligible for CLS tested the communication channel that allows RTGS system operators to communicate irrespective of time and language differences. Furthermore, to take into account the new currencies that will become CLS-eligible in 2008, the communication tool was extended to the relevant RTGS systems.

CONTINUOUS LINKED SETTLEMENT

Continuous Linked Settlement (CLS) is a system designed for the settlement of foreign exchange (FX) transactions.¹¹ CLS largely eliminates FX settlement risk by settling FX transactions in its books on a payment versus payment (PvP) basis. The remaining balances of the CLS settlement members in the books of CLS Bank (CLSB) are squared by pay-ins and pay-outs in central bank money for each of the eligible currencies.

The processing of CLS payments introduced a new criticality into TARGET, as delays in their processing could cause systemic risk on a global

scale. Although the TARGET contingency measures proved to be operationally capable of processing CLS payments in unusual circumstances, a framework of supporting business practices was required. In order to develop such a framework and to raise credit institutions' awareness of the issue, 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.europa.eu).

In 2007 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. To do this, a comprehensive risk management framework has been put in place for the TARGET system. This framework includes 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 involved the conduct of 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,

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

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 assures users that the overall security situation in TARGET will be kept at a satisfactory level.

4 TARGET OVERSIGHT

The scope of the oversight of the TARGET1 system comprised the entire network of national TARGET components and the ECB payment mechanism (EPM). In line with the decentralised structure of TARGET, the participating NCBs were responsible for the oversight of their respective national RTGS system, whereas the ECB oversaw the EPM. In order to take into account the technically consolidated nature of TARGET2, the ECB has been assigned by the decision-making bodies of the ECB to lead and coordinate all TARGET2 oversight activities. The ECB acts in close cooperation with the respective national central banks, which remain responsible for the conduct of the oversight of the local features of TARGET2. The new oversight arrangement has already been put in place for the oversight assessment of the TARGET2 design that was drawn up in the course of 2007.

TARGET OVERSIGHT ACTIVITIES

Throughout 2007 the TARGET1 system was subject to regular oversight by the respective national central banks and the ECB in order to ensure the system's continued observance of all relevant Core Principles. Although a couple of significant incidents occurred in specific components of the TARGET system during the year, the overseers concluded that these incidents had been properly investigated and followed up by the system operator.

TARGET2 OVERSIGHT ACTIVITIES

Throughout 2007 the TARGET2 design was subject to an intensive assessment against the relevant Core Principles. In terms of scope, the oversight assessment of the TARGET2 design included the design of the SSP, as well as the proprietary home accounts (PHAs) of four NCBs (Nationale Bank van België/Banque Nationale de Belgique, Deutsche Bundesbank, Lietuvos bankas and Banco de Portugal) which will be used to provide RTGS services during the transition period. The PHAs of two other NCBs (Oesterreichische Nationalbank and Narodowy Bank Polski) will be assessed in 2008.

As far as the SSP is concerned, a number of oversight findings were identified and will be followed up on the basis of an agreed action plan. The TARGET2 oversight function concluded that TARGET2 is likely to fully observe all relevant Core Principles and that the operation of the relevant PHAs is in line with the Core Principles and will not have any adverse implications for the smooth operation of TARGET2.

It is envisaged to publish an oversight assessment report on the TARGET2 design in early 2009.

CHAPTER III

TARGET DEVELOPMENTS

In 2007 preparations continued for TARGET2, the new generation of TARGET, which went live on 19 November 2007. NCBs, credit institutions and ancillary systems have prepared themselves thoroughly for the migration to TARGET2. At the same time, the performance of the current system had to be maintained at its 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.

Following Narodowy Bank Polski’s connection to TARGET via the Banca d’Italia’s RTGS system in 2005, on 20 November 2006 Eesti Pank’s euro RTGS system was also connected to TARGET via the Banca d’Italia’s system. In view of Slovenia’s entry into the euro area in January 2007, Banka Slovenije decided, for efficiency reasons, not to develop its own euro RTGS system, but to use the RTGS system of the Deutsche Bundesbank to connect to TARGET. Banka Slovenije commenced operations as a member of the Eurosystem on 2 January 2007.¹²

Other new Member States, i.e. Cyprus, Latvia, Lithuania and Malta, have been able to use the SSP since it commenced operations on 19 November 2007. Moreover, Cyprus and Malta carried out all the preparatory work necessary to act as a Eurosystem central bank in TARGET from 2 January 2008 onwards.

2 TARGET2

FROM TARGET TO TARGET2

Since its inception TARGET has formed a benchmark for processing euro large-value payments in terms of speed, reliability, opening times and service level, and has contributed to the integration of financial markets in Europe by providing its users with a common payment and settlement infrastructure. However, the environment in which TARGET operates has changed over time. Technological developments as well as the fast-moving process of European integration triggered requests from users for enhanced and harmonised levels of service. Consequently, in October 2002 the Governing Council of the ECB decided to develop the next generation of TARGET (TARGET2) in order to better meet user needs by:

- providing a harmonised service level with a harmonised pricing structure;
- ensuring cost-efficiency;
- preparing for future developments; and
- including the enlargement of the EU and the euro area.

In 2007 the TARGET2 project reached its final phase. The final development work was completed and most of the year was dedicated to testing and migration activities, as well as to finalising the legal framework and addressing remaining business issues.

On 19 November 2007 the Eurosystem launched successfully the single shared platform (SSP) of TARGET2. The launch of TARGET2 saw the connection of the first migration group composed of the national central banks and the respective TARGET user communities in Austria, Cyprus, Germany, Latvia, Lithuania, Luxembourg,

¹² Slovenian banks and Banka Slovenije had been able to use TARGET since July 2005 by means of remote access to the German TARGET component.

Malta and Slovenia. The second group of countries (Belgium, Ireland, Spain, France, the Netherlands, Portugal and Finland) is planned to migrate to TARGET2 on 18 February 2008. The third and final group (Denmark, Estonia, the European Central Bank, Greece, Italy and Poland) will migrate on 19 May 2008.

Three Eurosystem central banks – the Banca d’Italia, the Banque de France and the Deutsche Bundesbank – jointly provide the single technical infrastructure (i.e. the SSP) and operate it on behalf of the Eurosystem. TARGET2 remains under the responsibility of the Governing Council of the ECB, while each national central bank continues to be responsible for the business relationship with the users in its country.

SYSTEM RULES

Specifications

The general functional specifications (GFS) provide a high-level overview of the SSP for TARGET2 and its functional specifications. The latest version of the GFS (version 2.1) was made available to the user community in June 2007. The user detailed functional specifications (UDFS) provide a more in-depth and detailed explanation of the core services (book 1) and the optional services (book 2) offered by the SSP, and XML messages (book 4). The latest versions of the UDFS book 4 (version 2.3), and the UDFS books 1 & 2 (version 2.4), were made available to the user community respectively in October and November 2007.

The user handbook for the information and control module (ICM) of the SSP describes the online information tools and control measures of the ICM, allowing access to the other relevant modules of the SSP. The latest version of the user handbook (version 2.4) was made available to the user community in November 2007.

TARGET2 Guideline

In 2007 the Eurosystem completed the public TARGET2 Guideline, which repeals the Guideline governing the operation of TARGET. The new Guideline is the basis for the NCBs to

establish their TARGET2 component systems, governed by their national legislation. The TARGET2 Guideline contains the main legal elements of TARGET2, including governance arrangements and audit rules, as well as transitory provisions on the migration from TARGET to TARGET2. In addition, to ensure the maximum legal harmonisation of the rules applying to TARGET2 participants in all jurisdictions concerned, the Guideline includes the harmonised conditions for participation in TARGET2. These conditions have been drafted in a way that allows the Eurosystem NCBs to implement them in an identical manner, with certain derogations only in the event that respective national laws require otherwise.¹³ The harmonised conditions already contain relevant alternatives which will enable NCBs to customise their respective implementation in line with the requirements of national law. This approach implements the decision of the Governing Council of the ECB in October 2005 to “legally construct TARGET2 as a multiple system, but aiming at the highest degree of harmonisation of the legal documentation used by the central banks within the constraints of their respective national legal framework”.

The Guideline was published in the Official Journal of the European Union in September 2007 and is also available on the ECB’s website in all EU languages.

Guidance on procedures for “Group recognition in TARGET2”

The arrangements approved by virtue of the communication on TARGET2 in July 2006 allow for the recognition of three types of groups: 1) credit institutions that consolidate according to IAS 27¹⁴; 2) credit institutions that do not consolidate or consolidate according to

¹³ No national derogations have been identified so far by the national central banks.

¹⁴ IAS 27 defines a range of institutions that are bound to publish consolidated financial statements. The application of the international accounting standards (IAS) was endorsed by the European Parliament and European Council Regulation 1606/2002 of 19 July and became mandatory from 2005 onwards for the financial statements of listed (publicly traded) EU companies.

other standards but which are in line with the definition provided under IAS 27; and 3) bilateral and multilateral networks of savings and cooperative banks based on statutory/cooperation rules in line with national legal requirements.

Following this decision, procedures clarifying how to submit an application for group status were put in place in order to enable the NCBs to start the verification and acceptance process of entities wishing to create a “group” in TARGET2. Such procedures are required to ensure fair and equal treatment between banks subject to different consolidation and accounting regimes, as well as the timely communication of decisions on group status to the TARGET2 participants, in full compliance with the principle that NCBs maintain the business relationship with their participants.

OPERATIONAL ISSUES

Options for remote participation in securities settlement systems

From a business and liquidity perspective, the ancillary systems (ASs) are very important counterparts of TARGET2. In 2005 the UDFS set out the detailed description of functionalities available to ASs, and in November 2006 the third progress report on TARGET2 finalised the pricing scheme for ASs. However, there was still a need to clarify the arrangements available for remote participation in securities settlement systems (SSSs), i.e. how to enable a bank to participate in several ASs using a single account in TARGET2. The issue emerged because of the different types of SSS models (“integrated” and “interfaced”) and is particularly important for multi-country banks that wish to settle their branches’ transactions related to a foreign AS on the account of the head office. The principle that banks should be able to settle the cash position stemming from any AS on any RTGS account in TARGET2, irrespective of the ASs location, was an important user requirement for TARGET2.

The Eurosystem evaluated various proposals for remote participation in SSSs and favoured

the option of NCBs “passively” supporting foreign SSS models (integrated or interfaced). This solution would leave the current legal relationships between the SSSs and their “home” central bank untouched, but would facilitate the remote access to foreign SSSs by virtue of additional legal agreements/guarantees between the central banks concerned.

In the integrated model, the remote participant can transfer liquidity from its TARGET2 account to the cash account on the SSS integrated platform (and vice versa). As this cash account is legally owned by the home central bank of the SSS, the remote participant in the SSS would need a separate agreement with the home central bank of the SSS concerning cash accounts on the SSS platform. In the case of the interfaced model, liquidity can be made available at the request of the remote participant by shifting liquidity from its TARGET2 account (at any central bank) to its sub-account dedicated to the settlement of a specific SSS and opened in the books of the same central bank. In addition, NCBs have worked out the necessary internal arrangements so that the home central bank of the SSS remains the single legal contact point for the SSS.

The above provisions would not make “remote” auto-collateralisation possible, a limitation stemming from the prohibition of remote access to intraday credit. Therefore, auto-collateralisation practices remain in their current domestic form in TARGET2.

TARGET2 risk management

A TARGET2 risk management framework was established in order to ensure the security and operational reliability of the system. Security requirements were defined for TARGET2 and the system was assessed against these requirements before it went live. The requirements cover the security and operational reliability of the SSP and central banks’ TARGET2-related applications.

In addition, the Core Principles for Systemically Important Payment Systems assign certain

responsibilities to the operators of a payment system which need to be fulfilled. Core Principle VII (dealing with security and operational reliability, and in the following referred to as “CP VII”) states that the “[...] operators of a payment system [...] need to concern themselves not just with the security and operational reliability of the components of the central system, but also with the components of the system’s participants.”

Against this backdrop, a concept called “Measures to ensure the security and operational reliability of TARGET2 participants” has been developed. By implementing this concept, the Eurosystem, in its capacity as TARGET2 system operator, will meet CP VII in respect

of the security and operational reliability of TARGET2 participants.

Night-time settlement of SSSs in TARGET2

The objective of the night-time opening of TARGET2 is to facilitate the night-time settlement of the various ancillary systems in central bank money with finality. The night-time window of TARGET2 has, compared with the daylight one, the peculiarity that only one of the generic AS settlement procedures will be offered: procedure 6. In this procedure, settlement happens on dedicated accounts¹⁵ of the AS’s settlement banks during consecutive settlement cycles.

¹⁵ Dedicated liquidity posted from an RTGS account of a bank to sub-accounts (interaction with an interfaced SSS) or mirror accounts (interaction with an integrated SSS).

Box 6

FIRST TARGET2 STATISTICS

The single shared platform of TARGET2 successfully started operating on 19 November 2007 with the banking communities of the following countries: Austria, Cyprus, Germany, Latvia, Lithuania, Luxembourg, Malta and Slovenia. On the go-live date a total of 274 direct participants were migrated, as well as 7 ancillary systems. On the following days a number of other ancillary systems were connected to the platform.

Between 19 November and the 31 December 2007, no major incident was reported and the availability of the SSP reached 100%. In this period 99.63% of the payments delivered to the SSP were processed in less than five minutes, 0.28% were processed in five to 15 minutes. The processing time only exceeded 15 minutes for 0.09%.

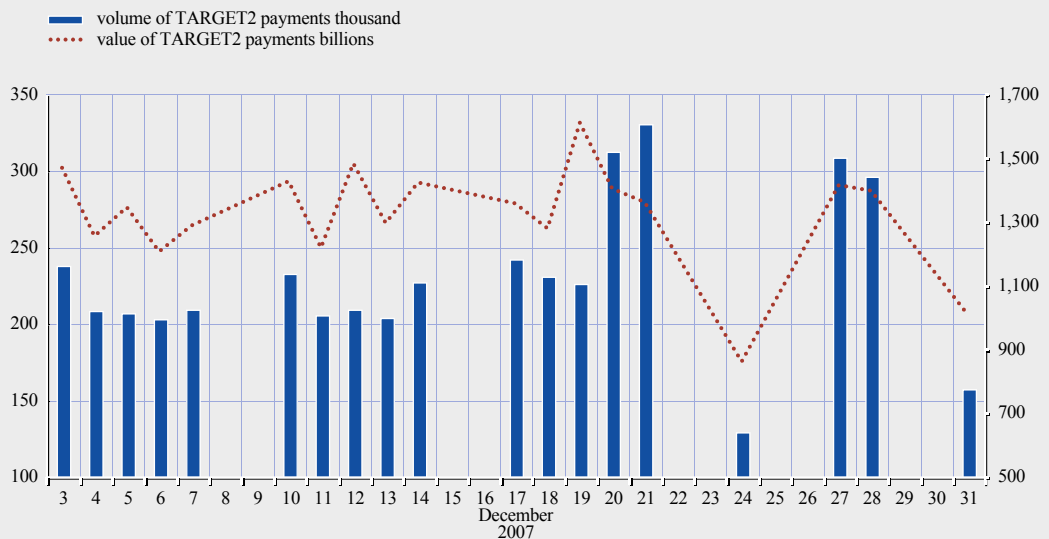
On average 228,000 transactions were settled daily on the platform, representing a value of €1,300 billion. Comparing these figures with the overall TARGET ones for that period reveals that around 55% of the TARGET volume and 49% of the TARGET value were migrated to the SSP during the first country wave.

The Chart illustrates the daily volume and value of the SSP for the month of December 2007:

The highest peaks were reached on 21 December, with 330,523 payments being settled on that day and more than 81,000 during the peak hour (7-8 a.m.).

All these statistics are extremely reassuring as they provide reasonable evidence of the reliability and good performance of the SSP during its first 29 days of operation.

Daily volume and value settled on the SSP TARGET2



Source: ECB.

INFORMATION ISSUES

Information guide for TARGET2 users

The “Information guide for TARGET2 users” aims to provide banks and ASs using TARGET2 with a standard set of information in order to give their operators a better understanding of the overall functioning of the system and enable them to make use of it as efficiently as possible. It answers the most frequently asked questions relating to TARGET2 and tries, in particular, to give users a clear understanding of those features that are common and those that are specific to each country. In addition to information on the operational procedures in normal circumstances, the information guide also provides information for abnormal and contingency situations.

Additional documentation on country-specific features can be found on the websites of the respective national central banks. The information guide is intended purely to provide information on the current TARGET2 system and should not be seen as a legal or contractual document.

Information guide for TARGET2 pricing

The “Information guide for TARGET2 pricing” provides TARGET2 users with a comprehensive overview of the pricing schemes related to TARGET2 (core services, liquidity pooling and AS services) and a detailed reference to the billing principles for the various types of transactions, as well as the entities to be invoiced. This information guide serves as reference documentation on pricing and billing issues, but does not confer any legal rights on operations or entities.

Both of the aforementioned information guides were made available to the user community in October 2007, as part of the fifth progress report on TARGET2.¹⁶

¹⁶ <http://www.ecb.europa.eu/press/pr/date/2007/html/pr071029.en.html>

Communication events around the go-live date of TARGET2

On the day following the go-live, i.e. on 20 November 2007, the Deutsche Bundesbank hosted a Eurosystem press conference in Frankfurt in order to review the first day of operations.¹⁷

In January 2008 the Banque de France hosted a conference in Paris attended by central bank representatives, TARGET2 users and the press to discuss TARGET2 in various work streams (e.g. to assess events around the go-live date and the operation of TARGET2, to draw lessons from TARGET2 in the field of European integration, etc.). Issues related to TARGET2-Securities and CCBM2 were also addressed at the conference.¹⁸

COOPERATION WITH MARKET PARTICIPANTS

The Eurosystem developed the features and services of TARGET2 in close cooperation with TARGET users. Good cooperation between the Eurosystem and the user community throughout the TARGET2 project has been a critical factor in the successful launch of the system and its acceptance by the users.

In addition to the cooperation at the national level (between each NCB and its national user group), a joint cooperation and communication structure was set up between the Eurosystem and the users at the European level. This cooperation consisted of regular joint meetings and joint task forces to address the relevant issues related to TARGET2 operations, risk management, contingencies, testing and migration. A user-focused project plan was created and regularly updated as a tool to facilitate the users' internal planning and its alignment with the Eurosystem planning. A TARGET2 information session for users at the European level took place in June 2007 in Frankfurt (at the ECB's premises). Relevant and updated information was regularly published on the dedicated TARGET2 website and on the ECB and NCB websites.

FUTURE EVOLUTION OF TARGET2

TARGET2 offers a broad range of features and services that meet the general and specific requirements of various types of users. However, during the project phase, NCBs, ancillary systems and banks put forward several suggestions and ideas for the further enhancement of the TARGET2 services. Some of these ideas were taken on board during the specification or implementation phases, while others could not be accommodated before the go-live date because they were put forward at a late stage in the project and consequently could not be included within the original scope of the SSP. Accordingly, the Eurosystem started to review some potential functional and system changes, with the intention to schedule some of them for the next releases of TARGET2.

Some of these proposed future changes would further improve the SSP response in crisis situations, while others would further improve liquidity management and monitoring solutions for participants. A third category consists of new or improved services provided to new and existing participants that could attract additional traffic or open up TARGET2 to particular market segments.

Migration

The migration to the new single shared platform successfully started on 19 November 2007 with the first group of banking communities. All operations were settled smoothly from the first day onwards and no major incident was reported. First figures showing the volumes and values settled on the SSP are provided in Box 6 and show that around half of the traffic had already been shifted to the new platform with the first migration.

¹⁷ <http://www.ecb.europa.eu/paym/target/target2/html/target2launch.en.html>

¹⁸ <http://www.ecb.europa.eu/events/conferences/html/t2conference.en.html>

Table 17 Composition of migration groups and changeover 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	<i>Reserved</i>
Latvia	Ireland	Greece	<i>for</i>
Lithuania	The Netherlands	Italy	<i>contingency</i>
Luxembourg	Portugal	Poland	
Malta	Spain		
Slovenia			

Source: ECB.

The planned dates for the other country waves are 18 February 2008 and 19 May 2008. In the event that a banking community could not migrate on time, a fourth contingency wave would take place on 15 September 2008. The composition of the groups is provided in Table 17.

For several years already the Eurosystem has built the TARGET2 migration framework in close collaboration with the future participants. In particular, a dedicated group composed of central banks', banks' and ancillary systems' representatives regularly met to discuss migration-related topics. In this context, special attention was given to the specific case of multi-

country banks for which the migration per country wave posed some challenges.

Testing

Testing activities for TARGET2 were one of the major project activities in 2007. These activities were split into tests at the central bank level and tests with participants.

Before delivering the single shared platform to the participants for their own tests, central banks checked the compliance of the system with its agreed specifications. This extensive activity lasted three months from February until the end of April 2007 and yielded positive results.

After the acceptance of the system by the central banks, tests with participants were able to start in May 2007, focusing on banking communities of the first country wave. During these tests, banks and ancillary systems had to demonstrate their ability to interact properly with the new platform. Moreover, some more elaborate tests at the country or EU level allowed the robustness of the operational procedures to be verified.

Testing activities for the first migration group were completed at the beginning of November, shortly before the go-live date, which was confirmed by a press release on 8 November. Testing activities with the other two groups

Table 18 TARGET2 operational day

Time	Description
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.
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. ¹⁾	Data to update the accounting system available for central banks.
6.45 p.m. - 7 p.m. ¹⁾	Start-of-day processing.
7 p.m. - 7.30 p.m. ¹⁾	Provisioning of liquidity (from standing facilities, intraday credit, home accounts) until start of procedure for AS.
7.30 p.m. ¹⁾ - 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 shutdown.
1 a.m. - 6.45 a.m.	Night-time processing (ancillary system settlement procedure 6).

Source: ECB.

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

started respectively in June and July 2007 and were still ongoing at the end of 2007.

Throughout the testing phase, the Eurosystem regularly published test reports to transparently communicate the progress made to future participants.

Operational day

The operational day of TARGET2 is longer than that of the current TARGET system. TARGET2 starts the new business day on the evening of the previous day. The night-time window¹⁹ is 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 is expected to facilitate the night-time settlement of the different ancillary systems in central bank money with finality, and also supports cross-system settlement during the night.

The Governing Council of the ECB believes that the night-time window generally increases the efficiency of night-time settlement and favours initiatives such as cross-system delivery versus payment.

¹⁹ Only procedure 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.

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.

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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
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I DISTRIBUTION OF PAYMENT FLOWS IN TARGET

Table I.1 Distribution of payment flows in TARGET – 2006

	Total				Intra-Member State				Inter-Member State			
	Value ¹	%	Volume	%	Value ¹	%	Volume	%	Value ¹	%	Volume	%
ARTIS (AT)	7,878.5	1.5	3,333,530.0	4.0	4,188.1	1.2	2,786,919	4.3	3,690.4	2.0	546,611	2.9
ELLIPS (BE)	19,429.5	3.6	1,734,504.0	2.1	3,490.7	1.0	816,681	1.3	15,938.8	8.6	917,823	4.8
RTGS ^{plus} (DE) ²	150,776.2	28.3	37,896,390.0	45.6	104,025.4	29.8	32,748,860	51.0	46,750.8	25.3	5,147,530	27.1
KRONOS (DK)	3,157.0	0.6	116,207.0	0.1	57.1	0.0	8,189	0.0	3,099.9	1.7	108,018	0.6
EP RTGS (EE) ³	0.1	0.0	1,960.0	0.0	0.0	0.0	2	0.0	0.1	0.0	1,958	0.0
SLBE (ES)	75,588.7	14.2	9,547,022.0	11.5	68,703.9	19.7	8,515,166	13.3	6,884.8	3.7	1,031,856	5.4
EPM (ECB)	5,069.3	1.0	39,715.0	0.0		0.0		0.0	5,069.3	2.7	39,715	0.2
BOF-RTGS (FI)	3,782.9	0.7	311,834.0	0.4	1,738.8	0.5	152,415	0.2	2,044.1	1.1	159,419	0.8
TBF (FR)	135,188.1	25.3	4,577,952.0	5.5	107,990.9	31.0	2,121,980	3.3	27,197.2	14.7	2,455,972	12.9
CHAPS Euro (GB)	43,035.3	8.1	5,577,159.0	6.7	10,806.0	3.1	1,460,528	2.3	32,229.3	17.4	4,116,631	21.6
HERMES (GR)	6,872.5	1.3	1,517,585.0	1.8	4,384.7	1.3	1,194,058	1.9	2,487.8	1.3	323,527	1.7
IRIS (IE)	6,656.4	1.2	1,217,628.0	1.5	3,539.6	1.0	731,824	1.1	3,116.8	1.7	485,804	2.6
BI-REL (IT) ⁴	37,686.0	7.1	10,948,045.0	13.2	25,627.9	7.3	8,869,460	13.8	12,058.1	6.5	2,078,585	10.9
LIPS-Gross (LU)	7,878.3	1.5	670,946.0	0.8	3,386.9	1.0	197,744	0.3	4,491.4	2.4	473,202	2.5
TOP (NL)	25,297.0	4.7	4,551,544.0	5.5	9,228.2	2.6	3,696,707	5.8	16,068.8	8.7	854,837	4.5
SORBNET EURO (PL) ⁵	101.6	0.0	28,624.0	0.0	4.3	0.0	7,569	0.0	97.3	0.1	21,055	0.1
SPGT (PT)	3,392.6	0.6	1,068,464.0	1.3	1,552.9	0.4	848,987	1.3	1,839.7	1.0	219,477	1.2
Euro RIX (SE)	1,852.7	0.3	71,471.0	0.1	42.9	0.0	12,693	0.0	1,809.8	1.0	58,778	0.3
Slovenia (SI) ⁶	16.4	0.0	44,419.0	0.1	9.6	0.0	18,919	0.0	6.8	0.0	25,500	0.1
	533,524.6	100	83,135,577.0	100	348,754.4	100	64,143,292.0	100	184,770.2	100	18,992,285.0	100

Source: ECB.

Table I.2 Distribution of payment flows in TARGET – 2007

	Total				Intra-Member State				Inter-Member State			
	Value ¹	%	Volume	%	Value ¹	%	Volume	%	Value ¹	%	Volume	%
ARTIS (AT)	8,847.8	1.4%	3,881,580.0	4.2%	4,281.5	1.1%	3,245,797	4.5%	4,566.3	2.1%	635,783	3.1%
ELLIPS (BE)	26,638.5	4.3%	2,038,280.0	2.2%	4,953.0	1.3%	895,290	1.2%	21,685.5	9.8%	1,142,990	5.5%
Cyprus (CY) ⁷	1.2	0.0%	1,849.0	0.0%	0.0	0.0%	137	0.0%	1.2	0.0%	1,712	0.0%
RTGS ^{plus} (DE) ⁸	181,232.0	29.4%	41,867,637.0	44.8%	126,527.4	32.0%	36,198,401	49.9%	54,704.6	24.7%	5,669,236	27.3%
KRONOS (DK)	4,079.9	0.7%	131,401.0	0.1%	54.1	0.0%	8,640	0.0%	4,025.8	1.8%	122,761	0.6%
EP RTGS (EE) ³	0.9	0.0%	17,677.0	0.0%	0.0	0.0%	22	0.0%	0.9	0.0%	17,655	0.1%
SLBE (ES)	87,605.4	14.2%	10,656,990.0	11.4%	78,540.9	19.9%	9,428,093	13.0%	9,064.5	4.1%	1,228,897	5.9%
EPM (ECB)	7,006.5	1.1%	43,072.0	0.0%		0.0%		0.0%	7,006.5	3.2%	43,072	0.2%
BOF-RTGS (FI)	6,124.9	1.0%	354,050.0	0.4%	2,354.2	0.6%	188,458	0.3%	3,770.7	1.7%	165,592	0.8%
TBF (FR)	145,219.2	23.5%	4,894,013.0	5.2%	114,122.3	28.9%	2,141,541	3.0%	31,096.9	14.1%	2,752,472	13.2%
CHAPS Euro (GB)	47,780.0	7.7%	5,711,342.0	6.1%	9,947.3	2.5%	1,455,418	2.0%	37,832.7	17.1%	4,255,924	20.5%
HERMES (GR)	8,421.1	1.4%	1,615,202.0	1.7%	5,616.3	1.4%	1,253,986	1.7%	2,804.8	1.3%	361,216	1.7%
IRIS (IE)	7,437.4	1.2%	1,360,234.0	1.5%	4,299.6	1.1%	811,213	1.1%	3,137.8	1.4%	549,021	2.6%
BI-REL (IT) ⁴	42,101.3	6.8%	11,503,291.0	12.3%	27,484.5	7.0%	9,348,063	12.9%	14,616.8	6.6%	2,155,228	10.4%
Lithuania (LT) ⁷	1.8	0.0%	1,150.0	0.0%	0.0	0.0%	118	0.0%	1.8	0.0%	1,032	0.0%
LIPS-Gross (LU)	9,992.0	1.6%	866,852.0	0.9%	3,762.0	1.0%	333,895	0.5%	6,230.0	2.8%	532,957	2.6%
Latvia (LV) ⁷	4.3	0.0%	9,621.0	0.0%	0.6	0.0%	5,016	0.0%	3.7	0.0%	4,605	0.0%
Malta (MT) ⁷	0.2	0.0%	12.0	0.0%	0.0	0.0%	0.0	0.0%	0.2	0.0%	12	0.0%
TOP (NL)	30,761.0	5.0%	7,059,738.0	7.6%	11,600.7	2.9%	6,111,889	8.4%	19,160.3	8.7%	947,849	4.6%
SORBNET EURO (PL) ⁵	51.5	0.0%	31,936.0	0.0%	5.1	0.0%	8,704	0.0%	46.4	0.0%	23,232	0.1%
SPGT (PT)	3,379.5	0.5%	1,217,390.0	1.3%	1,794.7	0.5%	1,002,369	1.4%	1,584.8	0.7%	215,021	1.0%
Slovenia (SI) ^{7,9)}	537.9	0.1%	803,735.0	0.9%	457.9	0.1%	731,151	1.0%	80.0	0.0%	72,584	0.3%
	616,731.4	100	93,375,701.0	100	395,412.4	100	72,574,446.0	100	221,319.0	100%	20,801,255.0	100

Source: ECB.

1) € billions.

2) The figures of RTGS^{plus} (DE) include the figures of Slovenia (SI).

3) The figures of EP RTGS (EE) are included in the figures of BI-REL (IT).

4) The figures of BI-REL (IT) include the figures of SORBNET EURO (PL) and EP RTGS (EE).

5) The figures of SORBNET EURO (PL) are included in the figures of BI-REL (IT).

6) The figures of Slovenia (SI) are included in the figures of RTGS^{plus} (DE).

7) CY, LT, LV, MT and SI commenced live operations on the SSP on 19 November.

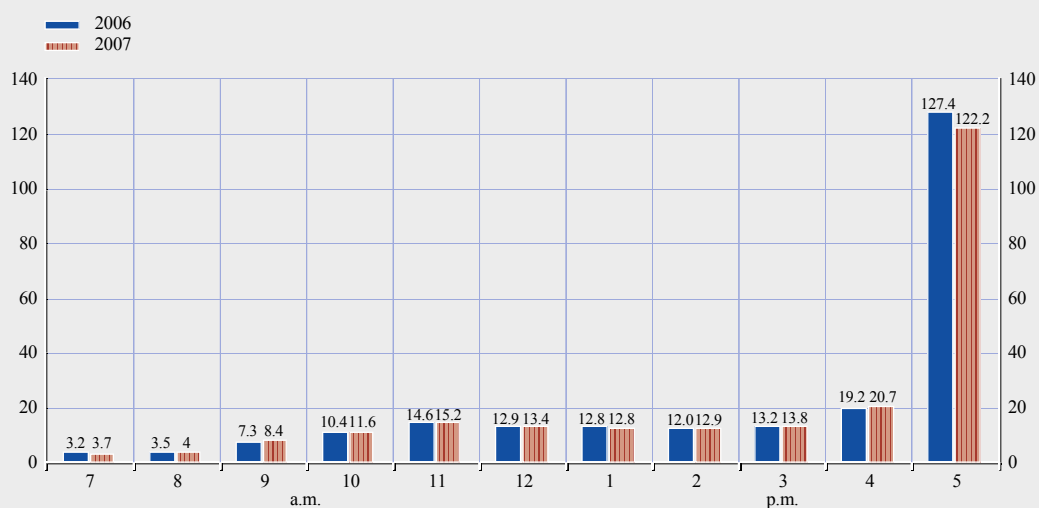
8) The figures of RTGS^{plus} (DE) include the figures of Slovenia (SI) until 16 November.

9) The figures of Slovenia (SI) are included in the figures of RTGS^{plus} (DE) until 16 November.

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

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

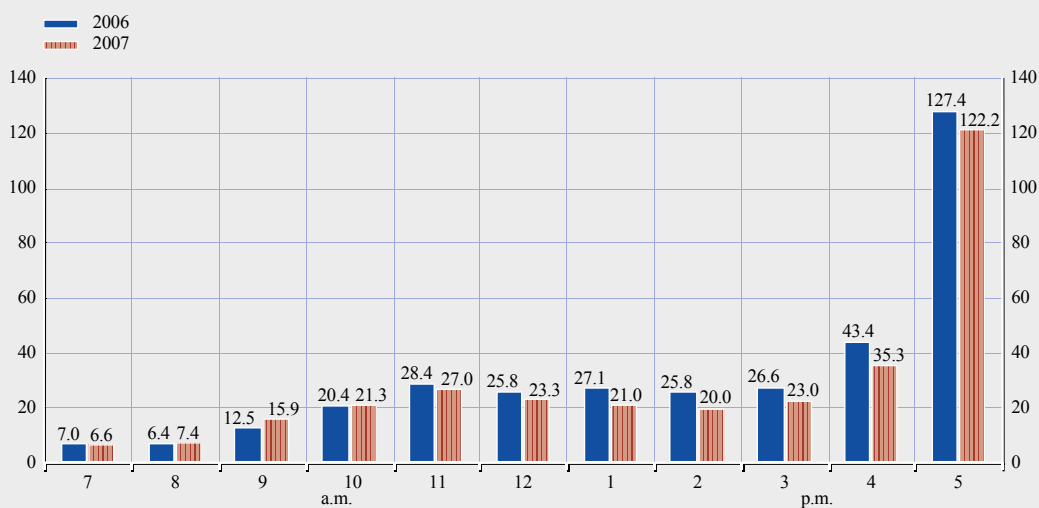
(€ millions)



Source: ECB.

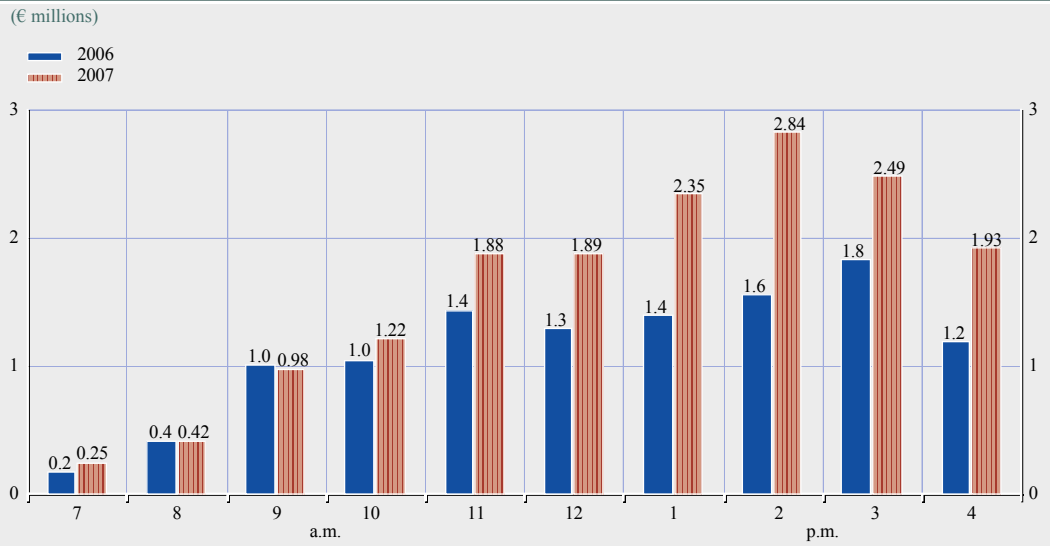
Chart 2.2 Average value of a TARGET inter-Member State interbank payment – intraday pattern

(€ millions)



Source: ECB.

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

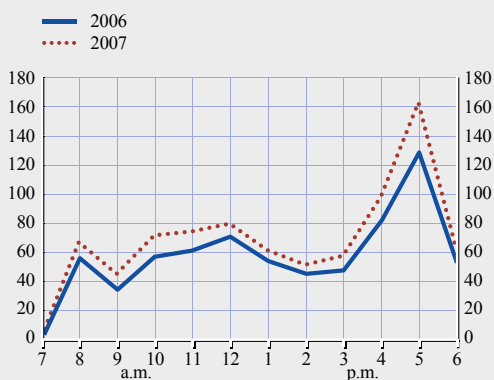


Source: ECB.

3 TARGET INTER-MEMBER STATE INTRADAY PATTERN

Chart 3.1 Intraday pattern of interbank payments – value

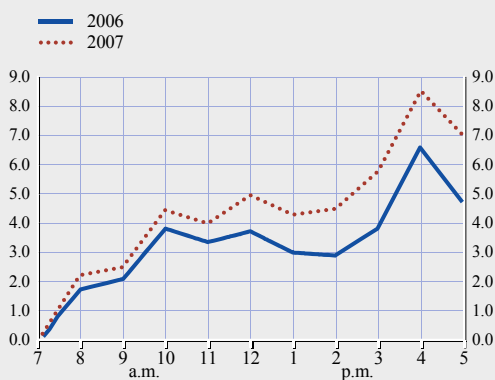
(€ millions)



Source: ECB.

Chart 3.2 Intraday pattern of customer payments – value

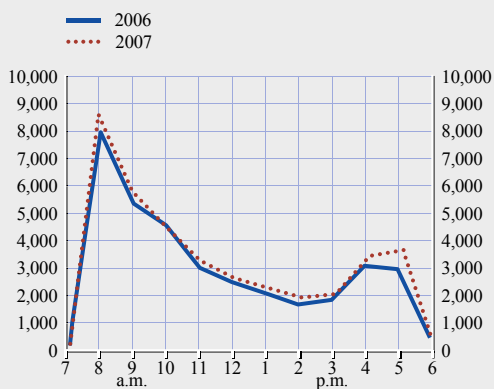
(€ millions)



Source: ECB.

Chart 3.3 Intraday pattern of interbank payments – volume

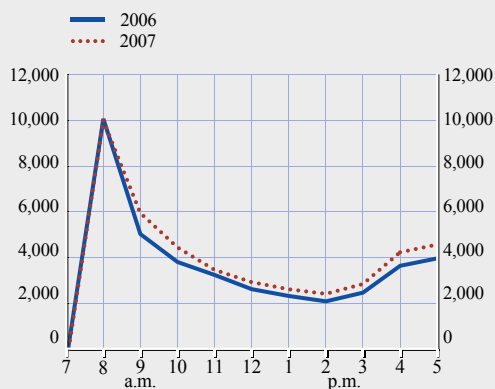
(thousands)



Source: ECB.

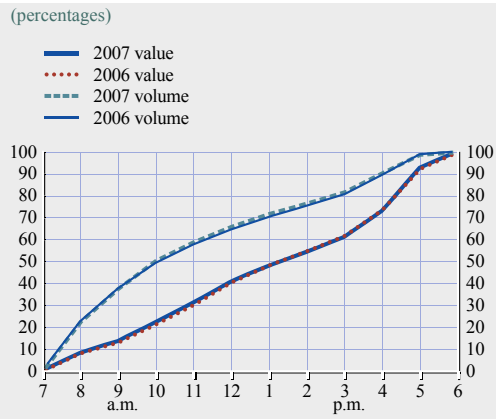
Chart 3.4 Intraday pattern of customer payments – volume

(thousands)



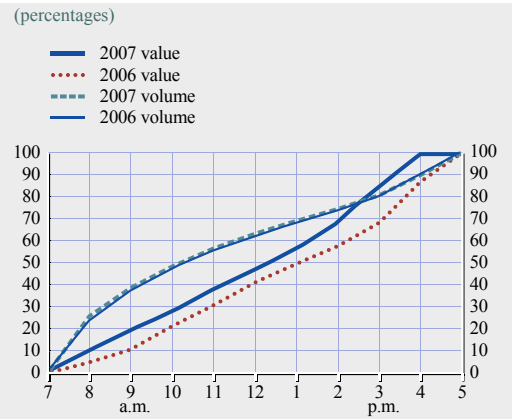
Source: ECB.

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



Source: ECB.

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



Source: ECB.

4 TARGET AVAILABILITY PER NCB AND THE EPM

Overall System Availability													
(%)													
NCB	2007												Average Ytd
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
AT ¹	99.46	100.00	99.64	99.51	100.00	99.64	100.00	100.00	100.00	100.00	100.00	100.00	99.85
BE	100.00	99.83	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.82	100.00	100.00	99.97
DE ¹	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
DK	99.76	100.00	100.00	99.28	99.77	100.00	99.87	100.00	100.00	99.42	99.93	100.00	99.84
EE	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
ES	99.83	99.51	100.00	100.00	100.00	100.00	99.88	100.00	100.00	99.82	99.92	100.00	99.91
EU	99.72	100.00	100.00	100.00	100.00	100.00	100.00	99.88	100.00	100.00	100.00	98.06	99.81
FI	100.00	100.00	100.00	100.00	100.00	100.00	99.07	99.54	100.00	100.00	100.00	100.00	99.88
FR	99.62	98.86	99.89	100.00	97.23	100.00	100.00	100.00	100.00	99.58	98.91	100.00	99.51
GB	100.00	97.10	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.76
GR	100.00	100.00	100.00	98.88	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.21	99.84
IE	100.00	100.00	100.00	100.00	99.92	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.99
IT	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
LU ¹	100.00	99.92	100.00	100.00	100.00	100.00	99.86	100.00	100.00	100.00	100.00	100.00	99.98
NL	100.00	100.00	100.00	99.76	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.98
PL	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
PT	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.24	100.00	100.00	100.00	99.94
SSP ²											100.00	100.00	100.00
Overall System Availability	99.91	99.72	99.97	99.85	99.82	99.98	99.92	99.97	99.93	99.87	99.99	99.84	99.90

Source: ECB.

1) These national components ceased to operate on 16 November 2007.

2) The TARGET2 system started operating 19 November 2007 when a first group of countries (Germany, Cyprus, Latvia, Lithuania, Luxembourg, Malta, Austria and Slovenia) migrated their operations to the Single Shared Platform.

2 STRUCTURAL ORGANISATION OF TARGET

The information in this section (with the exception of the sub-section on the legal framework) of the annex only reflects the situation until 19 November, i.e. before the single shared platform (SSP) for TARGET2 was launched. For information on TARGET2, see Chapter III on TARGET developments.

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

The fourth indent of Article 105(2) of the Treaty establishing the European Community and the third indent of the Statute of 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 (RTGS) 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 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 in 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 was also published in the Official Journal of the European Communities (OJ L 140, 24.5.2001, pp. 72-86).

Since the inception of the TARGET system, in order to reflect the business and legal developments in the EU, the TARGET Guideline was amended a number of times. The latest developments were consolidated in the Guideline ECB/2005/16 of 30 December 2005 (OJ L 18, 23.1.2006, p. 1).

This Guideline was amended in 2006 by Guideline ECB/2006/11 of 3 August 2006 (OJ L 221, 12.8.2006, p. 17). The amendment was conditioned by the entry of Slovenia into the euro area and the necessity to accommodate the way Banka Slovenije has chosen to connect to TARGET. These amendments were applied as of 1 January 2007.

The launch of TARGET2 on 19 November 2007 necessitated a new legal framework. The Guideline of the European Central Bank on the Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET2) of 26 April 2007 (ECB/2007/2) is the main legal instrument governing TARGET2. Although TARGET2 is, like TARGET, legally structured as a multiplicity of payment systems, the Governing Council has decided that the rules of the TARGET2 component systems will be harmonised to the greatest extent possible, with certain derogations in the event of national legal constraints. To this end, Annex II of the TARGET2 Guideline establishes harmonised conditions for participation in TARGET2, to be seamlessly implemented by the TARGET2 central banks, which govern the relationship between the relevant central bank and its participants in respect of payment processing in the payment module of the SSP. The TARGET2 Guideline has been published in all official EU languages in the Official Journal of the European Union (OJ L 237, 8.9.2007, p. 1). The TARGET2 Guideline has replaced the Guideline ECB/2005/16 of 30 December 2005. However, due to the phased migration of the national RTGS systems to the SSP, the Guideline ECB/2005/16 will continue to apply to such systems until the relevant central banks have migrated to the SSP.

PARTICIPATION IN THE SYSTEM

Only supervised credit institutions, as defined in the first indent of Article 1 of the First Banking Co-ordination Directive¹ and which are established in the European Economic Area (EEA), can be admitted as direct participants in a national RTGS system. In addition, by way of exception, the following entities may also be admitted as participants in a national RTGS system, subject to the approval of the relevant NCB:

- 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.² However, remote participants can only participate in TARGET on the basis of available funds and cannot have recourse to intraday or overnight credit facilities.

TYPES OF TRANSACTIONS HANDLED

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

The types of transactions handled by TARGET are as follows: (i) payments directly connected with central bank operations in which the Eurosystem is involved either on the recipient or the sender side; (ii) the settlement operations

1 Incorporated into Directive 2000/12/EC of the European Parliament and the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions.

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

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. the processing of 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; there are currently approximately 53,000 addressable banks and branches.

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.³

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 message, 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.⁴

3 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”.

4 TARGET messages exchanged via the interlinking system are classified either as requests, notifications, free format or 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.

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 an 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 system/the EPM is operational. The sending NCB/the ECB is entrusted with the task of: (i) converting, if necessary, the payment order into the message standards which are used by the interlinking system; (ii) applying the additional security features used during communications between NCBs/the ECB; and (iii) sending the message through the interlinking mechanism to the receiving NCB/the ECB. Once the sending NCB/the ECB has debited the RTGS account of the sending credit institution and credited the payment to the interlinking account of the receiving NCB/the ECB, the payment becomes irrevocable.⁵

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 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

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

system 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. CET, 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.

Box 7

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 appropriate modifications and specifications. 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 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 Narodowy Bank Polski's euro RTGS system (SORBNET-EURO) was connected to TARGET via the Banca d'Italia's RTGS system (BIREL). On 20 November Estonia was the second new Member State to join TARGET. Eesti Pank's euro RTGS system was also connected to TARGET via the Banca d'Italia. In view of Slovenia's entry into the euro area in January 2007, Banka Slovenije decided, for efficiency reasons, not to develop its own euro RTGS system, but to use the RTGS system of the Deutsche Bundesbank to connect to TARGET. Banka Slovenije commenced operations as a member of the Eurosystem on 2 January 2007. Other new Member States (i.e. Cyprus, Latvia, Lithuania and Malta) have been able to use the single shared platform of TARGET2 since it commenced operations on 19 November 2007. Moreover, Cyprus and Malta carried out all the preparatory work necessary to act as a Eurosystem central bank in TARGET from 2 January 2008 onwards.

PRICING

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

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

Fees are 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 non-discrimination. They must also take into account the fact that the fees for intra-Member State and inter-Member State transfers should be in the same range so as not to distort the singleness of the money market.

RTGS systems may charge extra fees for any additional services that 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's Director General Payment Systems, who refers 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 Working Group on TARGET2 issues (WGT2). 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 play an important role. In 2007 the ECB and the NCBs maintained a fruitful dialogue with TARGET users in regular meetings with 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 supreme 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 Oversight Working Group (PSOWG) to assist in the oversight of the existing TARGET system as a whole. The PSOWG is the coordination body for all oversight activities related to the current TARGET system which are performed collectively at the ESCB level. It provides a forum for the exchange of all information related to the existing TARGET system which is or could be relevant from an oversight perspective. Based on its mandate, the PSOWG is responsible for the preparation and performance of the oversight activities related to TARGET, which outcome is submitted to the PSSC and, ultimately, to the Governing Council.

With a view to adjusting the current oversight framework of TARGET to the more centralised nature of TARGET2, the Governing Council approved the general organisational modalities for the oversight of TARGET2 and, in particular, that the PSSC, as advisor to the ECB's decision-making bodies, would assess both the conduct and the outcome of all TARGET2 oversight activities, which would be led and coordinated by the ECB. NCBs contribute to the conduct of TARGET2 oversight activities, in particular as the overseer with primary responsibility for the conduct of the oversight of the local features of TARGET2.

3 CHRONOLOGY OF DEVELOPMENTS IN TARGET

NOVEMBER 1994

In this month the EMI published a report entitled “The EMI’s intentions with regard to cross-border payments in Stage Three”, which laid down the basic principles and objectives as well as the approach to be adopted by EU 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 subsidisation 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 progress 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.

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 mechanisms¹ 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.²

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. CET.³

With regard to relations with other funds 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 upon 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 of €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 non-euro area NCBs, namely an earlier closing time

1 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.

3 Ibid.

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

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

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

For the provision of settlement services to cross-border large-value NSSs, the EMI Council agreed on a method for the settlement of the future European Banking Association (EBA) clearing system within the euro area. This envisaged that the EBA would open a central settlement account at the ECB and perhaps also open settlement accounts with NCBs which agreed 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.⁵ 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 non-euro area NCB would have to make an intraday deposit with the Eurosystem.⁶

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 were 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 could also be admitted as participants in a national RTGS system subject to the approval of the relevant NCB.⁷

Unlimited, but fully collateralised, intraday credit would be provided to RTGS participants fulfilling the general counterparty eligibility criteria of the ESCB.⁸ 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

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 latest version "The implementation of monetary policy in the euro area: General documentation on Eurosystem monetary policy instruments and procedures", ECB, September 2006.

authorised to hold accounts for customers, provided that no spillover to overnight credit was possible. At their own discretion, NCBs could decide to grant intraday credit to investment firms, on condition that these investment firms be subject to a formal spillover prevention arrangement. Any arrangement under which 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 live⁹, 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. CET. 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.¹⁰

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.¹¹

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.¹²

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.¹³

OCTOBER 2000

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

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

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

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.

message format for customer payments, MT103, and the STP version, MT103+.

DECEMBER 2000

A long-term calendar for TARGET operating days, applicable as from 2002 until further notice, was established. Accordingly, in addition to Saturdays and Sundays, TARGET would 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, would 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 would be available at the NCBs. These days would not be settlement days for the euro money market or for foreign exchange transactions involving the euro. The EONIA would also not be published. Furthermore, the CCBM for the cross-border use of collateral would 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 became a member of the Eurosystem and participated in TARGET, bound by the same rules as the NCBs of the other participating Member States and the ECB.¹⁶

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, OJ L 140, 24.5.2001 (pp. 72-86). The document is also available on the ECB's website. 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)¹⁷, 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 would 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 would have the possibility but not the obligation to connect to TARGET as from the date of their joining the EU. Participation in TARGET would be compulsory only when they join EMU.

¹⁵ See the ECB's press release of 14 December 2000.

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

¹⁷ 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.¹⁸

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 would have to verify that the system's existing and envisaged set-up and procedures were compatible with the Core Principles for Systemically Important Payment Systems. Second, any case of non-compliance with the Core Principles would have to be brought to the attention of the decision-making bodies of the ECB so that, when needed, measures could 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 2003.¹⁹ 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 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

¹⁸ "TARGET2: Principles and structure".

¹⁹ "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 Narodowy Bank Polski's euro RTGS system (SORBNET-EURO) was connected to TARGET via the Banca d'Italia's RTGS system (BIREL).

NOVEMBER 2006

On 20 November 2006 Estonia was the second new Member State to join TARGET. Eesti Pank's euro RTGS system was also connected to TARGET via the Banca d'Italia.

JANUARY 2007

Slovenia entered into the euro area. For efficiency reasons, Banka Slovenije had decided not to develop its own euro RTGS system, but to use the RTGS system of the Deutsche Bundesbank to connect to TARGET. Banka Slovenije commenced operations as a member of the Eurosystem on 2 January 2007.

Following its decision not to join TARGET2, in 2006 Sveriges Riksbank prepared for the disconnection of its TARGET component, E-RIX, effective as of 2 January 2007. Swedish participants largely anticipated the

disconnection before the end of the year and prepared alternative ways to remain connected to TARGET (e.g. either as a direct participant via another central bank, as an indirect participant or through correspondent banking).

NOVEMBER 2007

On 19 November 2007 the Eurosystem successfully launched the single shared platform (SSP) of TARGET2. The launch of TARGET2 saw the connection of the first migration group composed of the national central banks and the respective TARGET user communities in Austria, Cyprus, Germany, Latvia, Lithuania, Luxembourg, Malta and Slovenia.

4 GENERAL TERMS AND ACRONYMS

Countries		ESCB	European System of Central Banks
AT	Austria	EU	European Union
BE	Belgium	EUR, €	Euro
CY	Cyprus	EURO1	EU-wide payment system of the EBA
DE	Germany		
DK	Denmark	FIN	Financial application; store and forward messaging service on the SWIFT network
EE	Estonia		
ES	Spain	FIN copy	Function of the SWIFT network whereby instructions may be copied and optionally authorised by a third party before being released to the beneficiary
FI	Finland		
FR	France	Forex (FX)	Foreign exchange
GR	Greece	GFS	General functional specifications
IE	Ireland	IBAN	International Bank Account Number
IT	Italy	ICM	Information and control module
LT	Lithuania	IFFM	Interlinking free format message
LU	Luxembourg	IMF	International Monetary Fund
LV	Latvia	ISIM	Interlinking statistical information message
NL	Netherlands	ISO	International Organization for Standardisation
MT	Malta	ITES	Interlinking test environment system
PL	Poland	MAC	Message authentication code
PT	Portugal	MT103	Message types
SI	Slovenia	103+	
UK	United Kingdom	202	
		NCB	National central bank
Others		NMP	National migration profile
ASI	Ancillary systems interface	NSS	Net settlement system
BIC	Bank Identifier Code	PM	Payment module
BIS	Bank for International Settlements	PSMN	Payment settlement message notification
CCBM	Correspondent central banking model	PSMR	Payment settlement message request
CET	Central European Time	PSOWG	Payment Systems Oversight Working Group
CLS	Continuous Linked Settlement	PSSC	Payment and Settlement Systems Committee
CM	Contingency module	PvP	Payment versus payment
CPSS	Committee on Payment and Settlement Systems	Repo	Repurchase operation
EAF	Euro Access Frankfurt	RTGS	Real-time gross settlement
EBA	European Banking Association	SSP	Single shared platform
EC	European Community	SSS	Securities settlement system
ECB	European Central Bank	STP	Straight-through processing
ECBS	European Committee for Banking Standards		
EEA	European Economic Area		
ELS	Euro Link System		
EMI	European Monetary Institute		
EMU	Economic and Monetary Union		
EONIA	Euro overnight index average		
EPM	ECB payment mechanism		
ERM II	Exchange rate mechanism II		

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**.

Ancillary systems interface (ASI): The ancillary systems 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: Continuous Linked Settlement (CLS) Bank. CLS Bank provides global multi-currency 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.

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

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

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

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

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

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

Daily processing: The complete cycle of processing tasks which needs to be completed in a typical business day, from start-of-day procedures to end-of-day procedures, including the backing-up of data.

Daily settlement: The completion of settlement on the day of value of all payments accepted for settlement.

Deposit facility: A standing facility of the Eurosystem which counterparties may use to make overnight deposits at an NCB, 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 II): 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 funds transfer systems in order to satisfy the payment obligations which are generated. The links between the exchange of assets and the payment system(s) may be manual or electronic.

Final (finality): Irrevocable and unconditional.

Final settlement: Settlement which is irrevocable and unconditional.

Final transfer: An irrevocable and unconditional transfer which effects a discharge of the obligation to make the transfer. The terms “delivery” and “payment” are 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, e.g. 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 an 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 funds transfer system: A funds transfer system through which large-value and high-priority funds transfers are made between participants in the system for their own account or on behalf of their customers. Although as a rule no minimum value is set for the payments they carry, the average size of payments passed through such systems is usually relatively large. Large-value funds transfer systems are also known as wholesale funds transfer systems.

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

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

Liquidity risk: The risk that a counterparty will not settle an obligation at its full value when due, but 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 funds transfer system, the settlement operations of which are completed on a bilateral or multilateral net basis.

Obligation: A duty imposed by contract or by law.

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

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

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

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

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

Payment settlement message notification (PSMN): 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 processing: 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 funds 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 order-by-order basis (without netting) in real time (continuously).

Settlement: An act which discharges obligations in respect of funds or securities transfers between two or more parties. 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 Tele-communication): 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), and Pankkien On-line Pikasirrot 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 funds and/or securities transfer system. The act of transfer affects the legal rights of the transferor, the transferee and possibly third parties with regard to the money, security or other financial instrument being transferred.

Transfer system: A generic term covering interbank funds transfer systems and exchange-for-value systems.

TARGET-RELATED DOCUMENTS PUBLISHED BY THE ECB

This 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 and Information 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's website (www.ecb.europa.eu).

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.
- “Annual Report 2006”, April 2007.
- “Annual Report 2007”, April 2008.

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 cooperation” (section 4 on “A new key component of international cooperation: 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 evolution of large-value payment systems in the euro area”, August 2006.

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.
- “TARGET Annual Report 2005”, May 2006.
- “TARGET Annual Report 2006”, May 2007.

OTHER PUBLICATIONS

- “Third progress report on the TARGET project”, November 1998.
- “Payment systems in the European Union: Addendum incorporating 1997 figures” (Blue Book), January 1999.
- “Cross-border payments in TARGET: A users’ survey”, November 1999.
- “Payment systems in the European Union: Addendum incorporating 1998 figures” (Blue Book), February 2000.
- “Interlinking data dictionary” (version 2.02), March 2000.
- “Information guide for credit institutions using TARGET”, November 2000.
- “Long-term calendar for TARGET closing days”, December 2000.
- “Recommendations for CLS payments in euro”, February 2001.
- “Explanatory memorandum on the recommendations concerning CLS payments in euro”, February 2001.
- “Guideline of the European Central Bank on a Trans-European Automated Real-time Gross Settlement Express Transfer System (ECB/2001/3)”, April 2001.
- “Derogation for Greece from the long-term calendar for TARGET closing days”, February 2002.
- “Guideline of the European Central Bank of 27 February 2002 amending Guideline ECB/2001/3 on a Trans-European Automated Real-time Gross Settlement Express Transfer System (TARGET) ECB/2002/1”, March 2002.
- “TARGET minimum common performance features of RTGS systems within TARGET”, June 2002.
- “TARGET interlinking data dictionary”, June 2002.
- “TARGET interlinking specification”, June 2002.
- “TARGET interlinking user requirements”, June 2002.
- “Payments and securities settlement systems in the European Union: Addendum incorporating 2000 figures” (Blue Book), July 2002.
- “TARGET interlinking specification”, November 2002.
- “TARGET interlinking data dictionary”, 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” (Blue Book), April 2004.
- “Payment and securities settlement systems in the accession countries: Addendum incorporating 2002 figures” (Blue Book), 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” (Blue Book), February 2005.

“Correspondent central banking model (CCBM) – Procedure for Eurosystem counterparties”, May 2005.

“Information guide for credit institutions using TARGET”, June 2005.

“Assessment of SORBNET-EURO and BIREL against the Core Principles”, June 2005.

“Connection of SORBNET-EURO to TARGET via the Banca d'Italia and its national RTGS system BIREL”, June 2005.

“Result of oversight assessment of retail payment systems in euro”, August 2005.

“Correspondent central banking model (CCBM) – Procedure for Eurosystem counterparties”, August 2005.

“Payment and securities settlement systems in the European Union: Addendum incorporating 2003 figures” (Blue Book), August 2005.

“Second progress report on TARGET2”, October 2005.

“Business continuity oversight expectations for systemically important payment systems (SIPS)”, June 2006.

“Communication on TARGET2”, July 2006.

“Third progress report on TARGET2”, November 2006.

“Payment and securities settlement systems in the European Union and in the acceding countries: Addendum incorporating 2005 data” (Blue Book), December 2006.

“TARGET2-Securities and the CCBM2 – Launch of a public consultation”, April 2007.

“Consultation announcement: Oversight framework for card payment schemes”, May 2007.

“Consultation announcement: Oversight of payments infrastructure – Eurosystem common methodology for the assessment of euro systemically and prominently important payment systems against the Core Principles”, May 2007.

“Amendment to the criteria for assets eligible as collateral for Eurosystem credit operations”, May 2007.

“Amendment to the calendar for the phasing-out of marketable tier two assets eligible as collateral for Eurosystem credit operations”, May 2007.

“Fourth progress report on TARGET2”, June 2007.

“Adherence of the central banks of the new Member States, Bulgaria and Romania, to the Memorandum of Understanding on high-level principles of cooperation in crisis management situations and the Memorandum of Understanding on cooperation between payment systems overseers and banking supervisors”, August 2007.

“Payment and securities settlement systems in the European Union” (Blue Book, Volumes 1 and 2), August 2007.

“Fifth progress report on TARGET2”, October 2007.

“TARGET2: Confirmation of the go-live date for migration group 1”, 9 November 2007.

“Oversight of payment systems: the Eurosystem’s common methodology”, November 2007.

“Statistics on payments and securities trading, clearing and settlement – data for 2006”, November 2007.

“TARGET2 successfully launched”, 19 November 2007.

INFORMATION BROCHURES

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

“The ECB payment mechanism”, August 2000.

“TARGET”, November 2001.

“Brief overview of TARGET”, August 2003.

“TARGET2 – The payment system of the Eurosystem”, November 2003.

“TARGET – The Trans-European Automated Real-time Gross Settlement Express Transfer System”, November 2003.

“TARGET2 – The future TARGET system”, September 2004.

“TARGET – The current system”, September 2004.

“TARGET – The current system”, August 2005.

“TARGET2 – Innovation and transformation”, August 2005.

“A single currency – an integrated market infrastructure (TARGET2, T2S, CCBM2, SEPA)”, September 2007.

