

MONETARY POLICY

The goal of Eesti Pank is to ensure price stability through the fixed exchange rate of the Estonian kroon. Estonia has been using the fixed exchange rate and the currency board system successfully for 16 years.

The strengths of the system have revealed themselves in the current phase of economic downturn. The currency board arrangement has successfully coped with the adjustment need of the internal and external balance in the changed economic environment. Inflation, wage growth, the current account deficit and credit demand have all decreased rapidly. At this point, large exchange rate volatility would have jeopardised non-financial sector competitiveness as well as financial stability.

Eesti Pank ensures the smooth operation of the monetary system through monetary policy instruments and active participation in economic policy discussions. The central bank's main monetary policy instrument is the **standing facility of buying and selling foreign currency** (forex window) available for credit institutions. The forex window enables banks to increase their Estonian kroon reserves by selling to the central bank a desired amount of foreign currency, and vice versa – to buy foreign currency for Estonian kroons. The **reserve requirement** is another important monetary policy instrument of Eesti Pank, obliging banks to keep a part of their assets as buffers in Eesti Pank or in high-quality external assets.

In 2008, the central bank left the banks' reserve requirement unchanged at comparatively high 15%. The underlying reason was the turmoil in global capital markets. In the light of the current global financial crisis, the Estonian banking system has maintained a high level of liquidity and capitalisation, meaning that financial intermediaries continue funding credit-worthy projects. Owing to the credit crunch, local financial institutions do not depend on parent banks' funds that much any more, and are thus less vulnerable to the changes in the external environment.

The Estonian kroon money market remained thin in 2008. The transactions mainly reflected non-residents' decisions to cover the open foreign exchange position in the kroon. The changes in the Estonian money market interest rate (Talibor) did not affect the cost of capital for the domestic non-financial sector.

On 26 February 2009 Eesti Pank entered into a precautionary arrangement with the Swedish central bank to ensure financial stability under the currency board system and to promote confidence in the financial markets. The contract amount is 10 billion Swedish kronor in exchange for Estonian kroons. The precautionary arrangement with the Swedish central bank is an additional measure to support the current high liquidity and capital buffers of the branches and subsidiaries of Swedish banks operating in Estonia.

ECONOMIC ANALYSIS, FORECAST AND RESEARCH AS THE BASIS FOR MONETARY AND FINANCIAL POLICY-MAKING

Monitoring

Making monetary policy decisions requires an effective system for monitoring and forecasting economic developments, supported by target research on long-term processes in the Estonian economy. This system involves all departments that are responsible for shaping the central bank's monetary policy decisions.

Economic development monitoring mainly covers Estonia and the European Union member states, but also other major countries that play an important role in global economic developments. Understanding the external environment is very important for a small open economy, and thus developments in Estonia are always analysed in the context of trends in foreign economies. The monitoring process of the Estonian economy may be divided into two categories: monitoring developments in the non-financial sector and in the financial sector. The outputs of this process are monthly reviews for internal use in the bank, which serve as a basis for press releases and statements.

Economic reviews

Eesti Pank publishes economic statements six times a year. Twice a year the central bank publishes a longer **economic overview** that includes also an economic forecast (see also "Key points of the economic forecasts of Eesti Pank in 2008", p 149). Once every six months the central bank analyses financial stability. The results of the analysis are published in the **Financial Stability Review**. Estonia's economic developments in light of the forthcoming adoption of the euro is analysed in the **Report on the Adoption of the Euro** published twice a year.

The flexibility of the labour market plays an important role in the fixed exchange rate regime. Smooth income convergence towards more prosperous countries requires flexible wage formation based on productivity growth. Labour market issues have been the topic of targeted research projects already for several years. These serve as the basis for the Labour Market Review published twice a year.

Economic forecast

Eesti Pank issues economic forecasts twice a year: a spring forecast in May and an autumn forecast in November (see "Key points of the economic forecasts of Eesti Pank in 2008", p 149). To this end, current year's economic developments and projections for the following two years are analysed. The forecast baseline scenario is usually accompanied by two risk scenarios. For further information on the key points of Eesti Pank's economic forecasts see the bank's web site.

Rapid changes in the economic structure require regular improvement and revision of the macroeconomic model for the Estonian macroeconomic forecast. This task has been divided between the Research Department and the Economics Department of Eesti Pank. The Research Department is responsible for developing the quarterly econometric model of the Estonian economy that serves as a basis for compiling semi-annual economic forecasts in the Economics Department. In 2008, the development of the model for the macroeconomic forecast focused on improving the description of the credit transmission channel. The second agenda of development activities was related to the development of a general equilibrium model that would enable to analyse the impact of the ECB's monetary policy decisions on the Estonian economy. Representatives of Eesti Pank participated in the modellers' working group of the ESCB member states. The working group meetings focused on exchange of experience in model development and harmonisation of relevant principles.

Economic research

Eesti Pank's economic research projects are based on the **strategic research plan**, which determines the general framework for the studies conducted in the bank. The priorities for 2007–2009 included activities related to the development of the macro model of the Estonian economy and the monetary policy simulation model; research on monetary policy and financial sector, as well as analysis of the sustainability of the Estonian monetary system. In 2008, thirteen research projects on these issues were carried out.

The projects focused on stress testing the banking sector; inflation in the Central and Eastern European countries; the effects of the opening of the Estonian labour market; the ability of Estonian companies to adjust to economic shocks; the flexibility of price and wage formation in Estonian companies, etc. In 2008, also the development of the monetary policy simulation model started off and the base model for the macroeconomic forecast of the Estonian economy was improved.

Most of the research projects are conducted in the Research Department, but occasionally also other departments carry out single projects. For instance, migration trends were analysed in 2008 in the Economics Department.

In addition to publication in the Eesti Pank Working Papers Series, the central bank's economic researches gain recognition on the international arena. In 2008, research papers and articles were published in internationally recognised academic journals and introduced at international conferences.

The **cooperation in research continued at international and domestic level** in 2008. Central bank's economists attended the Working Group of Econometric Modelling and the Wage

Dynamics Network, composed of members of the European System of Central Banks. In cooperation with the Faculty of Economics and Business Administration of the University of Tartu, Eesti Pank started preparations for a high-level conference "European Association of Labour Economists Annual Meeting 2009" to be held in Tallinn in autumn 2009.

Along with introducing Eesti Pank's own research projects, several well-known **foreign experts** were invited to Estonia last year to present their research results. For example, Zsolt Darvas from the Corvinus University of Budapest presented a research on the euro area enlargement and euro adoption strategies; Prof. David Mayes from the University of Auckland held a seminar on the background and lessons of the global financial crisis; colleagues from other national central banks (Finland, the Netherlands, the Czech Republic) introduced their current research projects, etc. The annual series of lectures dedicated to the internationally renowned Estonian economist Prof. Ragnar Nurkse continued in 2008 with a lecture by Erkki Liikanen, Governor of the Bank of Finland.

On 1–2 February 2008, the International Monetary Fund (IMF) and Eesti Pank organised a seminar "Convergence in the Baltics" in Brussels to discuss the developments and outlook of the Baltic economies and economic convergence in the European Union. Seminar participants included representatives from the Baltic States, the IMF, the European Commission, the European Central Bank, other EU countries and universities.

On 21 August 2008, Eesti Pank, the Ministry of Economic Affairs and Communications and the US Global Interdependence Center (GIC) organised an international conference "Emerging Energy Markets" in Tallinn, which addressed energy policy issues in the Nordic and Baltic countries.

The keynote speeches were held by Juhan Parts, Minister of Economic Affairs and Communications, who talked about energy policy challenges in the Nordic-Baltic region, and Jean-Claude Schwartz from the European Commission, who analysed changes in the European energy policy. The panels were chaired by Einari Kisel, Deputy Secretary General of Energy at the Estonian Ministry of Economic Affairs and Communications; David R. Kotok, Member of the Board of Directors of GIC, and Andres Sutt, Deputy Governor of Eesti Pank. Panel participants included market agents, economists and experts from the IMF, the United States, EU countries and the Nordic Investment Bank.

In 2008, Eesti Pank conducted twelve **open seminars**. Nine of them had guest lecturers from abroad and three presented the bank's own research projects.

The **visiting researcher programme** of Eesti Pank has contributed to fruitful research contacts for years now. In 2008, five foreign experts took part in the economic research projects of Eesti Pank.

In 2008, Eesti Pank granted the traditional **research award** of young Estonian economists to Kristjan-Olari Leping, doctoral candidate at the University of Tartu, for his research "Heterogeneity of human capital and its valuation in the labour market".

RESERVE MANAGEMENT

The foreign exchange reserves of Eesti Pank are backing the Estonian kroon and are used to ensure the stability of the kroon. According to the currency board principles, foreign exchange reserves must fully cover all the liabilities of Eesti Pank, including the banknotes and coins issued, and the accounts of commercial banks with Eesti Pank. The central bank proceeds from strict risk

constraints in investing the reserves, taking into account the primary objectives, namely the preservation and liquidity of assets. Return comes third on the list of objectives.

Structure of foreign exchange reserves

The structure of foreign exchange reserves did not change considerably in 2008. The reserves are still divided into two: the liquidity buffer and the investment portfolio. A marginal part of the reserves is held in gold.

The liquidity buffer accounts for approximately 10% of total reserves and the central bank can use it at any time for Eesti kroon and foreign currency transactions with domestic credit institutions.

Assets of the other major component of the foreign exchange reserves – the investment portfolio – are invested in international financial markets. The objective of the investments is to achieve the optimum balance of risk and average return above money market interest rates over a global economic cycle. Investment portfolio assets are primarily invested in the liquid bond markets of leading industrial countries, while constantly monitoring and managing the interest rate, credit, currency and liquidity risks of the investments. For further information on risk management see the web site of Eesti Pank.¹

Investment process

Eesti Pank manages interest rate risk through the benchmark portfolio. This determines the average risk level the bank is ready to accept, and it is also used for performance measurement purposes in reserve management. The benchmark portfolio does not include currency risk. Limits have been set for the allowed deviation of the actual investment portfolio from the benchmark portfolio.

¹ <http://www.eestipank.info/pub/en/ylidine/pank/haldamine/reserve.html?ok=1>

The decisions regarding changes in the risk level of the benchmark portfolio are made by the Monetary Policy Committee of Eesti Pank. Lowering the risk level of the benchmark portfolio essentially means reducing the average duration of the portfolio: more assets are invested in low-volatility financial instruments providing more stable yields. As a result, the accrued interests offset the potential price fluctuations caused by market volatility. In the case of increasing the risk level, more assets are invested in longer-term instruments; that is, government bonds with the maturity of more than one year.

In addition to earning on a relatively stable benchmark portfolio, or **passive investment**, Eesti Pank is also engaged in **active investment**, taking positions in global financial markets. Such investment decisions are taken based on economic analyses, market relationships and other factors. Markets and securities are chosen on the basis of the concept, expected horizon and efficiency of the investment. The main investment philosophy lies in diversification: the aim is to spread risks and make better use of market opportunities. Strategies utilise primarily fixed income and interest rate markets and exchanges of the world's developed economies. Portfolio managers make investment decisions independent of each other. This is possible because the overall risk limit is divided into portions and the use of each portion is up to its portfolio manager.

Eesti Pank tries to keep up with the times and find its niche in today's relatively efficient markets. Two different approaches are applied in making investment decisions: subjective and model based. The former is mainly based on the qualitative analysis of economic processes, market psychology and the experience of portfolio managers. The latter is based on quantitative market relationships derived from investment models. The best decisions for investment in money, capital and foreign exchange markets are made by combining these two approaches.

External asset managers also have a role in active investment. In 2008, the central bank had four external asset managers. Informed Portfolio Management started cooperation with the central bank in 2007. BlackRock has been investing Eesti Pank's assets since 2006, PIMCO since 2005 and ABN Amro Asset Management since 2003. The external asset management programme is based on overlay mandates and the managers express the majority of strategies through derivative instruments.

In 2008, active investment resulted in 69 basis points of excess return over the benchmark portfolio.

Results and determinants of investment in 2008

The foreign exchange reserves of Eesti Pank totalled 44.18 billion kroons as at the end of 2008. Annual growth in reserves was approximately 26%. The excess reserve accounted for nearly 14% (6 billion kroons) of total reserves.

Return on investment was significantly higher than expected. It was affected by the deepening of the global financial and liquidity crisis in the second half of 2008, which brought about a rapid decline in the interest rates on government bonds both in Europe and the United States. The decline continued until the end of the year, regardless of the key interest rate cuts and other measures taken by major central banks. Consequently, the 7.21% return on foreign exchange reserves was considerably higher than the return on the money market (see Figure 1).

Changes in the benchmark portfolio in 2008

As of April 2008, the investment horizon of the benchmark portfolio is one year. In July, the Monetary Policy Committee of Eesti Pank decided to extend the duration of the benchmark portfolio

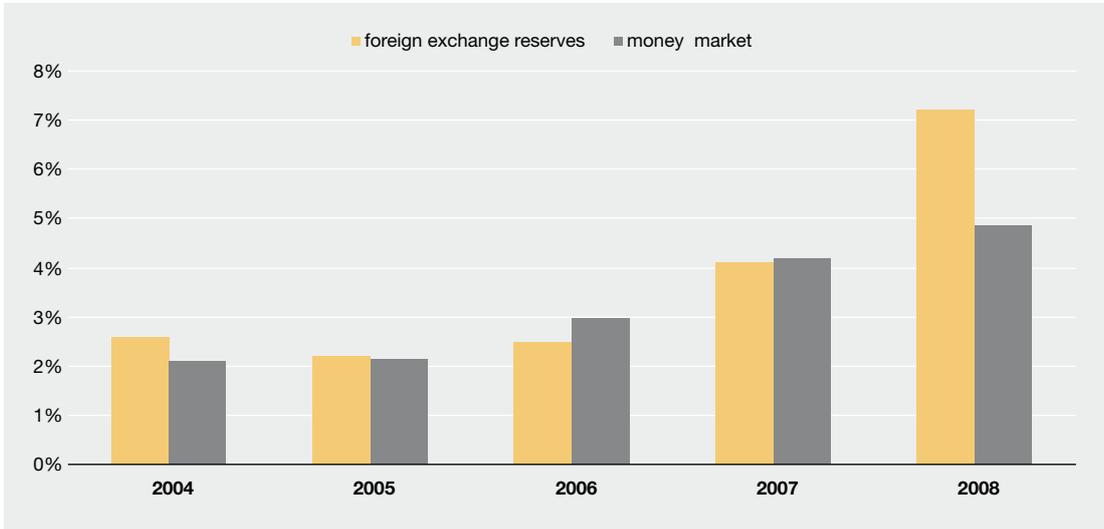


Figure 1. Return on foreign exchange reserves compared to return on money market

Table 1. Structure of the benchmark portfolio

	3 months	1 to 3 y	3 to 5 y	5 to 7 y	7 to 10 y	10+ y
Euro area	62.78%	16.56%	8.33%	5.71%	4.26%	2.37%
USA	67.02%	16.02%	7.71%	5.23%	4.02%	

owing to the rise in interest rates at the beginning of 2008. However, interest rates went down in autumn, which is why the duration was shortened in November. Table 1 shows the structure of the benchmark portfolio endorsed by the Monetary Policy Committee on 19 November 2008.

Asset management services provided to the public sector

Eesti Pank has been cooperating with various public sector institutions for years already.

In 2006, the central bank started to provide risk management service to the Estonian Unemployment Insurance Fund. The service includes daily monitoring of the investment activities of asset managers, drawing the reports required and, if necessary, advising the Fund in investment related matters.

Eesti Pank continued to provide the full package of asset management services to the Guarantee Fund, whose investment portfolios totalled 2.2 billion kroons at the end of 2008.