

## 4. SYSTEMICALLY IMPORTANT PAYMENT AND SETTLEMENT SYSTEMS

### 4.1. INTERBANK PAYMENT SYSTEMS

An average of 487 payments per day were made through the **TARGET2-Eesti large-value payment system** in the first half of 2014, with a total value of 1 billion euros (see Figure 4.1.1). This means that 90 more payments were made per day than in the first half of the previous year, but the total value was 13% smaller. The increase in the number of payments was driven by the closure of the ESTA retail payments system, as there were twice as many domestic customer payments in TARGET2-Eesti after ESTA closed at 140 payments a day.

The biggest impact on the value of TARGET2-Eesti came from the closure of ESTA and ending of ESTA collateral payments from February and the ending of deposit tenders of the European Central Bank in June. In the first half of the previous year, 13% of the total value of TARGET2-Eesti had been ESTA collateral transfers and 14% had been payments for deposit tenders.

**Eesti Pank closed the ESTA retail payment system on 1 February and Estonian domestic retail payments are now settled through the STEP2 system run by EBA Clearing.** STEP2 settled as many domestic payments in Estonia in the first half of this year as ESTA did in the first half of the previous year, with an average of 106,000 payments per day (see Figure 4.1.2). The value of domestic payments settled in STEP2 was 2% more than a year ago in ESTA.

### 4.2. RISKS TO THE PAYMENT AND SETTLEMENT SYSTEMS AND THE OVERSIGHT ASSESSMENT

There are two systemically important payment and settlement systems operating in Estonia: the large-value payment system **TARGET2-Eesti** and the **securities settlement system**.

Figure 4.1.1. Structure of the value of TARGET2-Eesti

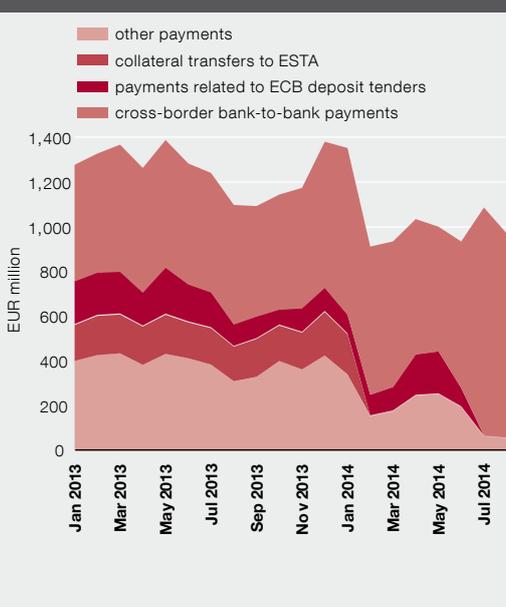
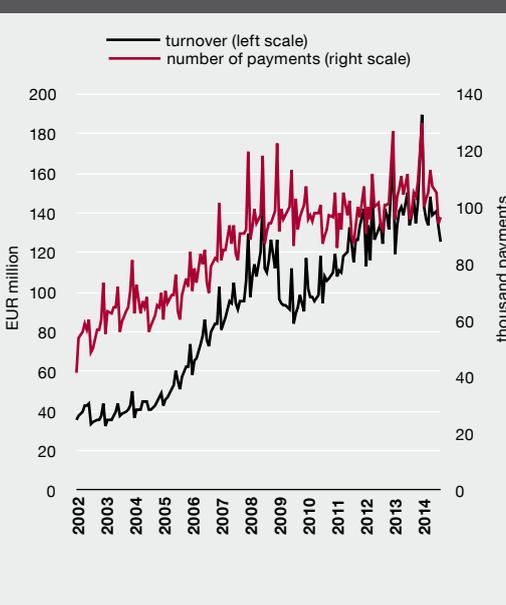


Figure 4.1.2. Payments made in settlement systems ESTA and STEP2 (daily averages)



TARGET2 and its component system **TARGET2-Eesti**, which is run by Eesti Pank, worked without any significant incidents<sup>23</sup> in the first half of 2014 (see Figure 4.2.1). There were six minor incidents during that time, which did not interrupt the availability of the system and the availability rate of both the single shared platform and the TARGET2-Eesti component system was 100%.

The banks had sufficient liquidity buffers for the settlement of payments (see Figure 4.2.2). The centralised liquidity management of the banking groups meant that the banks only needed to use the Eesti Pank intra-day lending facility minimally, as the credit line opened against a collateral pool was used by only one bank. The banks did not require overnight credit and the average balance held at Eesti Pank in the first half of 2014 was 286 million euros. The reduction in account balances was encouraged by the decision of the ECB on 11 June 2014 to introduce negative interest rates on its deposit facility.

**The securities settlement system managed by the Estonian Central Securities Depository (ECSD) experienced one incident in the first half of 2014 that affected the settlement of securities and reduced the availability of the system. The incident originated with a problem at the network service provider of the ECSD and made part of the system inaccessible for account operators for around two hours. To prevent such incidents happening again, the system operator added some technical checks to detect interruptions in the connection. There was also one minor incident in which the setting of collateral for ESTA was delayed because of a technical issue at the ECSD. The issue was resolved quickly and by 10.00 the ECSD was again ready to work with the retail payment system. The securities settlement system had an **availability rate of 99.9% in the first half of the year.****

23 An incident is significant if it has some impact on several settlement system users or if it leads to measures being put in place to ensure continuity or to a loss of availability.

Figure 4.2.1. Availability of interbank payment systems

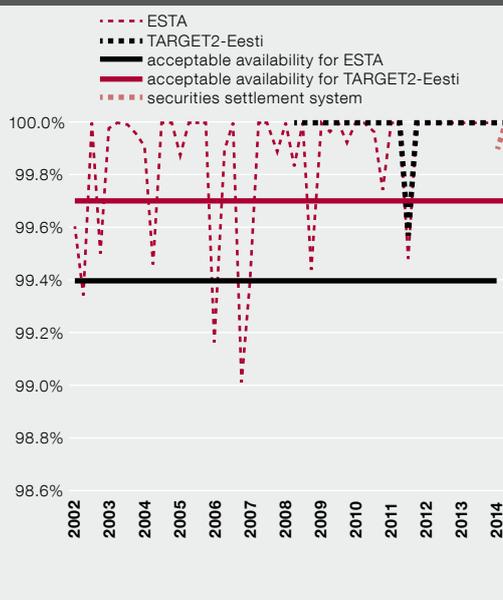
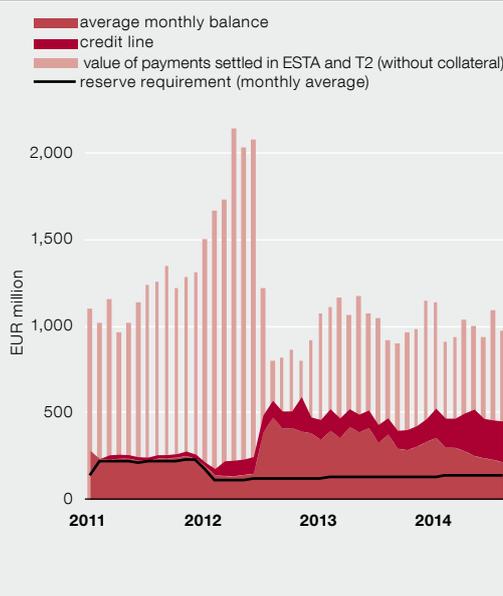


Figure 4.2.2. Value of interbank payments, reserve requirements, and balances held at the central bank



The changes caused by the closure of ESTA were made smoothly. The ESCD has been using the E-riigikassa payment solution of the State Treasury since 1 February 2014 for making payments related to corporate actions and for settling payments of the second and third pension pillars, while development work has continued on the pan-Baltic X-stream technical solution. In addition, the government appointed the ECSD as the registrar of the central register of securities for the next five years, and the new agreement for the maintenance of the register between the ECSD and the Ministry of Finance will come into force from 1 January 2015.

Eesti Pank assessed the securities settlement system using the CPSS-IOSCO<sup>24</sup> principles as new oversight standards and found that the system meets most of the requirements. The overseer considers that risk management needs to be improved and changes need to be introduced by 1 July 2015 (see Box 6).

24 CPSS - Committee on Payment and Settlement Systems; IOSCO - International Organisation of Securities Commissions. From 1 September 2014 CPSS is named CPMI, or Committee on Payments and Market Infrastructures. See <http://www.bis.org/cpmi/index.htm>.

Changes in the payment market and in oversight led **Eesti Pank to update its framework for the oversight of payment and settlement systems**<sup>25</sup>. The main changes were:

- Eesti Pank started using the new requirements for financial market infrastructure oversight adopted for the Eurosystem by the Governing Council of the ECB on 3 June as its standards for oversight.
- Eesti Pank included the card payment system managed by Nets Estonia AS in the scope of its oversight because of its large share of payments processed and influence on the smooth functioning of currency circulation. Oversight will begin at the start of 2015.
- Harmonisation of European payment standards led to ESTA, the domestic retail payment system, being closed, and oversight of it ending. As Estonian domestic retail payments are now settled through the pan-European STEP2 system, Eesti Pank is involved in overseeing that system through the working groups of the Eurosystem.

25 [http://www.eestipank.ee/sites/eestipank.ee/files/files/Makseseisemid/en/oversight/the\\_framework\\_for\\_oversight\\_of\\_payment\\_and\\_settlement\\_systems.pdf](http://www.eestipank.ee/sites/eestipank.ee/files/files/Makseseisemid/en/oversight/the_framework_for_oversight_of_payment_and_settlement_systems.pdf)

## **Box 6: Oversight assessment of the securities settlement system**

### ***The aim of the assessment***

Eesti Pank assessed the securities settlement system run by the Estonian Central Securities Depository (ECSD) using the CPSS-IOSCO principles for Financial Market Infrastructures (FMI) adopted as international oversight requirements for the Eurosystem.

The assessment was started firstly because new and stricter oversight requirements were introduced for financial market infrastructure, and secondly because the ECSD will in future be joining the TARGET2-Securities (T2S) securities settlement platform that is being set up, and it is the job of central banks to assess whether the securities settlement systems joining the platform and the connections between them are eligible for Eurosystem credit operations. This user assessment follows a two-layered approach, meaning the assessment of the securities settlement systems and their links is partly based on the results of the assessment by the overseer.

**The services provided by the ECSD for securities settlement are:**

- opening securities accounts for physical and legal persons and opening custody accounts;
- maintenance of securities;
- settlement of stock exchange trades;
- matching of over-the-counter (OTC) transactions;
- settlement of free-of-payment (OTC FOP) transactions;
- settlement of delivery versus payment (OTC DVP) transactions;
- settlement of cross-border stock exchange and OTC transactions.

Securities are settled in processing cycles that start every full and half hour between 09.00 and 18.00. Each processing cycle settles exchange, OTC DVP, and OTC FOP securities transfers. The registrar executes the settlement only if account operators have met all the necessary conditions for that.

Settlement is performed using the BIS (Bank of International Settlements) model 1 where both money and securities are settled according to the gross settlement principle, trade by trade. Money settlement is performed using the integrated model in autonomous central bank money where clearing members transfer the money needed for settlement to the ECSD account in TARGET2, and the ECSD returns the money resulting from settlement back to the clearing members at the end of the working day.

The ECSD has set up links with securities depositories in Latvia, Lithuania and Poland. The links with Latvia and Lithuania are bilateral and allow securities registered there or in Estonia to be transferred back and forth between registries. The services that ECSD currently provides to account operators for Latvian and Lithuanian securities are: settlement of stock exchange transactions; settlement of OTC DVP transactions; OTC FOP transactions from the ECSD to the foreign depository or vice versa; and management and storage of securities in an ECSD correspondent account, including processing of corporate actions.

The links to the Polish depository allows the ECSD to make FOP transfers of Estonian securities listed as transferable to the Polish depository and back.

***The results of the assessment***

Of the 24 oversight principles, 21 apply to the securities settlement system. The oversight principles cover requirements for reducing various risks – financial and operation risks, general business risk, custody and investment risk, and risks arising from tiered participation – and guidelines on governance, risk management frameworks, default procedures, ensuring the efficiency of the system, and disclosure of system rules.

Eesti Pank used the ECSD's own self-assessment, and the laws, agreements, rules and procedures that regulate the operations of the ECSD and the functioning of the system in its assessment of the securities settlement system.

The assessment of the overseer is that **the securities settlement system fully observed the requirements of 12 principles:** 1 – legal basis, 4 – credit risk, 7 – liquidity risk, 8 – settlement finality, 9 – money settlements, 11 – requirements for central securities depositories, 12 – exchange of value settlement systems, 16 – custody and investment risk, 18 – access and participation requirements, 20 – financial market infrastructure links, 21 – efficiency and effectiveness, and 22 – communications procedures and standards (see Table B6.1).

**Table B6.1. Outcome of the assessment**

Observance level	Principle
Observed	Principles: 1, 4, 7, 8, 9, 11, 12, 16, 18, 20, 21, 22
Broadly observed	Principles: 2, 13, 19, 23
Partly observed	Principles: 3, 15, 17
Not observed	Principles: -
Not applicable	Principles: 5, 10

The assessment showed that the ECSD securities settlement system **broadly observed four principles:** 2 – governance, 13 – participant default rules and procedures, 19 – tiered participation requirements, and 23 – disclosure of rules, key procedures and market data.

The ECSD securities settlement system **partly observed three principles:** 3 – framework for the comprehensive management of risks, 15 – general business risk, and 17 – operational risk.

The requirements for two principles (5 – collateral and 10 – physical deliveries) do not apply to the securities settlement system run by the ECSD.

**The assessment of the overseer is that the securities settlement system of the ECSD runs with fixed, transparent and clear rules, most risks are managed appropriately and most of the applicable CPSS-IOSCO principles and key considerations are met in full.**

### **Summary of the findings**

The risk management framework used in the Nasdaq group and the rules and standards for risk management are broad-based and thorough, though the internal risk management of the ECSD could be more comprehensive and thorough given the new requirements

There are weaknesses from interdependencies and management of risks arising from service providers. Analysis is also needed of those risks that the ECSD could itself pose to other parties. Compliance with several requirements is affected by insufficient business continuity plan-

ning, and also because the ECSD is still developing a plan for recovering critical services or winding them down in accordance with the requirements. The overseer also finds that the quality of testing of continuity needs to be improved. Furthermore, the CPSS-IOSCO requirements foresee the rapid recovery of critical services, and large-scale system development is probably needed from the ECSD to remedy this.

The risk management framework should reflect tiered participation, or management of risks coming from indirect membership. To make the operation of the securities settlement system more transparent, the ECSD needs to publish information on the system in accordance with the CPSS-IOSCO disclosure framework.

Eesti Pank made several recommendations to the system operator to increase the security of the ECSD securities settlement system and will observe how those recommendations are followed.

Eesti Pank also made one recommendation concerning the ECSD to the Ministry of Finance, as the basis for calculating the reserve capital as decreed to the ECSD by the Ministry of Finance underestimates the real operating costs of the ECSD by about half, and this reduces the reserve capital of the ECSD.