

# CURRENCY CIRCULATION

Well-functioning and efficient payment systems are a necessary precondition for an efficient financial system. Payment systems should meet the needs of the society as well as comply with the legal framework of a country. They should operate without any risks that might endanger the financial system. Managing and developing various payment channels, including interbank payment systems, is one of the main functions of Eesti Pank.

## DEVELOPMENT OF THE PAYMENT AND SETTLEMENT ENVIRONMENT

In 2007, the European System of Central Banks, and thus also Eesti Pank, faced a new challenge: updating of the present TARGET by developing the **TARGET2**. The TARGET is composed of the central banks' RTGS (Real-Time Gross Settlement) systems and a network linking them, whereas the TARGET2 functions on a single shared platform and provides a harmonised set of services.

The TARGET2, a new system replacing the TARGET, offers its users (credit institutions) up-to-date tools for liquidity management, including liquidity pooling within a banking group, reservation of liquidity and management of payment flows. The technological modifications of the system serve the purpose of increasing cost-effectiveness and adjusting fast to new developments, such as the enlargement of the Eurosystem. For bank customers, the new system will still be providing the possibility of making cross-border express payments in euro.

As planned, the TARGET2 was introduced on November 19, 2007, when our neighbours Latvia and Lithuania joined the system among others. Finland joined the TARGET2 in the second wave on February 18, 2008. Eesti Pank and several Estonian commercial banks<sup>1</sup> connected to the system in the third wave on May 19, 2008.

Major changes are under way also in the cross-border **retail payments market**. Under the lead-

ership of the European Payments Council (EPC), Estonian banks have been preparing to join the **Single Euro Payments Area** (SEPA). The SEPA aims at making euro payments across Europe as easy as domestic payments. This would simplify financial transactions, strengthen the European internal market and competition, and enhance efficiency. Estonian banks took the first major step towards the SEPA on January 28, 2008 by launching the service of trans-European retail payments in compliance with the SEPA standards.

On June 14, 2007, most of the banks operating in Estonia implemented the **interbank direct debit system**, which enhances the effectiveness of domestic interbank retail payments. The new service enables customers to use domestic direct debits also if the accounts of the payer and the payee are not held with the same bank. The information logistics company Itella Information AS is responsible for interbank information exchange and provision of payment information.

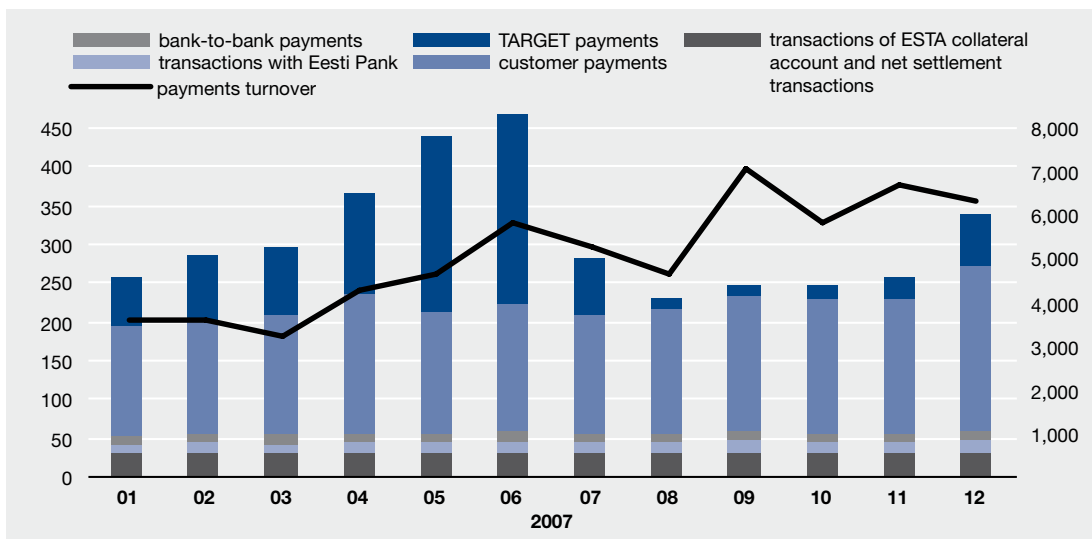
### **Settlement System of Interbank Payments**

The Estonian Settlement System of Interbank Payments contains two sub-systems: the Settlement System of Ordinary Payments (ESTA) and the Real-Time Gross Settlement (RTGS) System. The ESTA settles domestic interbank retail payments in Estonian kroon, whereas the EP RTGS settles domestic express payments in kroon as well as domestic and cross-border payments in euro.

The **Real-Time gross Settlement System EP RTGS** settles payments instantaneously. It takes approximately five minutes for a money transfer to be transferred from one bank to another.

The number of payments settled through the RTGS **increased 19%**, year-on-year. On average, **311 transactions a day** were settled in 2007 (see Figure 1). The growth stems from the possibility of making cross-border payments after joining the

<sup>1</sup> Hansapank, SEB Ühispank (now SEB Pank), Nordea Pank, Sampo Pank, Eesti Krediidipank, SBM Pank and Tallinna Äripank



**Figure 1. Number of payments processed in EP RTGS (left scale) by transaction types and their average daily value (EEK m; right scale) in 2007**

TARGET. In 2007, Sampo Pank settled the most transactions via the TARGET. Parex Bank and Eesti Pank made somewhat fewer settlements, and so did SBM Pank who joined the TARGET later than others, on September 17. Payments originated by bank customers form the majority (79%) of all EP RTGS payments. On average, 165 domestic and 74 cross-border customer payments were settled a day.

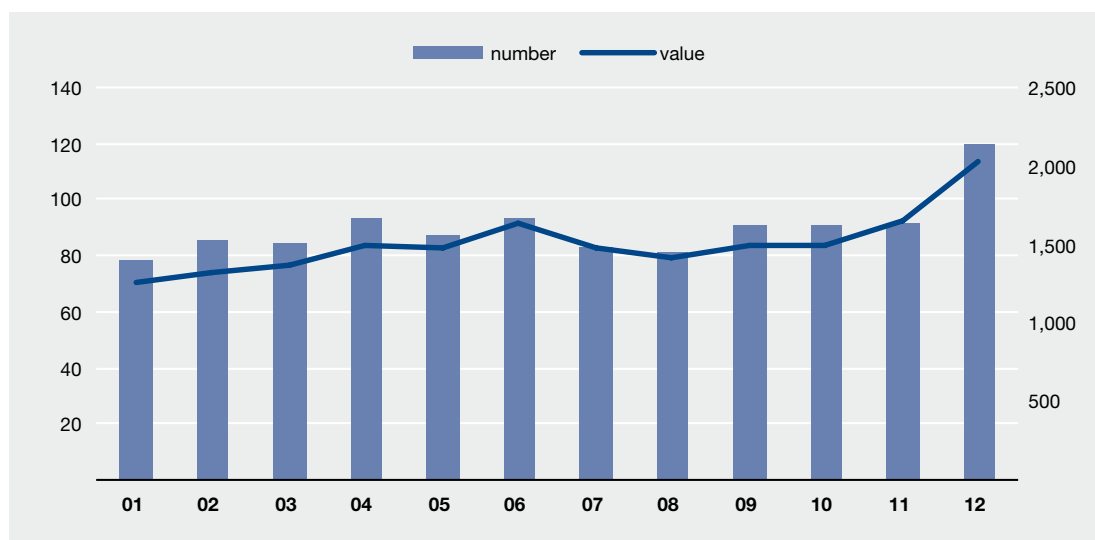
The average daily turnover of express payments stood at 5 billion kroons. In previous years, banks' "compulsory" payments (transactions related to the collateral account of the ESTA) accounted for the largest share in turnover. In 2007, however, the turnover of banks' currency purchase and sale transactions grew considerably, reaching 2 billion kroons as daily average (40% of the total turnover of transactions). Compared to 2006, the turnover of payments settled through the EP RTGS increased 69%.

The average value of domestic customer payments of the EP RTGS stood at 4.6 million kroons, whereas that of cross-border express payments in euro was 82,000 kroons.

In the **ESTA, the settlement system of retail payments**, payments made from one bank to another usually reach the beneficiary within 30 minutes but no later than in an hour and a half on a working day<sup>1</sup>.

On average, **90,000 transactions** a day were settled through the ESTA in 2007 (see Figure 2). The number of payments has increased 12%, year-on-year. An average of **1.5 billion kroons** a day were settled through the ESTA. The turnover of ESTA payments has increased 25%, year-on-year. The average payment settled through the ESTA was 16,800 kroons.

<sup>2</sup> The ESTA operates on working days from 8.15 AM to 6 PM. Payments are settled on every hour.



**Figure 2. Number of transactions processed in ESTA (thousand; left scale) and their average daily value (EEK m; right scale) in 2007**

## MEETING THE CASH DEMAND

### Banknotes and coins in circulation and their structure

On December 31, 2007 the total amount of currency in circulation was 11,762.2 million kroons (see Table 1). 1,888.3 million kroons (16.1%) were in the

vaults of credit institutions and savings and loan associations operating in Estonia and 9,873.8 million kroons (83.9%) were in circulation outside credit institutions and savings and loans associations.

In previous years, the amount of currency in circulation increased rapidly, whereas in 2007 it decreased

**Table 1. Banknotes and coins in circulation as at end-year**

Nominal, value	Total amount (EEK m)				Number (m)			
	31/12/2004	31/12/2005	31/12/2006	31/12/2007	31/12/2004	31/12/2005	31/12/2006	31/12/2007
1, kroon	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
2 krooni	26.0	29.6	33.5	38.5	13.0	14.8	16.8	19.2
5 krooni	38.8	43.1	47.8	49.5	7.8	8.6	9.6	9.9
10 krooni	70.6	77.5	85.6	94.3	7.1	7.7	8.6	9.4
25 krooni	187.4	207.1	225.4	233.4	7.5	8.3	9.0	9.3
50 krooni	45.4	46.6	49.0	54.4	0.9	0.9	1.0	1.1
100 krooni	1,076.1	1,122.4	1,180.1	1,193.1	10.8	11.2	11.8	11.9
500 krooni	7,337.8	8,450.3	10,001.2	9,942.5	14.7	16.9	20.0	19.9
<b>Banknotes total</b>	<b>8,786.7</b>	<b>9,981.2</b>	<b>11,627.3</b>	<b>11,610.3</b>	<b>66.3</b>	<b>73.1</b>	<b>81.3</b>	<b>85.4</b>
5 senti	2.1	2.1	2.1	2.1	42.4	42.0	41.5	41.2
10 senti	11.4	12.3	13.4	14.6	113.7	123.2	134.4	146.0
20 senti	17.7	19.8	22.3	24.7	88.7	99.2	111.3	123.4
50 senti	16.4	19.1	22.1	25.1	32.9	38.2	44.1	50.2
1 kroon	46.6	52.9	61.0	69.7	46.6	52.9	61.0	69.7
5 krooni	8.1	8.3	8.5	9.0	1.5	1.7	1.7	1.8
<b>Coins total</b>	<b>102.4</b>	<b>114.6</b>	<b>129.4</b>	<b>145.1</b>	<b>325.9</b>	<b>357.1</b>	<b>394.1</b>	<b>432.3</b>
<b>Collector coins</b>	<b>5.9</b>	<b>6.0</b>	<b>6.4</b>	<b>6.7</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>
<b>Banknotes and coins total</b>	<b>8,895.1</b>	<b>10,101.7</b>	<b>11,763.2</b>	<b>11,762.2</b>				



slightly (by 1.0 million kroons). The last time this happened was in 1998 (by 47.9 million kroons). The fourth quarter was especially remarkable in that respect when currency in circulation decreased by 322.1 million kroons, instead of the usual strong growth.

This stemmed from the decline in the amount of 500-kroon banknotes, the biggest denomination in circulation. The amount of all other denominations in circulation, however, increased.

Coins in circulation continued rapid growth and amounted to 432.3 million at the end of 2007. Thus, there were already as much as 320 coins in circulation per resident.

As the share of 500-kroon notes in circulation diminished, the average calculated value of a banknote in circulation decreased by 7 kroons, year-on-year, and totalled 136 kroons at the end of 2007.

The average calculated value of a coin in circulation remained at the level of 2006 and stood at 33 sents.

#### Expert analysis and handling of cash

The central bank issued 12,474.8 million kroons to credit institutions and received 12,472.6 million kroons in 2007 (see Table 2). The figures of issued and received cash indicate changes in circulation. Compared to 2006, the amount of banknotes issued decreased by 4 million notes, remaining at the previous year's level. The amounts of cash received, on the other hand, grew considerably.

All banknotes returned to Eesti Pank are sorted with fully automatic sorting machines. Banknotes unfit for circulation are destroyed and the rest are returned to circulation. In 2007, 21.8 million banknotes in the total amount of 564.6 million kroons were withdrawn from circulation (see Table 3).

Compared to 2006, the number of unfit banknotes increased significantly in 2007: every fourth banknote was withdrawn from circulation. Over half of the unfit banknotes were 2- and 10-kroon notes, which were replaced by new ones. The decrease of 500-kroon banknotes was exceptional. As a result, also the total amount of unfit banknotes decreased year-on-year.

In 2007, Eesti Pank performed expert analyses for 5210 damaged and worn-out banknotes submitted by credit institutions and discovered 20 banknotes with counterfeit features.

All in all, 238 counterfeit banknotes were discovered in Estonia in the expertises performed by the Forensic Service Centre in 2007. 500-kroon banknotes accounted for the largest share (47.9%) of counterfeit money. Given the amount of currency in circulation (85.4 million pieces), the number of counterfeit banknotes is relatively marginal. No counterfeit coins were found in 2007.

#### Preparation of new banknotes and coins

In 2007, the central bank put into circulation 2- and 10-kroon banknotes with renewed security features. The 2-kroon banknotes were supplied by Giesecke

**Table 2. Movement of currency between Eesti Pank and credit institutions**

Year	Total amount (EEK m)		Number (m)			
	Issued by Eesti Pank	Received by Eesti Pank	Issued by Eesti Pank		Received by Eesti Pank	
			Banknotes	Coins	Banknotes	Coins
2004	8,881.7	8,306.0	93.7	26.1	90.5	0.7
2005	10,445.0	9,237.8	105.8	31.7	99.0	0.6
2006	12,399.0	10,732.5	118.6	37.5	110.4	0.7
2007	12,474.8	12,472.6	114.6	38.4	110.5	0.3

**Table 3. Banknotes unfit for and withdrawn from circulation as at year-end**

Nominal value	Total amount (EEK m)				Number (m)			
	2004	2005	2006	2007	2004	2005	2006	2007
1 kroon	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
2 krooni	0,3	0,4	0,7	14,1	0,2	0,2	0,4	7,0
5 krooni	10,0	9,3	6,3	16,5	2,0	1,9	1,3	3,3
10 krooni	5,0	5,3	2,9	61,3	0,5	0,5	0,3	6,1
25 krooni	14,4	13,5	16,3	47,3	0,6	0,5	0,7	1,9
50 krooni	27,2	10,6	12,4	16,0	0,5	0,2	0,2	0,3
100 krooni	74,0	74,7	63,7	284,6	0,7	0,7	0,6	2,8
500 krooni	701,6	751,0	537,9	124,8	1,4	1,5	1,1	0,2
<b>Total</b>	<b>832,6</b>	<b>864,7</b>	<b>640,2</b>	<b>564,6</b>	<b>6,0</b>	<b>5,6</b>	<b>4,5</b>	<b>21,8</b>

& Devrient (Germany) and the 10-kroon notes by De La Rue Ltd (United Kingdom).

In order to renew banknotes in circulation and raise their quality, Eesti Pank made procurements for new 100- and 500-kroon notes. The new banknotes were delivered to Eesti Pank by Giesecke & Devrient (Germany), the winner of adjudication.

Moreover, new coins were procured:

- 10-sent coins from Staatliche Münze Baden-Württemberg (Germany);
- 20-sent coins from Staatliche Münze Baden-Württemberg;
- 50-sent coins from Monnaie de Paris (France);
- 1-kroon coins from the Koninklijke Nederlandse Munt (Netherlands).

In 2007, the central bank issued a gold collector coin with the nominal value of 100 kroons to celebrate the 15th anniversary of the monetary reform and re-adoption of the kroon. This coin differs from all earlier collector coins for its triangular shape. It is unique since triangular coins are quite rare in the world. The coin depicts the national flower of Estonia – the cornflower. The coin was designed by Ivar Sakk. It was minted by the Mint of Finland Ltd. in the total amount of 6,000 pieces.