

PAYMENT AND SETTLEMENT SYSTEMS AND CURRENCY IN CIRCULATION

Price stability relies on the smooth operation of the financial system, which is based on efficient and well-functioning payment and settlement systems. Management and development of interbank payment and settlement systems is one of the primary tasks of Eesti Pank.

DEVELOPMENT OF THE PAYMENT AND SETTLEMENT ENVIRONMENT

Given the close integration of European countries, the keywords regarding the development of the payment and settlement environment are **international cooperation** and **common strategic development patterns**. The objective of harmonisation is to achieve effectiveness at the member state level as well as the EU level. As a member of the European System of Central Banks, Eesti Pank closely cooperates with the European Central Bank and member countries of the Eurosystem.

In 2008, the most important project of the ESCB, including Eesti Pank, was the trans-European settlement system **TARGET2** that operates on a single shared platform. The new system was implemented in several stages. The first member states connected to the system at the time it was launched; that is, in November 2007. Eesti Pank and a number of commercial banks¹ operating in Estonia connected to the TARGET2-Eesti, a sub-system of TARGET2, on 19 May 2008.

The new system is more efficient, both technologically and financially, since it operates on a single shared platform and there is no need for the euro area countries to maintain their own systems for euro transactions. Financial risks have been minimized, as the TARGET2 payments are settled using the central bank's

funds – banks can make transactions only with the funds available on the single shared platform. The TARGET2 is secure and reliable. Besides ensuring the operational reliability of the system, Eesti Pank together with the other national central banks of the Eurosystem will be planning and testing the TARGET2 also in 2009 to **ensure the system's business continuity in the case of a financial or operational crisis**.

As regards the **cross-border retail payment market**, under the leadership of the European Payments Council (EPC) Estonian banks have been preparing to join the **Single Euro Payments Area (SEPA)**. In addition to cross-border cooperation, the commercial banks, Eesti Pank and the Estonian Banking Association collaborate in the Estonian working group of the EPC. The SEPA aims at making euro payments across Europe as easy as domestic payments. Several banks operating in Estonia have concluded an adherence agreement and as of 28 January 2008 are providing the service of trans-European retail payments in compliance with the standards for SEPA credit orders. The year 2009 will witness major changes when the directive on payment services² will be transposed into the Estonian legislation and the SEPA Direct Debit Scheme will be made available. The inclusion of the general public in the consultation process for legislative amendments will be yet another major challenge.

As regards domestic developments in 2008, Eesti Pank opened accounts for several new branches of foreign banks. In addition, preparations are under way to connect to the interbank settlement systems. Thus, the systemically important payment systems can expect new members in 2009.

¹ Swedbank, SEB Pank, Nordea Pank, Sampo Pank, Eesti Krediidipank, Marfin Pank and Tallinna Äripank.

² Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market.

Interbank payment and settlement system

Eesti Pank is managing three interbank payment and settlement systems: the Settlement System of Ordinary Payments (ESTA) for domestic payments, the Real-Time Gross Settlement System (EP RTGS) and TARGET2-Eesti for cross-border euro payments.

Around **98,500 payments** are settled every day via the interbank payment and settlement systems with the total value of **10 billion kroons**.

The Settlement System of Ordinary Payments (ESTA) is among the fastest in Europe. Payments are transferred to accounts in other banks ten times a day. The payment is transferred from the originator's account to the payee's account in 30 to 90 minutes, depending on the time of the origination. The ESTA also enables to settle large-value payments.

The ESTA's customer-friendly functionality enables to settle the majority of interbank domestic payments: **98,000 payments** are settled daily, which accounts for **99.7%** of total interbank payments. An average of **1.8 billion kroons** a day were settled through the ESTA in 2008.

Both the number and value of payments continued to grow in 2008, with annual growth standing at 10% and 21%, respectively (see Figure 1). The average value of a payment increased 10% to 18,500 kroons.

The **Real-Time Gross Settlement System (EP RTGS)** processes express payments – transfers between banks take around five minutes.

The number of payments settled through the EP RTGS decreased 13%, year-on-year. The decrease is due to a change in the structure of the EP RTGS, namely the transfer of cross-border euro payments from the RTGS to the TARGET2. On average, 270 transactions a day were settled in 2008 (see Figure 2). The express payments originated by bank customers account for 62% of total transactions; on average, 164 domestic customer payments were settled a day with an average value of 2.7 million kroons.

The average daily value of express payments reached 5.5 billion kroons. Banks' "compulsory" payments (transactions related to the collateral account of the ESTA) and purchase and sale transactions accounted for the largest share of the value (40% and 30%, respectively).

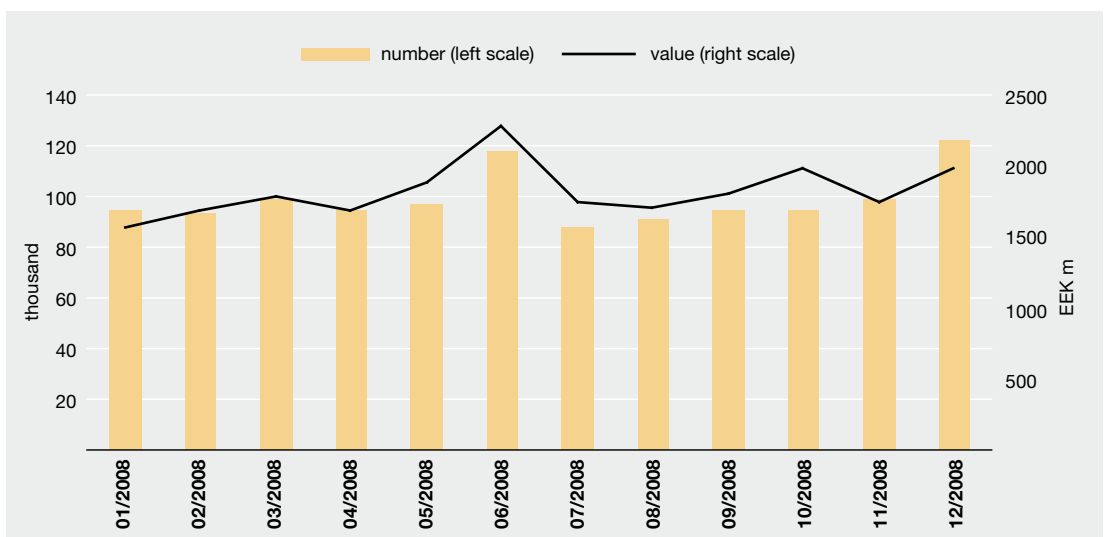


Figure 1. Number of payments processed in ESTA and their daily average value in 2008

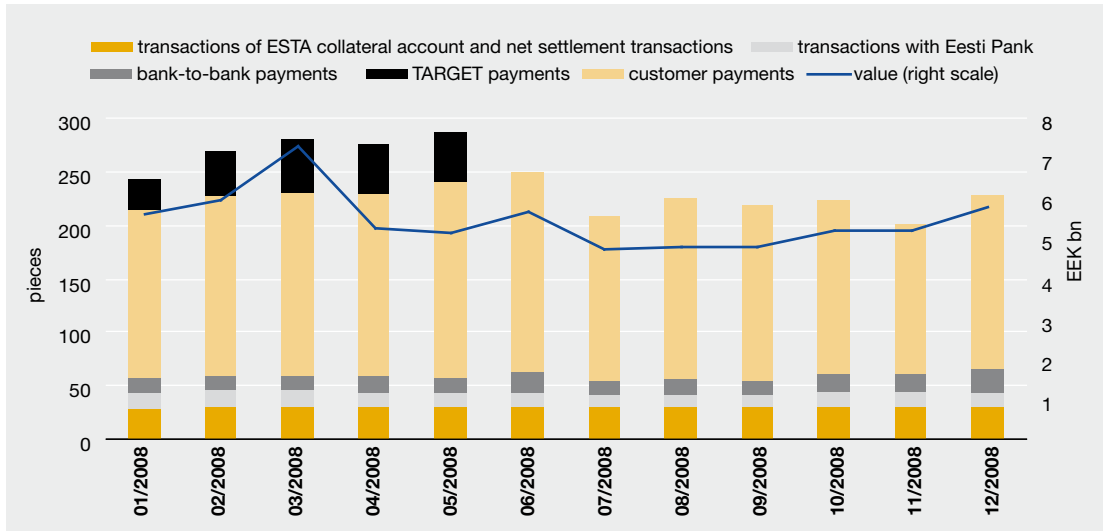


Figure 2. Number of payments processed in EP RTGS by transaction types and their average daily value in 2008

Compared to 2007, the value of payments settled through the EP RTGS increased 8%.

The number of payments settled via the **TARGET2-Eesti** was relatively modest in the first year of the system's operation. Customers started to use the TARGET2, the alternative

channel for settling euro payments, more actively in November-December 2008. On average, 35 payments are settled a day with the value of 80 million euros (1.3 billion kroons). Estonian bank customers and banks receive an average of 170 payments daily via the TARGET2 with the value of 80 million euros (1.3 billion kroons).

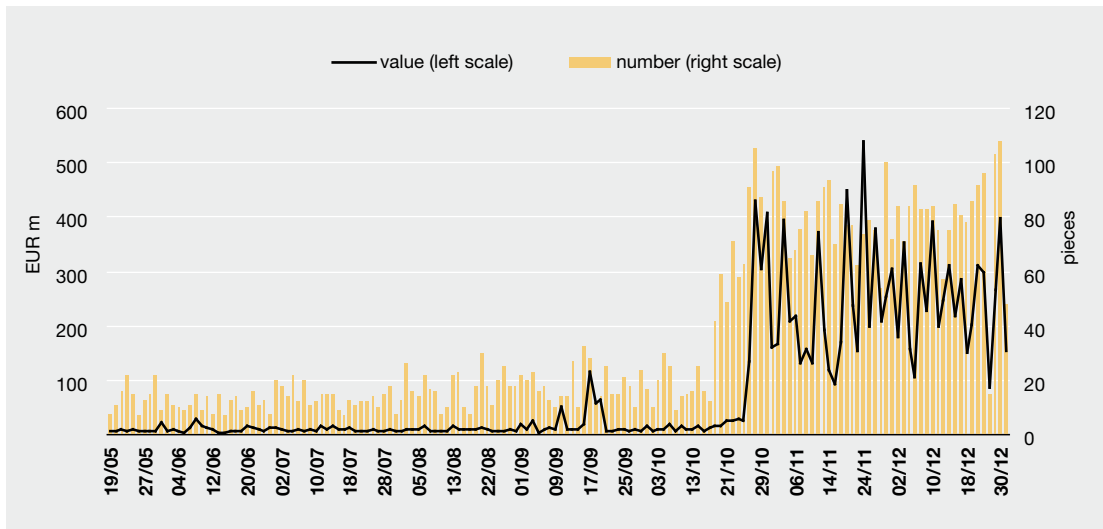


Figure 3. Number of payments processed in TARGET2-Eesti and their average daily value in 2008

MEETING THE CASH DEMAND

Banknotes and coins in circulation and their structure

The total amount of currency in circulation as at 31 December 2008 was 11,996.3 million kroons (see Table 1). 1,905.1 million kroons (15.9%) were in the vaults of credit institutions, and savings and loan associations operating in Estonia; 10,091.2 million kroons (84.1%) was in circulation outside credit institutions and savings and loans associations.

In 2008, the amount of currency in circulation increased by 234.2 million kroons (2.0%). The increase is relatively small compared to 2005-2006, when the currency in circulation grew more than 10% year-on-year. The amount of currency in circulation reflects economic

developments. It is especially noteworthy that in December 2008 the currency in circulation increased by only 17.1 million kroons. This is the lowest figure for December since the re-introduction of the Estonian kroon in 1992. Usually, in December the amount of currency in circulation grows (by more than 200 million kroons) for seasonal reasons.

Although the amount of coins in circulation continued growth, the rate of growth was lower than in previous years. As at year-end, there were 454.6 million coins in circulation; that is, approximately 340 coins per inhabitant.

The average calculated value of a banknote in circulation remained close to the 2007 level and stood at 137 kroons at the end of 2008. The average calculate value of a coin in circulation was 34 senti.

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

Nominal value	Total amount (EEK m)				Number (m)			
	31/12/2005	31/12/2006	31/12/2007	31/12/2008	31/12/2005	31/12/2006	31/12/2007	31/12/2008
1 kroon	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
2 krooni	29.6	33.5	38.5	39.6	14.8	16.8	19.2	19.8
5 krooni	43.1	47.8	49.5	49.9	8.6	9.6	9.9	10.0
10 krooni	77.5	85.6	94.3	95.0	7.7	8.6	9.4	9.5
25 krooni	207.1	225.4	233.4	232.8	8.3	9.0	9.3	9.3
50 krooni	46.6	49.0	54.4	52.1	0.9	1.0	1.1	1.0
100 krooni	1,122.4	1,180.1	1,193.1	1,165.2	11.2	11.8	11.9	11.7
500 krooni	8,450.3	10,001.2	9,942.5	10,194.6	16.9	20.0	19.9	20.4
Banknotes total	9,981.2	11,627.3	11,610.3	11,833.9	73.1	81.3	85.4	86.3
5 senti	2.1	2.1	2.1	2.0	42.0	41.5	41.2	40.8
10 senti	12.3	13.4	14.6	15.2	123.2	134.4	146.0	152.1
20 senti	19.8	22.3	24.7	26.1	99.2	111.3	123.4	130.6
50 senti	19.1	22.1	25.1	27.2	38.2	44.1	50.2	54.4
1 kroon	52.9	61.0	69.7	74.8	52.9	61.0	69.7	74.8
5 krooni	8.3	8.5	9.0	9.4	1.7	1.7	1.8	1.9
Coins total	114.6	129.4	145.1	154.9	357.1	394.1	432.3	454.6
Collector coins	6.0	6.4	6.7	7.5	0.1	0.1	0.1	0.1
Banknotes and coins total	10,101.7	11,763.2	11,762.2	11,996.3				

Expert analysis and handling of cash

In 2008, the central bank issued 12,897.5 million Estonian kroons of cash to credit institutions and received 12,646.9 million kroons, which is slightly more than in 2007 (see Table 2). The amount of cash issued and received by Eesti Pank has decreased significantly, as the supply of small denominations has shrunk. The amount of coins issued by the central bank has also substantially decreased.

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 2008, 31.2 million banknotes in the total amount of 3,016.3 million kroons were withdrawn from circulation (see Table 3).

Compared to 2007, the number of unfit banknotes has grown considerably. This concerns primarily 25-, 100- and 500-kroon notes, as new banknotes were put into circulation.

In 2008, Eesti Pank performed expert analyses for 12,011 damaged and worn-out banknotes and 2,076 coins submitted by credit institutions. 20 banknotes with counterfeiting elements were discovered.

All in all, 297 counterfeit banknotes were discovered in Estonia in the expertises performed by the Forensic Service Centre in 2008. 500-kroon banknotes accounted for the largest share of counterfeit money (48.1%). Given the number of banknotes in circulation (86.3 million), the number of counterfeits is relatively marginal. No counterfeit coins were found in 2008. Neither were there any failures in circulation.

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
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
2008	12,897.5	12,646.9	102.0	24.7	101.1	2.6

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

Nominal value	Total amount (EEK m)				Number (m)			
	2005	2006	2007	2008	2005	2006	2007	2008
1 kroon	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
2 krooni	0.4	0.7	14.1	11.0	0.2	0.4	7.0	5.5
5 krooni	9.3	6.3	16.5	11.4	1.9	1.3	3.3	2.3
10 krooni	5.3	2.9	61.3	30.8	0.5	0.3	6.1	3.1
25 krooni	13.5	16.3	47.3	154.0	0.5	0.7	1.9	6.2
50 krooni	10.6	12.4	16.0	17.5	0.2	0.2	0.3	0.4
100 krooni	74.7	63.7	284.6	1,017.6	0.7	0.6	2.8	10.2
500 krooni	751.0	537.9	124.8	1,774.0	1.5	1.1	0.2	3.5
Total	864.7	640.2	564.6	3016.3	5.6	4.5	21.8	31.2

Preparation of new banknotes and coins

In 2008, new 25-, 100- and 500-kroon banknotes were put into circulation (year of issue: 2007). The new banknotes were delivered to Eesti Pank by Giesecke & Devrient (Germany).

In addition, the central bank ordered new 2-kroon notes (produced by Giesecke & Devrient) and 10-kroon notes (by De La Rue Ltd in the UK).

New 10- and 20-sent coins were ordered from Staatliche Münze Berlin (Germany) and 50-sent coins from Monnaie de Paris (France).

In February 2008, Eesti Pank issued 10-kroon silver coins, 50-kroon golden coins and 100-kroon platinum coins dedicated to the 90th anniversary of the Republic of Estonia. The coins were minted by Suomen Rahapaja Oy (Finland). The silver coin was designed by Heino Prunsvelt and the reverse depicts the "Wiiralt oak" after a famous engraving by the Estonian artist Eduard Wiiralt. The golden coin was designed by Jaano Ester and the reverse depicts a windmill. The first windmills are known to have existed in Estonia already in the 14th century. The first Estonian platinum coin was designed by Tiit Jürna and its reverse depicts barn swallows, Estonian national birds. The averse of these coins bears Estonia's national coat of arms.

In June 2008, Eesti Pank put into circulation a 1-kroon circulation coin and a 10-kroon collector banknote to celebrate Estonia's 90th anniversary. In terms of specification, the new 1-kroon coin is similar to the previous 1-kroon coin. The difference lies in the reverse designed by Jaan Meristo and depicting the logo of the 90th anniversary of the Republic of Estonia. The coins were minted by Staatliche Münze Berlin.

The design of the collectors' banknote draws on the currently valid ten-kroon note as well as the pre-war ten-kroon note. The averse is a copy of the pre-war note designed by Günther Reindorff. The original printing plates for 10-kroon banknotes, which were found from a hideaway in the vault of Eesti Pank and which date back to 1940, were used. Most probably, the plates had been hidden there after Estonia's occupation in 1940 and were meant to be destroyed. The reverse of the collector banknote is a copy of the current 10-kroon note, designed by Vladimir Taiger and depicting the famous Tamme-Lauri oak. The collector banknotes were printed by De La Rue printing office. The banknote and the coin come in a special presentation folder.

In July 2008, Eesti Pank issued a silver 10-kroon collector coin dedicated to the summer Olympic Games. The averse depicts a fragment of the Olympic stadium in Beijing and the logo of the Estonian Olympic Committee. The reverse bears the grand national coat of arms of the Republic of Estonia. The coin was designed by Tiiu Kirsipuu and minted by Suomen Rahapaja Oy.