

ACTIVITIES OF EESTI PANK IN 2014

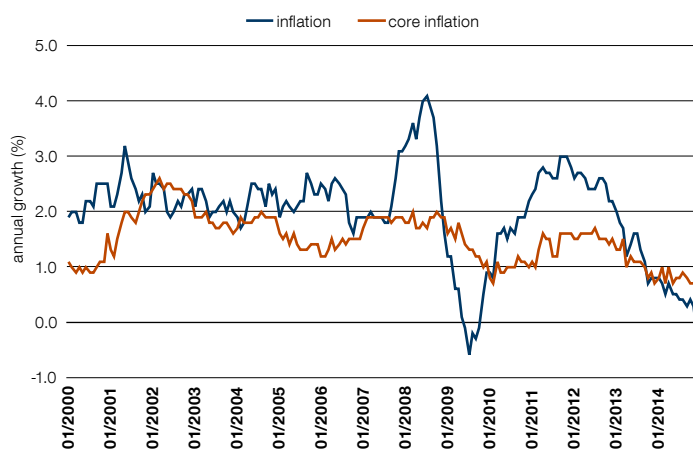
PARTICIPATION IN MONETARY POLICY DECISION-MAKING IN THE EUROSISTEM AND IMPLEMENTATION OF DECISIONS

Monetary policy decisions of the Eurosystem

The monetary policy of the euro area favoured growth in economic activity in 2014, and through that supported price stability². Inflation was falling in the euro area throughout the year, and this reduced the inflation expectations of market participants. In response, the Governing Council of the European Central Bank cut its monetary policy interest rates in 2014 and introduced various additional monetary policy measures.

Consumer prices rose by 0.4% on average in the euro area in 2014, but prices at the end of the year were 0.2% lower than they were in December 2013 (see Figure 1). Core inflation³ was stable throughout the year, but weak economic activity in the euro area kept it low at 0.8%. The general slowdown in inflation in the euro area was mainly due to falling prices for raw materials. The oil price started to fall notably faster from June and by December it was down around 55% from its level of the summer, and this had a major impact on energy prices. The contribution to inflation of prices for services and manufacturing other than energy was stable but small. One of the main causes of low service price inflation is the continuing fall in prices of communications. In the first half of the year the fall in consumer prices was deepened by the rise in the exchange rate of the euro, which lasted until spring 2014, but then the euro depreciated from May onwards, braking the slide in consumer prices. The biggest influence on the exchange rate came from the ever more pessimistic outlook for growth and for inflation in the euro area, followed by expectations for the introduction and implementation of new monetary policy measures by the European Central Bank and for a change in the monetary policy stance of the USA. Expectations for where inflation was headed reacted to slow price rises and a fall in the oil price. Short-term inflation expectations fell substantially and there has also been a small fall in long-term inflation expectations since summer 2014.

Figure 1. Inflation and core inflation in the euro area



Source: Eurostat
Last observation: December 2014

² The objective of the Eurosystem monetary policy is to maintain price stability in the euro area. This is set out in article 127 section 1 of the Treaty on the Functioning of the European Union, which covers monetary policy. Price stability is defined by the Governing Council of the European Central Bank as annual growth in the harmonised consumer price index (HICPI) of the euro area of below, but close to, 2% over the medium term.

The Governing Council of the European Central Bank lowered the monetary policy interest rates of the Eurosystem to their lowest-ever levels under the economic and monetary union in 2014. Interest rates were cut twice, by a total of 20 basis points. In June the minimum bid rate on main refinancing operations was lowered to 0.15%

³ Core inflation shows the change in price of the consumer basket without the effect of energy, food, alcohol and tobacco.

and the marginal lending rate by 50 basis points to 0.40% while the deposit facility rate entered negative territory for the first time, falling to -0.10%. In November all the rates were lowered by a further 10 basis points. The fall in the central bank interest rates also affected the interest rates in the money market, including the EURIBOR, which also fell to historically very low levels.

Monetary policy interest rates had already been cut extremely low **and so it was necessary to use additional measures to meet the goal of price stability and support the functioning of the monetary policy transmission channels**. The additional measures in the form of targeted loans to banks⁴ and asset purchases by the European Central Bank indicated to financial markets that monetary policy in the euro area will remain accommodative for an extended period, which stands in contrast to the move towards a tightening of monetary policy conditions in the USA. From the start of the year until the autumn, the balance sheet of the Eurosystem shrank in size by 13%, mainly because banks were repaying their three-year monetary policy loans early, but the new measures introduced in the autumn swelled the balance sheet by 8% by the end of the year. The Governing Council of the European Central Bank calculates that the package of measures will contribute to an increase of 1 trillion euros in the balance sheet to the level seen in early 2012 of close to 3 trillion euros.

The Governing Council of the European Central Bank decided on 5 June that the Eurosystem would offer credit institutions targeted **longer-term refinancing operations (TLTRO)** from September 2014 to June 2016, which are primarily intended for further lending onwards to companies in the non-financial sector. At first all counterparties

⁴ TLTRO – targeted longer-term refinancing operation. Similar measures have been taken by several other central banks, including those in Japan, the United Kingdom and Hungary, where cheap money boosted investment and consumption growth.

were permitted to borrow up to 7% of their total outstanding amount of loans to euro-area non-financial companies other than housing loans as at 30 April. Banks that increased their lending were able to borrow additional money from the central bank on top of this. In January 2015 it was decided to ease the lending conditions for the banks further as the interest rate on repayments was set at the rate for main refinancing operations, having earlier been that rate plus ten basis points. The TLTROs give the banks long-term cheap loans that allow them to in turn lower the price of their own loans to the non-financial sector. Although conditions vary widely in different euro-area countries, the credit supply to the non-financial sector is gradually improving and lending conditions are easing. The first signs of a recovery in growth in corporate credit can be seen in credit demand in the euro area⁵. Although the banks operating in Estonia have not been particularly interested in using the TLTRO, they are affected by money market interest rates remaining low, which reduces the interest expenses on loans even under Estonian lending conditions. Negative interest rates mean that it is not beneficial for banks to deposit money with the European Central Bank, and this should raise their interest in lending.

At the start of September the Governing Council of the European Central Bank increased its direct control over the growth of the money supply and **set up asset purchase programmes** planned to run for at least two years, and certainly until inflation is in line with the price stability goals of the Eurosystem. The purchase programme is also intended to improve the credit options of companies. In October the third Covered Bond Purchase Programme (CBPP3) was started, under which the Eurosystem buys covered bonds issued in euros by monetary financial institutions in the euro area. In November the Asset-Backed

⁵ ECB Bank Lending Survey, January 2015.

Securities Purchase Programme (ABSPP) was started, which bought securities where the underlying assets represent claims on euro-area non-financial companies. Buying ABSs helps develop this sector of the market, which has until now been quite minor. Asset purchases should also improve the financing conditions for the private sector through the reallocation of portfolios, as those selling the financial assets will be able to use the money earned for new investment, such as loans to companies. It is important for both programmes that the European Central Bank not be too active in the primary and secondary markets and not drive out private investors. Estonian companies are still quite restrained in their use of bonds to finance their activities, and it is mainly large companies that do it. Financing through bonds has remained marginal for banks operating in Estonia but the engagement of the Eurosystem in bond markets may still improve financing conditions for banks and companies here.

In autumn 2014, the Governing Council of the European Central Bank confirmed that if the economic or financial environment worsens, it was unanimously prepared to use additional unconventional monetary policy instruments within its mandate to deal effectively with the risks from inflation remaining low over the long term. In January 2015 it was decided **to widen the purchase of assets** by using freshly minted money to buy bonds issued by euro-area governments and European institutions and agencies with maturities of two to thirty years⁶. Purchases

⁶ PSPP – public sector asset-purchase programme. Common risk sharing using the capital key of the European Central Bank (Estonia's capital key is 0.274%) covers 20% of the programme, with the European Central Bank buying 8% in bonds from euro-area countries and the central banks of the euro area buying 12% in bonds from institutions. The euro-area central banks buy the other 80% of the purchase programme in sovereign bonds from their own country. Sovereign bonds are only bought from the secondary market, as direct purchases from governments would breach the prohibition on monetary financing. The Eurosystem can buy up to 25% of any one bond issue and 33% of the bonds of any issuer. Similar measures are used by the central banks of the USA, Japan and the United Kingdom.

of these asset classes started in March 2015 and will continue until at least September 2016, and certainly until there has been a lasting correction in euro-area inflation that is in line with the price-stability goals of the Eurosystem. Asset purchases totalling 60 billion euros a month are planned under ABSPP and CBPP3. Estonia has not issued any sovereign bonds and so the effect of the final goal of the programme is more important for the country.

The expanded purchase programme will help boost growth in economic activity and will ease financing conditions in the non-financial sector because the returns on bonds will fall, encouraging investors to put their money elsewhere. Rising investment and consumption in the euro area will also be boosted eventually as inflation climbs and approaches 2%. It is important to remember that the Eurosystem will start to buy assets to support price stability, not in order to cover government budgets. No single monetary policy measure can alone be used to affect economic activity over the long term. Although it will be easier in the coming years for governments to fund their spending by issuing bonds, countries should still make sure that the European fiscal rules are followed and that the planned structural reforms are carried out. Any loss of motivation for that among governments will damage the effectiveness of the asset purchases, as the capacity for growth of their economies will be diminished.

Implementing monetary policy decisions in the euro area and Estonia

Monetary policy decisions are implemented through the monetary policy operations of the Eurosystem and the standard framework for this did not change in 2014, **though some non-standard measures were added**. The changes made during 2014 are presented in table 1.

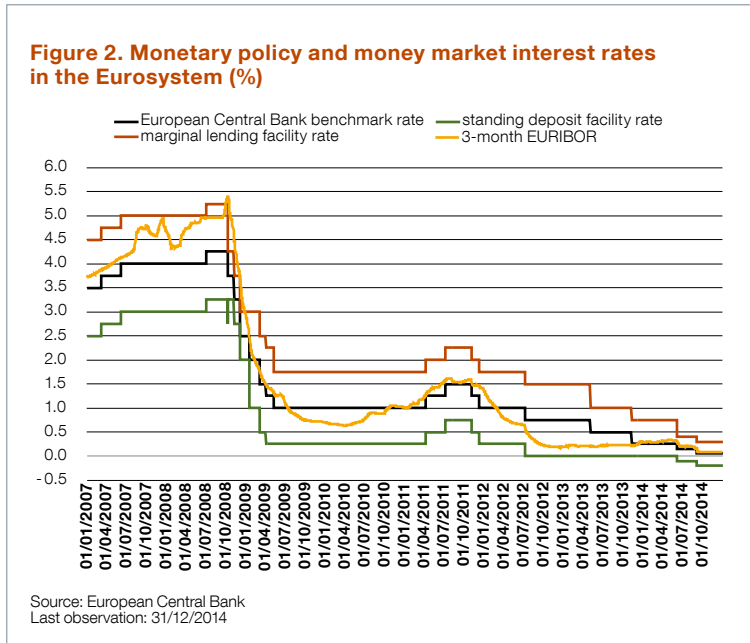
Table 1. The Eurosystem's monetary policy framework in 2014

The standard monetary policy framework	Maturity	Frequency	Change in 2014
1. Open market operations			
MRO – main refinancing operations	One week	Weekly	Interest rate lowered by 10 basis points on 11 June and 10 September from 0.25% to 0.05%
LTRO – longer-term refinancing operations	1 month and 3 months	Monthly	One-month operations were ended on 10.06.2014
FTO – fine-tuning operations	As necessary	As necessary	Weekly liquidity absorbing operations were ended on 10.06.2014; see SMP under non-standard measures in this table
Structural operations	As necessary	As necessary	
2. Standing facilities			
DF – deposit facility	Overnight	Daily	Interest rate lowered by 10 basis points on 10 June and 11 September, from 0% to -20%
MLF – marginal lending facility	Overnight	Daily	Interest rate lowered by 35 basis points on 11 June and by 10 basis points on 10 September, from 0.75% to 0.30%
3. Reserve requirement			
MRR – minimum reserve requirement	Daily	Daily	Maintenance period was extended by two weeks on 17.07.2014
ER – excess reserves	As necessary	As necessary	Deposit facility interest rate paid on excess reserves from 11.03.2014
Non-standard measures			
	Maturity	Frequency	Developments in 2014
Fixed-rate full allotment tender procedure	From October 2008	Permanent	Extended on 05.06.2014 to December 2016
Currency swap agreements with leading non-euro area central banks	Without any specified term	As necessary	One new agreement signed
VLTRO – very long-term refinancing operations	Three years	Once	Early repayment continued
SMP – securities market programme	Purchases ended, securities are being held to maturity		The operations of sterilising the liquidity added by the SMP were ended (see open market operations of Eesti Pank)
CBPP; CBPP2 – covered bond purchase programmes	Purchases ended, securities are being held to maturity		
TLTRO - targeted longer-term refinancing operations	2-4 years	Quarterly	A new measure announced on 05.06.2014
CBPP3 – covered bond purchase programme 3	At least 2 years	Daily	A new measure announced on 04.09.2014
ABSPP – asset-backed securities purchase programme	At least 2 years	Daily	A new measure announced on 04.09.2014

Changes in the monetary policy interest rates of the European Central Bank and their impact on the money market interest rates EONIA and the three-month EURIBOR are shown in Figure 2.

Early repayment of the two three-year refinancing operations continued in 2014. The monetary policy counterparties of the Eurosystem made

good use of the chance to do this and paid back 334 billion euros over the year at an average of 6.7 billion euros a week. The repayments reduced the excess liquidity in the Eurosystem. The main reasons for early repayment were the improved financing conditions available from the markets and the tendency to run down the liquidity buffers that had been kept as an additional precaution. Some



of the money borrowed in the three-year refinancing operations was translated into new targeted longer-term refinancing operations.

The first two rounds of the targeted longer-term refinancing operations took place in September and December 2014, and saw a total of 212.4 billion euros lent to 469 counterparties from all the euro-area countries. The main attraction for participants was that the interest rate was lower than those to be found in the markets. The two operations added a net 143 billion euros of liquidity, and this had an impact on short-term money market interest rates.

As part of the package of monetary policy measures announced in June, the additional liquidity sterilisation operations carried out as part of the Securities Market Programme (SMP) were ended (see Table 1, Securities Market Programme).

For the first time ever, the Governing Council of the European Central Bank introduced **negative interest rates on its deposit facility** on 5 June 2014, and it also applied the interest rates on the deposit facility to excess reserves, which had previously had an interest rate of zero. The decision affected the EONIA short-term money market interest rates and also the money deposited in central banks, including government deposits, which were now subject to an interest rate cap⁷. Interest rates in the money market turned negative, but did not approach -0.20%, which is

the interest rate of the deposit facility. Excess liquidity also declined somewhat in the euro area as holding excess reserves at the central bank bore a cost and the unsecured overnight market interest rates were more attractive for deposits. Liquidity was also affected by the introduction of the interest rate cap for government deposits. Figure 3 shows the changes in the volume of the Eurosystem's monetary policy operations.

The first transactions were made in the autumn under the Asset-Backed Securities Purchase Programme and **the third Covered Bond Purchase Programme** announced in September 2014. Purchases of asset-backed securities started on 21 November and had reached 1.7 billion euros by the end of the year. The announcement of the programme and the purchases under it led to a noticeable fall in the interest spreads on asset-backed securities.

⁷ See https://www.ecb.europa.eu/ecb/legal/pdf/oj_jol_2014_168_r_0017_en_txt.pdf

Purchases under the covered bond purchase programme started on 20 October and had reached 29.6 billion euros by the end of the year. As with the previous programme, the purchases led to a significant fall in the interest spreads on covered bonds. The definition of securities eligible for purchase is based on the eligible collateral for monetary policy operations.

Eesti Pank's monetary policy operations

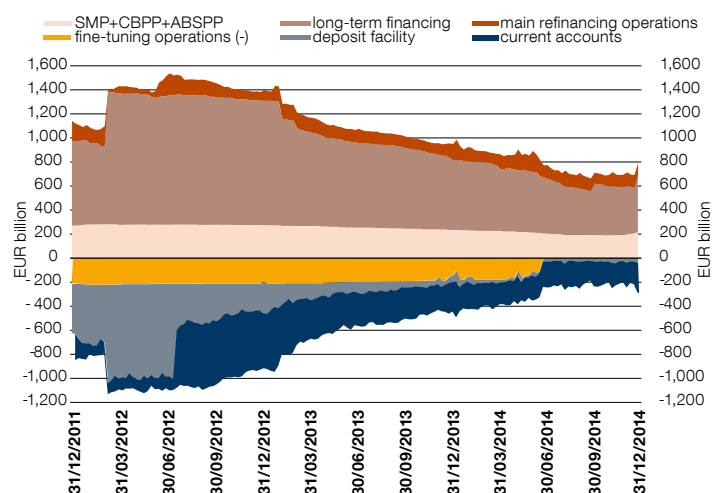
The Estonian counterparties of monetary policy operations did not use the monetary policy lending facilities of the Eurosystem, including the overnight facility, in 2014. The main reason for the low take-up was that the bank groups use centralised liquidity management and the local banks had sufficient liquidity buffers, meaning that local banks are not very dependent on the liquidity supplied by the central bank. The banks participated

most actively in the deposit auctions with one-week maturity, until they were ended in June.

Some Estonian counterparties took part in the targeted longer-term refinancing operations (TLTRO), borrowing most of the amount permitted. At the end of 2014, Eesti Pank's portfolio of monetary policy loans stood at 52 million euros.

Bonds purchased under the Covered Bond Purchase Programme (CBPP2) and the Securities Market Programme (SMP) are held to maturity by Eesti Pank. The ABSPP is initially only being run by the European Central Bank. As there are no securities in Estonia that are suitable for the CBPP3, Eesti Pank has not been involved in operating that programme either. Eesti Pank shares the risks of both the new purchase programmes with the other members of the Eurosystem in accordance with the capital key under the solidarity principle. The risks are also shared for the Securities Markets Programme (SMP).

Figure 3. Changes in volumes of main monetary policy operations of the Eurosystem 2012-2014



MANAGING CURRENCY CIRCULATION

Payment Systems

It is important for the maintenance of economic and financial stability, the implementation of monetary policy, and the uninterrupted circulation of currency that payment systems operate efficiently.

Eesti Pank's responsibilities for payment systems are:

- to promote the smooth operation of payment systems,
- to act as overseer of payment systems,
- to participate in the development of the payment market.

Eesti Pank fulfils these responsibilities by working with the banks operating in Estonia, the Ministry of Finance and the Financial Supervision Authority, and supports the sustainable development of the payment market in Estonia through the Estonian Payment Forum.

Eesti Pank's responsibilities for payment systems and the payment market were clarified in the Eesti Pank Act in 2014 and a framework was created at Eesti Pank to develop the operation of payment systems, oversight, and the payment market.

The framework describes what exactly Eesti Pank does to meet its responsibilities, outlining the principles that Eesti Pank should follow in this, and giving a comprehensive list of the domestic and cross-border payment system working groups that Eesti Pank participates in.

Payment systems managed by Eesti Pank

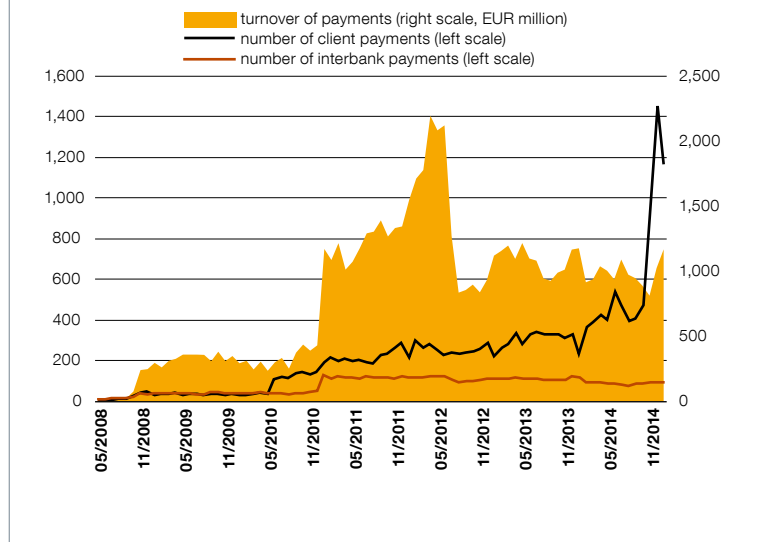
Eesti Pank managed the TARGET2-Eesti payment system for large-value payments in 2014.

The ESTA system for domestic retail payments was closed on 1 February 2014, after which banks sent those payments through the pan-European STEP2 system.

TARGET2-Eesti

TARGET2-Eesti is part of TARGET2, the Trans-European Automated Real-time Gross Settlement Express Transfer System, and had 15 members at the end of 2014, who were credit institutions operating in Estonia, the Estonian Central Secu-

Figure 4. Payments in the TARGET2-Eesti system (daily averages)



rities Depository and Eesti Pank. A daily average of 626 payments with a total value of one billion euros were settled through this system in 2014, meaning the number of payments was 50% higher than in 2013 but the total value was 9% lower (see Figure 4). One cause of the rise in the number of payments was that banks have started sending

more client payments through the system since the closure of ESTA and the consequent reduction in the speed of inter-bank payments. Client payments accounted for 85% of the total number of payments in TARGET2-Eesti in 2014, with an average of 535 payments per day. The change in the turnover of TARGET2-Eesti came mainly from monetary policy transactions in the Eurosystem and the ending of collateral payments through ESTA.

TARGET2-Securities

Eesti Pank is participating in the TARGET2-Securities (T2S) project, a single shared platform for settling securities in the Eurosystem. T2S is being set up to harmonise securities settlements in the euro area and make cross border securities trading easier, cheaper and more secure for investors. The 24 depositories joining T2S have to make the securities registered with them available to all the other depositories that have joined the T2S platform. The cash leg of securities transfers in T2S is settled in central bank money.

The main task in 2014 for the depositories and central banks joining T2S in the first wave was testing, so that they would be ready to join the platform by 22 June 2015. The Estonian Central Securities Depository will join T2S in the fourth wave in February 2017.

Central bank collateral management

The Eurosystem provides credit to banks against securities used as collateral, and the securities used can be issued by a domestic or cross-border depository. Two updates were made in 2014 to the Correspondent Central Banking Model (CCBM) facilitating the cross-border use of collateral. These were the Removal of the Repatriation Requirement (RRR), under which securities had to be repatriated to the depository where they had been issued, and the introduction of a Triparty

Collateral Management Services (3PCMS) to allow for the use of cross-border agents.

Estonian banks use securities from other Eurosystem countries as collateral for Eurosystem credit operations because the Estonian Central Securities Depository has not registered any securities eligible as collateral for Eurosystem credit operations.

Oversight

The aim of oversight is to promote the safety and efficiency of payment and settlement systems by identifying and analysing risks to the systems and making recommendations for ways to minimise risks and make the system more efficient. The infrastructure overseen by Eesti Pank in 2014 was the TARGET2-Eesti real-time gross settlement system operated by Eesti Pank and the securities settlement system operated by the Estonian Central Securities Depository.

The year 2014 was a **year of change in the regulatory environment**. The European Central Bank issued a regulation⁸ setting out the oversight requirements for Systemically Important Payment Systems (SIPS). At the same time a framework was introduced for harmonising the oversight of other payment systems in the Eurosystem. The aims and tasks in oversight of payment systems were set out in the Eesti Pank Act, giving a clear legal basis to the work of fulfilling the oversight function. The Eesti Pank framework for oversight of payment systems was also updated to adopt the CPMI-IOSCO⁹ requirements for financial markets infrastructures as oversight requirements of Eesti Pank.

⁸ Regulation of the European Central Bank (EU) no 795/2014 of 3 July 2014 on oversight requirements for systemically important payment systems (ECB/2014/28)

⁹ CPMI – Committee on Payments and Market Infrastructures; IOSCO – Technical Committee of the International Organisation of Securities Commissions.

Eesti Pank assessed how the **securities settlement system** managed by the Estonian Central Securities Depository complied with the oversight standards. The opinion of the overseer was that the securities settlement system runs with fixed, transparent and clear rules, most risks are minimised to the necessary extent, and the great majority of the applicable CPMI-IOSCO requirements are met. Eesti Pank gave the Central Securities Depository recommendations on how to improve the reliability and security of the system in order to correct shortfalls identified during the assessment. A separate deadline was agreed for each recommendation, and Eesti Pank monitors how these recommendations are followed.

Eesti Pank started oversight of the **card payment system** used in Estonia. Card payments account for a large share of the payments made in Estonia and most of them are processed by the card payment system managed by Nets Estonia AS, meaning that that system has an effect on the smooth functioning of currency circulation.

Development of the payment market

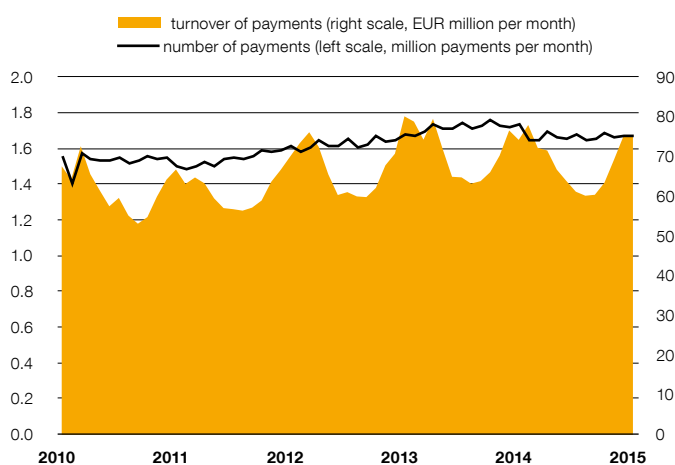
Eesti Pank contributes to the functioning and the development of the Estonian payment market, facilitating cooperation between payment intermediation parties and participating in designing and implementing financial sector policies and regulation. Eesti Pank considers it important to define a payment market with efficient and secure payment solutions which take the needs of payment services users into account.

In February 2014 all the banks operating in Estonia changed their information technology systems to comply with the SEPA requirements as all domestic bank account numbers were translated into IBAN format and the ISO 20022XML formats were adopted for payments. The changeover went as planned, but adopting the new messaging standards took companies longer than was initially foreseen, so the deadline for adopting the new standard was extended in December 2014 out to 1 February 2016.

Direct debits within Estonia were replaced by e-invoice standing orders when the changeover to SEPA happened. Despite the changes in the payment market, the use of e-invoice standing orders remained similar to the use of direct debits in the previous year and an average of 1.7 million payments were made each month in 2014, with a total value of 68 million euros (see Figure 5).

Since 1 February 2014 banks have settled both domestic and cross-border retail payments in the pan-European STEP2 system. A daily average of 105,000 payments with a total value of 141 million euros were settled through STEP2 in 2014, which is similar to the figures for the ESTA system that was in use in the previous year (see Figure 6).

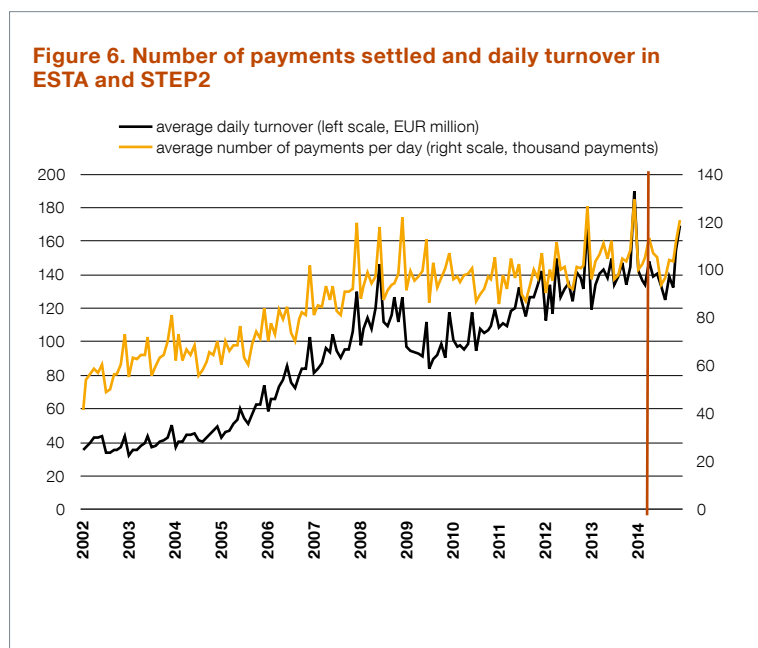
Figure 5. Direct debits and e-invoice standing orders



Settlement in STEP2 is slower than it was in ESTA and money now takes around 3-5 hours to be transferred from one bank to another, rather than the earlier hour or hour and a half. To speed

The legal framework for the payment market

The European Union regulation on improving securities settlement and on central securities depositories came into effect during 2014 to promote advances in the securities market by increasing the security and efficiency of securities settlements, and it was accompanied by a directive regulating the comparability of fees related to payment accounts, payment account switching, and access to payment accounts. Discussions on the updating of the directive regulating payment services in the domestic market and on regulation of interchange fees for card payments also continued in 2014.



payments up, Eesti Pank has worked with the banks to find solutions from the current settlement systems and from completely new approaches to payments.

There have been payment institutions and Savings and Loan Associations providing payment services in the Estonian payment environment for years alongside the banks, but their operational options are limited. To harmonise conditions of competition, Eesti Pank proposed in 2014 that the issuing of payment service provider identification codes should be centralised and given over to the Financial Supervision Authority, as all the providers of payment services are already under supervision. This change will allow non-bank payment service providers to issue internationally accepted account numbers to their clients.

Cash

Cash retains an important role in society as a means of payment and a store of value. Cash is one of the symbols of stability and certainty in a society. The demand for cash and changes in the structure of that demand reflect social and economic developments and daily consumption habits.

Banknotes in circulation in the euro area and Estonia and their structure

As the central bank of a euro-area country, Eesti Pank is responsible for satisfying the demand for euro banknotes and coins in Estonia and for managing and maintaining the security of the cash resources needed for circulation. Eesti Pank's role in organising cash circulation gives it responsibility for ensuring that notes and coins are handled to the common stan-

dards of the euro area and that requirements for recirculation and authenticity control are met.

At the end of 2014, 17.53 billion banknotes were circulating in the euro area with a combined total value of 1016.5 billion euros. A year earlier, 16.51 billion banknotes were circulating with a combined value of 956.2 billion euros. This means that both the value and the number of euro banknotes in circulation were around 6.2% higher in 2014 than in 2013. The largest share of the total value of the banknotes by denomination was in fifty-euro notes, followed by 500-euro notes.

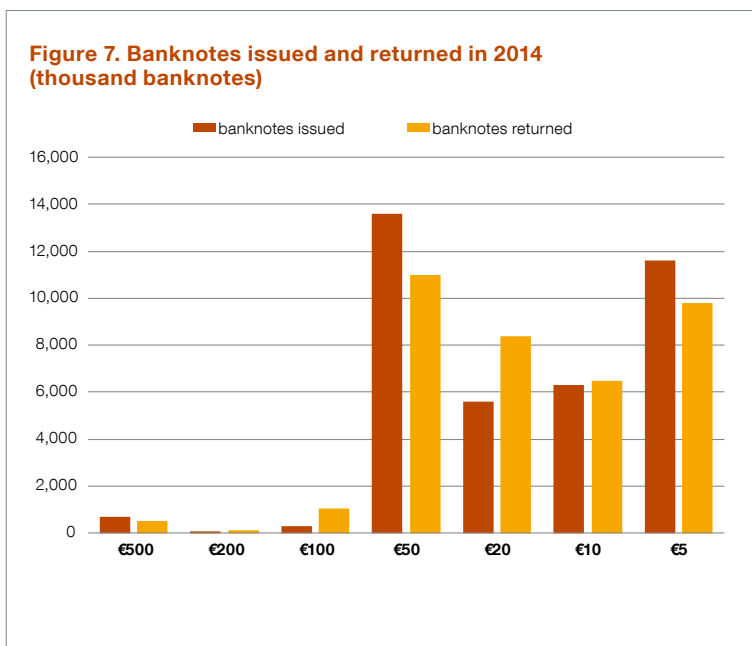
The euro cash in circulation in Estonia includes both the cash

issued by Eesti Pank to meet the cash demand of credit institutions and their customers, and the cash brought to Estonia by companies and individuals. This means that the total value and volume of euro cash in circulation in Estonia can only be estimated.

In 2014 Eesti Pank issued 1296.3 million euros to credit institutions and 1210.7 million euros were returned to Eesti Pank (see Table 2). Since the euro was introduced in 2011, the net total of

euro cash issued by Eesti Pank has increased to 960.2 million euros, of which 922.4 million euros was in banknotes and 37.8 million euros in coins.

Figure 7. Banknotes issued and returned in 2014 (thousand banknotes)



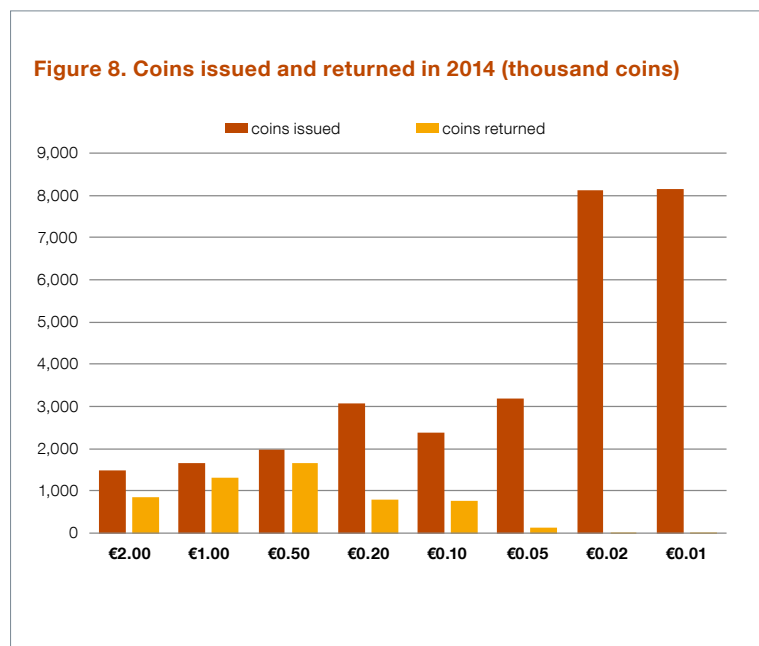
The most common banknotes issued by number of notes were fifty-euro notes and five-euro notes, and there was a positive net emission of them, meaning that more of them were released into circulation to meet the needs of credit institutions than were returned to the bank. More twenty and 100-euro notes were received back by Eesti Pank than had been issued, which is a reflection of the way that banknotes and people move and come here from other euro area countries (see Figure 7).

Table 2. Cash flows between Eesti Pank and credit institutions

Year	Total amount (EUR million)		Number (million)			
	Issued by Eesti Pank	Received by Eesti Pank	Issued by Eesti Pank		Received by Eesti Pank	
			banknotes	coins	banknotes	coins
2011	1661.2	1045.5	45.0	124.5	34.8	22.3
2012	1441.1	1323.0	43.8	35.9	43.2	5.0
2013	1466.6	1327.0	41.9	34.3	41.1	5.8
2014	1296.3	1210.7	38.1	30.8	37.2	5.6

The most common coins issued by volume were one and two cent coins, which people often pile up as low-value coins after they have entered circu-

lation. As a result, low-denomination coins do not circulate, and the central bank has to top up the stock of coins from time to time to ensure that there are sufficient coins in circulation (see Figure 8).



In 2014 the central bank continued to receive Estonian kroons that had remained in circulation and 1.4 million euros worth of kroons in cash was returned to Eesti Pank during the year. By the end of 2014 there was still around 47.1 million euros worth of cash in kroons that had not yet been returned to the central bank.

Expert analysis and handling of cash

Banknotes returned to Eesti Pank by credit institutions are sorted by fully automated sorting machines, the authenticity of all the notes

is checked using parameters that only the central bank knows, and worn, dirty, torn or stained banknotes are removed from circulation. Banknotes that are suitable for circulation are packaged and returned into circulation.

A total of 38.0 million banknotes were processed, which is slightly more than in 2013. Almost 4.6 million euro banknotes were withdrawn from circulation and destroyed during processing in 2014, which is three quarters as many as in 2013. The number of banknotes removed and destroyed remains larger than usual because the five and ten-euro banknotes of the first series that were returned to the central bank were removed from circulation and replaced

with banknotes of the second series. Five and ten-euro notes accounted for an overwhelming 85% of the banknotes removed from circulation and destroyed. Quality indicators for other euro banknotes remain very good, and it was only twenty-euro notes where the number of worn notes returned from circulation was slightly higher (see Figure 9).

In 2014, experts from Eesti Pank analysed 26,333 damaged banknotes and 161 coins. The number of damaged banknotes was more than five times as high as in the previous year, which was because of the more widespread use of anti-theft devices by cash handlers, and because banknotes that had been accidentally marked with security dye by these devices were checked.

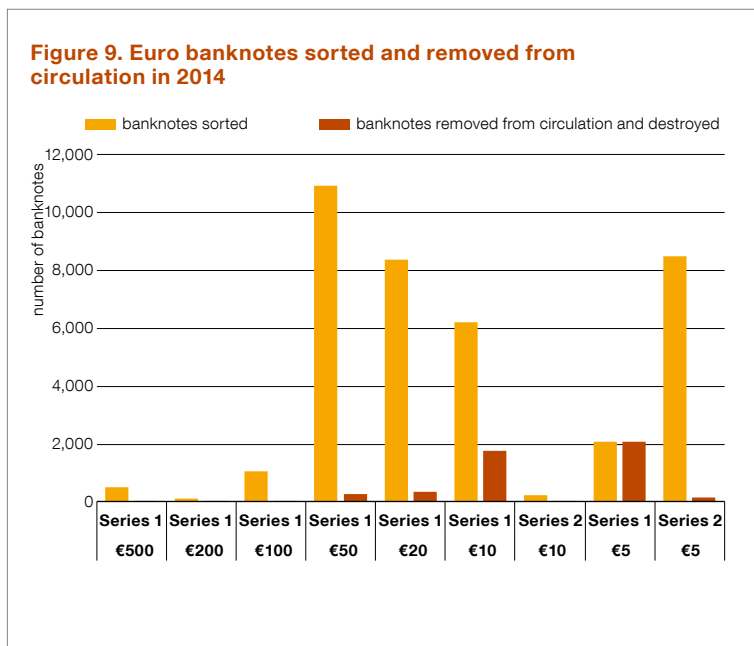
In 2014 a total of 838,000 counterfeit euro banknotes were removed from circulation, mostly in the euro area and other EU countries, with twenty-euro notes accounting for 55% of the counterfeit notes and fifty-euro notes for 29%. The share of twenty-euro notes among the counterfeits

In 2014, 128 counterfeit euro coins were discovered, down from 152 in 2013 and given the amount of currency in circulation, the number of counterfeits found remains very small.

New banknotes and coins

Banknotes

In September 2014 the second series of ten-euro notes entered circulation throughout the euro area with a new design and improved security features. To facilitate the introduction of the new banknotes, Eesti Pank ran an information campaign presenting the new security features to cash handlers and the general public alike. The bank also allowed suppliers of cash handling devices and companies adapting such devices to borrow samples of the new ten-euro notes for testing purposes, and organised tests of cash handling devices. Information work continued into 2015 together with preparations for the next banknote in the second series, the new twenty-euro note that will be released into circulation on 25 November 2015.



discovered increased from the previous year, and it reached 60% in the second half of 2014, while the share of fifty-euro notes declined. The share of high nominal value 200-euro and 500-euro notes among the counterfeit notes remained small.

In 2014, 481 counterfeit euro banknotes were discovered in Estonia, with 249 of them being identified in the second half of the year. The most common counterfeits registered in Estonia in 2014 were fifty-euro notes. The number of counterfeits detected increased because of the success of the law enforcement agencies in combating counterfeiting as much as because of an increase in the activity of counterfeiters.

All the central banks of the euro area are involved in the production of euro banknotes every year, and in 2014 Eesti Pank fulfilled its commitment to the Eurosystem by joining with eight other euro-area central banks to print the quota of fifty-euro notes set by the Governing Council of the European Central Bank. The notes were printed in Germany by the Bundesdruckerei printing house after a joint procurement and were supplied to the commonly held assets of the Eurosystem.

Circulation coins

Eesti Pank's supplies of euro circulation coins were sufficient in 2014 and so no new coins were minted.

Preparations started in the fourth quarter for

an increase in the stock of one and two-cent coins, and the Lithuanian Mint asked the lowest price and so was awarded the contract for minting them. The new circulation coins reached Eesti Pank in the first quarter of 2015 for release into circulation in the second quarter.

Collector coins and numismatic products

In 2014 Eesti Pank issued two silver collector coins with a nominal value of ten euros, and 7500 of each coin were minted by the Royal Dutch Mint.

The silver collector coin issued in January was dedicated to the **Estonian delegation and the athletes who represented the Republic of Estonia at the XXII Olympic Winter Games in Sochi**. The obverse side of the coin showed the coat of arms of the Republic of Estonia and the year 2014, and the reverse showed the logo of the Estonian Olympic Committee and the nominal value of the coin of ten euros. The coin was designed by Taavet Kohal and had a motif of exciting and delicate patterns drawn on frosted glass that appear on both sides of the coin.

In June a silver collector coin **dedicated to the work of Miina Härma** was issued. February 2014 marked the 150th anniversary of the birth of Miina Härma, the first Estonian professional female composer and organist, who was also an outstanding choir leader. The obverse side of the coin shows the coat of arms of the Republic of Estonia and the year 2014, and the reverse shows the music teacher, conductor and composer symbolised by pure tonal vibrations resonating from a tuning fork, the words "Miina Härma 150", and the nominal value of the coin of ten euros. The silver collector coin was designed by Jaano Ester.

The Eesti Pank **museum has a shop** where Estonian kroons can be exchanged for euros, worn or damaged cash can be submitted to expert analysis for exchange, and collector coins and numismatic products can be bought along with other publications and souvenirs from the bank. In 2014 there was an increase in interest among museum visitors for the services of the shop and 4060 people used the services of the museum shop for exchanging kroons for euros, while worn or damaged notes or coins were submitted for analysis on 78 occasions. At the start of the year Eesti Pank exchanged Latvian lats for euros for two months after Latvia joined the euro area, and lats were exchanged on 662 occasions. The most popular product sold was the collector coin for the Estonian delegation and athletes to the XXII Olympic Winter Games in Sochi

From last year, Eesti Pank collector coins and numismatic products can also be bought from eleven post offices in the Eesti Post retail network across Estonia and from the Eesti Post online shop. A range of collector coins is also sold in the Parliament Shop of the Estonian History Museum and in the Estonian Theatre and Music Museum.



SAFEGUARDING FINANCIAL STABILITY

Macroprudential supervision

The mandate of Eesti Pank for macroprudential supervision

Changes to the Eesti Pank Act came into force in May 2014 giving the central bank a clearer mandate than before to act as a macroprudential authority in Estonia and setting the aims and duties in macroprudential supervision. **The aim of macroprudential supervision** is to help ensure the stability of the financial system as a whole by increasing the resilience of the financial system and reducing the build up of systemic risks to financial stability. **The main macroprudential supervisory duties** of Eesti Pank include: collecting the information needed for macroprudential supervision; reviewing and assessing the stability of the financial system and the risks to it; identifying the participants in the financial system and the financial structures that can have a significant influence on the emergence of systemic risks; defining the risks to the stability of the financial system and assessing them; and applying measures to reduce risks.

Changes were passed to the Credit Institutions Act alongside those to the Eesti Pank Act that clearly defined **the measures that Eesti Pank can take in its macroprudential supervision**. Some of these are measures described in the banking regulations of the European Union, the Capital Requirements Regulation and Directive (CRR/CRD), which are used across the European Union following the same principles. This group of measures includes various requirements for capital buffers alongside additional tools such as changes to the risk weightings used in the calculation of capital requirements. Before measures can be applied, they must be

announced and coordinated with the institutions of the European Union and with the other member states.

The other set of macroprudential measures are requirements that affect the issuing of loans. These give Eesti Pank the right to rule how much banks can lend to borrowers in relation to the value of their collateral, or how much of a borrower's monthly income can be used for paying the loan and its interest. Eesti Pank can also set limits on the maximum maturity of loans and on how large the loan portfolio of a bank can be in relation to its deposits.

Applying macroprudential supervision

As the legal framework for macroprudential supervision expanded significantly, Eesti Pank started to develop tools and procedures in 2014 that it could use if necessary as the macroprudential authority to combat risks to the financial system. The priority in 2014 was to set up tools that would support the resilience of the Estonian financial system.

The first macroprudential measure was introduced on 1 August 2014 and was the **requirement for banks to hold a systemic risk buffer**. The impetus for the buffer came from the single Capital Requirements Regulation, which came into force in the European Union at the start of 2014 and lowered the minimum capital adequacy requirement in Estonia from its earlier 10% to 8%. Eesti Pank considered that a reduction in the regulatory capital requirements was not appropriate and so decided to apply a 2% systemic risk buffer to the banks. The introduction of the buffer did not have any immediate effect on the capitalisation of the banking sector or the financing of the economy, as the banks were anyway holding capital buffers that exceeded the requirements at their own discretion.

The higher capitalisation requirement in Estonia is necessary because the economy is small and open, which makes it more volatile than those in many other countries in Europe. This means that an unexpected worsening of the economic environment can rapidly lead to a marked deterioration in the ability of the non-financial sector to service its loans. Although the financial buffers of companies and households have increased, they are still relatively modest and are not necessarily sufficient to cope with unexpected external or domestic shocks. The Estonian financial system is also vulnerable because of the importance of the banking sector in financing the economy and the high degree of concentration in banking. A large majority of the banking sector is exposed to the risks from the same group of countries and economic sectors.

The assets of branches of foreign banks make up around 30% of the total assets of the Estonian banking sector, meaning that the requirement will not apply to a relatively large part of the banking market. So that all the participants in the Estonian banking market would be aware of the structural risks to the local economy and financial system, and so that market conditions would be equal, Eesti Pank has requested those countries that provide banking services in Estonia through branches to apply equivalent requirements for risk positions in Estonia. The Swedish and Danish macroprudential authorities have decided to introduce higher capital requirements for systemically important banking groups in their own countries, which can be considered as essentially similar to the systemic risk buffer in Estonia.

A second important element in the macroprudential toolbox **is the requirements for issuing housing loans** that Eesti Pank decided to introduce for the whole of the banking market. From 1 March 2015 all the banks operating in Esto-

nia, including branches of foreign banks, have to comply with three requirements when issuing housing loans. These are:

1. a loan-to-value limit for mortgages – the ratio of a mortgage to the value of the property that will act as collateral for it may not exceed 85%, or 90% for loans guaranteed by KredEx;
2. a debt service-to-income limit – the ratio of the principal and interest repayments of all the loans of the borrower to the net income of the borrower may not exceed 50%;
3. a limit of 30 years on the maximum permitted maturity of mortgages.

The banks have to take all three of these limits into account when they issue mortgages. To ensure that banks have sufficient flexibility in making decisions about lending and in assessing the risks associated with it, and thus to help make sure that the credit market operates as efficiently as possible, Eesti Pank is permitting banks to issue up to 15% of their mortgages each quarter with conditions that breach the limits.

The requirements for mortgages were introduced at a level close to the lending standards applied by the banks in 2014, and they are expected to have very little short-term impact on the lending conditions of the banks. Setting these limits is important for preventing credit booms, as they help stop the loan conditions affected by the limits being loosened if competition between the banks increases in the housing loan market. If risks start building up significantly in the real estate market and the risk behaviour of lenders and borrowers amplifies the cyclical upswing, then Eesti Pank will be able to tighten the requirements that are already in place. It is assumed that this would lead to a reduction in lending and would lower the chances of a housing bubble inflating.

Cooperation in macroprudential supervision

Eesti Pank **works with other Estonian authorities** in its macroprudential supervision, particularly the Financial Supervision Authority and the Ministry of Finance. The work together with them is based in a joint committee which discusses matters affecting the Estonian financial sector, including assessments of financial stability and risks to it, and planned macroprudential measures, on which all the partners may comment before they are passed.

The Single Supervisory Mechanism (SSM) makes **the European Central Bank** responsible for macroprudential supervision alongside the states that have joined the SSM. If needed, the European Central Bank can set stricter capital and liquidity requirements for banks than those fixed by the individual member state. As part of its macroprudential supervisory role, the European Central Bank started carrying out national risk assessments in 2014 of states covered by the SSM and assessment of the measures taken by the countries. During the initial phase of SSM macroprudential supervision, a great deal of attention is being focused on developing common analytical methods and on assessing the planned measures and coordinating the framework design.

Financial stability is analysed at the European Union level, where risks are assessed and macroprudential measures coordinated by **the European Systemic Risk Board (ESRB)**. The members of the ESRB continued their work on developing a macroprudential framework for the whole European Union in 2014. To raise awareness of the key principles of the framework, the ESRB produced and released a Flagship Report on macropruden-

tial supervision and a handbook of policy tools to help national supervisory authorities in adopting new measures. It also produced and presented a proposed method for implementing counter-cyclical capital buffers, which can provide guidance to member states in developing their framework.

Assessment and cross-border coordination of the measures taken by member states also started last year, and is one of the key responsibilities of the ESRB. An important topic for Estonia was the start of development work on principles for how individual measures taken by member states should be reciprocated by other countries. A task force was set up in the ESRB Instruments Working Group to consider this, and Eesti Pank participated in it.

The ESRB paid more attention than before to shadow banking in its analysis work and to the insurance sector, and it continued to analyse interconnectedness within the financial sector and to develop the set of indicators used in analysis.

Macroprudential policy issues **in the Nordic-Baltic region** are discussed regularly at the Nordic-Baltic Macroprudential Forum (NBMF), which brings together central bank governors and heads of supervisory authorities. Participants in the forum exchanged national risk assessments and shared their experiences of introducing macroprudential tools. They also discussed principles of reciprocity.

Financial stability assessment

One responsibility of macroprudential supervision is producing and publishing reviews and assessments of the stability of the financial system and the risks to it. In 2014 Eesti Pank considered the possible risks to financial stability to be small. The

main risks were identified as a deterioration in the external environment, a rapid rise in real estate prices in the Nordic countries and rises in Estonian wages and real estate prices.

A deterioration in the external environment could come from a slower recovery than had been expected in heavily indebted European Union countries with high unemployment rates. This in turn could restrict Estonia's capacity to export. The economic sanctions in relation to the conflict between Russia and Ukraine, and the sharp economic downturn in Russia caused by the fall in the oil price and the depreciation of the rouble have affected trade relations and confidence, both in Estonia and in our main trading partners. The direct positions of the Estonian banking sector with Russian residents are very small and the banks are most likely to be affected by the deteriorating economic results of domestic non-financial enterprises. Stress tests by Eesti Pank showed that the resilience of the banks operating in Estonia to any possible growth in problem loans remains good even so.

Real estate prices in the Nordic countries, especially Sweden and Norway, have been rising rapidly with support from loans for six years now. The indebtedness of households in those countries has climbed to a very high level, which makes the economy vulnerable to any potential shock. The biggest banks in Sweden mainly fund their operations with loans from the financial markets, which leaves them vulnerable to any shock in those markets or in the wider economy. The risks from developments in the Nordic countries could affect the Estonian financial sector through two main channels. Firstly, a worsening of the economies in Nordic trading partners could damage the outlook for economic growth in Estonia. Secondly,

over 90% of the banks operating in Estonia are subsidiaries or branches of the Nordic banking groups, so a change in the financing conditions of the parent banks could have an impact on the largest banks in Estonia, and through them on the funding of a large part of the Estonian economy.

Real estate prices grew more slowly in Estonia than in the previous year, and the number of transactions fell. However, the continued rapid growth in household incomes could lead to overly optimistic expectations for the future and could boost demand for real estate. With interest rates remaining low, this could lead to more reckless financial behaviour and rapid rises in real estate prices, and could increase long-term risks and the vulnerability of the financial system. Eesti Pank considers it important that no expectation be created among lenders or borrowers that the rapid growth in real estate prices will continue and that the current conservative approach to granting and taking housing loans be maintained.

Financial sector policy

Single Banking Supervision in the European Union

On 4 November 2014, single banking supervision started in the European Union. **The Single Supervisory Mechanism** is intended to ensure that compliance by euro-area credit institutions with the prudential requirements is supervised effectively in the same way in all the member states and that there is good-quality supervision of credit institutions. The legal basis of the mechanism is the Single Supervisory Mechanism regulation, under which the European Central Bank bases its supervision on the legislation of the European Union and of individual member states.

Under the Single Supervisory Mechanism, **the European Central Bank** started direct supervision of more than 120 systemically important banks in the euro area. National authorities will retain supervisory responsibility for less important banks. The banks licensed in Estonia that passed under the direct supervision of the European Central Bank were Swedbank and SEB. To keep supervisory decision making separate from monetary policy, a separate governing body, the Supervisory Board, was set up at the Single Supervisory Mechanism. Staff from Eesti Pank help prepare for the meetings of the Supervisory Board and cooperate with the Financial Supervision Authority in discussing the decisions to be taken by the board. Estonia is represented on the Supervisory Board by the head of the Financial Supervision Authority and the Deputy Governor of Eesti Pank.

Before single banking supervision started, comprehensive assessment was carried out for important euro-area banks, which were needed before responsibility for supervision could be assumed by the European Central Bank. The assessment revealed that 25 banks had a shortfall in capitalisation of a total of 25 billion euros. Twelve banks had recovered to the required level of capitalisation by the end of the assessment, and the other banks were given nine months to cover the capital shortfalls. The Estonian banks covered by the comprehensive assessment did not suffer any capital shortfalls.

Changes in the legal environment of the financial sector

One of the most important legal changes affecting the operation of the financial sector was the **European Union Bank Recovery and Resolution Directive** that came into force in 2014.

Transposing of the directive into Estonian law started in autumn 2014 and the draft of the law was presented to the Riigikogu just before the turn of the year. Eesti Pank worked together with the Financial Supervision Authority and the Ministry of Finance on drafting the law. The draft establishes a single framework for the proper resolution of problems for banks facing financial difficulties, in order to maintain financial stability, reduce the impact of systemic banking crises, and minimise the cost to taxpayers. Crisis resolution in Estonia within this framework will be the responsibility of the Financial Supervision Authority, which will also have to get an opinion from Eesti Pank before taking major decisions. The draft law follows the principle that the costs of resolution should first be covered by the bank's shareholders and creditors. The resolution fund that will be set up under the law will be funded by the banks.

Single banking supervision is the first pillar of banking union, and a second pillar was agreed on in 2014, **which was the Single Resolution Mechanism**. Single resolution will be managed by the Single Resolution Board, composed of the resolution authority from each member state, a Chair, a Vice Chair, and four elected full-time members. The focus of the management by the Single Resolution Board will be the Single Resolution Fund, which will operate from 2016. The Single Resolution Fund will be worth 1% of covered deposits, or around 55 billion euros, and it will take eight years to build up this amount. Eesti Pank considers it important that the contributions to the fund should be paid by market participants and that they should be bank-based. The size of the contributions from the bigger banks will depend on the importance of each bank adjusted for the risk level of its assets.

COMPILING STATISTICS FOR THE ESTONIAN FINANCIAL AND EXTERNAL SECTORS

Eesti Pank is responsible for supplying economic analysts and the public **with high-quality, reliable, timely and independent information on the statistics for the Estonian financial sector, the external sector and financial accounts.** Statistical data are used in analysis of the Estonian economy and the financial sector and in forecasting, and the whole dataset serves as an input for the European Union, the Economic and Monetary Union, and other international statistical work. The dataset is used by the European Central Bank, Eurostat, the International Monetary Fund and other international organisations. Eesti Pank is involved in developing statistical methods for the European Economic and Monetary Union and in maintaining the joint registers and databases of the European System of Central Banks. Statistics were compiled and published on time in 2014, and were transmitted to international organisations on time too, and Eesti Pank completed all the statistical activities required under the national statistical programme.

Developments in the field of statistics have been affected a great deal in recent years both by changes in the general economic climate and by institutional reforms across Europe. The biggest impact was from the **single supervisory mechanism set up at the European Central Bank, which substantially increased the need for diverse and detailed data.** Monetary policy makers have also added various extra data requirements recently. Several statistical initiatives have been introduced or developed by the European Central Bank in response to these rapidly changing needs, and in 2016 quarterly statistics on insurance will be introduced, as will statistics on money market

transactions, which are needed for the collection of daily data from credit institutions. The European Central Bank has also created a new expanded framework for consolidated banking statistics and wants to improve access to the data for individual credit institutions in parallel with this, and as part of this it started collecting statistics on the interest rates of the most important credit institutions in the euro area in 2014. The central database and register of financial institutions of the European Central Bank is being constantly developed and expanded. The biggest project in the years ahead will be the **creation of a database at the European Central Bank for data from individual loans** and the start of collection of such data in member states. More than a year has been spent on defining the size and the content of this database and this is going to remain a priority in statistical development at the European Central Bank in the years to come.

Alongside all these new events in 2014, it was necessary to complete the introduction of the changes to the methodologies for compiling statistics that had already been started. These came mainly from the need to use the new international statistical standards, the European System of National and Regional Accounts (ESA 2010) and the new Balance of Payments Manual 6th Edition (BPM6), but some changes also stemmed from changes to the directives from the European Central Bank and the European Parliament on requirements for statistics and data. A consequence for the compilation of financial sector statistics was that **almost all the directives issued by the Governor of Eesti Pank on reporting by credit institutions had to be changed.** Changes were made in parallel with this to the contractual reporting from lease companies. Financial sector data were collected using the updated guidelines for the first time in December 2014.

The first quarterly external sector statistics compiled using the new methodology were published on the Eesti Pank website at the start of June, and time series and several tables with more information were added in September. Explanatory material was put on the Eesti Pank website to explain the content of the changes to users of statistics and an in-depth information session on the changes was organised jointly with Statistics Estonia. The first balance of payments yearbook to use the new methodology came out in November 2014 and the compilation of the flash estimate of the balance of payments was altered in accordance with the new requirements.

The balance of payments statistics were also affected by the introduction on 1 February of the payment requirements of the European Union's Single Euro Payments Area (SEPA). These meant that **the International Transaction Reporting System had to be reorganised**, because the new principles do not differentiate between cross-border and domestic payments in SEPA countries, and so bank clients no longer had to declare foreign transactions for the balance of payment statistics. A new reporting scheme using automated data processing for foreign transactions was introduced for credit institutions to address the shortage of data.

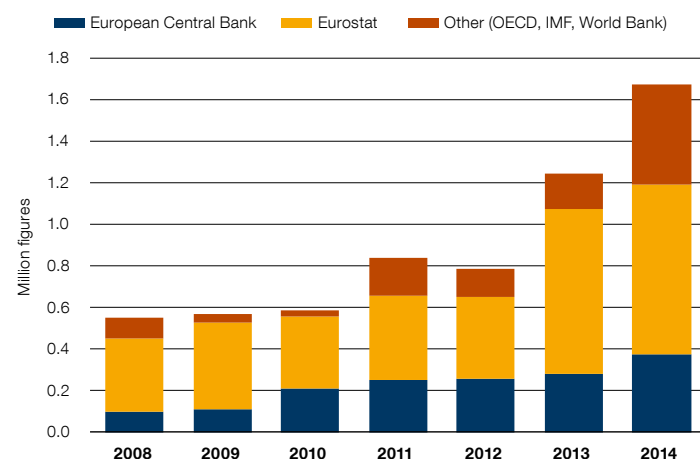
The most important change in the compilation of the financial accounts for the quarter affects the deadlines for submissions of Estonian data to the European Central Bank, as these were shortened by ten days from the third quarter of 2014. The final

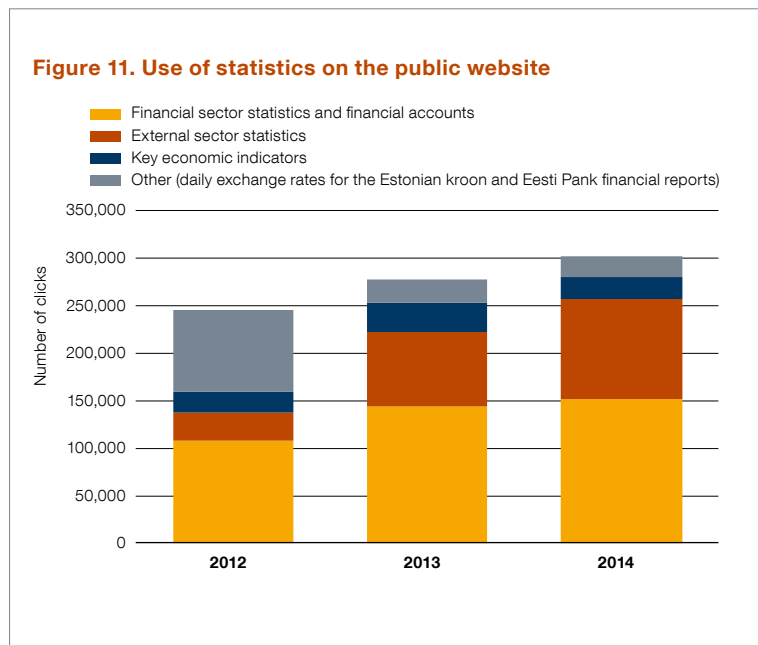
financial account data started to be accompanied by preliminary data, which have a deadline that is even shorter by a couple of weeks.

The supply of information to the European Central Bank's Centralised Securities Database (CSDB) and quality management of the data have been made even more efficient. The requirements to submit data on securities and their issuers and to monitor quality continuously were supplemented from 2014 by the requirement to send statistics to the European Central Bank on the holders of securities by institutional sector and alongside this, data on the securities holdings of the central bank itself.

Figure 10 shows how the methodological changes already described and the increased demand for data from international organisations increased the volumes of statistics sent in 2014. The main growth in data volumes comes from the external sector statistics compiled under the new methodology, though in part the data continued to be sent

Figure 10. Statistics on the external sector, the financial sector and securities sent to international organisations





in the earlier form. The increasing need for statistics is confirmed **by the year on year increase in the number of visitors using the statistics section of the Eesti Pank website as a source of official data** (see Figure 11).

To help it cope with the new statistical demands, the additional transmission of international data and the shorter release deadlines, Eesti Pank continues to develop IT solutions for collecting and processing data and to improve its internal processes. A large amount of extra work in IT development for statistics came from the change-over of **a lot of data transmissions to the SDMX data format in 2014**.

The increasing need for statistics has foregrounded the need for **closer work** with Statistics Estonia and various other institutions that hold data. It is important to find the best solutions as far as is possible in this for sharing data and for harmonising the methodologies for compiling the data that

are released. This work was supported in 2014 by further improvements to the methodology work with Statistics Estonia, as Eesti Pank and Statistics Estonia set up a working group to work on the joint compilation of the financial account, with the aim of developing the methodology used, improving information exchange and reducing discrepancies between the annual and quarterly financial accounts. Work with Statistics Estonia on tightening the classification of economic units also continued, resulting in the publication by **Statistics Estonia of the list of economic**

units on 1 December 2014. This list helps data transmitters in classifying their clients and transaction counter-parties and so helps the statistical outputs to match better. Cooperation and data exchange agreements with the Estonia Central Securities Depository and the Centre of Registers and Information Systems were also renewed.

There was also multi-party work together on **the euro area Household Finance and Consumption Survey (HFCS) as processing and analysis of the data collected from the earlier research continued in 2014**. The data that had been collected were complemented with data from various national registers and other sources like the Tax and Customs Board, credit institutions, lease companies, the Estonian Central Securities Depository, Krediidinfo, the Land Register and life insurance companies. The results of the survey will be published in 2015.

CONSULTATION AND COOPERATION ON QUESTIONS OF ECONOMIC POLICY

Monitoring and economic analysis at Eesti Pank

Eesti Pank conducts monitoring and economic analysis **to support the preparation for decisions that set the monetary policy of the Eurosystem and to ensure financial stability in Estonia; to provide a basis for the advice it gives to the government; and to shape the public discussion of economic policy issues.** The results of the monitoring and analysis work are made public through economic reviews, press releases, commentaries and presentations. Eesti Pank also publishes regular commentaries on the main indicators for the Estonian economy, and comments on topical economic events in Estonia and abroad.

The regularly published reviews are:

- **the labour market review**, which comes out twice a year and gives early warning of possible imbalances, particularly price pressures, assesses the gap between supply and demand for labour, and observes the institutional development of the labour market;
- **the competitiveness report**, which comes out once a year and takes a longer and wider view of topics affecting the balanced development of the Estonian economy, and assesses the potential for growth in the economy from the point of view of exports;
- **financing of the economy**, which is published once a year and analyses the connections between the financial and non-financial sectors, looking at how Estonian companies and households finance themselves, what

capacity the banking sector has to finance the economy, and how lending conditions are set;

- **the financial stability review**, which is published twice a year and analyses the functioning of the Estonian financial sector and assesses the risks that threaten it.

In addition to carrying out this monitoring and analysis work, experts from Eesti Pank also participated in a quarterly **Europe-wide survey of bank lending**, which is used to produce a review of the estimates by banks of changes in demand and supply for loans. They were also involved in producing a review assessing the balance of economic developments in the euro area.

In recent years Eesti Pank has started presenting the results of its economic analysis in public lectures, which have proven popular with the public.

Economic forecasts

Eesti Pank produced **three economic forecasts** in 2014. They looked ahead to the current year and the next two years and gave detailed background information on particular points of the Estonian economy and euro-area monetary policy. The forecasts produced in the regular forecasting cycle were part of the series on the **Estonian Economy and Monetary Policy**, with one published in June and one in December. An extraordinary forecast update was also published in September because of changes in the accounting statistics for the national accounts.

Eesti Pank prepared its forecasts as part of the joint broad macroeconomic projection exercise (BMPE) forecast produced with the European Central Bank and the other central banks of the Eurosys-

tem. The central bank of each country analyses the outlook for its own economy for the BMPE, and a forecast for the euro area as a whole is compiled from the reports of all the individual member states. To ensure consistency, the forecasts use shared assumptions for expected developments in the world economy and foreign trade in terms of commodity prices, interest rates and exchange rates. Alongside the euro-area economic forecast prepared together with the central banks of the Eurosystem, the European Central Bank produces two further conditional forecasts called the macroeconomic projection exercise (MPE) in March and September.

Economic forecasting at Eesti Pank uses the **Estonian macroeconomic econometric model called EMMA**. EMMA contains the most important connections for all the Estonian economic figures and the main transfer channels for impacts from the external environment. EMMA is updated before each forecast to make sure that its connections are up to date and the forecast is accurate. A key input in this is the results of the monitoring and economic research work done by Eesti Pank.

In 2014 there was a **changeover in the European Union to the ESA 2010, the new European system for national and regional accounts**. The first data using the new methodology were published in September. This meant that the key indicators for the national accounts were revised by more than usual, and it was necessary to reassess the forecasting model in the light of the new data and **to update key economic figures for 2014-2016 contained in the forecast published in June**. The update took in the revised GDP statistics, and also statistics on the Estonian labour market, foreign trade and prices that had been released since the forecast, and it made use

of the latest information about the external environment.

The production of economic forecasts for the euro area and its member countries is coordinated at the European Central Bank by the monetary policy committee. The European Central Bank's monetary policy committee contains working groups responsible for forecasting, modelling and state financing, and experts from Eesti Pank are part of these working groups. The euro-area forecast is an important input for monetary policy decision making and is used by the Governing Council of the European Central Bank for assessing the state of the economy and risks to price stability.

On top of their work in preparing the Eurosystem forecasts, experts from Eesti Pank also participate in the forecasting working groups of the European Commission and of the Organisation for Economic Cooperation and Development (OECD).

Economic research

The general direction and framework for research work are decided to fit with the duties of Eesti Pank and **the strategic research plan** based on them. Ten research projects were completed, which came under the categories of monetary policy, the financial sector and the real economy, and development of the macroeconomic and banking modelling system.

The research studies looked at the implications for inflation of the euro changeover in Estonia, the impact of household liabilities on financial wealth in euro-area countries, the sustainability of European external debt, labour market topics such as factors affecting reservation wages in Estonia and the gender pay gap, and more. To improve the

Table 3. A selection of works published in internationally recognised academic journals in 2014

Author	Title	Published in
Jaanika Meriküll , Tairi Rõõm	One currency, one price? Euro changeover-related inflation in Estonia	ECB Working Paper No. 1732, 2014
Jaanika Meriküll , Tairi Rõõm	Are foreign-owned firms different? Comparison of employment volatility and elasticity of labour demand	ECB Working Paper No. 1704, 2014
Lenno Uusküla , Gertrud Errit	Euro Area Monetary Policy Transmission in Estonia	Baltic Journal of Economics, 1(14), 2015
Michael Ehrmann, Chiara Osbat, Jan Strasky, Lenno Uusküla	The Euro Exchange Rate During the European Sovereign Debt Crisis - Dancing to its own Tune?	Journal of International Money and Finance, Vol 49, December 2014
Liina Malk	Relaxation of employment protection and labour reallocation	International Journal of Manpower, Vol 35, No 6, 2014
Hubert Gabrisch, Karsten Staehr	The Euro Plus Pact. Competitiveness and external capital flows in the EU Countries	Journal of Common Market Studies, 2014
Elena Bobeica, Paulo Soares Esteves, António Rua, Karsten Staehr	Exports and domestic demand pressure: a dynamic panel data model for the euro area countries	ECB Working Paper, No. 1777
Karsten Staehr	The Maastricht inflation criterion and entry to the eurozone: challenges and options for EU countries from central and eastern Europe	Jens Hölscher (ed): Poland and the Eurozone. Palgrave Macmillan, 2014.
Merike Kukk, Karsten Staehr	Income underreporting by households with business income. Evidence from Estonia	Post-Communist Economies, Vol. 26, No. 2, 2014
Juan Carlos Cuestas, Luis Alberiko Gil-Alana, Karsten Staehr	Government debt dynamics and the global financial crisis: has anything changed in the EA12?	Economics Letters, Vol. 124, No. 1, 2014

economic models used, updates were made to the dynamic stochastic general equilibrium model of Estonia and the euro area, and the credit risk and profitability models for banks¹⁰.

Working papers are published by Eesti Pank and the results of the central bank's economic research have been successfully presented internationally. In 2014, research papers and articles were published in internationally recognised academic journals (see table 3) and in the series of publications of the European Central Bank, and the research done at the bank was also presented at international scientific conferences.

Researchers continued working with Estonian and foreign partners in 2014, participating in the ESCB econometric modelling working group, the ESCB's Competitiveness Network and Wage

Dynamics Network, and the Household Finance and Consumption Network run by the central banks of the euro area. They also participated in the 17th doctoral summer school organised jointly by the Doctoral School in Economics and Innovation of Tartu University and Tallinn University of Technology and helped organise the international conference on transition economies *Economic Challenges in Enlarged Europe 2014* under the leadership of Tallinn University of Technology. Close cooperation also continued at the initiative of Eesti Pank with the Estonian Economic Association, a local scientific and research institution.

As usual, foreign experts were also invited to Estonia to talk about their work and a total of eleven seminars were held in Eesti Pank in 2014. Former Polish deputy prime minister, finance minister and central bank governor, Professor Leszek Balcerowicz of the Warsaw School of Economics gave a public lecture at Eesti Pank as part of the series of lectures dedicated to Professor Ragnar Nurkse.

¹⁰ For a full list of the economic research published in the Eesti Pank working papers, see "Eesti Pank publications 2014" in the appendix.

The lecture was entitled *The euro in a comparative perspective*.

The Eesti Pank guest researcher programme continued to play an important role in the research work and three foreign experts took part in the economic research in 2014. The central bank also awarded again its annual prize for young Estonian economic researchers. The prize was awarded for the twelfth time in 2014, and the prize for doctoral studies went to Kristjan Liivamägi, Tõnn Talpsepp and Tarvo Vaarmets for their work on investment behaviour. The research award in the master's studies category went to Magnus Piirits for his work on the intergenerational effects of the pension system reforms.

Advisory functions

Under the Eesti Pank Act and by tradition, Eesti Pank acts as an advisor to the government on many important areas of economic policy. The bank's interest in non-financial questions is in the **balanced development of the economy**, which covers everything that has a direct or indirect impact on price stability, and in the stability of the Estonian financial sector and the construction of the integrated European monetary and economic union.

In public discussions on the state of the Estonian economy and the outlook for it, Eesti Pank highlighted that debt levels are low, there are fewer problem loans, and savings have increased, all of which mean that the resilience of the Estonian economy in the face of risks has improved. The dangers from rising real estate prices have also receded.

The risks from excessive growth in labour costs also eased to an extent during the year, but even

so, Eesti Pank emphasised that **if wages continue to rise rapidly and external demand and inflation in foreign markets continue to remain low, it will start to hold back Estonia's competitiveness** and the economy will lose some of its capacity for growth. Eesti Pank also drew attention to the excessive difference between rates of wage growth in the public and private sectors, which will make it harder to make the necessary correction in the private sector.

In fiscal policy discussions, Eesti Pank noted that some indicators put the Estonian economy below its potential and some put it above, and the bank recommended that the government **ensure an improvement in the fiscal position with both nominal and structural indicators in 2016**.

At the start of the year Eesti Pank supported the government in setting up the **Fiscal Council**. The main role of this independent advisory body is to observe whether the budget rules are followed and whether fiscal policy is sustainable. The statute of the fiscal council requires it to publish its opinion on the forecasts for the macro economy and state financing and on the budget strategy and how the goals of the structural budget position of the general government are being achieved. It has six independent members and receives technical support from Eesti Pank¹¹.

During the year the main European Union topic of debate was **the banking union**. Eesti Pank and the government were both of the opinion that in a banking crisis, the costs should first be covered by the bank's owners and creditors. The division of cross-border crisis resolution costs should ensure the rights and obligations of the states are balanced. Eesti Pank and the government are both in favour of solutions that cover the whole of the

¹¹ <http://eelarvenoukogu.ee/>

European Union and are supported by market-based mechanisms.

The principle of balancing the rights and obligations of member states must be followed, whatever kind of joint funds are created. Whether they are created as part of the banking union or a fiscal union, the joint funds should not be allowed to encourage member states to take less responsibility for fiscal policy.

Both Eesti Pank and the government remain open to debate about the institutional framework for the European economic and monetary union, though **both consider it vitally important that deci-**

sions already taken and legislation already passed be enacted.

Economic policy questions are discussed more widely at meetings with the Finance Committee, Economic Affairs Committee and European Union Affairs Committee of the Riigikogu and at regular meetings with the Ministry of Finance and the Ministry of Economic Affairs and Communications. The Prime Minister's office and the President of the Republic are also represented at the regular meetings. Work on the legal framework for financial stability and the financial sector is done in a joint commission by Eesti Pank, the Ministry of Finance and the Financial Supervision Authority.

INTERNATIONAL PARTNERSHIPS AND PUBLIC COMMUNICATIONS

International cooperation

The largest task in Eesti Pank's international communications work **was communication with European Union institutions**, especially the European Central Bank and the institutions set up there in 2014 for the Single Supervisory Mechanism (SSM). Eesti Pank's most important partner in global financial and economic policy is the International Monetary Fund, the IMF. More information on Eesti Pank's main international partners can be found on the Eesti Pank website¹² (see also Table 3).

Work with the European Central Bank

The European Central Bank, the ECB, is Eesti Pank's most important partner in the European Union. Almost everybody at Eesti Pank works with the European Central Bank and the central banks of the member states of the euro area, the Eurosystem, in their daily work. The Governor of Eesti Pank attends the twice-monthly meetings of the Governing Council of the European Central Bank, where decisions are taken on the monetary policy of the euro area¹³ and on the other duties of the Eurosystem¹⁴, including the maintenance of security and confidence in the banking system of the euro area.

Alongside its monetary policy discussions, the Governing Council of the European Central Bank focused in its meetings in 2014 on starting up the single supervisory mechanism (the SSM) and on

¹² <http://www.eestipank.ee/en/eesti-pank/international-cooperation>.

¹³ ECB monetary policy decisions can be found at <http://www.ecb.europa.eu/press/govcdec/mopo/2014/html/index.en.html>.

¹⁴ Other decisions by the Governing Council of the ECB can be found at <http://www.ecb.europa.eu/press/govcdec/otherdec/2014/html/index.en.html>.

the results of the review of the quality of assets of the banks. In 2014 the European Central Bank wrote a convergence report on the progress made by Lithuania and other European Union countries outside the euro area in fulfilling the criteria for euro-area membership, and the final wording was coordinated with all the central banks of the European Union and approved by the General Council of the European Central Bank, where the Governor of Eesti Pank also sits.

Work with other European Union institutions

Eesti Pank is represented at the European Union's Economic and Financial Affairs Council (ECOFIN) and its committees and working groups, at the numerous committees and working groups of the European Commission, and at the European Systemic Risk Board (ESRB) and its substructures^{15,16}.

Deputy Governor of Eesti Pank Madis Müller attended the informal ECOFIN meeting in Athens in April 2014, and the Governor attended the meeting in Milan in September. Weaker economic growth than had been predicted led discussions about growth and weakness and the sustainability of public finances to be restarted in 2014. Financial stability was also a topic of importance for Eesti Pank.

Eesti Pank helped with the preparations for meetings of the European Council, the heads of state and government of the EU member states. Eesti Pank was represented in the Estonian delegation to the October meeting of the European Council, where the recovery of the economy and ways of increasing investment were discussed.

¹⁵ For more about the ESRB's work in 2014, see the chapter "Safeguarding financial stability".

¹⁶ More about the work of these institutions can be found at <http://www.eestipank.ee/en/eesti-pank/international-cooperation>.

International Monetary Fund

Estonia has been a member of the International Monetary Fund since 1992. Estonia's regular work with the IMF is conducted through the Nordic-Baltic Constituency. The interests of Estonia in the IMF are represented by Eesti Pank, which is also responsible for the financial obligations that come with membership.

In 2014 Eesti Pank was party to the comprehensive discussions on the effects of non-traditional monetary policy, fiscal policy, the restructuring of sovereign debt, and lending programmes. The introduction of reforms to the IMF quotas continued, and there were discussions on how the size of the quotas for the member states is calculated.

Full-scale economic policy consultations under Article IV of the IMF's Articles of Agreement were held in March 2014 as part of the monitoring work done by the IMF. The IMF found that Estonia has continued to recover from the crisis, the state budget is based on conservative principles, and the banks operating in Estonia are well capitalised. The outlook for the Estonian economy is mainly threatened by risks related to foreign trade. Although the IMF considered Estonia's competitiveness indicators to be generally good, attention was drawn to the pressure that wage and price rises are putting on price competitiveness. New head of mission Christoph Klingen started work in autumn 2014, and he is also head of mission for Lithuania.

Work with the Bank for International Settlements and the Organisation for Economic Cooperation and Development

The Governor of Eesti Pank attends annual general meetings of governors of the Bank for Interna-

tional Settlements (BIS) and working meetings of the heads of central banks, where discussions are held on issues of international monetary and economic policy, and financial sector management and supervision.

The Organisation for Economic Cooperation and Development (OECD) working with various agencies produced a report in 2014 on the Estonian economy 2013-2014, which was published in Tallinn in January 2015 in the presence of OECD Secretary General José Ángel Gurría.

Eesti Pank experts work with the BIS and OECD on economic and financial sector policy and statistics.

Work with other central banks

Alongside the European Union institutions and international organisations, the central banks of the Nordic and Baltic countries have always been important foreign partners for Eesti Pank. Estonia is part of the Nordic-Baltic Constituency at the IMF, and there is close multilateral or bilateral cooperation covering almost all the activities of the central bank: monetary policy and economic research, cash, financial stability, statistics, payment and settlement systems, and internal affairs from book-keeping to staffing issues. Eesti Pank also works with the Bank of Finland on reserve management. In 2014 Eesti Pank supported the Lithuanian central bank in its preparations for the changeover to the euro, by helping set up the necessary infrastructure and sharing experience of membership of the Eurosystem. Eesti Pank staff also discussed their experience of membership of the euro area with the Lithuanian media and at a high-level euro conference. In 2014 Eesti Pank together with other euro-area central banks provided technical assistance in integrating the central bank of Montenegro with the European Union.

Table 4. Eesti Pank's participation in the work of international organisations and institutions*

European System of Central Banks	
Governing Council of the European Central Bank	Ardo Hansson
General Council of the European Central Bank	Ardo Hansson
Supervisory Board of the single supervisory mechanism	Madis Müller
Public Relations Committee	Katrin Kask, Ingrid Mitt
Budget committee	Kairi Rätsepp, Helga Käärik
Eurosystem IT Steering Committee	Ülo Kaasik
Financial Stability Committee	Jaak Tõrs
Information Technology Committee	Ahti Roosa, Jarmo Inkinen
Committee on Controlling	Helga Käärik, Kairi Rätsepp
Payment and Settlement Systems Committee	Mihkel Nõmmela, Kaire Torsus
Organisational Development Committee	Kairi Rätsepp, Helga Käärik
Banknote Committee	Rait Roosve, Margot Luukas
Human Resources Conference	Kadi Kapral, Riina Padar-Leppiman
Accounting and Monetary Income Committee	Liivi Teder, Kairi Rätsepp
Monetary Policy Committee	Martti Randveer, Peeter Luikmel
International Relations Committee	Raoul Lättemäe, Evelin Tamla
Risk Management Committee	Kaari Kumari, Rain Nõmmik
Internal Auditors Committee	Henn Oit, Viljar Alnek
Statistics Committee	Jaanus Kroon, Ain Paas
Market Operations Committee	Janno Luurmees, Toivo Kuus
Legal Committee	Kadi Kapral, Marek Feldman
High-Level Group on SWIFT and CLS issues	Kaire Torsus, Airi Uiboaid
TARGET2-Securities Council	Mihkel Nõmmela
Council of the European Union	
Informal Council of Economics and Finance Ministers	Ardo Hansson
Economic and Financial Committee	Madis Müller
European Commission	
Committee on Monetary, Financial and Balance of Payments Statistics	Jaanus Kroon
Balance of Payments Committee	Jaanus Kroon
Organisation for Economic Cooperation and Development	
Economic Policy Committee	Martti Randveer, Ilmar Lepik
Financial Markets Committee	Jana Kask
International Monetary Fund	
Board of Governors	Ardo Hansson
Nordic-Baltic Monetary and Financial Committee	Madis Müller
European Systemic Risk Board	
General Board	Ardo Hansson
Advisory Technical Committee	Jana Kask
European Banking Authority Board of Supervisors	Jaak Tõrs
Bank for International Settlements	
Board of Governors	Ardo Hansson
Irving Fisher Committee on Central Bank Statistics	Jaanus Kroon

* The table shows only those committees and working groups that held meetings and discussions in 2014.

Public relations

The public relations work of Eesti Pank supports the central bank in its primary role of maintaining price stability in the euro area and in achieving its strategic goals.

The better that market participants understand the actions of the central bank, the more successfully the Eurosystem, including Eesti Pank, can do its work, as the decisions taken by central banks have a direct impact on the expectations of people and companies and on the decisions they then make about borrowing, buying real estate, investing or making other transactions. Public support for the central bank's monetary policy is a great help in maintaining stable and sustainable economic growth in Estonia and the euro area and in achieving financial stability. Eesti Pank releases regular announcements about its activities and about important economic policy questions. Releases of information are fuller and more frequent than the legal duty to report demands.

During the year, the bank issued its opinion on the Estonian economy four times, released 48 commentaries on current economic figures, and published various other reviews and analyses. It also released the European Central Bank's press releases, the editorial of its monthly bulletin, and its reviews of the euro-area economy. As well as releasing publications and the information published on the website, Eesti Pank also handles direct inquiries. Information can be requested by mail, email or phone. **In 2014 the bank received a total of 2604 inquiries**, 1787 of which were by telephone and the remainder by email, the "Ask a question" website interface or mail.

At the start of the year, enquirers were most interested in the plans for issuing commemorative and collector coins, and there were questions about

the speed and frequency of payments following the changeover to SEPA in February 2014, and about the costs of bank transactions. Throughout the year there were questions about exchanging Latvian lats after Latvia had adopted the euro at the start of the year, and enquirers were informed that they could exchange Estonian kroons for euros at the central rate of 15.6466 with no service fee.

Media relations and public appearances

Around 4,500 written articles, news stories, radio and TV news items and links to Eesti Pank commentaries were published or released in the Estonian media in 2014 referencing the work of Eesti Pank and its economic policy positions. During the year the media expressed constant interest in the state of the economy and various facets of it, with particular focus on the outlook for economic growth and the situation in the labour market, and in the second half of the year on the impact of the sanctions imposed by the European Union and Russia. There was in-depth media coverage of the requirements introduced for banks for housing loans.

There was discussion throughout the year about the Single Euro Payment Area and the changes it brought, and questions about the speed of payments, and there was also discussion about the use of virtual money. The design of the new ten-euro banknote and its security features also got a lot of attention during the year.

In 2014, Eesti Pank held 14 press conferences and presentations, issued 149 press releases and statements, and published 25 longer interviews with managers and experts from the bank, while on 95 occasions topical economic issues were publicly explained in presentations or articles,

some of them in Russian or English. Spokespeople from the bank provided over 220 comments in writing or in spoken form such as radio and television interviews.

Eesti Pank Museum

The role of the Eesti Pank museum is to maintain and cherish the history of Eesti Pank and Estonian money as a part of the Estonian cultural heritage, and it also provides a detailed introduction to the central bank's role and functions. Besides the general overview that it provides, the museum also has a varied programme that covers these topics in more depth. In 2014 it continued the programme of public lectures, holding 26 lectures to present

the various issues relating to the key functions of the central bank and economic questions. The museum also hosted excursions for around 5000 visitors. Many of these groups were of schoolchildren in their final year of basic school, but there are also younger school children and kindergarten groups. **More than 21,000 people visited the Eesti Pank museum during the year.** The museum hosted two temporary exhibitions in 2014, one at the start of the year on Latvian currency from 1914-2013 and one in the middle of the year under the title *Eesti Pank 95: the central bank in the years 1919–1939*. The Eesti Pank travelling exhibitions *Estonian Money from the Mark to the Euro* and *The Eurosystem* were put up five times in schools, libraries and museums across Estonia.

FINANCIAL ASSET MANAGEMENT

The Eesti Pank reserves underpin confidence in the monetary system of the euro area, guarantee the bank freedom of action and ensure that it has sufficient capital to cover any possible losses.

The goal of investment of the reserves is to earn a stable income while ensuring that the assets are preserved over the long term. As Eesti Pank has a long investment horizon, it is able to benefit from the diversification of its investments in a range of asset classes. This allows risks to be diversified better without any concessions being made in the expected return on the investments. The investments are mainly made in the liquid money and capital markets of developed countries.

Eesti Pank's financial assets are invested by the Financial Markets Department, which also assesses and manages all the associated risks¹⁷.

The risk level accepted by Eesti Pank and the expected return are reflected by the benchmark portfolio, which is used for measuring the performance and risks of investments. The Executive Board of Eesti Pank sets the risk level of the benchmark portfolio, basing it on the situation in global financial markets. The benchmark portfolio is reviewed and adjusted to match the agreed risk level at least once a quarter.

The structure of investment assets

At the end of 2014 Eesti Pank's invested reserves were in sovereign bonds of euro-area countries, with 205 million euros of investment there at the end of the year. The foreign currency reserve of investments outside the euro area stood at 250 million euros

at the end of 2014. The largest part of the foreign currency reserve was the 150 million euros held in US Treasury Notes and bonds. The equity portfolio increased during 2014 to stand at 57 million euros at the end of the year. To diversify risks, a small part of the reserves were invested in Australian and Canadian sovereign bonds. **At the end of 2014, Eesti Pank's portfolio of investment assets stood at 513¹⁸ million euros** (see Figure 12).

Eesti Pank continues to hold 8250 troy ounces or 256.6 kg of gold.

Return on investments

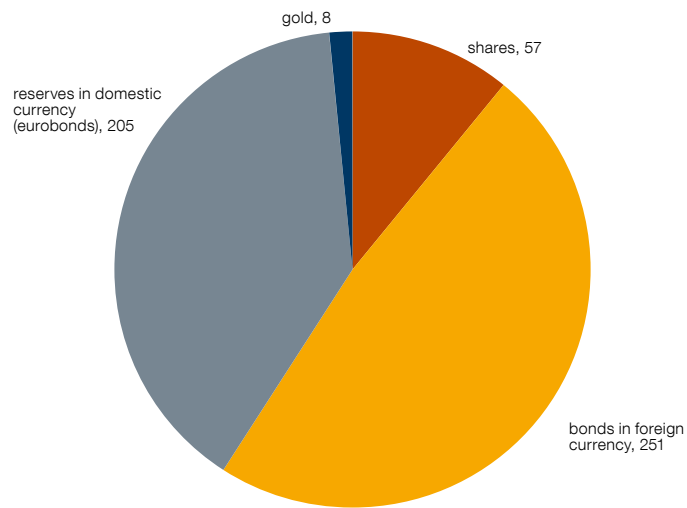
During the year a total of 22.8 million euros was earned from investments meaning **the return on invested assets was 5.05%, which was higher than the return from money markets** (see Figure 13). Both equity and bonds made a positive contribution to the results. Central banks continued to support bond prices through a continuing loose monetary policy, as global economic growth remained modest and, even more importantly, inflation and inflation expectations fell, partly due to a fall in commodity prices. As a result central banks either didn't reduce liquidity, as in the USA, or instead increased it, as in Japan and the euro area. At the same time demand for sovereign bonds was also lifted by geopolitical risks. Those risks supported global demand for risk-free assets and caused the prices of sovereign bonds to rise.

The equity portfolio also produced positive results. Like bond prices, prices of riskier assets, including shares, were supported by the continuation of loose monetary policies by the central banks. The return on the equity portfolio was also boosted by the depreciation of the euro against the US dollar, as the equity portfolio is denominated in US dollars.

¹⁷ More information about the investment process and risks can be found on the Eesti Pank website <http://www.eestipank.ee/en/monetary-policy/investment>.

¹⁸ Not including gold and income from gold.

Figure 12. Structure of Eesti Pank investments (EUR million)

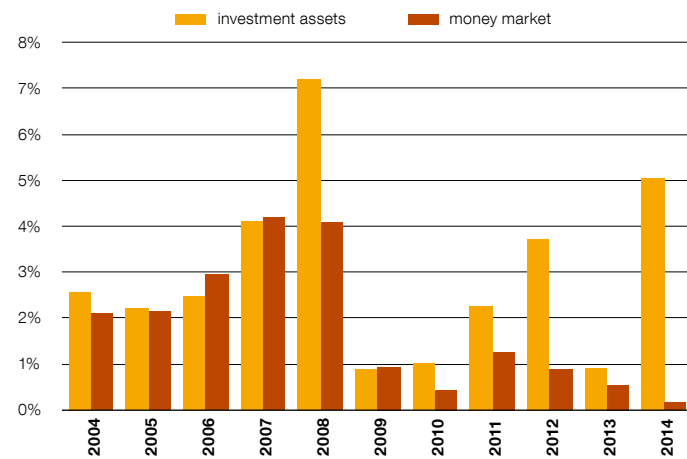


Active investment did not generate any excess return over the benchmark portfolio in 2014. External investment managers were again involved in active investment and at the end of the year Eesti Pank was using three external managers. These were PIMCO, which Eesti Pank has used since 2005; BlackRock, which has been used since 2006; and Informed Portfolio Management, used since 2007. In 2014, Eesti Pank ended its contract with Nomura Asset Management. The external asset management programme is based on overlay mandates and the managers express the majority of strategies through derivative instruments.

Asset management services provided to the public sector

In 2014 Eesti Pank continued working with the public sector as it has for many years. Full asset management services were provided to the Guarantee Fund, whose investment portfolio amounted to 205 million euros at the end of 2014.

Figure 13. Return on investment assets and return on money market



ACCOUNTABILITY, GOVERNANCE AND ORGANISATION, AND HUMAN RESOURCES POLICY

Central bank accountability

The independence of the central bank is an indispensable part of a monetary system that aims to maintain price stability. At the same time, a modern democratic society requires every public institution to report on its activities. **As the independent central bank of the Republic of Estonia, Eesti Pank has to explain its opinions and positions on economic policy to the Estonian public and their elected representatives.** Central bank accountability and independence are two counterbalancing principles.

Reporting to the Riigikogu

Eesti Pank has a duty to report to the Riigikogu. On top of the Governor's annual presentation to the Riigikogu, the central bank has regular meetings with members of the parliament and provides explanations and comments to questions posed by Riigikogu members. Managers and staff from Eesti Pank regularly meet with the Riigikogu Finance Committee to explain the bank's understanding of economic processes and to discuss key questions of economic development. Eesti Pank's leaders have made presentations on the central bank's positions on economic policy and its areas of work when groups in the Riigikogu have expressed an interest.

The following meetings with members of the Riigikogu were held in 2014:

- 29 January 2014 – Eesti Pank Governor Ardo Hansson responded to questions of the Riigikogu committee investigating the VEB fund;
- 7 April 2014 – Eesti Pank Deputy Governor Ülo Kaasik gave a presentation to members of

the Riigikogu foreign affairs committee on the economic relations of Estonia and its major trading partners with Russia and Ukraine;

- 6 May 2014 – The Executive Board of Eesti Pank met representatives of the Finance Committee of the Riigikogu;
- 2 June 2014 – Eesti Pank Governor Ardo Hansson presented the Eesti Pank annual report to the Finance Committee of the Riigikogu;
- 10 June 2014 – Eesti Pank Governor Ardo Hansson and Chairman of the Management Board of the Financial Supervision Authority Raul Malmstein presented the Eesti Pank and Financial Supervision Authority annual reports to the full Riigikogu;
- 22 September 2014 – Eesti Pank Governor Ardo Hansson responded to interpellations by members of the Riigikogu¹⁹ on the circulation of cash and the organisation of payment services;
- 3 November 2014 – Eesti Pank Deputy Governor Madis Müller gave the Finance Committee of the Riigikogu a presentation on financial stability.

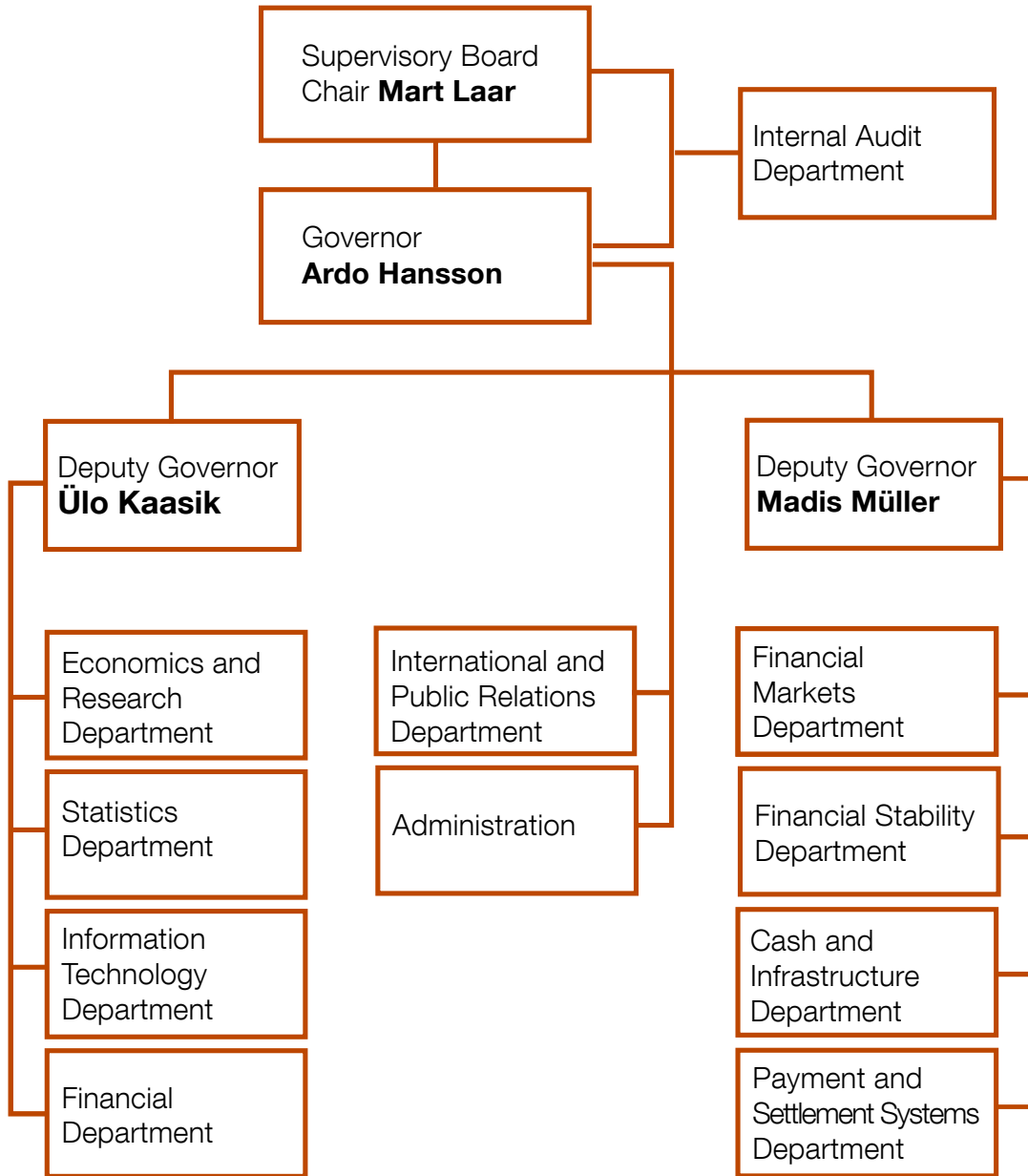
Regular public presentation of economic policy positions and economic data

Trustworthiness and transparency of the central bank are vital for a successfully functioning monetary system. Both specialists and members of the public need to be able to get regular, detailed and good-quality economic information from Eesti Pank.

It is stated in § 21 (5) of the Eesti Pank Act that "Eesti Pank shall periodically publish information concerning its activities and the economy of Estonia and the European Union." Eesti Pank publishes

¹⁹ Interpellations were submitted by Riigikogu members Neeme Suur, Jüri Morozov, Barbi Pilvre, Rannar Vassiljev, Karel Rüütli, Etti Kagarov, Tiit Tammsaar, Rainer Vakra, Heljo Pikhof, Inara Luigas, Lembit Kaljuvee, Jaan Õunapuu and Kalev Kotkas.

Figure 14. Eesti Pank Organisation Chart as at 31.12.2014.



its latest economic data on current affairs in press releases and comments and more thorough analysis is provided in regular publications²⁰, all of which are accessible from the Eesti Pank website.

The central bank has the right and the duty under the Eesti Pank Act and the Official Statistics Act to compile monetary, financial and balance of payments statistics that fall within its areas of responsibility. These statistics are then published on the Eesti Pank website in the statistics section²¹.

Like the central banks of the other euro-area countries, Eesti Pank publishes a wide-ranging quarterly review of the euro-area economy. This duty to publish comes from Protocol no. 4 to the Treaty on European Union and the Treaty on the Functioning of the European Union, which concerns the constitution of the ESCB and the ECB in article 15.1.

A more detailed annual review of Eesti Pank's work is published in the annual report under § 31 (4) of the Eesti Pank Act together with the annual accounts. The annual report is approved by the Supervisory Board of Eesti Pank and then presented together with the auditor's opinion to the Riigikogu. The Governor of Eesti Pank presents the central bank's annual report at a hearing held by the Riigikogu.

Reporting to the Supervisory Board of Eesti Pank

Under § 8 of the Eesti Pank Act, the Supervisory Board of Eesti Pank exercises supervision over all the activities of the central bank. The Governor and Deputy Governors inform the Supervisory Board members on a regular basis about Eesti Pank's activities and budget and about the Estonian economy and monetary policy and the financial sector.²²

²⁰ See also Appendix 3 "Eesti Pank's publications in 2014".

²¹ See also the chapter "Compiling statistics for the Estonian financial and external sectors".

²² See also the chapter "Eesti Pank's Supervisory Board 2014".

Governance and organisation

The Supervisory Board of Eesti Pank

The supervisory body of Eesti Pank is the Supervisory Board, which has a Chair and seven members. Further information on the activities of the Supervisory Board can be found in the chapter "Eesti Pank's Supervisory Board 2014".

The Executive Board of Eesti Pank

The Eesti Pank Executive Board manages the work of Eesti Pank. The Executive Board consists of the Governor and Deputy Governors, and in 2014 the Governor was Ardo Hansson and the Deputy Governors were Ülo Kaasik and Madis Müller. The Governor of Eesti Pank is, by virtue of office, the Chairman of the Executive Board, who has exclusive authority over banking policy, organisation of the bank's responsibilities to the European System of Central Banks, and general management of Eesti Pank's activities, among other things.

Development of the management system and work organisation of Eesti Pank

In 2014 the changeover to the new system of remuneration started and the new system started to apply from 1 January 2015. The salaries for Eesti Pank staff are now based on a smaller range of components, pay rises are more personalised than before and are more clearly connected to individual performance, and the principles for awarding bonuses have changed a little.

It was decided to end the system of study loans for staff of Eesti Pank and a system for agreed training was introduced instead. It was decided that housing loans would no longer be issued to Eesti Pank staff from 1 July 2015.

The Eesti Pank real estate development, maintenance and management strategy for 2014-2017

was approved and the Executive Board decided to put Maardu manor up for sale.

It was decided to approve the compliance framework and the telephone hotline associated with it. The risk manager will take responsibility for compliance issues and will report directly to the Governor on such issues.

Risk management

Risk management at Eesti Pank covers all the processes of the bank and allows various risks to be tackled in a single framework. Risk management aims to reduce the damaging effect that unforeseen events can have on the bank's work to achieve its goals. This requires integrated strate-

gic planning, budgeting and management reporting processes.

Reporting and analysis of risks shows that the internal risk level is stable but external risks remain real. Eesti Pank contributes to risk management for the whole of the euro area through the committees and management bodies of the European System of Central Banks.

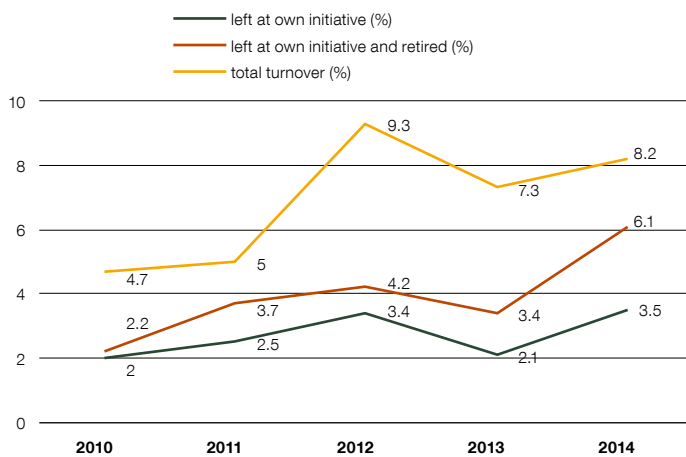
Contingency plans for services are used to reduce the impact of any possible interruption to the bank's processes and to ensure the continuity of activity. The risk management systems of the bank are assessed by both the internal and external auditors.



Human resources at Eesti Pank

Eesti Pank's human resources policy is to recruit and develop the employees needed for the bank to achieve its goals, and to motivate the staff and remunerate them competitively.

Figure 15. Employment flows at Eesti Pank 2010-2014



Number of employees

At the end of 2014, there were 238 employees working at Eesti Pank, down from 240 in 2013. See also Table 5. On average, there were 231.3 full-time equivalent employees at Eesti Pank in 2014; in 2013 there were 233.

The average age of Eesti Pank employees in 2014 was 43.8 and they had worked for Eesti Pank for an average of 11.4 years.

Remuneration

The salaries of the Governor of Eesti Pank and the Deputy Governors are set by the Supervisory Board. From 1 July 2014 Governor Ardo Hansson received a salary of 8800 euros a month, Deputy Governor Madis Müller's salary was 6800 euros a month and Deputy Governor Ülo Kaasik's salary was 6800 euros a month. In total the members of the Executive Board of Eesti Pank were paid salary of 261,422.67 euros in 2014.

The average monthly salary at Eesti Pank, including holiday pay and additional pay for working overtime, at night, during holidays and during national holidays, was 2125 euros in 2014, up from 1990 euros in 2013. This figure covers everyone from the top managers to the service staff, but the largest group of the bank's employees are professional specialists.

The salary of the members of the Supervisory Board of Eesti Pank is set by the law governing senior civil servants. The chairman of the Supervisory Board received 1820 a month in salary and other members of the board received 1300 a month.

Table 5. Number of employees at Eesti Pank as at 31.12.2014

	Total	Men	Women
Total number employed	252	104	148
of whom contract is suspended	14	4	10
of whom on maternity leave	4	-	4
of whom contract otherwise suspended (temporarily posted to the ECB or other international institution or studying)	10	4	6
Total number of active contracts	238	100	138

