IV. ENSURING MONETARY POLICY STABILITY

ECONOMIC POLICY OUTLINES FROM MONETARY POLICY STABILITY PERSPECTIVE

Economic policy choices taken in the transition period have ensured globalisation and stable growth of Estonia's economy. Both nominal and real convergence with the European Union has progressed well, being visible also in the growth of real income. Monetary policy and well-conditioned economic policy as well as targeted structural reforms underlie the progress. As ensuring stable economic development is an ongoing process, monetary and economic policy has been based on consistently drawn up and targeted programming documents.

The common line of all the economic programmes has been stable currency ensured by the fixed exchange rate of the kroon, balanced budget and open and fair competition-oriented economic policy. Consistent adherence to these core objectives has ensured sustained growth in productivity and facilitated growth in Estonia's living standard.

In the course of time, the role of strategic programming documents underlying economic policy condition has been growing both on the domestic and international levels. As a result, their quality as well as economic policy coordination with current and future EU Member States has improved. The government renewed medium-term budget strategy and pre-accession economic programme and updated goals outlined in the Employment and Labour Market Action Plan.

From the point of view of the monetary policy, measures to enhance the stability of the fiscal policy and labour market flexibility are most significant. **In 2002, new (Basic) Budget Act became effective, which made the budgetary process more transparent for the public and achievement of budgetary goals easier.** Improvements of the Basic Budget Act have been approximating it to the principles of the Stability and Growth Pact and harmonised budgeting principles with EU Member States.

The underlying principle of the budgetary policy is to maintain budgetary balance over a business cycle. To pursue this principle, revenue collection has necessitated changes in the expenditure even within the budget year. In 2002, the economic growth exceeded forecasts and two supplementary budgets increasing expenditure were drawn up whereas annual revenues surpassed expenditure by 1.2% of GDP.

The first supplementary budget was 0.4% of the annual GDP. The second supplementary budget exceeded the first one (0.7% of GDP) but had relatively few consumption-oriented current expenses. This budget was to finance single investments outlined in strategic schemes and to pay back debts. Considering rapidly growing domestic demand, Eesti Pank's position is that supplementary budgets will be justified only if no additional resources are channelled into domestic demand.

Implementation of mandatory funded pensions[1] in 2002 will facilitate fiscal policy stability in longer than medium-term perspective as well. The national development plan, focusing on efficient use of EU funds[2], as well as insurance against accidents at work and unemployment insurance pursue the same goal.

In order to curb foreign-debt servicing costs and to avoid potential risks involved in the fluctuating nominal exchange rate of currencies, the government refinanced, in 2002, most of the external loans taken immediately after the restoration of independence. Thus, in June the government issued euro bonds reaching 100 million euros (1.57 billion kroons).

Stable economic development allows also concentrating more on long-term labour market goals. In 2002, priorities centred on improvement of working environment and education system, including furtherance of the higher education reform.

MONETARY POLICY OBJECTIVES AND DEVELOPMENT

Continuity

In 2002, we celebrated ten years of the monetary reform, which reintroduced the kroon and established a currency-board based monetary system. The exchange rate of the Estonian kroon against the German mark was fixed at 1 DEM = 8 EEK. Since 1 January 1999 the exchange rate of the kroon is fixed against the currency of the European Economic and Monetary Union, the euro, at 1 EUR = 15.6466 EEK. The Estonian kroon is freely convertible, ie there are no restrictions on the free movement of capital between Estonia and foreign countries.

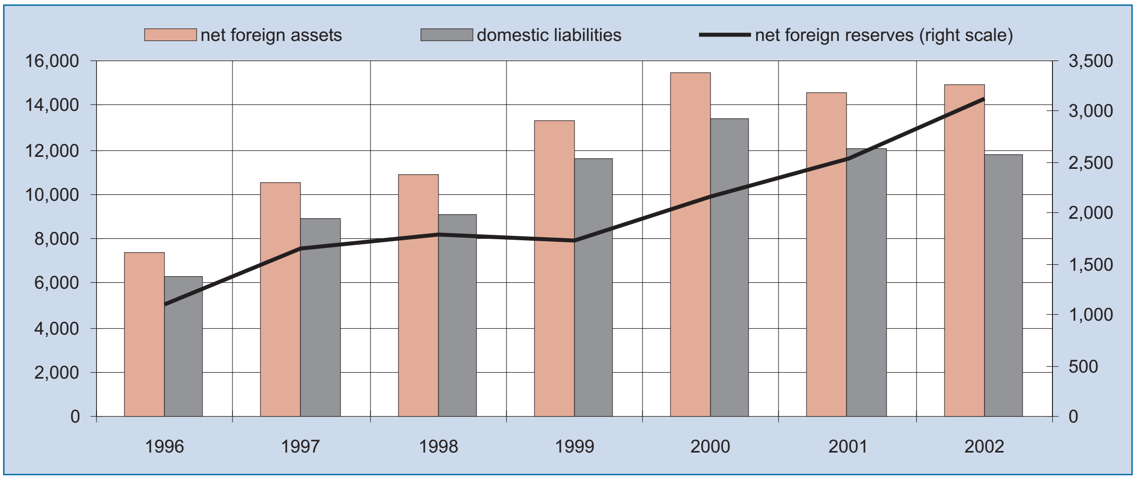

Figure 4.1. Eesti Pank net foreign assets, domestic liabilities and net foreign reserves (EEK m)

[1] Besides the already existing mandatory PAYG component (I pillar) and voluntary prefinanced component (III pillar), the so called (semi)mandatory prefinanced component (II pillar) was established. This component is mandatory for all new labour market entrants and voluntary for current taxpayers. The implementation of the system has been successful and more than a third of Estonia's workforce had joined the system by end-year. The new three-pillar pension system should alleviate aging pressure to the budgetary expenditure and mixed financing principles should provide sufficient cover under unfavourable developments in the finance and/or labour market.

[2] The government started drafting of the plan in 2002 and should complete in the first half of 2003.

Currency board arrangement (CBA) is an exchange rate system in which central bank's domestic liabilities should be fully backed by foreign exchange reserves. The liabilities include the total base money in the economy as well as all other liabilities and guarantees of Eesti Pank. Thus, the kroon has the so-called automatic protection, as reduction in the external reserves of the central bank will not endanger the ability to maintain the exchange rate (see Figure 4.1). Under the CBA the law prohibits the central bank to directly or indirectly credit the central or local governments setting, thus, prerequisites for a transparent and conservative budgetary policy.

The mission of Eesti Pank is to strengthen both domestic and international confidence in the Estonian currency and the stability and integrity of the monetary system. The constitutional task of the central bank to ensure the stability of the national currency means developing monetary policy, which is oriented to long-term price stability. Price stability is ensured in stable exchange rate policy, as price developments in a small open economy are primarily subject to external impacts.

Monetary policy continuity together with firm strategic goals is one of the most significant factors in orienting the economy, including shaping of inflation expectations.

Towards European Economic and Monetary Union

In the integrating European economic area, joining the Economic and Monetary Union (EMU) will allow Estonia to meet its main tasks – to ensure the stability of the currency in circulation in Estonia and low inflation rate – best and in the most reliable way. The reason is that unlike several other development scenarios, EMU is also aspiring sustainable economic growth and price stability. In order to secure Estonia's smooth entry to EMU, Eesti Pank has set as one of the monetary policy main activities under the Strategic Development Plan to specify entry (including participation in exchange rate mechanism ERM2) requirements and preparation of the entry. Thereby, the monetary policy framework based on the fixed exchange rate of the Estonian kroon and currency board arrangement will be preserved until the entry to EMU and the Eurosystem[3].

The accession to the EMU and the Eurosystem will encompass three distinct phases. In the first phase – until joining the EU – Estonia will maintain fixed exchange rate against the euro pursuant to the current legal framework. By today Estonia has successfully completed accession negotiations and would become a full EU member by May 2004. In the second phase, as a Member State after joining the EU and ERM2 (enjoying the status of Member State with a derogation), Estonia will have to harmonise its economic, budgetary and monetary policy legislation with the acquis. In this phase Estonia will have to meet the Maastricht criteria, necessary for joining the Eurosystem. In the third phase Estonia will join the euro area and will fully participate in EMU.

Considering the outlooks of Estonia's economic development, Eesti Pank continues to gradually harmonise the monetary policy operational framework with EMU norms and makes necessary preparations to participate in the European System of Central Banks to develop single monetary policy. Upon joining the Eurosystem the euro will become the legal tender in Estonia.

MONETARY TRANSMISSION MECHANISM IN ESTONIA

Monetary transmission mechanism is a description of the means how changes in monetary policy – eg, a change in central bank interest rates or money supply – transmit into economy.

[3] The European System of Central Banks (ESCB).

According to the traditional view, monetary policy decisions affect interest rate level and liquidity conditions on domestic financial markets. Those changes pass on to domestic real sector activity and have therefore an impact on aggregate demand and inflation level. Interest rate, bank lending, asset price and exchange rate channels are differentiated depending on the channel, which transfers the monetary policy impact into the real economy.

The Estonian monetary system lies on the fixed exchange rate against the euro and currency board arrangement, therefore, primarily monetary policy benchmark rate decisions taken by the European Central Bank have an impact on Estonian economy: shaping the interest rate in the euro area, free movement of capital translates them also into Estonian interest rates. Apart from that, changes in the exchange rate of the euro have an impact on Estonian economy as well, as the exchange rate of the euro determines the exchange rate of the Estonian kroon against other currencies. These signals transmit into Estonia's real economy via different transmission channels and have a long-term impact on the gross demand and inflation rate in Estonia.

In 2002, money market and loan interest rates continued to decrease both in the euro area and in Estonia. It is seen more and more often that monetary policy interest rate decisions rapidly influence money market and lending rates in Estonia. Such a rapid interest rate transmission is in compliance with monetary transmission mechanism of the euro area countries, in which the interest rate channel plays a significant role in achieving target inflation. Contemporaneously, the exchange rate channel is shredding its importance, as the introduction of the euro in mutual trade has eliminated the implications of exchange rate fluctuations.

As financial deepening is going to continue also in upcoming years in Estonia, we can assume that the role of the interest rate channel will gradually gain significance. At the same time, Estonia's economy will become more tied to the EU Member States and the role of the euro in Estonia's trade will be large. In other words, the share of the exchange rate channel will shrink also in Estonia. Such a development in our transmission mechanism is similar to the developments in the euro area and displays that also monetary policy transmission mechanisms are gaining similarity. The deepening relationship between Estonia and the euro area is highly favourable, as this describes Estonia's increasing preparedness to participate in EMU.

Monetary Policy in 2002

Reform of Monetary Policy Operational Framework

Planning the alignment of Estonian monetary system with EMU, Eesti Pank resolved to launch a reform in the monetary policy operational framework in 2000. According to the strategy approved by the Board of Eesti Pank in 2000, the reform falls into two stages, the first of which was over by 30 June 2001 and the second will last until Estonia joins EMU.

The objective of **the first stage of the reform** was to revise the current framework in order to safeguard smooth performance of the fixed exchange rate under the currency board arrangement and reduce market distortions. The most significant component was the transition to partially involve foreign assets in meeting reserve requirement in order to make the reserve requirement system more market-based.

The core change in reforming the reserve requirement lies in permitting banks as of 1 January 2001 to hold up to 25% (up to 50% as of 1 July 2001) of the minimum reserve requirement, currently held only with the central bank, in high quality foreign assets. Only bonds denominated in euro and possessing high credit rating (at least S&P AA-/Moody's Aa3) are eligible, issued by governments of developed countries or supranational credit institutions.

The banking sector was positive about the changeover to using foreign assets in meeting the reserve requirement. Four credit institutions have joined the system. By end-2002 the liquidity portfolio deposited on Euroclear and Clearstream accounts had reached 3.5 billion kroons (see Figure 4.2). As the growth in high-quality foreign assets and contemporaneous shrinkage in the kroon reserve requirement, accompanying the first stage of the reform, were of about the same volume, the monetary impact of the reform was neutral – the gross volume of liquidity buffers remained unchanged. **The changeover to using foreign assets in meeting the reserve requirement was a significant step in establishing high-quality external buffers.** Expanding the possibilities of Estonian credit institutions to manage liquidity in the euro area money markets, a firm foundation has been set for further alignment of the financial sector with European financial markets.

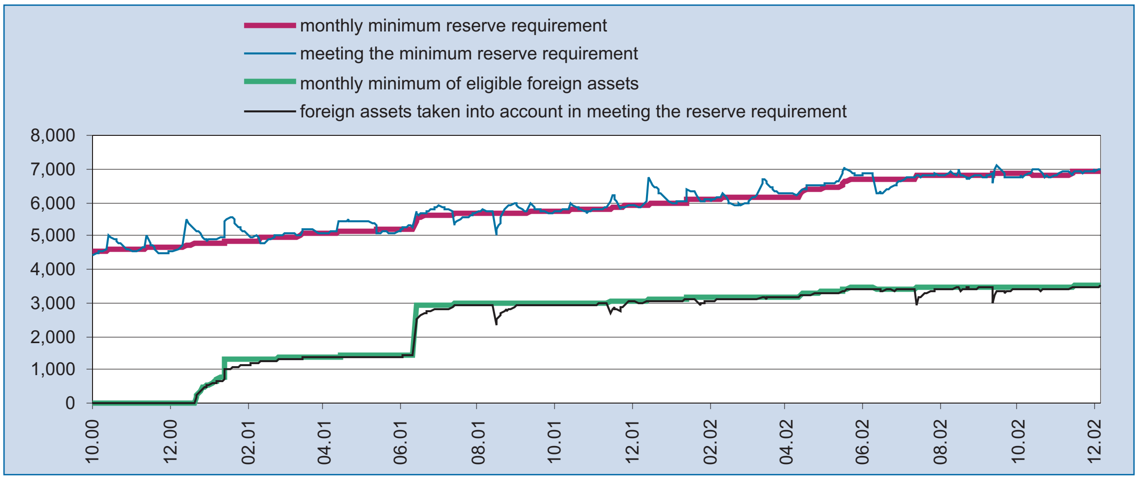

Figure 4.2. Meeting the minimum reserve requirement (EEK m)

The objective of **the second stage of the reform** is to ensure technical and operational readiness in order to adopt smoothly all monetary policy instruments of the Eurosystem upon Estonia's accession to the euro area. The monetary policy operational framework together with foreign exchange-markets and foreign-assets-based liquidity management characteristic of the currency board arrangement allows achieving full operational convergence with the operational framework of the ESCB by the entry to the Eurosystem.

Considering relatively larger volatility and lower depth of emerging markets as well as restrictions on central bank's liquidity assistance, it is essential in the interests of Estonia's financial stability and credibility to maintain slightly larger liquidity buffers than in the Eurosystem. The level of reserve requirement can approach that of the Eurosystem only gradually, first and foremost, in compliance with economic development. **Over the recent years, the level of remunerated reserve requirement (kroon reserve requirement) with Eesti Pank has significantly decreased towards the level of the Eurosystem** – from about 10.4% at the end of 2000 to 5.2% of the requirement by 1 July 2001. The development of the payment systems has accompanied more efficient cash flow management by credit institutions. The reserve requirement with the central banks is 2% in the Eurosystem.

In 2002, Eesti Pank drafted technical changes necessary to align the reserve requirement base with the Eurosystem[4]. Besides aligning the balance sheet items of the reserve requirement, the changes involved also introduction of maturity differentiation: beginning from 1 March 2003, the liabilities of the reserve requirement

[4] The Board of Eesti Pank adopted Decision No 5–2 on 31 October 2002.

base are differentiated by maturity[5] and by type (see Table 4.1). In the Eyrosystem different reserve ratios are applied. Estonia will also apply now two reserve ratios – general ratio for liabilities with up to two years of maturity and special ratio for liabilities with longer maturities and repurchase agreements. In brief, in March

Table 4.1. Evolution of Eesti Pank monetary policy operational framework

	1999 [1]	2000	2001	2002	2003
1. 'Forex window'	Eesti Pank is obliged to conduct exchange transactions with Estonian credit institutions without constraints between USD, JPY, SEK, GBP, EUR and EEK				
Exchange rate spread	No exchange rate spread of EEK-EUR purchase and sale transactions between credit institutions and Eesti Pank (1 EUR = 15.64664 EEK).				
2. Reserve requirement	Estonian credit institutions are obliged to keep certain amount of their incorporated assets liquid in assets determined by Eesti Pank.				
1) Reserve requirement base	a) Liabilities to customers; b) debt securities issued by banks; c) net liabilities to foreign credit institutions; d) financial guarantees to financial institutions and non-resident credit institutions.[2] Since 1 September 1998				a) Liabilities to customers; b) debt securities issued by banks; c) gross liabilities to foreign credit institutions; d) repurchase agreements e) financial guarantees to financial institutions belonging to the consolidation group; f) subordinated liabilities; g) government lending funds and counterpart funds. Since 1 March 2003 [3]
2) Monthly minimum reserve requirement	10% of the reserve requirement calculation base Since 1 January 1993	13% of the reserve requirement calculation base Since 1 July 2000			General (13%) and special requirement (13%) of the reserve requirement calculation base Since 1 March 2003 [4]
Additional liquidity requirement	3% of the reserve requirement base [5] Between 1 November 1997 – 30 June 2000		–		
3) Assets eligible for meeting reserve requirement	a) Deposits with Eesti Pank b) credit institutions' cash in hand – up to 20% of the monthly minimum reserve requirement Since 19 June 1998		a) Deposits with Eesti Pank b) credit institutions' cash in hand – up to 20% of kroon reserve requirement c) quality foreign securities – up to 50% of reserve requirement [6] Since 1 July 2001		
4) Averaging	Averaging on monthly basis. Averaging begins on the first calendar day of each month and ends on the last calendar day. Since 1 July 1996				
Daily minimum reserve requirement	40% of the monthly minimum reserve requirement Since 1 November 1997		40% of kroon reserve requirement Since 1 January 2001		
5) Remuneration of the reserve requirement	ECB deposit interest rate Since 1 July 1999				
3. Standing deposit facility in Eesti Pank	Eesti Pank offers to credit institutions possibility to earn interest on the settlement account's average monthly balance exceeding the minimum reserve requirement with Eesti Pank				
	Since 1 January 1999 ECB deposit interest rate. Between 1 November 1997– 31 December 1998 Deutsche Bundesbank discount rate.				
4. Eesti Pank certificates of deposit (CDs)	Once a month Eesti Pank organises auctions of the Eesti Pank short-term (1 month) certificates of deposit with limited issue (up to EEK 30 m). Between 19 March 1993– 19 May 2000		–		
5. Facility to sell foreign securities to Eesti Pank	–		Eesti Pank is ready to buy from credit institutions securities which meet the quality requirements set to meeting the reserve requirement. Since 1 January 2001		

[1] For requirements to monetary policy operational framework of earlier years see the monetary policy chapter in the Eesti Pank annual reports of those years.
[2] Since 1 August 1998 up to 50% of the issued financial guarantees were included into minimum reserve requirement calculation base, since 1 September 1998 by 100%.
[3] From 1 March 2003 claims to foreign credit institutions are not deducted from credit institutions' liabilities to non-resident credit institutions any more. Reserve requirement base also includes subordinated liabilities, government lending funds and counterpart funds.
[4] From 1 March 2003 general and special ratios of reserve requirement were introduced. Special ratio is used for liabilities with maturities of over 2 years and for repurchase agreements.
[5] Since 1 November 1997 – 2%, since 1 December 1997 – 3% of reserve requirement base.
[6] Since 1 January 2001 – limit for external assets 25%, since 1 July 2001 – 50% of the reserve requirement.

[5] The required reserves' calculation base differentiates between liabilities with over and below two years of remaining maturity.

2003 only the structure of the reserve requirement changed, the rates are still at 13%. Thus, the kroon reserve requirement to be kept as deposits with Eesti Pank is still at 5.2%.

Net liabilities to foreign credit institutions were replaced by gross liabilities, ie Estonian credit institutions cannot deduct claims to foreign banks from liabilities to foreign banks. Also subordinated liabilities, government lending and counterpart funds are involved. Unlike the Eurosystem, the reserve requirement will retain, for the time being, financial guarantees issued to financial institutions belonging to the consolidation group. They were involved in 1998 to smooth market distortions (to suspend rapid spread of financing from the banking sector to other financial sectors).

The changes in the reserve requirement calculation base are not related to measures the central bank applied in the autumn of 2002 to balance Estonian economy, they are determined merely by the strategy of the reform of the monetary policy operational framework.

Considering the future perspective, full technical preparedness for the introduction of open market transactions upon joining the Eurosystem is most significant in the context of operational convergence. The principles underlying Estonia's monetary policy and the fixed exchange rate of the kroon remain unchanged until full membership in EMU.

Measures Applied in Autumn by Eesti Pank and the Government

Throughout 2002, the world economy remained weak for longer than anticipated – while initially economy was expected to recover in the second half of the year, then by early-2003 recovery expectations had been postponed for more than a year. Despite deteriorating global economic outlooks, optimism in Estonia's private sector remained high in the second half of 2002. Shrinking interest level and the high credit demand it had brought along in the real sector encouraged optimism – banks' loan and leasing portfolio displayed the highest growth in recent years, being the most explicit in the real estate sector. Both private persons' housing investments as well as real estate development went up. In brief, domestic demand increased its role in the economic growth and the growth rate was significantly higher compared to Estonia's main trade partner, the European Union.

Estonian economy grew rapidly at the expense of previous reserves and extensive external borrowing whereas domestic saving in the private sector shrank. Estonia's current account deficit soared sharply, reaching record high of the last four years. The share of external debt capital increased significantly in financing the deficit – first time ever, foreign direct investments covered less than a half of Estonia's external financing demand. In the second half of the year, high loan demand had a deteriorating impact on households' financial position – their debt burden increased faster than their deposits. Under these circumstances the government drafted the second supplementary budget, signalling a potential decline of the role of the state in domestic saving.

Against the global economic weakness Estonia's accelerating domestic demand and accompanying inhibited domestic saving, rapid domestic credit growth, deteriorating current account balance and growing foreign debt reflected unbalances in Estonia's economic development, indicating a need to curb the rate of borrowing and increase domestic saving. **In September 2002, in order to draw attention to the unbalances and having consulted with the government and market participants, Eesti Pank decided to implement measures to support Estonian economy to regain balance.**

Firstly, Eesti Pank recommended the government to take abroad part of the deposits from Estonian commercial banks, as the good tax collection has boosted the deposit volume. The objective of this monetary policy signal was to draw the attention of the public and the financial sector to scarce saving in the private sector in financing credit growth as well as to growing external borrowing. All in all, in the second half of 2002 the government sector reduced deposits in domestic banks by more than a billion kroons.

Secondly, Eesti Pank in cooperation with the Financial Supervision Authority draw the attention of the commercial banks to increasing risks in the economic environment and issued recommendations for lending. Besides general recommendations, additional risks in commercial real estate, housing and consumption loans were pointed out. Several meetings with the managers of the commercial banks took place and staff of the Financial Supervision Authority discussed with loan and risk management officers these recommendations.

Last autumn, the objective of Eesti Pank was to initiate public discussion and, thus, draw the public attention to risks associated with rapidly growing borrowing. Considering the spreading uncertainty in the external environment, it was important to increase the awareness of such risks among the public and borrowers. The last few months of 2002 slightly stabilised both domestic and loan demand and growing unbalances were suspended. At the same time, however, neither large current account deficit nor credit growth demand has significantly decreased, nor remarkable changes have appeared in banks' financial behaviour. Although according to the latest estimates economic unbalance is slightly shrinking, potential risks should be closely monitored in future as well. Developments in the external environment play an essential role in risk analysis.

As could be expected, central bank activity in the second half of the year attracted major response. Taking into consideration geopolitical risks, which inevitably influence growth recovery in the world economy, it is essential to remain conservative both in the private sector and economic policy.

INTRODUCTION OF EURO NOTES AND COINS AND EUROISATION

In 2002, EMU Member States who fully participate in the Eurosystem introduced euro notes and coins and national currencies were withdrawn. *In order to ensure smooth introduction of the euro and unproblematic withdrawal of component currencies from the circulation, besides EU national central banks also central banks of some accession countries, including Eesti Pank, participated in the initial distribution of the euro cash.*

Estonia's currency-board-based monetary system is based on efficient markets and therefore, as a rule, market manages cash flows without the central bank interference. Considering the uniqueness and scope of the exercise, Eesti Pank settled for a single acquisition of the euro notes and coins from the ESCB to ensure market liquidity. With the assistance of the Bank of Finland Estonian credit institutions were supplied with a sufficient amount of the euro. While in end-2001 the demand for the cash in kroons went slightly up, as the sale of euro area national currencies to credit institutions increased, in early 2002 the demand for the euro component currencies remained on the regular level.

The introduction of the euro notes and coins, similar to the introduction of the euro on accounts in 1999, brought along a discussion on the use of the euro outside the euro area countries. Estonia has a goal to join EMU and introduce the euro as stipulated, by withdrawing the national currency and going through the phases set out in the Europe Agreement.

The parallel voluntary use of the euro and the kroon by market participants in the economy, ie the level of euroisation, remains at a stable low in Estonia, reflecting high confidence in the kroon. The euroisation should remain moderate also in the upcoming years, as costs and risks involved make an extensive parallel use of two currencies as cash economically inefficient. After joining the EMU, the changeover to the euro in Estonia should take place as fast as *possible (eg, during the monetary reform of 1992 there was no parallel cash in use). Market participants confirmed this position also in the survey conducted by Emor in February 2002.* ***Considering the level of integration of Estonia with the EU, the optimum solution for us would be to adopt the euro as soon as the EU acquis allows.***

Cooperation with the European Central Bank

In 2002, preparations to join the Eurosystem intensified cooperation between the European Central Bank and the central banks of the accession countries, inter alia, joint monetary policy seminars were held. *The seminars focused on the impact of the monetary transmission mechanism, exchange rate issues and convergence of monetary policy operational framework.*

The objective of the joint seminars is to analyse topical economic issues and problems and to develop cooperation between the central banks of the candidate countries to ensure smooth entry of the accession countries to the Eurosystem. However, evaluations of the monetary policy transmission mechanisms of Estonia and EMU seemed to be largely overlapping: the role of the interest rates as a mediator of monetary policy impulses is increasing and the role of the exchange rate in the transmission mechanism is decreasing. There is intent to study more deeply the impact of structural changes on the transmission mechanism and the impact of monetary policy on different sectors of gross demand. Discussing exchange rate issues, it was stressed that economic and monetary policy should, first and foremost, safeguard macroeconomic stability, ensuring low inflation and stable exchange rate expectations. A precondition in joining the Eurosystem is the capability of the accession country to implement price-stability oriented economic policy and to ensure sustainable economic growth.

Discussing the convergence of the monetary policy operational framework, it was stressed that economic policy stability is the most important factor in joining the Monetary Union, which should be duly taken into consideration preparing operational convergence. Eesti Pank has been gradually converging the operational framework to the Eurosystem requirements since 1999.

TEN YEARS OF ESTONIA'S MONETARY POLICY

Since 1992 Estonia's monetary policy objective has been to achieve and maintain a stable currency, in order to ensure price stability and sustainable economic growth. The monetary reform laid basis for developing a stable macroeconomic environment, sustained, first and foremost, by balanced economic policy, gradually strengthening financial sector and rapid reorientation of the real sector to developed external markets.

Monetary policy in the independent Estonia could be divided into three stages: (1) setting up and implementation of the monetary system; (2) updating of the monetary policy framework; (3) preparations to joining the Eurosystem.

The most significant event during the past ten years was undoubtedly the monetary reform, with an aim to introduce national currency and achieve economic stability through the exchange *rate policy. The successful reform decreased rapidly both the inflation rate and deposit and loan interest rates. Economic stability bolstered confidence in the Estonian kroon, increasing foreign direct investments, which was very important for Estonia as a developing state.*

Besides supporting conservative economic policy, also the efficiency of the financial system was improved in post-reform years, by creating an international-norm-based regulatory framework (including capital adequacy, liquidity ratios and requirement of minimum share capital). With market economy gaining foothold, restrictions on foreign exchange and the movement of capital were gradually removed. This established a basis for further integration with external markets. Market-based liquidity management in the banking system has been relatively smooth. Under free movement of capital and interest arbitrage monetary policy transmission mechanism changes in the anchor currency exchange rates and interest rates were reflected also in Estonia's monetary system: the exchange rate of the kroon strengthened and money market interest rates decreased.

In the mid-1990s, there was an increasing need to regulate monetary policy framework. In order to facilitate integration of the banking system with external markets, exchange rate differences on the purchase and sale rates of the Estonian kroon and anchor currency between Eesti Pank and credit institutions were abolished. And to promote the development of the domestic money market, the central bank started to quote money market interest rates. In addition to that, in order to increase liquidity buffers the monthly averaging was introduced in reserve requirement and a standing deposit facility was established for banks. Contemporaneously, as a restriction, reserve requirement base was expanded to curb boosting external borrowing and increasing domestic demand. The uncertainty in external markets brought along by the crises in 1997 in Asia and in 1998 in Russia increased liquidity risk and deepened a need for additional buffers and led to establishing an additional liquidity requirement for credit institutions. Eesti Pank tightened monetary conditions, which was a significant measure to restore the confidence in the banking system after the wave of consolidation, induced by economic shocks, in order to secure further sustainable financial deepening.

With the economic environment stabilising, increasing the efficiency of the currency-board-based monetary system and preparations to joining EMU became essential topics in Estonian monetary policy in 1999 in the context of Estonia as an accession country and introduction of the euro as account money. Parallel to drafting and analysing monetary policy scenarios, we have also intensively prepared smooth convergence of monetary policy operational framework with the ESCB framework. Similar to the Eurosystem, credit institutions' reserve requirement with the central bank is remunerated and short- and long-term requirements are differentiated in the reserve requirement base. The reserve requirement has become more market-based also due to the possibility to apply external-asset-based liquidity management. Despite technical reorganisation, Estonia will use the current currency-board-based monetary system until the entry to the Eurosystem.

Estonia's monetary system, based on stringent rules, has been reliable throughout the period of restored independence and has established a defined framework for reliable and transparent monetary policy. In order to promote the welfare of the people of Estonia, supported through joining EMU, real and nominal convergence of the economy vis-à-vis Europe should be ensured. Prerequisites of the smooth convergence are conservative fiscal and economic policy, sustainable financial deepening and continued structural reforms to enhance Estonia's credibility both for residents and foreign investors.

REGULAR ECONOMIC ANALYSIS, FORECASTS AND ECONOMIC RESEARCH

It is very important to consider the current stage in the economic policy cycle and evaluate correctly implications in taking every single monetary policy decision (as well as more broadly – taking economic policy decisions). Eesti Pank's **current economic policy analysis** should provide as precise an overview as possible of the situation and development perspectives in Estonian and world economy. Eesti Pank applies an economic analysis system based on regular monthly and quarterly surveys. The monthly surveys outline economic policy assessments by Eesti Pank's analysts, supplemented by economic policy recommendations in the quarterly surveys. **The quarterly economic policy comment is the most significant economic policy public output of Eesti Pank.**

Economic research conducted in Eesti Pank helps the central bank to meet its statutory duties, support current analysis and forecasting, participate in economic policy discussions in Estonia and to inform the public about the development of the economy.

Eesti Pank's **Strategic Research Plan**, which defines the overall research framework, underlies economic research. The key fields of research are maintenance of currency board credibility and smooth integration of Estonia's economy and monetary system with the EMU. In 2002, research projects involved another two very important topics – Estonian labour market and economic cycles. Four studies were completed on these topics. Ongoing improvement of the forecast model continues to be significant.

Research is primarily conducted in the Research Department, although current analysis and shorter studies are carried on in other departments as well. To gather international know-how also visiting researches are invited and in 2002, for example, Eesti Pank hosted them from France, Germany and Hungary.

In the field of **forecasting** cooperation relations with the Bank of Finland became closer. Colleagues introduced drawing up regular forecasts. Models and forecast management used in the Bank of Finland could be a useful model in preparing for the entry to the Monetary Union.

One of the events in the series dedicated to the tenth anniversary of the reintroduction of the kroon was a capacious collection of research articles *Alternative Monetary Regimes in Entry to EMU*. Recognised experts from all over the world wrote articles to the collection. The presentation of the book to Estonia's financial and academic community took place in November 2002. Also, a research seminar was held, which presented the joint study by Baltic central banks on the relationships between real exchange rate and competition. As the joint project was successful, it was decided to extend cooperation to another topical issue for the central banks of the accession countries: monetary transmission mechanism.