Eesti Pank

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Subscriptions of printed versions:
Fax: +372 668 0954
E-mail: publications@eestipank.ee

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Executive editor Mare Koit
Layout and cover Urmas Raidma
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ECONOMIC FORECAST FOR 2013–2015

The Eesti Pank forecast is produced jointly by experts from the central bank's Economics and Research Department and Financial Stability Department. The forecast is based on the Macro Model of the Estonian Economy, devised and regularly updated by Eesti Pank.

The external assumptions of the forecast are based on information available as at 14.05.2013, and the Estonian economic data available as at 15.05.2013.

SUMMARY

In the last three years the Estonian economy has adjusted to the post-crisis situation. The initial export-led recovery was superseded in 2012 by growth based on domestic demand and at the end of the year Estonian total output was only 3.5% below the peak that it had reached before the crisis. The Estonian economy is now more balanced than it was before the crisis and this means it is less vulnerable. There has been significant adjustment of the balance sheets of businesses and households as both have markedly reduced their debt levels in relation to Gross Domestic Product (GDP). The consequence has been that additional resources have been freed up for consumption and investment. Better balance in the economy is evidenced by the positive net foreign debt, the small current account deficit and the state budget that is almost in balance.

The rapid increase in domestic consumption has allowed the Estonian economy to grow even while the rest of the euro area growth and external demand have remained low. Lower unemployment and an improvement in material circumstances have made households more confident and spurred consumer spending. At the same time, companies have actively acquired assets to increase production capacity, as the utilisation of their existing resources has increased sharply. Private consumption and gross fixed capital formation were the biggest contributors to growth in 2012. A role was also played to some extent by temporary factors like government-financed projects, which were partially funded from sales of emissions permits. Furthermore, private consumption growth overtook growth in incomes as confidence grew in the second half of 2012 and households started to save less. The combined impact of the high comparison base from 2012 and weak external demand mean that growth will slow in 2013 and the flash estimate of the economic growth in the first quarter confirms that.

In 2014 and 2015 Estonian growth accelerates to an equilibrium level. This acceleration will require the target markets for Estonian exports to recover, but as the global economy is not yet set firmly on the path to growth, Estonian economic growth may turn out lower than forecast if the risks associated with the recovery of the external environment are realised. Both the public and the private sectors should be prepared for growth to be weaker than expected. In any case the economy will grow more slowly than in the years preceding the crisis. This can be explained by the sluggish growth in the global economy and by the convergence of Estonian income levels with those of more developed euro area countries, which is leading to a convergence of growth rates.

The euro area's prospects for growth have not improved since the previous forecast was released, but the surrounding risks have become more symmetrical and balanced, and at the same time smaller. Although the development of the euro area countries has been heterogenous in recent years, it has been possible to observe some stabilisation even in the countries with problems. One sign of this is that bond yields have declined in highly-indebted countries and that they have held successful bond issues.

Confidence picked up in the euro area at the end of 2012 before turning down again in March this year, but this is probably temporary. A major

cause of the loss of confidence was the difficulties of the banking sector in Cyprus, which indicated that the crisis was not fully resolved in that region. Despite this, the financial markets of the euro area remained stable. At the point when this forecast was prepared, no transactions had been made under the programme of Outright Monetary Transactions, OMTs, announced in autumn 2012, but the existence of this facility has been enough to lessen the lack of confidence perceptibly in the financial markets. Evidence of the good liquidity position of the banking sector was given by large-scale repayment of the three-year long-term refinancing operation loans at the start of 2013.

Increased domestic demand following the strengthening of confidence among companies and households is necessary if the recession in the euro area that has now continued for six consecutive quarters is to be replaced by positive and accelerating growth. External demand alone can not compensate for the weak domestic demand in the euro area, which is relatively closed by Estonian standards, and a strong economic recovery can happen more through domestic factors like a rebound in consumption and investment.

A positive stimulus is expected from the monetary policy interest rate, which the European Central Bank cut at the start of May to the lowest level seen in the Economic and Monetary Union. Above all the low interest rate level passed on by the financial sector could encourage investments in fixed assets, which have previously fallen the most. The fall in interest rates is stimulating the whole of the euro area, though the countries with problems may need additional measures. Measures in these countries still do not include fiscal support as their high debt levels prevent governments from stimulating the economy through higher spending. The case is rather the opposite, as further budget consolidation may be necessary, which would weaken domestic demand in those countries even further. Additional structural reforms may also prove necessary.

The German economy, the largest in the euro area, showed clear signs of revitalisation in the first months of the year, for example in the increased growth in industrial production. Given the size of the German market and of demand in it, this could have a positive impact on the whole of the euro area. The forecast for the Estonian economy for 2013–2015 is built on the assumption that the euro area debt crisis will recede and that the economy will exit recession during 2013. Estonian economic growth will accelerate to 4.2% in 2014 and to 4.3% in 2015.

Unemployment is expected to fall in Estonia in the coming years. Employment will rise by very little between 2013 and 2015 and increases in employment will be inhibited more and more by the decline in the working age population. The decline in labour force will be balanced during the forecast period by an increase in labour force participation rate, though only partially. The decline in the working age population indicates that employment will fall in 2015 even though unemployment is falling. If economic activity turns out to be weaker than forecast, it is possible that the fall in employment will be larger and will start earlier.

The real sector will face problems in increasing production because there is less labour available and the economy is approaching full employment, which means that employment cannot be expanded without creating wage pressures. This, however, may encourage the development of employees' skills and increase the share of human capital in the economy. An increased role for human capital and more production capital per worker are required for any move towards becoming an economy with higher value added.

The next few years will be a favourable time for increasing production capital as rising demand

and the financing terms offered by banks both favour investments in fixed assets. Although limited competition in the lending market has allowed banks to maintain their profitability by raising risk premiums, loan interest rates will remain at historically very low levels throughout the forecast horizon. The extremely low interest rates do create a risk of unexpected acceleration in credit growth as a further strengthening of confidence could see pressures on real estate prices and over-optimistic consumption patterns, and this could threaten the balance of the economy.

For a path of stable economic growth to be reached, resources need to be deployed carefully, and the availability of cheap credit should not lead to an underestimation of risk. Loan-financed investment in overpriced fixed assets with low production potential is fraught with danger and can restrict long-term growth, as happened following the rapid rise in real estate prices. Many debt liabilities were taken on in the real estate bubble due to unrealistic decisions and they subsequently had a braking effect on growth.

Price pressures have eased somewhat at present as the world market prices for oil and food commodities have stabilised and inflation is expected to decrease in future. On top of the slower pace of commodity price increases, the elimination of the base effect created by the increase in the electricity price in January 2013 will contribute to the fall in inflation in 2014. Domestic price pressures will increase as wage growth strengthens and labour costs are passed through to the prices of goods and services. Despite the slowdown in inflation, prices will still rise more quickly than those in other euro area countries on the average throughout the forecast horizon. Inflation is held high in international comparison by the convergence of income levels, meaning the different rates of price rises can be explained by the gap in economic growth rate between Estonia and the rest of the euro area.

The fiscal position of the general government will remain strong in the following years. In 2012 the budget deficit fell to 0.3% of GDP. The deficit was lower than expected as the economy grew on the back of domestic demand, increasing the tax-base. This also means that the budget deficit for 2013 will be lower than previously forecast and will stay at the same level of 0.3% of GDP as in the previous year. The forecast considers it realistic that a balanced budget will be achieved in 2014 as was set in the state budget strategy passed in April 2013, and a nominal surplus will be achieved in 2015.

The main risks to the economic outlook have not changed much since previous forecast. The accuracy of the forecast could be threatened by slower recovery of external demand, by price pressures stemming from the labour market, and by a resulting drop in competitiveness because of those price pressures. Companies find that the labour shortage has reduced since the middle of last year[1], but it is possible that there will be larger labour shortages and an increase in wage pressures in some economic segments. This is a threat to the service sector in particular.

This forecast contains four boxes of background information. The first reviews the latest developments in the monetary policy of the euro area, the second looks at the resolution of the economic crisis and compares the recovery of the economy in Estonia with that in neighbouring countries and in the euro area as a whole, the third covers the connection between the income account in the balance of payments and the profitability of investments, and the fourth explains the role of EU subsidies and other funding in financing the spending of the general government in Estonia.

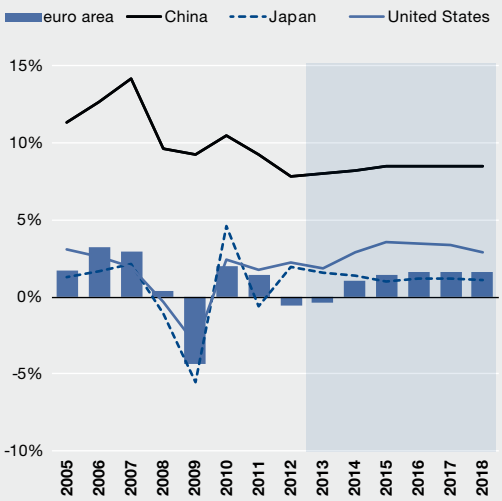
1 Based on barometer survey of the Estonian Institute of Economic Research, which takes opinions from manufacturing, construction and services companies on factors restricting production (www.ki.ee/en/).

The External Environment

Weak demand from trading partners was the main factor limiting economic growth in Estonia in 2012. Although the poor growth in the external environment has mostly been linked to the euro area, the growth has also slowed in other economic regions. The increase in confidence since autumn 2012 and the somewhat greater growth coming from demand in trading partners together indicate that the recovery has started in the external environment. The economy will pick up steadily in the most important economic regions in the forecast period (see Figure 1), but growth will at first remain below its levels from the decade before the Lehman crisis. The central assumption of the forecast is that demand in trading partners will increase by 4.7% in 2014 and by 5.6% in 2015 (see Table 1).

In the years before the crisis, there were signs of economic imbalances in many countries. These could be seen in the Baltic states for example in the rapid rise in real estate prices, or in Southern Europe in the increase in sovereign debt. Economic growth built on temporary factors certainly allowed living standards to be raised, but it led to a fall in competitiveness and an unproductive allocation of resources in the economy. The imbalances from the years before the crisis are now evident in the increased numbers for government debt and the worsened balance sheets of the private sector, which have slowed down growth in the countries with difficulties. Even though the interest environment has been favourable in recent years, the problems have been exacerbated in some countries by a tightening of lending conditions for small and medium sized businesses.

Figure 1. GDP growth of selected countries and economic areas



Source: IMF World Economic Outlook April 2013

A recovery of growth can now be expected particularly in countries like Germany, where the imbalances were nonexistent or insignificant before the crisis, and in countries where the problems before the crisis have now been resolved, like Latvia, which will join the euro in 2014. In 2012 the average budget deficit of EU member states was 4% of GDP, which shows that some countries still have to make cuts to their budgets. In the larger European countries, the budget deficits stood at 10.6% in Spain, 6.2% in the UK and 4.8% in France. The private sectors of some euro area countries may still need to reduce their debt levels, meaning that the contribution of the private sector to total demand growth will remain small in those countries. The countries burdened

Table 1. External assumptions in the forecast

					Previous forecast		
	2012	2013	2014	2015	2012	2013	2014
Foreign demand growth (%)	2.1	2.4	4.7	5.6	2.5	3.2	5.6
Oil price (USD/barrel)	112.0	105.5	100.0	96.2	111.7	105.0	100.5
Interest rate (3-month EURIBOR, %)	0.58	0.21	0.31	0.52	0.6	0.2	0.3
USD/EUR exchange rate	1.28	1.31	1.31	1.31	1.28	1.28	1.28

Sources: ECB, Eesti Pank

with problems will continue to eliminate the imbalances of the crisis during the years covered by this forecast, which will limit growth in the short term, though it is needed to ensure resilience in the economy.

GDP in the euro area fell by 0.6% in 2012. Confidence is higher than in autumn 2012, which suggests that the economy in the euro area is starting to improve step by step. The forecast of the Eurosystem expects quarterly economic growth in the euro area to turn positive during 2013, but for the year as a whole, GDP will shrink by 0.6%. GDP is expected to return to growth on an annual basis in 2014, when it should grow by 1.1%.

The recovery of the economy is largely dependent on the confidence of investors in the private sector. Countries such as Japan that have tried to exit the crisis by using substantial fiscal support rather than by reforming the economy may find it difficult to preserve their credibility in future, but a rise in uncertainty about some large economies could endanger the economic growth in countries that have started to recover.

The growth has recovered faster than expected in the USA, which succeeded in avoiding the so-called fiscal cliff. When the previous forecast was prepared, one of the risks coming from the external environment was that the USA would apply budget consolidation measures at the start of 2013 that could together have led to a sudden contraction in the US economy. Under the current programme the fiscal austerity measures will be implemented in the USA over a longer period of time. Some measures were already applied from March, but their impact is not yet clear.

The economic growth in Estonia's main trading partners, Sweden, Finland, Russia and Latvia, depends a lot on developments in the euro area. Growth in Russia is restricted by the relatively low price of exportable raw materials and weak demand in the euro area. The oil price at the start of 2013 was lower than a year earlier. One assumption in this forecast is that the oil price in 2013 will average 105.5 USD per barrel, and by 2015 this will fall to 96.2 USD per barrel. On top of the weak demand for energy commodities, the Russian economy was also affected by a sharp rise in consumer prices in 2012, partly caused by the rise in food commodity prices but also by a rise in administered prices, which had been postponed earlier.

Although the poor rates of growth of recent years are primarily associated with advanced economies, growth has also slowed in countries that were earlier growing rapidly. One cause of this is trade links, as the USA and the euro area are important export partners for emerging markets, while a second cause is the accumulation of imbalances that also happened in emerging countries in the years before the crisis, for example through the rapid rise in real estate prices in China.

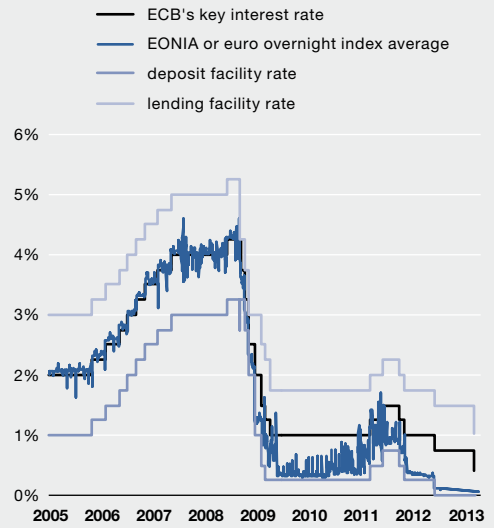
At the start of 2013, growth in China slowed from its earlier rapid pace. This slowing down was a consequence of the general lack of confidence in the external environment and also from the change of government, which led to a fight against corruption that reduced demand for luxury goods. Growth will be markedly stronger in China than in advanced economies in the forecast horizon and will probably accelerate in the short term at the start of the period on the back of growth in household consumption.

The risks in the external environment are more balanced than they were at the time the previous forecast was prepared and economic growth could prove to be faster than was previously expected. Increased confidence together with favourable borrowing conditions and low interest rates will put pressure on real estate prices in growing economies, and this could increase household consumption through the wealth effect, boosting growth temporarily. Faster growth based on short-term factors will improve living standards for some time, but will also bring the danger of new imbalances that could in turn later lead to a new crisis.

Box 1. The euro area's monetary policy environment

In the fourth quarter of 2012, GDP in the euro area was 0.6% lower than in the third quarter. Inflation remained slightly above 2% though, under the influence of high global energy prices and rises in indirect taxes and excise in the euro area as part of the fiscal consolidation. The negative sentiment spilled over into the confidence and economic indicators of early 2013, which meant that GDP fell by 0.2% in the first quarter. In the second half of 2012 the Eurosystem continued to expand its set of non-standard monetary policy measures to make the transmission channels in the euro area function more efficiently. As part of this, the Governing Council decided at its meeting of 2 August to announce a new measure – Outright Monetary Transactions, or OMTs – and loosened further the requirements for acceptable collateral for loans.

Figure B1.1. Eurosystem key interest rates and EONIA



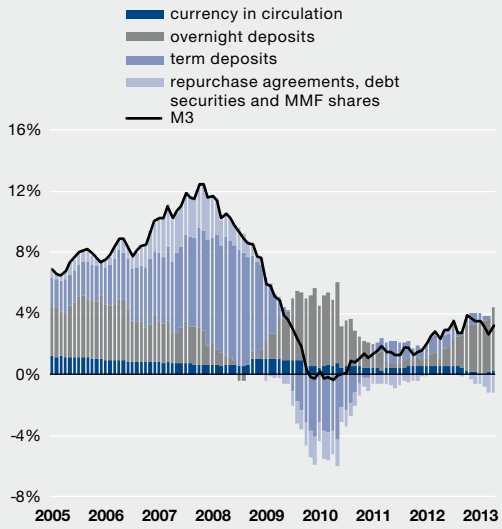
Sources: European Central Bank, Reuters/Ecowin

In the first half of 2013 the monetary policy environment was favourable in the euro area. At its meeting at the beginning of May the Governing Council of the European Central Bank decided to lower the interest rate on the main refinancing operations of the Eurosystem by 25 basis points to 0.50% and the marginal lending rate by 50 basis points to 1.00% and to keep the interest rate on the deposit facility unchanged at 0.00%. This is the lowest base interest rate in the history of the monetary union (see Figure B1.1). On top of this the annual growth in the harmonised consumer price index (HICP) slowed steadily during the first months of the year, falling just under 2% at the start of the year to 1.2% by April. The main cause of this decline was the fall in energy prices. Looking ahead, however, inflationary risks in the euro area remain broadly balanced and in line with the Eurosystem's aim of keeping inflation rates below but close to 2% over the medium term.

The inflation risk assessment is confirmed by the changes in the euro area money supply, as the annual growth rate of the broad monetary aggregate M3 slowed from 3.5% in January to 3.2% by the end of April. The largest contributor to the growth in the money supply remains the narrow monetary aggregate M1. The annual growth in M1 has accelerated, in contrast to M3, and it reached 8.7% by the end of April, as the continuing uncertainty in the market led to a preference for investments in liquid overnight deposits above all, which are part of M1 (see Figure B1.2). The volume of money market funds that are included in M3 is still very small, and the growth remains negative. This shows that activity in the euro area money markets has

not yet recovered compared to the situation before the crisis. Lending to the real sector in the euro area has also remained modest, and its annual growth[2] has been negative since last year, fluctuating between –0.5% and –0.3% in the first half of 2013. However, the latest Bank Lending Survey[3] of the euro area shows that banks have reduced the tightening of their credit conditions at a moderate speed.

Figure B1.2. Euro area annual money growth



Source: European Central Bank

On top of its traditional monetary policy measures, the Eurosystem has continued with its non-standardy measures to support the functioning of transmission channels. The Governing Council of the European Central Bank decided at its monthly meeting in May to extend the fixed rate full allotment or FRFA tender until at least the summer of 2014. At the start of 2013, banks were able to pay back early the amount that they wished from the loans they had taken from the Eurosystem under the three-year long-term refinancing operations[4]. The repayments made at the start of the year were larger than expected and at the end of April the banks of the euro area had paid back 38% of what was borrowed in the first three-year operation, and 18% from the second operation, making a total value repaid 274 billion euros. This shows that the liquidity position of the euro area banks continues to improve. Although no transaction have been made under the Outright Monetary Transactions programme announced last autumn, this has still had a positive impact on the financial markets of the euro area, lowering risk aversion and volatility.

The central bank influences short-term interest rates[5] in the money markets through its key interest rate and as long-term interest rates also depend on the expectations for short-term rates, it is important for the bank to follow carefully how rates move in the money markets. EONIA has remained low for a long time. At the start of May it was 0.08%, meaning it hovered around 10 basis points higher than the interest rate on the Eurosystem's deposit facility. The

2 Adjusted for loan sales and securitisation.

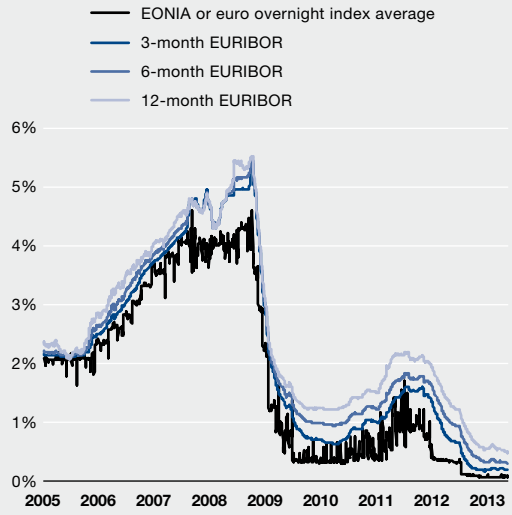
3 https://www.ecb.int/stats/money/surveys/lend/html/index.en.html. Replies to the question about stricter lending conditions are interpreted in the survey by analysing the net difference in the shares of those banks that have noted that hey have tightened their lending terms.

4 In December 2011 the first three-year long-term refinancing operation was run for a total value of 489 billion euros, followed by a second operation in February 2012 for 530 billion euros. In total the two three-year operations lent out 1.02 trillion euros to credit institutions of the euro area. Credit institutions that have taken the loans have the right to pay back as much as they wish of the loan after one year.

5 Interest rates fixed for up to one year.

three-month EURIBOR, the short-term money market interest rate, was 0.20%, the six-month EURIBOR was 0.30%, and the twelve-month EURIBOR was 0.49%, following the direction set by the key interest rate (see Figure B1.3).

Figure B1.3. Euro area money market interest rates



Source: Reuters/Ecowin

Economic activity

In the last three years the Estonian economy has adjusted to the post-crisis situation. The initial export-led recovery was superseded in 2012 by growth based on domestic demand. This allowed the negative impact of poor external demand to be counterbalanced and stimulated the whole economy (see Box 2 for a review of post-crisis adjustment). In the second half of 2012 the growth in domestic demand turned out to be unexpectedly rapid. This raised annual GDP growth to 3.2%, which was 0.3 percentage points more than forecast. The main driver of the faster growth in domestic demand was investments in fixed assets, a large share of which was government sector capital formation. A large part of this was funded by the income from sales of emissions permits, with European Union subsidies also contributing. Another factor that accelerated the revival in domestic demand was the large rise in private consumption in the third quarter, which led consumption growth to diverge from income growth. The unwinding of the temporary effects of the growth in private consumption and investments means that growth will be more moderate in 2013 at 2.0% than it was in 2012. A slowing of growth is also indicated by the flash estimate for GDP for the first quarter of 2013, which shows year-on-year growth of 1% and a decrease of 1% on the fourth quarter of 2012. GDP growth will accelerate in 2014 to 4.2% with support from a revival of external and domestic demand and growth in 2015 will be similar, reaching 4.3% (see Figure 2).

Although the traditional expenditure approach for calculating GDP shows that Estonian economic growth in 2011 and 2012 was based on domestic demand and that the contribution of net exports was very small or even negative, this does not directly imply that the exporting sector was weak. The distribution of value added created in the economy shows that Estonian growth was fast in the period largely thanks to exports (see Figure 3)[6]. The difference between the two calculation methods comes

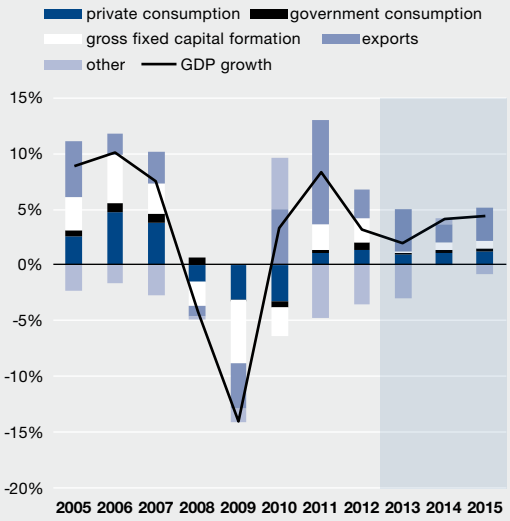
6 Under national accounting rules, GDP is equal to value added created in the economy and net taxes on products.

about because part of the goods and services consumed by households and the capital goods purchased by companies are imported. This means that the small or negative contribution of net exports to economic growth does not reflect the low significance of exports, but rather the large volume of imports consumed in the revival of domestic demand. In the last couple of years there was a rapid increase in investments in fixed assets with a large imported content, and the import content of consumption also increased due to rapid growth in purchases of cars. At the same time exports grew more than the import demand in trading partners and Estonian exporters managed to increase their market share despite the weak external demand.[7]

It is important for an economy like Estonia's with a very large exporting sector that demand growth should recover in export markets and that it should be broad-based. Growth in the last three years has been driven by the manufacturing sector, which has succeeded principally due to output sent outside the euro area. The right choice of target markets has given a boost to export growth, though a more equal recovery of growth in the euro area and across Estonia's partner countries would improve export capacity even more. This is particularly so given that the increases in the market share for the foreign trade of partner countries will not necessarily be able to support growth of exports as much as it did in the recent years.

The volume of the Estonian economy was slightly smaller than its potential in 2012 and so there was a negative output gap of 0.6%. As the forecast growth for 2013 remains below potential, the output gap will increase to 2.2%. The widening of the output gap is caused partly by the slowing of economic growth and partly by the investment-intensive structure of GDP, which has improved the shape of production capital and increased labour equipment with it, and in this way increased

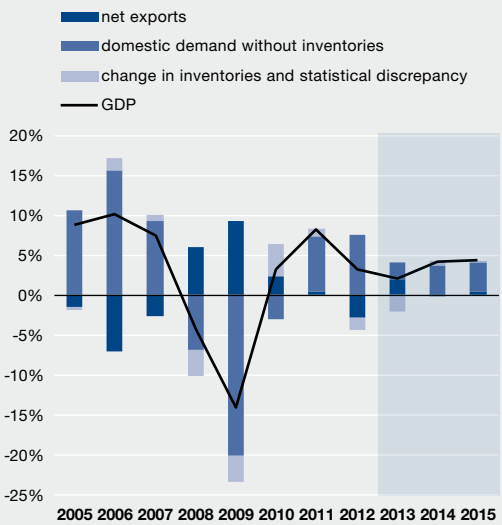
Figure 3. Economic growth by value added content of expenditure items*



* Value added is calculated using the import content of expenditure items found from input-output tables.

Sources: Statistics Estonia, Eesti Pank

Figure 2. Economic growth, expenditure approach



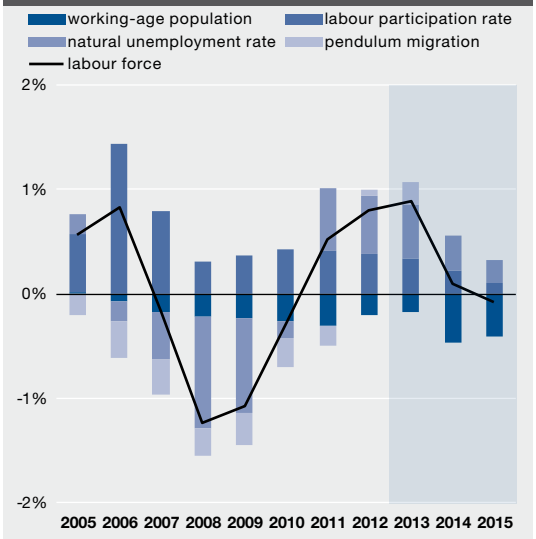
Sources: Statistics Estonia, Eesti Pank

7 More details on gaining market share are given in the Eesti Pank Competitiveness Report (2013).

production potential. As a result, potential growth in 2013 is 3.6%, but from 2014 it will fall to a little under 3.5%. A large part of the growth in potential comes from gains in the productivity of labour and capital. Labour productivity increases through both human capital development and technological improvement of production machinery. The output gap will start to close from 2014, when real economic growth will surpass potential growth (see Figure 4).

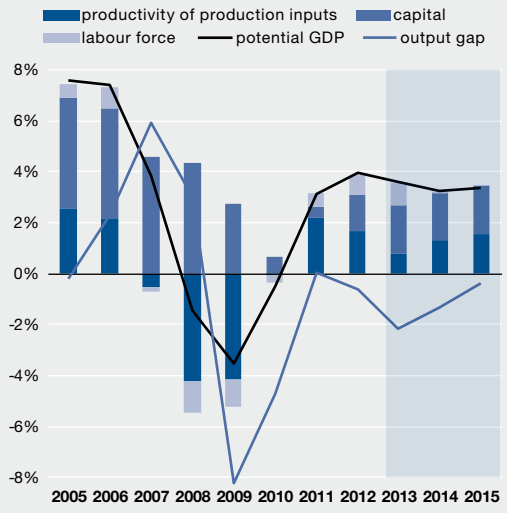
The contribution of the labour force to the potential growth of the economy in 2013 is around 0.9 percentage points, and in the next two years it will be around zero, even turning slightly negative in 2015. This figure is declining because there has been a steady deceleration in the rise in the participation rate, which has until now offset the negative effect of the decreasing working age population. The forecast for the contribution of the labour force is based on a somewhat optimistic assumption that the pendulum migration of people living in Estonia but working abroad will

Figure 5. Decomposed labour input to potential GDP growth (percentage points)



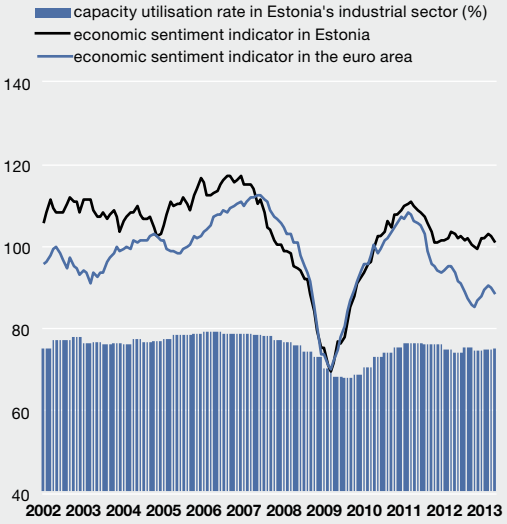
Sources: Statistics Estonia, Eesti Pank

Figure 4. Potential growth and output gap



Sources: Statistics Estonia, Eesti Pank

Figure 6. Economic environment indicators (seasonally adjusted)



Source: European Commission

not increase in the near future (see Figure 5). If it does, then potential growth will be weaker. A significant part of the growth in the contribution of the labour force will come from a reduction in the non-accelerating wage rate of unemployment, NAWRU.

In the last two years of the forecast horizon, investment activity will remain high in the Estonian economy. This comes partly from a favourable interest environment and largely unrestricted access to bank credit, and partly from increasing domestic demand and growth in exports due to a recovery of economic activity in neighbouring countries. As the utilization rate of production resources has already recovered to near to its historical average level, additional investment in fixed assets will be needed for production volumes to increase in future (see Figure 6). The large share of production investment in GDP supports the development of high value added production and a future rise in income levels. The outlook for economic development up to 2015 by key indicators is shown in Table 2.

Table 2. Economic forecast by key indicators*

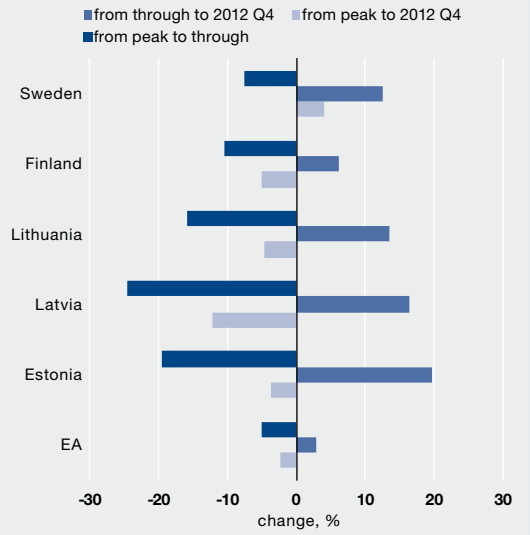
					Difference from previous forecast		
	2012	**2013**	**2014**	**2015**	**2012**	**2013**	**2014**
Nominal GDP (EUR bn)	17.0	17.9	19.2	20.7	0.0	-0.3	-0.3
GDP, volume change (%)	3.2	2.0	4.2	4.3	0.3	-1.0	0.2
CPI, change (%)	3.9	3.0	2.5	2.7			
HICP, change (%)	4.2	3.3	2.7	3.0	-0.1	-0.3	0.3
GDP deflator, change (%)	3.2	3.1	3.3	3.4	-0.5	-0.7	0.1
Current account (% of GDP)	-1.2	-0.8	-0.8	-0.2	-0.1	1.3	1.7
Private consumption expenditures, volume change (%) /1	4.4	3.0	3.4	3.9	1.6	0.0	-0.7
Government consumption expenditures, volume change (%)	4.0	1.0	1.5	1.5	1.8	-0.2	-0.5
Fixed capital formation, volume change (%) /2	21.0	1.5	6.8	5.5	4.7	-3.5	-0.8
Exports, volume change (%)	5.6	7.9	3.1	6.0	-0.7	4.2	-2.3
Imports, volume change (%)	9.1	5.8	3.3	5.7	2.1	2.9	-2.9
Unemployment rate (%)	10.2	9.2	8.8	8.5	0.0	-0.2	-0.1
Domestic employment, change (%)	2.2	1.8	0.1	-0.1	-0.2	1.3	-0.1
Productivity per employee, change (%)	1.0	0.2	4.1	4.5	0.6	-2.3	0.4
Real compensation per employee, change (%)	3.1	1.0	3.6	4.3	1.0	-1.3	-0.7
Average gross montly wage, change (%)	5.9	5.1	6.4	7.4	0.2	-0.3	-0.4
Private sector debt, outstanding amount change (%)	1.6	3.7	5.0	5.7	0.1	0.5	0.0
Gross external debt (% of GDP)	98.0	94.3	88.8	82.8	-2.9	-2.9	-4.9
Budget balance (% of GDP)	-0.3	-0.3	0.0	0.2	0.7	0.2	0.1

* GDP and its components are chain-linked.
/1 Includes NPISH consumption.
/2 Does not include valuables.
Sources: Statistics Estonia, Eesti Pank

Box 2. The post-crisis recovery of Estonia and its near neighbours

The global crisis affected Estonia differently from the rest of the euro area, and the recovery after the crisis has also been different. The Estonian economy proved more vulnerable to the crisis, which was shown by the sharper fall in economic growth. Among neighbouring countries and trading partners, Latvia experienced an even deeper fall as GDP dropped cumulatively by 24.6% before growth recovered.

Figure B2.1. Change in quarterly GDP



Sources: Eurostat, Eesti Pank

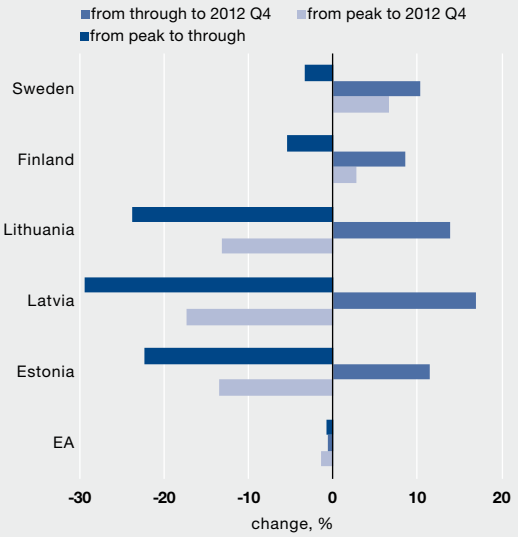
However, the Estonian economy adapted rapidly after the crisis and the recovery from the recession has been stronger even than those of the other Baltic states. In the fourth quarter of 2012, the total production of the Estonian economy reached almost to its pre-crisis level, at only 3.5% below the peak reached in the fourth quarter of 2007. This is similar to the aggregate indicator for the GDP of the euro area, which was 2.5% below its peak in the fourth quarter of 2012, but while Estonian GDP had fallen by 19.5%, the fall in the GDP of the euro area was only 5% (see Figure B2.1)[8]. Sweden stands out as an exception among the main trading partners, as GDP there had passed its earlier peak by 4% at the end of 2012.

In international comparison, Estonia stands out for the sharp decline in private consumption. In the euro area, Sweden and Finland the fall in private consumption was smaller than the decline in the economy as a whole, but in Estonia and the other Baltic states the opposite situation applied as household consumption fell by more than total production. The reason for this was that before the crisis there had been an unsustainable boom in consumption. The lack of savings that households had meant that when the crisis hit, they weren't able to smooth their consumption, and this ability was probably also limited by low levels of social insurance (see Figure B2.2). Private consumption also fell sharply in Estonia due to the strong reaction of the labour market, which saw employment drop steeply while unemployment leapt up (see Figure B2.3). The cause of this can be found in the structure of the economy before the crisis, as employment fell most in the construction sector and in export-oriented manufacturing.

While household consumption in Finland and Sweden returned to its pre-crisis level in the fourth quarter of 2012, Estonian households were consuming 14% less than at their earlier peak. The relatively subdued recovery of consumption, compared to that of GDP, is not a direct result of weakness in the house-

8 The reason for the deep recessions in the Baltic states was the lack of liquidity when capital inflows stopped, while euro area countries were able to get assistance from the European Central Bank (source: A. Hansson and M. Randveer (2013), Economic adjustment in the Baltic countries, Eesti Pank Working Paper series).

Figure B2.2. Change in quarterly private consumption

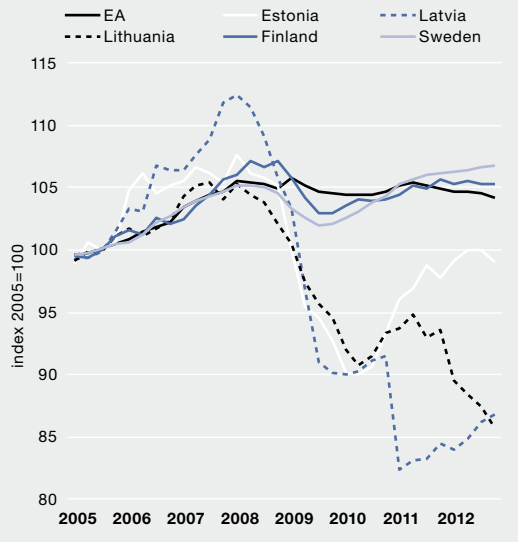


Sources: Eurostat, Eesti Pank

hold sector, but a consequence of the high comparison base in the boom times, when private consumption surpassed incomes and households reduced their savings. This means that the slower recovery of private consumption is to be expected and it is in line with balanced development.

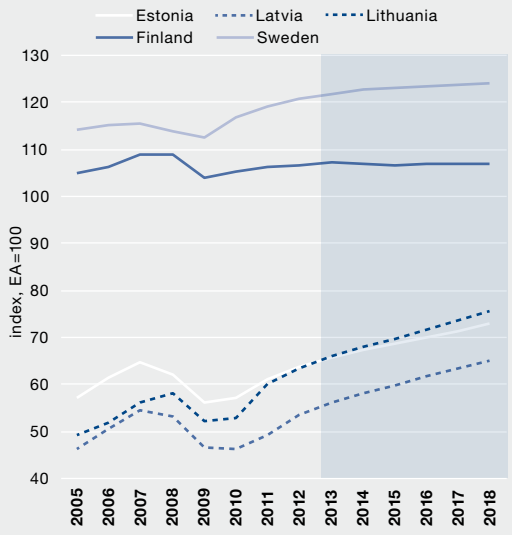
The forecast finds that the effects of the crisis will gradually recede and that growth in Estonia and its neighbours will approach an equilibrium path. Estonian growth will remain around 4–4.5% in the coming years, while average growth in the euro area will turn positive only in 2014 and then accelerate gradually. The difference between the growth rates for Estonia and the euro area is enough for local income levels to continue catching up with those of the rest of the euro area. In 2012, GDP per capita adjusted for purchasing-power-parity (PPP) in Estonia was 63.6% of the average for the euro area. The IMF's WEO (World Economic Outlook) estimates that the income level of Estonia will rise over the next five years to 73% of the euro are average (see Figure B2.4).

Figure B2.3. Employment



Sources: Eurostat, Eesti Pank

Figure B2.4. GDP based on purchasing-power-parity (PPP) per capita



Sources: IMF WEO April 2013, Eesti Pank

Domestic demand

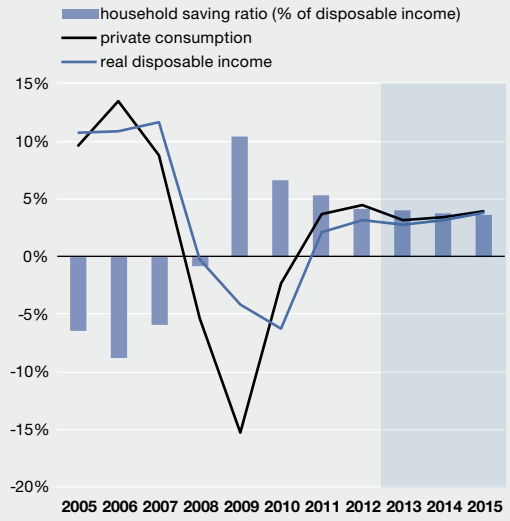
A main feature of the Estonian economy in 2012 was the strong growth in domestic demand. The capacity and confidence to consume and invest improved, and that supported production for the domestic market while export growth slowed. Growth in domestic demand accelerated in the second half of the year, when the largest contribution came from investments by the general government. Domestic demand increased by a total of 8.0% in 2012, but by the start of 2013 the post-crisis acceleration in economic growth had faded and growth in domestic demand was more restrained. When the economy grows with support from increasing external demand in 2014–2015, domestic demand growth will also speed up again.

Private consumption

Data from the consumer surveys of the Estonian Institute of Economic Research show that confidence among Estonian households has been relatively unstable in the past couple of years. The deepening of the euro area debt crisis in 2011 caused uncertainty about the outlook for the Estonian economy too, and fear that unemployment would start to rise again. Households' assessments of their own economic situation have been less volatile because the labour market has been moving steadily in a positive direction since 2010. Consumer confidence has been consistently above its historical average in 2013 and the indicators have improved month-on-month.

The real purchasing power of Estonian households rose in 2012 with disposable income increasing during the year by 3.2% at constant prices (see Figure 7). The continued rise in incomes and the slowing of inflation allowed households to consume more services and durable goods (appliances and equipment used for more than one year). Preliminary data show that private consumption growth exceeded growth in disposable income in 2012 and that the household savings rate fell. The faster increase in consumer spending than that in wages and pensions points to a rise in consumption confidence and a reduction in precautionary savings.

Figure 7. Real growth in private consumption



Sources: Statistics Estonia, Eesti Pank

Private consumption increased by 4.5% in 2012, with the growth picking up in the second half of the year. As in 2011, the biggest contributor to the rise in consumption was durable goods, particularly through purchases of cars, which was a feature of the recovery period. In the final quarter of 2012, household spending on leisure and cultural services and goods also increased markedly, indicating again an increase in consumption confidence.

Retail trade data show that consumption growth slowed at the start of 2013. This was to be expected as the rapid economic growth typical of the recovery had moderated, employment growth had slowed, and the major impact of car purchases has receded. The impact of the rise in electricity prices at the start of the year has also restricted consumption. In 2013 private

consumption growth is forecast to slow to 3.1%, which is still faster than GDP growth.

Private consumption will continue to give strong support to economic growth in 2014 and 2015, when consumption is forecast to grow by 3.4% and 4.0% respectively. Although the number of people in employment will not change significantly in the coming years, wage growth will accelerate as productivity growth recovers. The forecast predicts that private consumption will grow in the coming years at about the same rate as disposable income, and that the household saving rate, which has been falling since 2009, will stabilise at 4%. Consumption growth, which exceeds the rise in disposable income somewhat, will in future be supported by higher confidence levels and an increase in wealth brought about by a rise in real estate prices. The risk to the forecast for private consumption is that overly optimistic expectations for the future may appear, in which case private consumption will increase by more than forecast and the savings rate will decline even further. Materialisation of this risk could mean that if there is another downturn in the economy, buffers will again prove insufficient to smooth consumption[9].

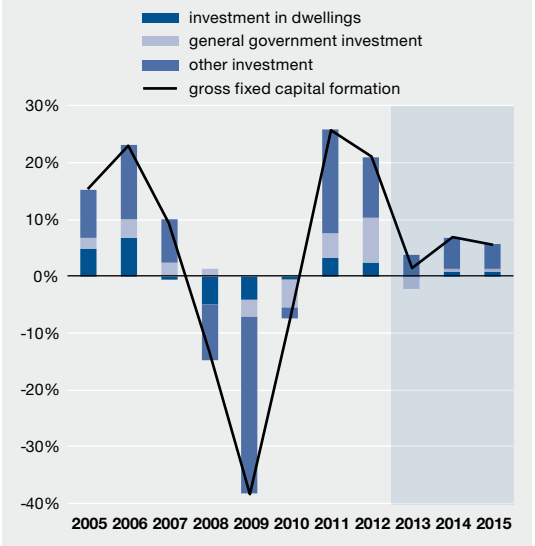
Gross fixed capital formation

Capital formation has increased significantly in relation to GDP in Estonia in the years since the crisis and its annual volume has climbed by over 50% from its lowest point in 2010, rising by 25.7% in 2011 and 21.0% in 2012. Gross fixed capital formation was 25% of GDP in 2012, which is 6 percentage points more than two years earlier. Very high growth numbers have been affected by investments in a few individual sectors. In the last two years, almost one quarter of the gross fixed capital formation in the business sector came in the energy industry[10], though investment activity has also been high in other industries in recent years. Outside the energy industry, corporate investment has grown in recent years on quite a wide base. Growth in construction investments recovered in 2012 alongside acquisitions of machinery and equipment.

An investment survey in manufacturing by the Estonian Institute of Economic Research found that investments in replacing equipment shrank in 2012. The main reasons for investment were plans to extend and rationalise production. According to the survey, the same goals will apply this year.

The forecast predicts that corporate gross fixed capital formation will grow again in 2013, but significantly more slowly than before. The growth in corporate value added slowed at the end of 2012 and expectations for new orders are more pessimistic. For investment growth to speed up again, the outlook for companies and confidence in future demand have to improve first. At the same time, the ability of companies to use loans to finance investments has increased. In 2014

Figur 8. Gross fixed capital formation, real growth



Sources: Statistics Estonia, Eesti Pank

9 Consumption smoothing over time needs savings to be built up when incomes are high and to be used when incomes decrease.

10 EMTAK 2008 classification "Electric power generation, transmission and distribution".

and 2015, growth in gross fixed capital formation will again accelerate slightly.

The general government sector has had a major impact on investment levels in recent years (see Figure 8). Gross fixed capital formation in the general government sector increased by 40% in 2012, having grown by 22% in 2011. Almost three quarters of this went into construction work, which was largely financed with sales income from emissions allowances and funds from the European Union Structural Funds. The budget for general government sector investment is smaller in 2013 than it was in 2012, because there are fewer available external resources.

The housing market has been growing strongly since 2011 and capital formation in dwellings increased by 15% in 2012. The value of the housing stock increased because of both renovation work and new building work, quite apart from the rapid rise in the real-estate price index in recent years. At the end of 2012, growth slowed sharply in household investments and the statistics for building licences issued show that the slowdown continued into the start of 2013. Annual growth in housing investment will speed up again in 2014 as the confidence of households remains strong and the credit environment is very favourable.

High demand in construction, with the general government sector playing a major role, has raised the price of construction work and in 2012 the construction price index rose by 4.6%. As public sector demand will be lower in 2013 and subsequent years than it was in 2012, price rises in the construction market will slow and building work will be more affordable for both households and companies.

Gross fixed capital formation will increase during the forecast horizon thanks to the private sector, especially in the business sector. In 2013 growth will slow to 1.5% as general government investment will be lower than in 2012 and the slowing of external and domestic demand growth will restrict the ability of companies to expand. In the coming years, investment growth will remain higher than GDP growth, as acquisition of fixed assets is at a low level and interest rates favour investment activity. The negative contribution of the general government sector to growth in 2014 and 2015 will recede and gross fixed capital formation will grow at 6.8% and 5.5% in the two years.

The forecast expects investment growth in Estonia to be moderate in the coming years and that gross fixed capital formation will not change much as a share of GDP. However, cheap loan money could bring the risk of overheating. Interest rates on long-term loans for both households and companies are at their lowest level in the past ten years. If expectations for the future exceed the real capacity of the economy, the single monetary policy of the euro area could prove too loose for Estonia and the ultra-low key interest rates could lead to faster growth in the loan burden than forecast.

Inventories

The contribution of inventories to the GDP growth was 0.1 percentage points in 2012, meaning that they barely changed in annual terms. However, the structure of the inventories did change. Manufacturing companies reduced their stocks of raw materials as external demand remained weak, but trading companies and those focusing on the domestic market increased their turnover, and with it the volume of finished goods. In future, inventories will increase together with general economic activity. The level of inventories as a share of GDP was higher in 2012 than the historical average, and during the forecast horizon it will fall somewhat.

External balance and competitiveness

The Estonian balance of payments current account turned into deficit in 2012 after three consecutive years of surplus. The current account deficit was

1.2% of GDP and was caused principally by the widening of the foreign trade deficit. Domestic demand grew faster than external demand due to investment activity that was affected by large individual transactions and one-off measures. The balances of the other components of the current account – services, income and current transfers – didn't change greatly during the year. In the forecast horizon, the current account position will improve somewhat, but will remain slightly negative. The contribution of net exports to economic growth will increase as domestic investment growth will be more modest than it has been and external demand will improve.

The import of goods grew faster in 2012 than goods exports and this meant that the trade balance worsened by 2.9 percentage points to –4.3% of GDP. The main cause of the rise in the external trade deficit was the increase in imports of investment goods. In 2012 the biggest contribution to import growth came from imports of various types of machinery and equipment and transport vehicles. Imports of transport vehicles grew by over 20% during the year and consisted mainly of cars and parts for cars. Large transactions for other transport vehicles were the purchase of railway rolling stock from Ukraine and a ship from Finland.

The slowing of growth or negative economic growth in several important trading partners meant that the speed of external demand growth continued to slow in the second half of 2012. The growth of weighted demand for imports in Estonia's trading partners slowed from 9.3% in 2011 to 3.3% in the first half of 2012, then it slowed again in the second half of the year to 0.9% in annual terms. Estonian exports of goods reacted to this only slightly, and they maintained the same growth rate of 7.4% in the second half of the year as they had managed in the first half. As external demand had stopped growing almost completely, this can be seen as a relative strengthening of Estonia's export position.

The export figures were very different for different destination countries. The fall in demand in the euro area meant that Estonian exports of goods there also declined, falling by 1.4% during the year in current prices. The main trading partner within the euro area continues to be Finland, where 51.1% of Estonia's intra-euro area goods exports went. However, demand grew comparatively quickly in trading partners outside the euro area. Estonia's four main trading partners outside the euro area are Sweden, Russia, Latvia and Lithuania, which together received 58.8% of goods exports outside the euro area. Estonian exports of goods to those four countries grew relatively fast over the year, by 6.5%, 15.5%, 14.5% and 22.9% respectively at current prices.

The increase in the deficit in the trade account in 2012 was offset by a surplus in the services account. The surplus on the goods and service account stood at 2.9% of GDP in 2012 and one quarter of the total exports of goods and services were exports of services. The surplus in transport services fell by 16%, more than any other service, even though exports of transport services grew by 7%. Imports of transport services grew by 22% and the main driver of this was the spending on large-scale transactions and the broad-based investment in the energy industry. The fastest growth was in exports of computer and IT services, which grew by more than a quarter during the year. The increase in the account for computer, IT and other business services offset completely the fall in the account for transport services for goods and passengers. The balance of exports and imports in 2012 stayed close to its level of last year, but it declined as a ratio to GDP.

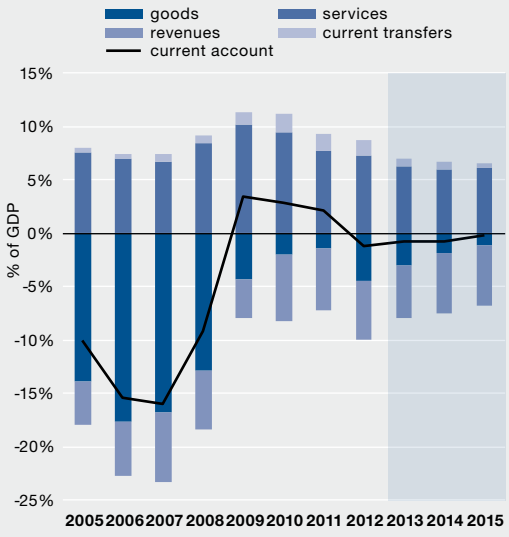
The surplus in the account for current transfers remained practically at its level for last year, but its sub-accounts changed a lot, relatively. The surplus in capital transfers, which are mainly European Union subsidies for infrastructure development in the general government and other sectors, increased over the year by 17% or 82 million euros. Sales of intangible assets, mainly CO2 emissions allowances, brought 32 million euros into Estonia, which is a lot less than in 2011, and the surplus on that account fell by 170 million euros.

The net outflow of income increased slightly in 2012, reaching 5.6% of GDP. The net inflow of labour income grew by 6% during the year to 202 million euros, mainly because of the increase in the number of Estonian residents working abroad, but the net outflow of investment income grew by 3% to around 1.2 billion euros. Both income earned abroad by Estonian residents and the income earned in Estonia by non-residents fell (see also Box 3).

The inflow of income, which is the labour and capital income earned abroad by residents, fell by 10% during the year. The decline in the inflow of investment income was mainly related to dividends that were taken out earlier and structural changes that were made in the banking sector in 2011. At the same time, however, investment income from Cyprus grew relatively quickly by a quarter to make up 26% of all investment income inflows, being earned mainly by investors in maritime transport.

The outflow of income from Estonia fell by 4% to 1.7 billion euros. Financial intermediation earned 30% of total outflows of investment income, followed by wholesale trading and head office activities, and logistics and real estate activities. Around 65% of the outflow was in the form of reinvested earnings, in which case there were no actual cash flows. Reinvested earnings are reflected in the financial account of the balance of payments as direct investment in Estonia. If the net outflow of reinvested income, which is a book value, is left out of the current account balance, the current account was in surplus by 4.6% of GDP in 2012.

Figure 9. Current account



Sources: Statistics Estonia, Eesti Pank

In the forecast horizon, the current account position will improve somewhat, but will remain slightly negative (see Figure 9). The contribution of net exports to economic growth will increase, affected by more modest domestic investment growth and faster external demand growth.

The forecast for exports is based on the assumption that the growth in external markets will gradually recover. Although the growth rate of Estonian exports of goods was several times higher than that of external demand in the last three years, the difference is much smaller if one-off factors are taken out and a longer period is considered. For this reason the export forecast is built on the conservative assessment that exports of Estonian goods and services will grow in the years ahead at almost the same speed as external demand, surpassing it only slightly. However, the growth profile of exports will be made uneven by the one-off large transactions made at the start of 2013, and their unwinding from the comparison base will slow export growth in 2014. Prices for Estonian exports will rise faster than prices in partner markets, and the market share of Estonian exports will continue its nominal increase. The forecast for imports of goods is supported by the assumption that the domestic demand and exports components of imports will remain the same. The slowdown in import-intensive investment activity will reduce demand for imports.

The forecast shows that the surplus for services in 2013–2015 will be relatively high at 6.0–6.3% of

GDP, but still smaller than in previous years. Tighter competition in the transport services market will have a braking effect on growth in services exports, while export potential will be reduced by cuts in air transport and probably by a less active supply of construction services abroad.

The forecast for the income account is put together using expectations for profit growth in Estonia and abroad and it is forecast that the net outflow of investment income will remain at around 5-6% of GDP. Resources from the European Structural Funds will decline in the coming years, meaning that the surplus in current transfers will shrink during the forecast horizon.

Estonia's gross external debt, which is the external debt of all the economic sectors in the country, grew during 2012 by 8% to reach 98% of GDP by the end of the year. The external debt of the government sector more than doubled during the year to make up almost 8% of gross external debt at the end of the year. The increase came partly within the framework of financial assistance provided through the EFSF[11]. Credit institutions' share of gross external debt fell by 6 percentage points over the year to 38%. At the end of 2011 foreign liabilities exceeded foreign assets to give net external debt of almost 1 billion euros, but at the end of 2012 foreign assets exceeded foreign liabilities by 0.3 billion euros. The contributors to the emergence of positive net position were principally the central bank and companies. The absolute amount of external debt will rise during the forecast horizon, but it will fall as a ratio to GDP. By 2015 Estonia's gross external debt will have fallen to 83% of GDP, which is lower than before the boom.

This forecast uses the conservative assumption that the market share of Estonian exports will not increase significantly during the forecast horizon. If the trends of previous years continue and Estonian exports grow faster than demand, the trade account balance could be more positive than forecast. The main risk to the export forecast is that external demand may recover more sluggishly than expected, and this would result in Estonian exports growing more slowly than assumed and the external position moving further from balance.

11 EFSF – European Financial Stability Facility.

Box 3. Components of investment income flows

A significant part of the deficit in the Estonian current account comes from the deficit in investment income. This is mostly because more investment has been made in Estonia from abroad than has been made abroad from Estonia, and so the total profit earned by foreign companies in Estonia is larger than that earned abroad by Estonian companies (see Figure B3.1). The large deficit on the investment income account does not necessarily mean that the money is actually leaving Estonia. Foreign investors reinvest the majority of their profit earned in Estonia back into Estonia. They are encouraged to do this by the favourable tax system and by Estonia's good position as a target country for foreign investments.

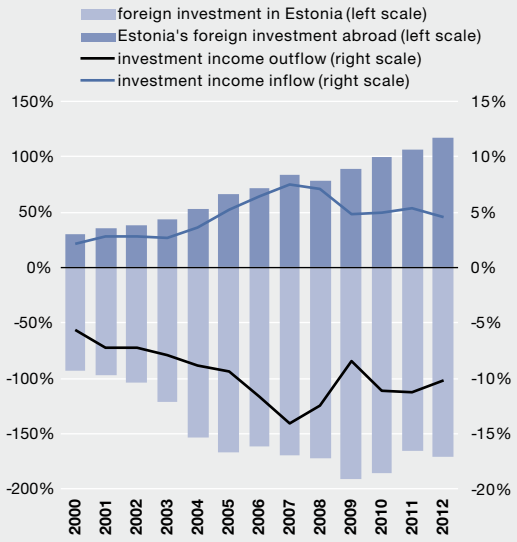
The difference between the positions for investments in Estonia and from Estonia abroad does not explain all of the net investment income balance. Investments made abroad by Estonian residents have increased markedly in recent years, but this has not led to a major rise in investment income earned abroad. In 2012 the investment income balance as a ratio to GDP was similar at 6.8% to the 7% that it was in 2006, but the net foreign investment position was much better as a ratio to GDP in 2012 than it was in 2006.

The faster recovery of the Estonian economy than that of the rest of Europe is reflected in the higher profitability of companies here and the consequent higher book value of outflows of investment income. Equally, the recovery in the European economy in future will probably lead to a rise in the return on investments made abroad by Estonian residents, and through this to a reduction in the book value of the net outflow of investment income.

Decomposition of the investment income balance into its components shows that the difference in the returns on investments in Estonia and abroad has created a large part of the deficit on the investment income account (see Figure B3.2). This difference in return means the different amounts earned on investments of the same type in the same industry in Estonia and abroad. The volume effect, which shows how differences in the volume of investments of the same type made in the same industry can affect the balance of the investment income account, has been negative in Estonia for a long time. This means that Estonians have invested abroad less than foreigners have invested in Estonia, or they have done so in industries with lower returns. The negative impact of the volume effect on the balance of the income account was decreasing until the start of the crisis, but in recent years it has remained relatively stable.

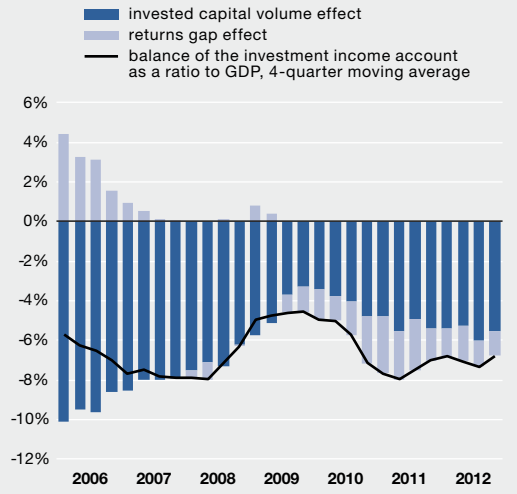
The largest change from 2006 to 2012 in the investment income account as a ratio to GDP came from a fall in the rate of return, which accounted for a 3,6 percentage point increase in the balance as a ratio to GDP (see Table B3.1). This particularly impacted the relative improvement in profitability of the financial and real estate sectors in Estonia compared to those in countries in which Estonian residents had invested.

Figure B3.1. Investment income and position (ratio to GDP)



Source: Eesti Pank

Figure B3.2. Components of the investment income balance (ratio to GDP)



Source: Eesti Pank

Table B3.1. The decomposition of change in net investment income to GDP ratio in 2012 compared to 2006

	Change in rate of return	Change in investment position	Change in investment structure	Change in rate of return structure
Agriculture, forestry and fishing	0.18	-0.17	-0.02	-0.02
Industry	0.19	-0.24	-0.14	0.19
Construction	-0.29	0.04	-0.03	0.19
Public services	-0.01	-0.04	-0.04	0.00
Wholesale and retail trade, repair of motor vehicles and motorcycles	0.42	-0.31	-0.19	0.57
Transportation and storage	-0.05	0.03	0.05	0.01
Accommodation and food services	-0.17	-0.05	0.00	0.26
Information and communication	0.92	-0.87	0.27	-0.30
Finance and insurance activities	-2.92	1.72	0.32	1.79
Real estate activities	-1.31	-0.03	0.16	0.65
Professional, scientific and technical activities	-0.3	-0.4	0.3	0.2
Administrative and support service activities	-0.1	-0.1	-0.1	0.0
Other	-0.2	0.3	0.3	-0.3
Total	**-3.6**	**-0.2**	**0.8**	**3.2**

Source: Eesti Pank

An improvement in the balance of the investment income account could come about through equalisation of the return on investments in Estonia and abroad if the return in Estonia is higher than that abroad. The return on investments in the financial sector in Estonia, for example, was higher in 2012 than that on investments made by Estonian residents in the financial sector abroad.

The average return on investments abroad in the real estate and construction sectors was higher during the boom than that on capital investments in Estonia, but in 2012 the returns on investments in these sectors in Estonia and abroad were similar. There are also sectors such as the trade sector that have seen returns on investments in Estonia diminish compared to those on investments abroad. One reason for this could be that during the boom private consumption in Estonia exceeded a sustainable level, which is why it has not returned to its pre-crisis level.

Notable changes have occurred in the structure of foreign investments since the boom years, and these have affected the balance on the income account. Foreign investment in the financial sector has fallen as a proportion of GDP while the investments in the financial sector abroad by Estonian residents have increased. Estonian households and companies have reduced their debt burdens since the years of the crisis and have increased their savings. While foreign investment in the Estonian financial sector has mainly been direct investment, the share of other investments in investments made in the financial sector abroad has increased.

For the changes in the balance of investment income to be analysed, they are divided into different impact components using the following methodology. The ratio of the balance of the investment income account to GDP T_t in period t is given by the equation

(1) $$T_t = \sum_{i=1}^{n} \left[r_{i,t}^V x_{i,t}^V - r_{i,t}^E x_{i,t}^E \right].$$

Income flows from investments abroad in period t is found by multiplying investment i's rate of return $r_{i,t}^V$ and the volume of capital invested $x_{i,t}^V$. *V* stands for foreign countries and *E* for Estonia. The balance of the income account is the gap between the return on capital invested abroad from Estonia and the return on capital invested in Estonia by foreigners. The balance of the income account in this analysis is divided into components by sector and by type of investment (direct investment, portfolio investment or other investment).

Using sectors allows more precise information about the structure of investments to be used than with aggregates, though this does mean that noise is added into the calculations. As rates of return can be volatile at the disaggregated level, the four-quarter moving average is used for them. This reduces noise in the data without losing a lot of information. In period t for sector i the moving average rate of return in Estonia $r_{i,t}^E$ is the moving total of the investment income earned from four quarters in Estonia (R^E) divided by the four-quarter moving average of investment position in Estonia (X^E). The rate of return for investment i in Estonia for period t is found from the equation

(2) $$r_{i,t}^E = \frac{4 \cdot \sum_{s=t}^{t-3} R_{i,s}^E}{\sum_{s=t-1}^{t-4} X_{i,s}^E},$$

where the income of each period depends on the amount of capital in the previous periods.

The volume of capital invested is shown as a ratio to GDP to identify the impact of different factors on the relation between investment income and GDP. The moving average for the volume of capital invested in the sector i is the four-quarter moving average of the volume of invested capital, divided by the total GDP for the four quarters. The four-quarter moving ratio to GDP of capital investment in Estonia i in period t is found by

(3) $$x_{i,t}^E = \frac{\sum_{s=t-1}^{t-4} X_{i,s}^E}{4 \cdot \sum_{s=t}^{t-3} Y_s}.$$

By transforming expression 1, it can be shown that

(4) $$T_t = \sum_{i=1}^{n} \left[\underbrace{\left(r_{i,t}^V - r_{i,t}^E\right) \frac{x_{i,t}^V + x_{i,t}^E}{2}}_{\textit{returns gap effect}} + \underbrace{\left(x_{i,t}^V - x_{i,t}^E\right) \frac{r_{i,t}^V + r_{i,t}^E}{2}}_{\textit{capital intensity effect}} \right].$$

The previous expression divides the investment income balance into the returns gap and the capital intensity effect. The returns gap effect is the difference in returns from investments in Estonia and abroad that are similar in content, weighted by the average ratio of this capital to GDP. Similar investment means the same type of investment in the same sector, such as direct investment in manufacturing. The external capital intensity effect is the gap between similar capital invested in Estonia and abroad, measured as a ratio to GDP, which is weighted for the average return of such investments. This illustrates the heterogeneity in capital, giving larger weight to investments that have higher returns and so have more impact on the investment income account. The total impact of the returns gap effect and the external capital intensity effect is equal to the

four-month moving ratio to GDP of the investment income account balance. Whether there is a deficit in the investment income account is conditional on the returns gap effect or on the capital intensity effect depends on the level of detail in the observation. The method of dividing the components used allows for analysis of the changes in the investment income account too. Using equation (4) in (5),

$$\Delta r_{i,t} = r_{i,t}^{V} - r_{i,t}^{E}$$

(5) $$\Delta x_{i,t} = x_{i,t}^{V} - x_{i,t}^{E}$$

$$w_{i,t} = \frac{x_{i,t}^{V} + x_{i,t}^{E}}{2} \quad \text{and} \quad p_{i,t} = \frac{r_{i,t}^{V} + r_{i,t}^{E}}{2},$$

the expression (4) can be written as

(6) $$T_t = \sum_{i=1}^{n} \left[\Delta r_{i,t} w_{i,t} + \Delta x_{i,t} p_{i,t} \right].$$

It can equally be shown that the difference in the ratio to GDP of the investment income account between period t and t-z can be written as

(7) $$T_t - T_{t-z} = \sum_{i=1}^{n} \Bigg[\underbrace{\left(\Delta r_{i,t} - \Delta r_{i,t-z}\right) \frac{w_{i,t} + w_{i,t-z}}{2}}_{\textit{effect of the change in the rate of return}} + \underbrace{\left(w_{i,t} - w_{i,t-z}\right) \frac{\Delta r_{i,t} + \Delta r_{i,t-z}}{2}}_{\textit{effect of the change in investment structure}} + \underbrace{\left(\Delta x_{i,t} - \Delta x_{i,t-z}\right) \frac{p_{i,t} + p_{i,t-z}}{2}}_{\textit{effect of the change in investment volume}} + \underbrace{\left(p_{i,t} - p_{i,t-z}\right) \frac{\Delta x_{i,t} + \Delta x_{i,t-z}}{2}}_{\textit{effect of the change in returns structure}} \Bigg].$$

Labour market

In the second half of 2012 the acceleration in economic growth that came from domestic demand led to somewhat increased imbalances in the labour market. The slowing of wage growth in the first half of 2012 proved temporary and in the second half of the year the gap between the growth rates for wages and productivity grew at the expense of profits. Preliminary data show that this continued into the first quarter of 2013. This forecast predicts that the recovery in external demand from the second half of 2013 will lead to faster increases in productivity and more balanced overall growth.

The forecast for employment for 2013 is more optimistic than it was in the previous forecast, mainly due to strong growth figures in the first quarter. However the growth will slow in the future due to the higher comparison base and in 2015 the number of employed will fall slightly. The unemployment rate will fall slowly, in a similar way to the NAWRU level [12], and by the last quarter of 2015 it will reach a seasonally adjusted 8.4%.

The rate of wage growth will slow in 2013 as the private sector will need to cut labour costs, which rose significantly in 2012, and to regain profitability. The recovery of profitability will also be supported by a recovery in external demand, which will contribute to faster productivity growth. The rise in the average gross monthly wage in the forecast horizon will be between 5.1% in 2013 and 7.4% in 2015.

12 The NAWRU (*non-accelerating wage rate of unemployment)* is the level of unemployment where wage rises do not increase wage pressure in the economy.

Employment and productivity

Total employment grew by 2.5% in 2012, increasing by 1.1% and 1.7% in the last two quarters. Employment in resident production units, or Estonian domestic employment not counting Estonian residents working abroad, increased by 2.2% in 2012. The growth in employment was markedly slower than in 2011. One reason for this was the end of the rapid growth that followed the crisis, and another was the external environment, which weakened from the second half of 2011 and has not yet returned to a path of strong growth. Employment growth became more and more service sector based throughout 2012 due to stronger domestic demand.

The weak growth in external demand particularly affected manufacturing, where domestic employment fell during 2012 by 3.9% according to the LFS[13], though it recovered in the first quarter of 2013, growing by 1.2%. Seasonally adjusted figures indicate that the low point of 2012 measured by number of salaried workers and total hours worked came in the second quarter. Companies adjusted their labour costs by significantly less than the fall in added value. This means that wages were raised at the expense of profits, probably because the fall in demand was seen as temporary and there was a desire to avoid the costs of redundancies and later rehiring.

In contrast to the LFS assessments, the data from corporate statistics for the number of waged employees in manufacturing have shown a markedly more equal recovery in employment since the second half of 2010, with growth of around 3% in both 2011 and 2012. The data show employment growth slowing in the second half of 2012, but not significantly.

The number of companies in the manufacturing sector planning to increase employment in the coming months was higher in the first quarter of 2013 than the number expecting to reduce employment, though this position reversed in April. Since the fall was not large in absolute terms, it allows for the forecast that employment will remain at around the same level, assuming that there is no major setback stemming from the external environment.

Employment in the construction sector will be affected most in the forecast horizon by the ending of building projects part-funded from the sales of emissions allowances in 2013 and by the end of the European Union budget period. The key question is whether other real estate projects will be able to pick up the slack labour or not. The alternative for the workers is, as before, to go abroad to work, mainly to Finland. This would increase pendulum migration even further. However, the pull factors from Scandinavian countries have lessened somewhat as economic growth there slows, and the attractiveness of Estonian labour is being reduced by the ever-stronger measures of the trade unions to ensure the payment of proper wages.

The service sector picked up in the second half of 2012 due to the increased willingness of households to consume coming from increases in incomes. Equally, the recovery in the real estate sector and growth in information technology and communications have contributed to employment in the service sector. LFS data show that the number of workers in the public sector has also increased, meaning employment in health, education and public administration. The rise in the number employed in the government sector will be restricted in the forecast horizon partly by wage rises that have already taken place and partly by the need for fiscal consolidation, which will impose limits on the growth of the payroll.

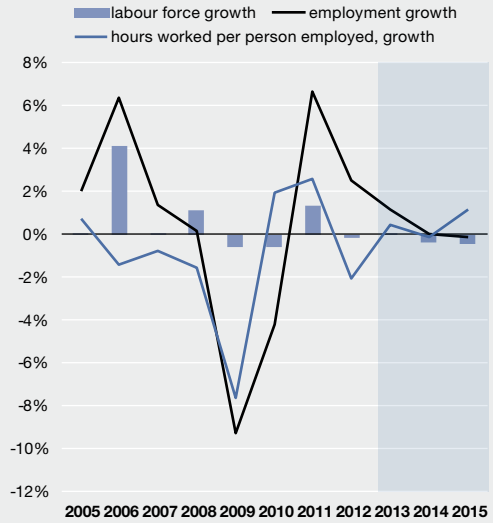
Hours worked per employee fell during the crisis by 8.2%, to bring the labour input better into line with lower output levels. In 2010–2011 hours worked per employee recovered slowly together

13 Estonian labour force survey.

with the growth in employment, though the average number of hours per employee in 2011 was only 96.1% of the pre-crisis level. In 2012 companies again used working hours to adjust labour inputs in a climate of weak demand. One reason why hours worked per employee have fallen is that part-time workers are playing a larger role than they were before the crisis. The majority of people working part-time are doing so voluntarily. Working hours will start to grow again during the forecast horizon, but will not return to their pre-crisis levels.

Employment growth is increasingly restricted by the reduction in labour resources. Changes in the age structure of the working-age population will lead to an increase in the labour force participation rate during the forecast horizon, which will somewhat offset the effect of the shrinking population. In the second half of 2012 labour force participation remained at the same level as a year earlier, meaning that the labour force was shrinking at the same speed as the total population[14].

Figure 10. Labour force, employment and hours work



Sources: Statistics Estonia, Eesti Pank

In summary, employment is forecast to grow by 1.2% in 2013, to remain at the same level in 2014, and to fall by 0.1% in 2015, assuming that the recovery continues in the external environment (see Figure 10). Employment growth will become more focused on the exporting sector than it was in 2012.

Unemployment

The unemployment rate fell throughout 2012 as the speed of employment growth declined, though at a slowing rate. By the fourth quarter of 2012 unemployment had fallen to 9.3%. In the first quarter of 2013, unemployment climbed to 10.2%, though if seasonal factors are taken into account, this still represents a fall in unemployment. Since the start of 2012, the number of the long-term unemployed has fallen faster than the number of short-term unemployed, and the share of long-term unemployed was 46.5% in the first quarter of 2013. The number of discouraged workers remained low, which is probably due to the extension of health insurance to all the registered unemployed in 2007, which encouraged the long-term unemployed to remain in the labour market.

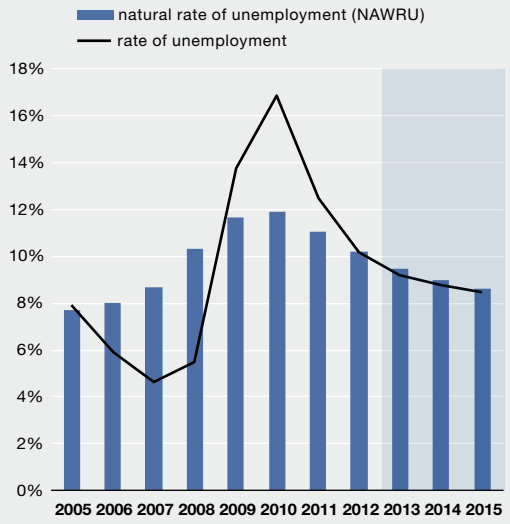
The labour market participation rate reached 68.1%, which was 0.4 percentage points higher than in 2011. By 2015, changes in the structure of the working age population mean that the participation rate will climb to 68.5%. The participation rate has been adjusted downwards from the 2012 December forecast because of higher emigration, since the people who emigrate are more likely than average to participate in the labour force. The stable labour market situ-

14 This and the next forecast use an estimated population figure that does not consider emigrants because the labour market statistics until the last quarter of 2013 are based on it. As Estonia's net migration has been negative since the previous census, the LFS results are adjusted to reflect the overestimate of population, with the result that the employment growth rate proves to have been overestimated in recent years.

ation will lead to an increase in the number of people who do not participate in the labour market because they have to take care of family members. This is a reversal of the "added worker effect" that could be observed during the years of the crisis, when the number of stay-at-home spouses decreased because the main income earners' jobs became more unstable and there was a need to support the family.

Eesti Pank's assessments show that unemployment fell by the end of 2012 to close to its NAWRU level[15], which means that unemployment any lower than this will lead to an increase in wage pressures. Throughout the forecast horizon, both real and NAWRU unemployment will fall at a similar rate, reaching 8.5% and 8.6% at the end of the period (see Figure 11). The reduced share of the young in the working age population will lead to a decrease in NAWRU, since they have a higher unemployment rate as they search for their first jobs. NAWRU will also be pushed down because enough time has passed since the crisis for the new skills and qualifications that the labour market needs to be gained.

Figure 11. Unemployment



Sources: Statistics Estonia, Eesti Pank

Wages and labour costs

The slowing of economic growth in the second half of 2011 and the first half of 2012 led to a mild reining in of wage growth in the first half of 2012, though wages grew faster in annual terms in 2012 than they did in 2011. The average rise in gross monthly wages in 2011 was 5.4%, but in 2012 it was 5.9%. Preliminary data show that economic growth slowed sharply in the first quarter of 2013, though the influence of this was not yet felt in wage growth for the quarter, which reached 6.3% on an annual basis, partly due to a rise in the minimum wage and the application of collective agreements in several industries. It is also to be expected that economic growth affects wage growth with a lag as wage negotiations are based on the economic results of the previous period, and wage rates are fixed in contracts that can be hard to change.

Somewhat faster wage growth is to be expected in the public sector as wage agreements come into force in 2013 for medical personnel and for teachers, while the Minister of Finance has announced planned pay rises in some other areas of public administration. A rise of 15% in the minimum wage will affect around 12–16% of workers, according to an assessment based on the LFS. Wage pressures should be weaker in 2013 in the exporting sector, where the payroll rose significantly as a share of value added in 2012.

Data from the barometer surveys of the Estonian Institute of Economic Research show that in the first quarter of 2013, a somewhat smaller percentage of the companies surveyed reported labour shortages as a factor restricting production than did so in 2012. The share of such companies is significantly smaller than it was before the boom.

15 NAWRU is found using the Kalman filter, see Estonian Economy and Monetary Policy review 1/2012 p. 14 for more details.

The forecast is for average wage growth to reach 5.1% in 2013, and then to accelerate in the next two years to 6.4% then 7.4%, accompanied by a recovery in productivity growth, which is the most important factor affecting wage growth. Given the rapid wage growth in the first quarter of 2013, the risk that in 2013 as a whole the growth rate for average wages will be somewhat higher than forecast cannot be excluded (see Figure 12).

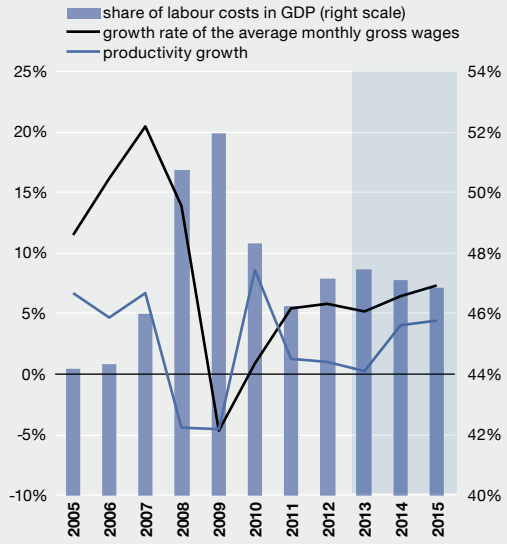
Unit labour costs had fallen after the crisis, doing so even in 2011, but they rose rapidly in 2012, with the nominal figure increasing by 5.2% and the real figure by 1.7%. Preliminary data show that this rapid growth continued into the first quarter of 2013. In the forecast horizon, unit labour costs will decrease again under the impact of recovering productivity growth and more moderate wage growth. The deeper reason for this is that unit labour costs cannot grow for a long time at the expense of profits as capital is a more mobile production input than labour. Sooner or later companies have to get their unit labour costs in line with productivity.

Inflation

The main drivers of inflation in 2012 were the rises in prices of energy and food, which were principally due to rises in the prices of commodities on global markets. Core inflation, which is more dependent on domestic factors[16] remained low throughout the year. In 2013 harmonised consumer prices will rise by 3.3%, and the main factor driving inflation here will be the rise in electricity prices that followed the opening of the market (see Figure 13). If the rise in electricity prices is removed, inflation for the remaining goods and services is a more modest 2.3%. Inflation will continue to slow in 2014 and will average 2.7% for the year. The central assumption of the forecast is that the world market price of oil will fall. Markets expect oil to remain close to 105 US dollars per barrel in 2013, then to fall in the second half of the forecast horizon to 96 US dollars per barrel.

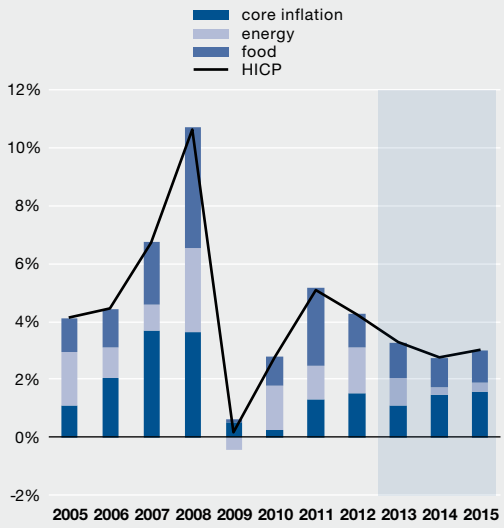
16 Core inflation covers industrial goods and services. Their share of the consumer basket is 55% in 2013.

Figure 12. Wages and productivity



Sources: Statistics Estonia, Eesti Pank

Figure 13. HICP growth



Sources: Statistics Estonia, Eesti Pank

The main sources of domestic price pressures are nominal unit labour costs, company profit margins and taxes. Company profit margins fell in 2012 as unit labour costs rose (see Figure 14). In 2013 the rise in unit labour costs will slow, mainly because the growth in the employment rate will slow (see Figure 15). The negative output gap will make it hard for companies to raise prices. The increase in productivity will be more in line with wage growth during the forecast horizon, and growth in company profit margins will turn positive.

The harmonised consumer price index (HICP) grew by 0.3 percentage points more in 2012 than the consumer price index (CPI) did. A larger share of the HICP basket is made up of services related to tourism such as food and accommodation, and industrial goods like clothing. The rise in these prices in Estonia in 2012 was the fastest of any country in the European Union. During the forecast horizon the difference between HICP and CPI will decrease if the rapid development in the tourism industry slows.

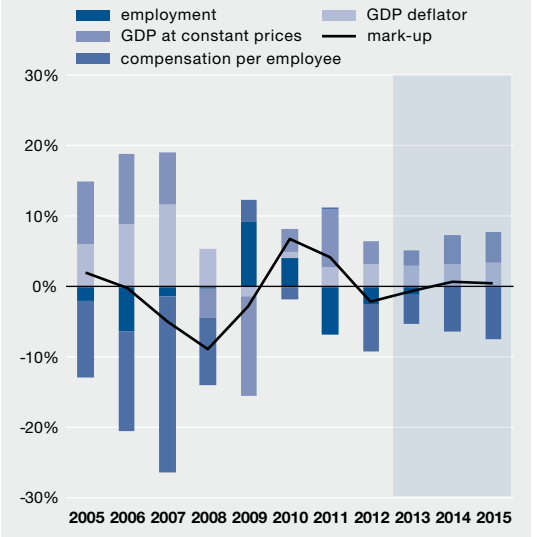
Figure 14. Composition of GDP deflator growth

Sources: Statistics Estonia, Eesti Pank

Food

Food price rises will slow in 2013 to 3.9%, though there will be differences between food groups. Inflation has been kept high mainly by unprocessed food products[17], with fruit and vegetables seeing sharp price rises in the second quarter of 2012. If weather conditions are favourable, the rise in prices for unprocessed food products will slow in the second half of this year. Demand is increasing on global markets for some food groups, which is a main cause of the rise in meat prices, and for this reason food price rises will remain relatively steep during the forecast horizon.

Figure 15. Contributions to growth in mark-up



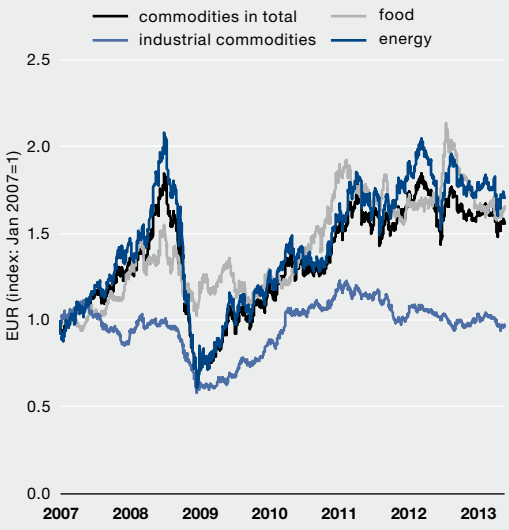
Sources: Statistics Estonia, Eesti Pank

Energy

Energy prices have risen sharply in recent years, though price pressures will drop noticeably during the forecast horizon. In 2010–2012 the price of energy consumed by households rose by almost 30%. The reason for this was the rise

17 Unprocessed food products are fruit and vegetables and meat and fish products.

Figure 16. Commodity price indices in the global market



Source: HWWI

in global oil prices and the weakening of the euro exchange rate due to the crisis of confidence (see Figure 16). The prices of imported natural gas and thermal energy follow changes in the oil price with a lag of more than half a year because of the pricing formulas used.

Inflation will be restricted in future because the cost of energy consumed in Estonia is rapidly approaching the euro area average. Energy prices will be affected in the forecast horizon by a rise in distribution network fees. Several companies that distribute energy to consumers have announced their intention to raise their prices, explaining that this is because of the need for increased investment. The price of heat is relatively uneven across different regions. However, the planned price rise will probably raise energy prices by less than the amount that Estonian consumers have become used to during the last couple of years.

Core inflation

Core inflation will accelerate during the forecast horizon primarily because of rising prices for services. Higher wages will have an impact on services inflation, and will gradually be passed through into the prices of labour-intensive services. The inflation dynamics of different components in the consumer basket for services were different, and for example growth in rent prices picked up during the recovery from the recession, reaching 19% in 2012, though it should recede during 2013. Prices for air transport have been very volatile in recent years, while prices for communications services have fallen for three consecutive years, though their rapid price falls cannot continue over the long term. Prices for communications services fell by 6.9% in 2012 and this offset a large part of the rise in the prices of other services.

Inflation was low at around 2% during the last couple of years for industrial goods. As the export prices of Estonia's trade partners fall this year and the rise of the import deflator slows, the prices of industrial goods will rise only slowly. The slowdown in inflation for goods may be helped by a strengthening of the euro, particularly against Asian currencies, in the second half of 2012. Prices for industrial goods will mainly fall for durable goods, one of the reasons being the weak demand prevailing in the global economy. An exception to this as a source of inflation in Estonia is clothing and footwear, which increased in price by up to 5.5% in 2012, partly because of the small size of the market and problems in the structure of the market.

Administrative factors

A major driver of inflation during the recovery from the recession was the rise in taxes and other administrative measures. Excise duty will continue to rise during the forecast horizon with tobacco excise rising by 6% at the start of 2014, which should raise inflation by around 0.1 percentage points. Excise on alcohol will continue to rise by 5% a year in 2014–2016, raising inflation by up to 0.2 percentage points each year. The forecast has taken these measures into consideration, but the impact of

administrative factors could yet be bigger if the recovery in external demand is delayed and the government needs to improve its fiscal position.

General government

The fiscal position of the Estonian general government is strong and will remain in structural surplus throughout the forecast horizon. The general government debt will remain low and will be less than 10% of GDP at the end of 2015. During the forecast horizon the combined impact of temporary measures taken during the crisis and trading in emissions allowances will be less than it was earlier and it should not surpass 0.5% of GDP per year, though it will increase spending and the budget deficit overall. The headline fiscal position will reach surplus by the end of the forecast horizon. The main risks to the balance of the budget are related to the overall outlook for growth for the economy.

Revenues

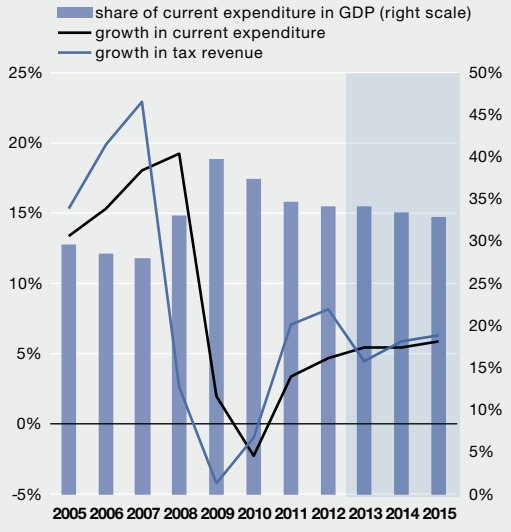
General government revenues increased by 8.6% in 2012. Growth based on domestic demand increased the tax abundance of Estonian GDP[18] and the tax burden temporarily rose to over 33% of GDP. Positive trends in the labour market aided tax receipts from labour and consumption, and the effect of the rise in excise taxes was only secondary. Significant sums were taken out of companies in dividends in 2012, which meant that 26% more corporate income tax was paid to the government than a year before. Part of this increase came from state-owned companies. In the final quarter of the year, receipts from consumption taxes fell as more tax rebates were paid during that period. Lower receipts from VAT at the end of the year were partially offset by increases in alcohol stocks before the rise in excise in January 2013 and the receipts from excise paid on them. In 2012 income from taxes was 8.2% larger than a year earlier.

18 The main sources of taxes are labour income and domestic end consumption.

At the beginning of the last decade, the government drafted a long-term programme of shifting taxes from labour to consumption, and this has since been carried out. The crisis and the recession interrupted the reduction of taxes on labour and in fact the unemployment insurance rate was raised in 2009 even as taxes on consumption continued to rise. A new phase in the reduction in taxes on labour started in 2013 when the unemployment insurance rate was lowered from 4.2% to 3% in January, while in 2015 income tax will fall from its current 21% to 20%. At the same time excise on alcohol and tobacco continues to rise. In total, tax revenue growth will slow and the tax burden will fall by 2015 to 32%. This will be aided by the recovery in external demand and the change in the structure of the economy to be more export-focused. General government tax revenues will be reduced temporarily in 2014–2017 by additional payments to the second pillar pension fund.

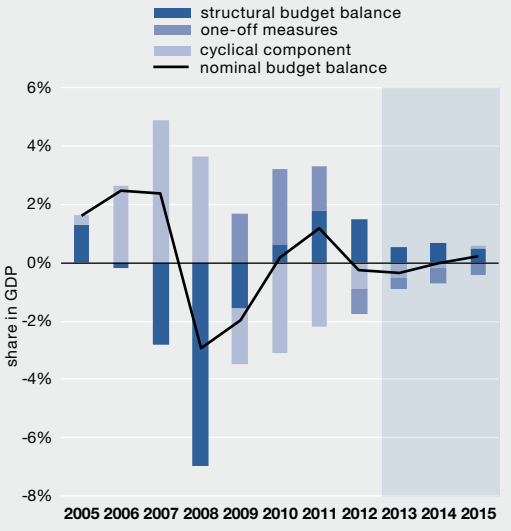
The share of non-tax revenues in the general government budget will fall in the coming years because of the capital transfers from the European Union's Structural Funds. A new budget period for the European Union starts in 2014 and the preliminary draft of that budget has set aside 5.9 billion euros for Estonia. Evidence from previous budget periods shows that the structural funds start to be used to a greater extent a couple of years after the start of the budget period because the planning and applications procedures take time. For this reason it may be assumed that in the near-term future there will be a temporary reduction in the use of external support funding and that the structural funds will start to contribute to growth in general government revenues at the end of 2015 (see Box 4). The delay may be reduced by experience already gained in project-writing. As the transfers are mainly linked to specific projects, increases or decreases in their size do not directly affect the balance of the budget.

Figure 17. General government current expenditure



Sources: Statistics Estonia, Eesti Pank

Figure 18. Fiscal position



Sources: Statistics Estonia, Eesti Pank

Expenditure

General government expenditure increased in 2012 by 12.7%. This was a temporary spike in growth and the double-digit number was a result of high levels of investment. More than half of the projects funded with the income from sales of emission allowances in earlier years were carried out in 2012, while at the same time, additional income from sales of allowances was already running out. On top of the emissions-funded projects, investments funded by the European Union and by domestic resources also grew strongly.

In 2013–2015, general government investments will not be as big as in 2012. The expected external financing during the forecast horizon will be smaller and the changeover to the next budget period will take time. Estonia will have a much more modest allocation of emission allowances under the new EU Emissions Trading Scheme, and demand for allowances in the market is currently low. For this reason the share of investments funded from the government's own resources will increase during the forecast horizon.

If capital expenditure is left aside, general government expenditure growth will remain relatively stable throughout the forecast horizon. General government current expenditure grew in both 2011 and 2012 at half the speed of tax revenues (see Figure 17).

Pensions and other social transfers account for 33% of current expenditure, which is the largest component, and they will continue to dominate in future according to the forecast. General government wages and salaries will grow slightly faster during the forecast horizon as a result of agreements signed in the last year with several professions and the general wage pressure from the continued recovery of the economy.

Fiscal balance and debt

The Estonian general government posted a deficit in 2012 as expected, though it was smaller

than previously forecast, amounting to 46 million euros or 0.27% of GDP. The deficit was smaller than expected because of good tax receipts and the postponement of some investment projects. The forecast for the budget balance this year is also more positive than before, again due to the increased tax base. This forecast predicts that that the government headline budgetary position will be close to balance in 2014 and will see a small surplus in 2015.

If one-off factors and the effect of the business cycle are removed, the budget for 2012 was in structural surplus and the structural surplus will continue throughout the forecast horizon (see Figure 18).

The reserves built up from budget surpluses have allowed the Estonian government to avoid excessive borrowing in difficult times. The central government debt increased in 2012 to 10.1% of GDP. This was due to capital transfers to increase the share capital of Eesti Energia and guarantees related to the operations of the European Financial Stability Facility (EFSF), which increased the debt in accounting terms.

One of the targets set in the budget strategy for 2014–2017 that was passed in spring 2013 was to preserve the structural budget surplus and maintain sufficient reserves. For reserves to be increased, the nominal fiscal position needs to be positive and this should be achieved in 2014 under the strategy. The strategy foresees general government reserves increasing from 2016 and by that time the structural surplus needs to be 1% of GDP. A significant improvement in the fiscal position is expected only in 2016. Eesti Pank forecasts that the general government budget will have only a marginal surplus in 2015 and there is no justification for postponing the robust increase in the surplus by 0.5 percentage points of GDP to the end of the period under review, especially to the year after the election. The target would be better achieved by a smooth increase in the difference in the growth rates of expenditure and revenues. Slower growth in expenditure in all the years covered by the budget strategy would ensure that a nominal budget surplus would already be achieved in 2014.

Box 4. Funding from the European Union budget

Transfers are paid from the European Union budget to advance the economic development of member states, reduce economic differences between different areas of Europe, and increase the competitiveness of the European Union. Since joining the European Union, Estonia has participated in two EU budgetary periods in 2004–2006 and 2007–2013, and also used pre-accession aid.

The funds received and to be received from the EU for 2007–2013 can be divided into two groups in terms of economic policy priorities.

1. **Regional policy** support comes through the Cohesion Fund and Structural Funds. The Cohesion Fund is the major source for investments in the environment, energy, transportation and other similar areas in member states where the gross national income per capita is less than 90% of the EU average. Structural Funds are the European Social Fund, aimed at promoting employment and human capital, and the European Regional Development Fund, which is used to reduce inequality in development between different regions.

2. **Agricultural policy** support can be divided into three groups with different aims:
   a. the European Fisheries Fund to support fishing,
   b. the European Agricultural Guarantee Fund to provide direct subsidies for agriculture,
   c. and the European Agricultural Fund for Rural Development to support life in rural areas.

This division is not entirely clearly delineated as the European Agricultural Fund for Rural Development can be considered an instrument of regional policy even though for cash flow management purposes it is connected more to the agricultural support system. Before the current budget period started, the rural development and fisheries funds were part of the structural funds[19].

The allocation of funds in the budget of a fund does not guarantee that that money will be transferred. A majority of the funds distribute their money for the implementation of specific programmes or measures[20] and for a project to receive financing through a grant it needs to meet all the requirements of its programme, which can demand a lot of administrative capacity. Grant applicants also need to consider that they are usually expected to make a contribution to sharing the costs of the investment. Most measures in Estonia are funded 75% by the EU and 25% from Estonian funds with the Estonian contribution coming from both the public and private sectors. The result of this is that by the end of 2012, three billion euros of payments had been transferred to Estonia from the structural funds of the EU budget for 2007–2013, while the Estonian public and private sectors had added a further billion euros to this.

Since its accession to the European Union, Estonia has received 4.2 billion euros from the EU budget, most of which has come from regional policy funds (see Figure B4.1). Around one quarter of the funds received have been production subsidies, 60% have been capital transfers, and the remainder has been current transfers [21]. Although all of the funding from the EU budget is allocated by the state through executive agencies, in most cases the end recipient of the subsidies is in the private sector and these amounts are not shown as government income or expenditure under the rules for the national accounts (see Figure B4.2)[22]. It can be seen from the figure that more than half of the total amount has been transferred to the private sector.

A majority of external support reaches Estonia as capital transfers, which are intended for the acquisition of fixed assets. They have only a modest impact on the fiscal position of the general government as the subsidies received are recorded at the same time that the investments are made and for the same amount.

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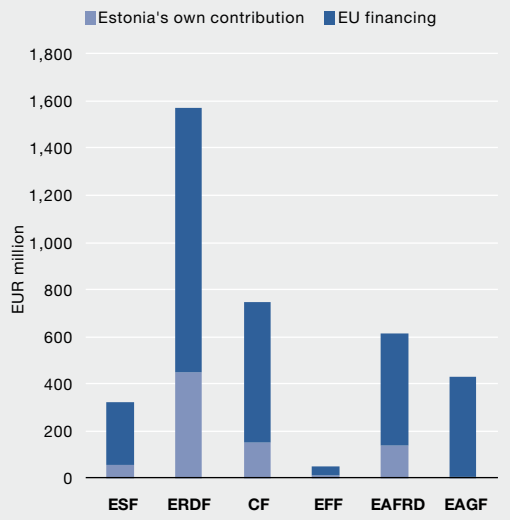
19 The wording used in texts concerning the budget of the European Union can be quite vague for historical reasons. The Cohesion Fund is not always clearly distinguished from Structural Funds for example, and cohesion policy may be used to refer to the whole of regional policy. Even the term *Structural Funds* can be used to mean all of the funds apart from direct agricultural support.

20 For the new budget period for 2014–2020 for example, Structural Funds will start to be deployed in three strands with a total of 16 priority directions, each with its own objectives and performance indicators. See http://www.fin.ee/riigi-eelarve-strateegia.

21 The data come from the sectoral accounts of the Estonian National Accounts and are calculated on an accrual basis, meaning that the amounts are recorded as the expenses are incurred.

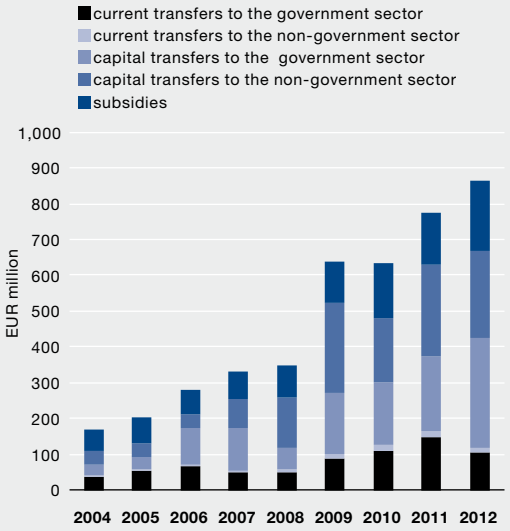
22 The state budget drawn up by the finance ministry shows EU transfers fully, also counting as revenues and expenditures those amounts that are not ultimately used by the general government.

Figure B4.1. Payouts from the EU budget 2007–2013 and Estonia's own contribution



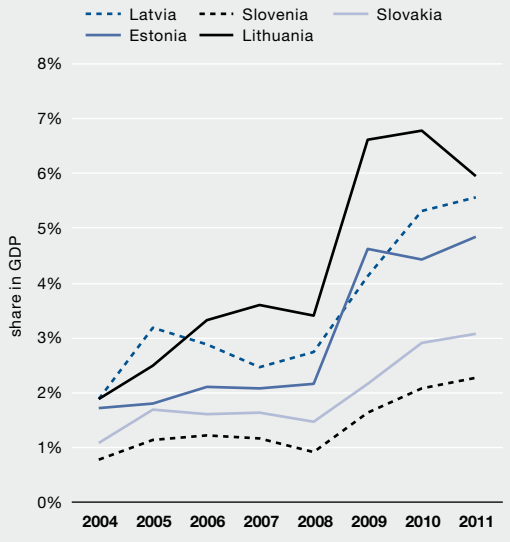
Sources: Ministry of Finance, Agricultural Registers & Information Board

Figure B4.2. EU expenditure in Estonia since the accession



Sources: Statistics Estonia

Figure B4.3. EU expenditure in new member states in 2004–2011



Sources: national statistical offices

In relation to GDP, the amounts transferred to Estonia have been among the largest of any received by EU member states (see Figure B4.3). In recent years the gap between the transfers from the EU budget to the Estonian economy and the amounts paid by Estonia into the EU budget, or the net receipts, has been around 4% of nominal GDP each year.

However, the payments from the EU budget to the new member states have not in any case reached the levels that were achieved by countries that joined earlier, even though Ireland, Greece and Portugal were significantly wealthier in relation to the EU average income at the time of their accession than the Baltic states were. Ireland, for example, had net annual receipts of around 5% of GDP in 1991–1995, and gross receipts of over 6%, even though Irish GDP per capita was around 80% of the EU average by the end of the period.

Estonia stands out among the newer member states as a recipient of transfers because of its capacity to deploy the amounts received in grants. In the 2007–2013 budget period, Estonia was allocated 3.4 billion euros from Structural Funds, of which over 90% has been transferred to projects. By the end of 2012, 54% of the total resources available to Estonia had been disbursed, while the average figure for the EU was 45%[23]. This gives Estonia an advantage in budget negotiations, because the European Commission considers how each member state used its money in the previous period when it is drawing up the budget. Estonia has the largest per capita support from the structural funds budget for 2007–2013.

Looking ahead, it can be seen that the peak of funding from the EU budget has passed. The amounts planned for the next budget period are larger than before, but this is mostly down to direct subsidies for agriculture (see Table B4.1).

Table B4.1. Expected transfers from the European budget for the budget periods ending and beginning (million euros)

	2007–2013	2014–2020
Total	4,986	5,893
Agricultural policy	1,308	1,812
of which direct subsidies	500	1,007
Regional policy	3,678	4,081
Net receipts	3,834	4,491

Source: Ministry of Finance, http://www.fin.ee/euroopa-liidu-eelarveraamistik-2014–2020

Assuming that the Estonian economy continues to grow relatively quickly, average net receipts from the EU budget excluding direct agricultural subsidies will be around 2% of GDP for 2014–2020. Evidence from previous budget periods shows that the structural funds started to be used to a greater extent a couple of years after the start of the budget period because the planning and applications procedures take time. For this reason it may be assumed that in the near-term future there will be a temporary reduction in the use of external support funding.

It has been discussed whether, and to what extent, the amounts disbursed from the EU budget to a country could endanger the sustainability of that country's public finances. Before the expansion of the EU in 2004 it was feared that the amounts demanded of new member states for co-financing of the investment receiving EU support would be too great, and would lead to a rise in the tax burden or an excessive rise in debt levels. This in turn intensified the debate over the applicability of national fiscal rules[24]. In Estonia's case, it can be shown that using the European money has not made the general government raise its spending excessively.

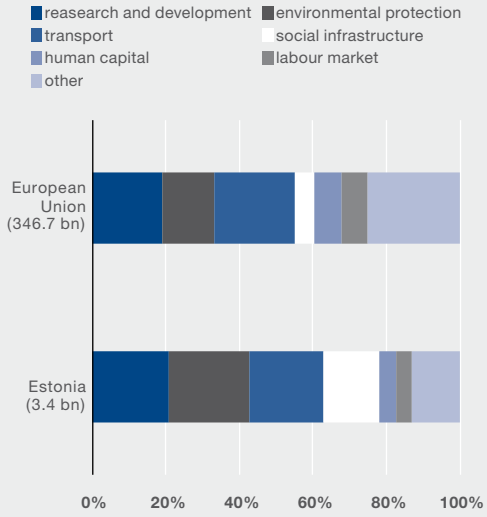
23 The calculation uses only data from the structural funds, which are the European Social Fund, the European Regional Development Fund and the Cohesion Fund. Agriculture, fisheries and rural development subsidies are accounted for separately. Various indicators can be used to assess the use of funds or the implementation of the budget. The Ministry of Finance, for example, estimates that at the end of 2012, 59.3% of available resources had been used. See http://www.fin.ee/riigi-eelarvestrateegia.

24 The Baltics Medium-Term Issues Related to EU and NATO Accession. IMF, Washington 2001, http://www.imf.org/external/pubs/ft/scr/2002/cr0207.pdf.

However in recent years there has been increased debate over whether reducing or stopping the subsidies and making Estonia a net contributor could hinder economic growth in Estonia and thereby slow the harmonisation of incomes, if it were accompanied by a rise in tax rates to a level that inhibits economic growth, or by underfunding in certain areas.

Several factors will affect the size of European Union transfers. Estonia will have to be particularly aware that the Structural Funds are intended for assistance in catching up, and if the Estonian economy continues to grow faster than the EU average, Estonia will cease to qualify for the subsidies. The level of financing from the Structural Funds depends on the relative wealth of the country or the region, which is used to decide the share of co-financing[25]. Discussions in the recent budget negotiations about the level of subsidies were particularly fraught[26].

Figure B4.4. Use of structural funds by area, 2007–2013



Source: European Commission

The majority of the grants from the European Union are used for investment, with some going towards the application of various technical minimum requirements. Excluding subsidies, most of which are direct agricultural support, capital transfers made up around 80% of the money received in 2004–2012. Comparison with previous years shows that the transfers from the EU budget have not significantly increased the overall level of government investment, which was on average close to 4.5% of GDP in the years both before and after accession. However transfers have affected the structure of investment and its regional distribution, by promoting water supply and sanitation projects in the smaller settlements for example.

Possible underfunding in the future is particularly an issue for areas whose importance has been disputed, such as support for peripheral regions, research and development and support for venture capital. There has also been discussion over how much money should reasonably be put into improving environmental protection and energy saving. As can be seen from Figure B4.4, Estonia has spent more than the average on environmental protection, research and development and social projects.

25 So far, Estonia has been one of the converging countries, with GDP per capita below 75% of the EU-25 average, where the most favourable measures have been applied. Funding from the Cohesion Fund for large projects can be accessed by countries where the GDP per capita is below 90% of the EU average.

26 The proposal by the European Commission, for example, to cap the subsidies received from the Cohesion Fund for 2014–2020 at 2.5% of the forecast gross national income of each member state. See http://www.fin.ee/euroopa-liidu-eelarveraamistik-2014-2020.

Looking ahead, it is most probable that a reduction in the transfers received from the EU budget will lead to an increased need for funding not from capital but from current expenses. Since 2004 the annual current transfers from the EU budget have averaged 0.5–0.6% of Estonian GDP. In recent years these transfers have accounted for 2.5–3% of total government spending and have been used to fund various labour market measures and social programmes, such that in 2007–2011 around 80% of active labour market measures were funded with European Union support[27]. This means that the government needs to make sure that if external funding is cut, the quality of public sector services will not suffer.

Possible changes in the European Union's institutional framework also need to be considered. The desire to move towards a more integrated Economic and Monetary Union will probably make it less possible for support to be distributed on the basis of income differences. More emphasis will be placed on shared priorities, and possibly also on costs stemming from the economic cycle. External support was vitally important for Estonia during the crisis years, when the share of revenues from taxes shrank and transfers from the EU budget made up some 8% of the Estonian general government budget.

27 See http://www.fin.ee/riigi-eelarvestrateegia.

Banking sector and financing of the economy

Lending

In contrast to many other countries in the euro area, banks operating in Estonia have not restricted their lending in the last half year. Lending has been supported by the high levels of capitalisation in the banking sector and a relatively high growth rate in deposits, which reached close to 9% at the end of the first quarter of 2013. Deposits from the real sector are a more stable funding source than money obtained from financial markets and their share in the financing of Estonia's banks had risen by the end of March to a record level of over 78%. The ratio of loans to deposits, which has fallen rapidly since the start of 2009, has been relatively stable at close to 112% for the past six months, reflecting the gradual recovery of the lending market and a slight slowing of the growth rate of deposits.

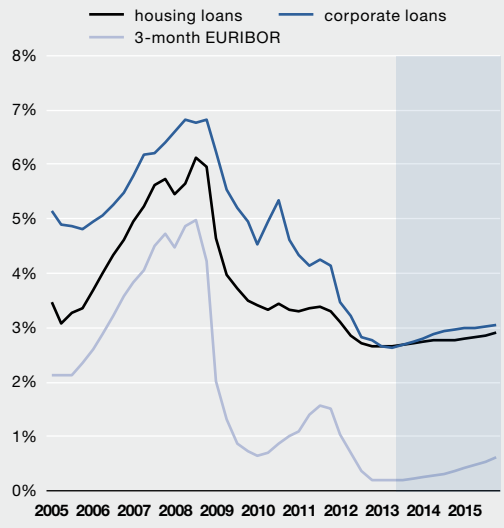
Domestic cash flows from loan repayments and deposits from the real sector have been enough to finance lending for the past four years. If loan turnover accelerates in the second half of the forecast horizon, banks will probably have to find additional sources of funds to finance it.

The continued faith of the markets in the parent banks has allowed those banks to access funds on relatively favourable terms. The parent banks do, however, remain vulnerable to possible unfavourable events as their needs for financing from the markets are still high and if macroeconomic developments are more negative than forecast, then the profitability of the parent banks and the quality of their assets could drop rapidly.

Loan interest rates have developed as was predicted in the previous forecast. The EURIBOR continued to fall at the end of 2012 and stabilised at the start of 2013 at a very low level. Although the EURIBOR will start to rise very gradually at the start of 2014, it will remain at historically very low levels throughout the forecast horizon (see Figure 19).

The relatively mild competition for new borrowers has allowed banks to raise their interest margins to preserve the profitability of their assets and equity when interest rates are very low. Although

Figure 19. Lending rates



Sources: Eesti Pank, European Central Bank

interest margins have also risen in Finland and Sweden, the earlier lower rate of loan losses has meant that interest margins there remain about 0.5 percentage points lower than in Estonia. No reduction in margins in Estonia is expected in the near future and there is in fact more pressure on them to rise, but they will decline in the second half of the forecast horizon under the impact of tougher competition, a smaller impact from loan losses and a rise in key interest rates.

Demand for Credit

The credit market for businesses has recovered somewhat quicker than was forecast in December. Although the volume of new loans taken has been close to what was predicted, the share of long-term loans in total loan turnover has increased, and this has led the outstanding loan balance to grow faster than expected.

Loans to companies were up 15% on a year earlier in the first quarter of 2013 with turnover of long-term loans rising by 45% and that of short-term loans by 7%. The sectors that saw the largest growth in turnover were the trade, logistics, real estate and construction sectors. Increased demand has been supported both by investment in fixed assets and the need for working capital, and by corporate mergers and restructuring. The growth in loan turnover will slow somewhat during 2013 because the comparison base will rise, but it will accelerate again in the second half of the forecast horizon on the back of stronger economic growth and increased confidence. Although very rapid growth in real estate development is generally not to be expected in the next few years, large individual development projects for commercial properties will contribute to both investment growth and lending growth this year.

The corporate debt to equity ratio has fallen significantly in the last couple of years with the support of profits and has reached its pre-boom level. Given the increased need for financing stemming from higher levels of activity and investment and the relatively low level of leverage in international terms, it can be assumed that companies will soon start to increase leverage again in order to boost future growth and increase the return on capital.

Household borrowing behaviour has been quite prudent so far, but some growth in loan demand from households has been apparent. In the first quarter of 2013, households took out 10% more loans and leases than a year earlier. Turnover of housing loans increased by 22% and that of other loans to households by 5%. Rapid growth continued to be seen in the turnover of leases to households for cars, which was up 23%. Increased demand for loans has been supported by increased consumer confidence, an improved outlook for the residential property market and very low interest rates.

The housing loan portfolio will start to grow in 2013 and moderate growth will continue in the following years. Faster growth will be restrained

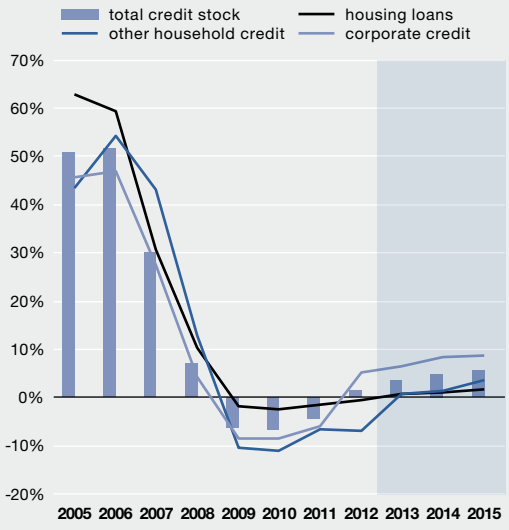
because the behaviour of households will be relatively conservative in comparison to what it was in the boom years, and because very many families that could get housing loans already have them.

The number of sales transactions for apartments was 15% higher in the first quarter of 2013 than it was a year earlier, and the average square metre price for an apartment was 8% higher. Although prices will probably continue to grow relatively rapidly in the coming quarters, this forecast expects the growth to slow in the coming years to match that of household incomes. The risk of relatively rapid growth in real estate prices continuing cannot, however, be ruled out, as the strong price rises could promote interest in real estate among investors at a time when the number of properties on sale has declined and the number of permits for construction and use of buildings does not indicate a rapid expansion of the housing stock.

As loan demand has been moderate in Estonia in recent years and corporate and household financial buffers have increased, Eesti Pank's forecast of 5–6% growth in lending to the real sector is not an indication of excessive lending growth in the short term. As this figure is slightly lower than nominal GDP growth, it is more a sign that lending activity is appropriate for balanced growth (see Figure 20). Of course the risk cannot be excluded that the very low key interest rates, strengthening confidence and reduced debt level in the private sector will lead lending to grow faster than forecast. It is also possible that relatively rapidly rising real estate prices will increase the ability and desire of households and companies to take loans as the value of their collateral increases.

For long-term economic growth to be achieved, it is important that while interest rates are so low, financing should go more to projects that will increase productivity than was the case in the previous lending cycle. Equally, companies and households must be prepared for the very low interest rates to rise at some point, for which reason they should not overestimate their ability to service their loans.

Figure 20. Credit stock growth



Source: Eesti Pank