Eesti Pank

# ESTONIAN ECONOMY AND MONETARY POLICY

**3**/2017

The Estonian Economy and Monetary Policy is an Eesti Pank review released four times a year that summarises the main recent events in the global and Estonian economies. Twice a year, in June and December, the review also contains the forecast for the Estonian economy for the current year and the next two calendar years.

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# INTRODUCTION

Growth in the Estonian economy was fast in the first half of 2017, and in the second quarter it reached almost 6%. Growth was given a boost by an improvement in the external environment, which encouraged exports, but the biggest driver was still domestic demand. In one sense such strong growth is good news, but at the same time it has confirmed the earlier assessments that the Estonian economy is exceeding its long-term sustainable level.

The economy is only able to exceed its sustainable level for a limited time, as increasing demand at a time of limited growth in production capacity will lead to higher inflation, which will start to restrict the competitiveness of companies, and this will then hold back growth in the economy. Production capacity has for some time been used more intensively than usual by companies in Estonia, labour costs have been put under pressure by labour shortages, and recently there have been noticeable increases in producer price inflation and consumer price inflation. All of this together indicates that the current rate of economic growth cannot be maintained for long.

There is however no reason to think at the moment that the economy is overheating on a broad basis, because the picture is quite different in different sectors. The acceleration in economic growth has partly been due to improved performance in oil shale production and energy, sectors that were earlier facing difficulties, where now there is some recovery in output volumes. Most sectors have seen some growth. The growth cycle has been very strong in the trade sector and there is a threat of overheating in construction, which is running at almost maximum capacity. Cyclical peaks are more noticeable in construction, because increased demand for construction services from companies, households and the general government all coincide.

Household spending on residential property and real estate investments has been boosted by rapid growth in incomes. Employee compensation was up by more than 8% in the second quarter, and the average gross monthly wage by 6.8%. Household consumption has been quite restrained though, as deposits have increased more than consumption has. As income tax reform will be introduced at the start of next year, it was possible that expectation of the rise in net income would cause consumption spending to rise already, as household confidence about the future is very strong. This has not happened though. Behaviour indicating a preference for gradual increases in spending is positive to note, as it helps in keeping economic growth more stable.

General government investment in the second quarter was half as much again as a year earlier, which is mainly because of funds received from the budget of the European Union. Mainly because of this, the contribution of the public sector to economic growth in the second quarter was relatively large, as its spending on consumption and investment provided about one third of overall economic growth. Without spending by the general government, the economy would have grown by about 4%, which is a little more than the estimate of long-term growth capacity.

It is notable that in the second quarter companies were able to increase their profits despite the rapid growth in labour costs. One of the main reasons for this is that in the past two or three quarters export prices have risen faster than earlier, reacting to changes in external markets. This improvement in the external environment has allowed Estonian exporters, which are mainly price takers, to pass on increased wage costs into end prices for products, though this can only be a short-term solution for a country that hopes to increase its incomes faster than those of its competitors. Further growth in profits and labour income depends above all on the ability to increase productivity.

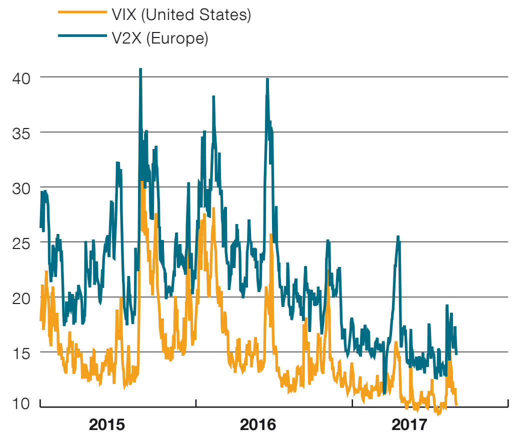
The data that are already available for the third quarter do not indicate any significant slowing down of growth, meaning that the economy continues to work beyond its capacity. In this case state fiscal policy should focus on the need for balance in the economy, because overheating in some sectors could pass on into the rest of the economy. The high volatility in economic growth, for which Estonia has stood out in Europe, has high social costs, leads to capital and labour resources being inefficiently allocated, increases uncertainty for companies and households, and reduces the credibility and long-term growth capacity of the economy.

# THE EXTERNAL ENVIRONMENT

## THE GLOBAL ECONOMY

**The global economy continued to grow rapidly in the second quarter of 2017 as industrial output rose and international trade picked up** (see Table 1). Central banks also continued to support growth with their accommodative monetary policies, while public spending also increased in many countries. Labour markets have also improved, showing that growth is more inclusive than some years ago. In the past 20 years, economic activity in the industrialised countries has been as synchronised as it is now during the technology boom in the 1990s and in the middle of the 2000s before the global financial crisis. Political instability was reduced at the start of summer in many parts of the world, but geopolitical tensions sharpened in August as North Korea stepped up its military activities again. This also made financial markets more volatile again (see Figure 1).

**Figure 1. Stock market volatility indexes in USA and Europe**




Last observation 1.09.2017
Source: Bloomberg

**Among the emerging economies, China and Russia saw economic growth continue in the second quarter of 2017.** Asian economies were supported by the good performance of the Chinese economy and strong demand from advanced economies. Latin American countries are clearly exiting their recessions, but the capacity to grow is still threatened by major political uncertainty in the region. Growth in the economies of the Middle East and Africa is being limited by low commodities prices and geopolitical tensions. Due to low commodity prices, inflation has continued to fall in commodities exporting countries like Russia and Brazil. The Chinese economy grew by 6.9% in the second quarter, as it did in the first. The rapid growth is based on strong industrial output, investment in fixed assets and retail sales. The government has reduced public sector investment a little from the first months of the year and the money supply has tightened. It is hoped that this will encourage companies to reduce their debt burdens. Capital outflows have been limited in recent months and the yuan has appreciated. Inflation has fallen to 1.4%, mainly because food prices have been lower. The outlook for growth in the Chinese economy continues to be threatened by rapid growth in borrowing and the high level of private sector debt. For more on the Russian economy see the section on Estonia's main trading partners.

**The economy picked up in almost all advanced economies in the second quarter.** This was particularly noticeable in the euro area, where economic growth was supported by strong domestic demand and lower unemployment, while interest rates remained low. Growth also accelerated in the US in the second quarter

**Table 1. GDP growth in different regions in 2011 - 2017 (change, %)***

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 Q1 | 2017 Q2 | 2017 |
|---|---|---|---|---|---|---|---|---|---|
| World | 3.8 | 3.0 | 2.9 | 3.2 | 3.4 | 3.1 | | | 3.5 |
| Advanced economies | 1.6 | 1.1 | 1.2 | 1.9 | 2.1 | 1.7 | | | 2.0 |
| Emerging markets and developing economies | 6.4 | 5.3 | 5.0 | 4.8 | 4.2 | 4.1 | | | 4.6 |
| Euro area | 1.6 | -0.9 | -0.3 | 1.2 | 2.1 | 1.8 | 2.0 (0.5) | 2.3 (0.6) | 1.9 |
| United States | 1.6 | 2.2 | 1.7 | 2.4 | 2.6 | 1.6 | 2.0 (0.3) | 2.2 (0.8) | 2.1 |
| China | 9.5 | 7.9 | 7.8 | 7.3 | 6.9 | 6.7 | 6.9 (1.3) | 6.9 (1.7) | 6.7 |
| Japan | -0.1 | 1.5 | 2.0 | 0.3 | 1.2 | 1.0 | 1.4 (0.3) | 1.5 (0.6) | 1.3 |
| United Kingdom | 1.5 | 1.3 | 1.9 | 3.1 | 2.2 | 1.8 | 2.0 (0.2) | 1.7 (0.3) | 1.7 |

* GDP at constant prices, quarterly growth over the previous quarter of the same year in brackets, WEO forecast for 2017
Sources: World Economic Outlook Update, July 2017, OECD, Eurostat, National Statistics

mainly because of consumption, because while unemployment is low, consumer confidence that economic growth will continue has increased. However the economy has not yet received the expected boost from fiscal policy through increased public sector spending. The Japanese economy continued to grow with support from increased household spending and strong exports. Growth slowed in the United Kingdom however, as uncertainty has increased about what will happen to the economy after Brexit, while incomes are being eroded by slightly higher inflation. Inflation pressures still remain weak almost everywhere, keeping below the target set by the central banks of advanced economies, as wage growth has not notably increased.

**Yearly growth in the US economy picked up slightly in the second quarter to 2.2% from 2% in the first quarter, mainly because of increased spending by households.** Exports have continued to increase and the trade deficit has narrowed. The Purchasing Managers Index for manufacturing[1] remains at record levels, as output levels, employment and inventories have all increased. Retail sales grew at their fastest rate in July since December last year, suggesting that the economy continued to grow in the third quarter. The labour market report for July shows that the number of jobs and the labour market participation rate rose by more than expected, while consumer confidence[2] remains high. Even though unemployment remains at 4.4%, which is below its long term natural rate, wage growth is only 3%. For this reason inflation has not risen significantly, and it stood at 1.7% in July.

**The Japanese economy continued to grow strongly in the second quarter, mainly on the back of private consumption.** Yearly growth picked up from 1.4% in the first quarter to 1.5%. Growth received a major boost from public-sector investment. Growth in private consumption was encouraged by the Japanese labour market, where the unemployment rate is very low at only 2.8%, wage growth is moderate, and consumer confidence remains strong. Investment is supported by favourable financing conditions, strong domestic demand and construction orders related to the Olympic Games that will be held in Tokyo in 2020. Confidence remains high in manufacturing[3], as output and new orders and employment continue to rise. Export growth also remains fast and external demand is strong, though increasing geopolitical tensions, particularly in Asia, mean the yen may appreciate, which could severely harm the Japanese exporting sector. Inflation has remained low, and has been at 0.4% since April.

**Uncertainty about Brexit led yearly growth in the economy of the United Kingdom to slow from 2% in the first quarter to 1.7% in the second quarter.** Spending by households has slowed down and corporate investment has fallen noticeably. Sentiment surveys[4] show that activity continued to increase in the industrial sector in the summer, but the growth in new orders was lower. Although the fall in sterling improved competitiveness, growth in export orders remained modest and export growth was somewhat slower in June than in the preceding months. Despite the slower economic growth, optimism remained relatively high among consumers according to sentiment surveys[5], and new jobs have continued to be created. The unemployment rate in the United Kingdom fell to 4.4% in June, which is its lowest level for 42 years. However, wage growth has remained at 2.1% while inflation picked up in June and July to 2.6%.

**Global stock market indexes moved in different directions in the summer.** Equity prices became sharply more volatile in August. Stock market indexes in Europe mainly fell, while the S&P 500 in the US continued to post new records until the second week of August, when it fell in just a few days to its levels of July. North Korean missile tests had a surprisingly large impact on markets, leading most major share indexes to fall. The recovery was rapid however.

1 The Institute for Supply Management's US Manufacturing PMI; IHS Markit.

2 The University of Michigan Consumer Sentiment Index.

3 The Nikkei Japan Final Manufacturing PMI, IHS Markit.

4 IHS Markit/CIPS UK Manufacturing PMI.

5 The GfK Consumer Sentiment Index.

Although investors have become more worried about excessively high equity prices, further rises in prices are supported by very good economic data. The performance of the European stock markets is weakened though by the strong euro.

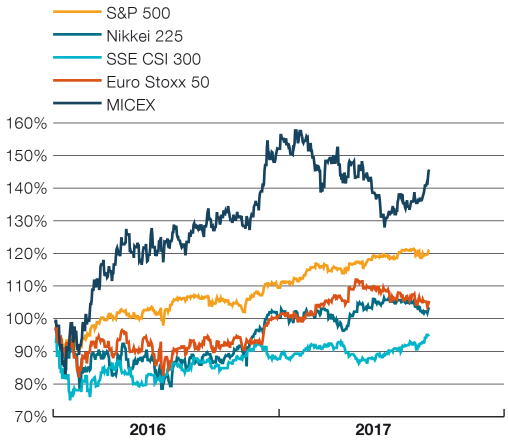
**Interest rates remain low on sovereign bonds.** The rise in yields at the end of June, which came in reaction to the expectation of tighter monetary policy from central banks, did not continue and the general rise in risk aversion brought about by political and geopolitical tensions in August led interest rates to fall on risk-free sovereign bonds. The rise in interest rates on US government bonds in June and July turned to a fall in August, but the interest rates on German bonds remain clearly above the low level of June. The biggest fall in the summer was in interest rates on British government bonds in the context of the uncertainty surrounding Brexit.

**Prices mainly rose in commodities markets.** The crude oil price mainly rose in the second half of July, and seasonal demand caused a rapid reduction in stocks in the US. The price of Brent crude remained at between 50 and 53 dollars a barrel in August. Prices of precious metals and industrial metals were higher in August than in June. The main cause of the rise in prices of precious metals was seen to be the depreciation of the dollar, together with increased geopolitical tensions. Prices of industrial metals were boosted by expectations of faster growth in the global economy, reduced inventories and improved economic data from China, which is the world's largest consumer of metals. Prices for agricultural commodities have fallen however, as harvests were better than expected.

## THE EURO AREA

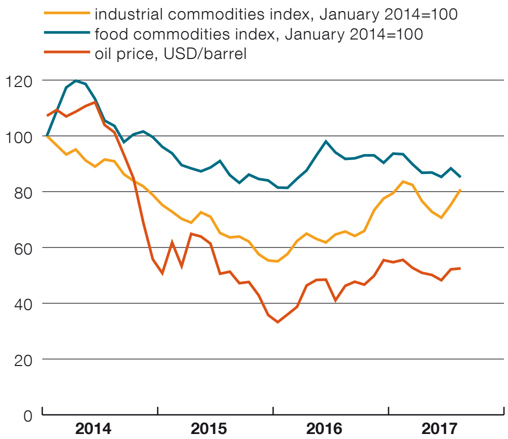
**Economic growth strengthened in the euro area in the first half of 2017.** The preliminary estimate from Eurostat shows that quarterly growth in the economy increased to 0.6% in the second quarter. Yearly growth totalled 2.3%, which is the fastest growth since 2011. Higher employment led private consumption to become the main driver of growth, while favourable financing conditions have helped raise investment. While imports grew faster than exports last year and the contribution of net exports to

**Figure 2. World stock indexes (03.01.2016 = 100%)**



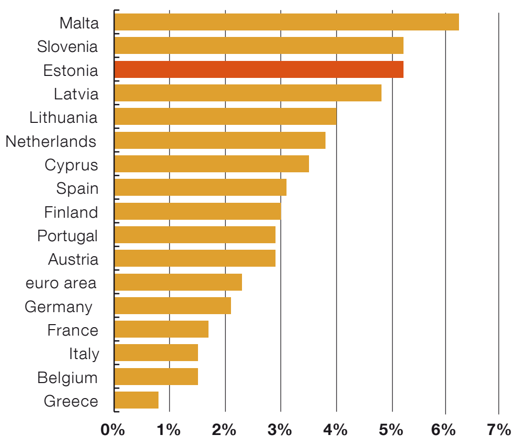

Last observation 1.09.2017
Source: Bloomberg

**Figure 3. Commodity price indexes and the oil price, USD**




Sources: HWWI, Reuters, Bloomberg.

**Figure 4. Real GDP growth year on year, Q2 2017**



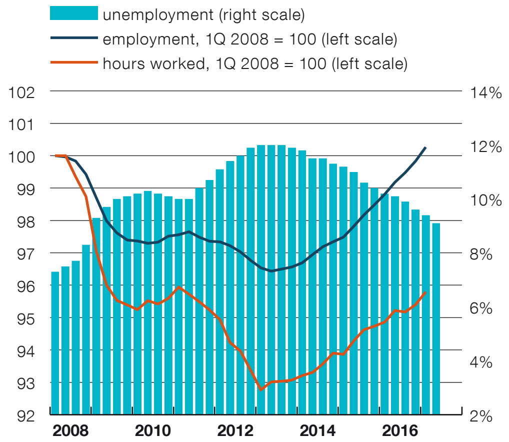

Source: Eurostat

economic growth in the euro area was negative, the improvement in the external environment this year means net exports have supported growth positively. Economic activity indexes in recent months give hope that growth will continue at more or less the same rate in the third quarter. The Purchasing Managers Index (PMI) published by Markit remains close to its highest levels of the last six years. The Economic Security Index (ESI) published by the European Commission climbed at the end of summer to its highest level for more than 10 years. The economy has been revitalised by faster growth in the manufacturing sector, which has been supported by domestic demand coming from the strengthening economic environment, and also by improved demand for exports (see Figure 4).

**Stronger economic growth has improved the situation in the labour market in the euro area.** Employment has been growing quarter on quarter in the euro area since 2013, and the unemployment rate has gradually fallen. Employment saw its fastest annual growth rate of recent years in the first quarter of this year, and the number of people in employment passed the level of 2008 for the first time. The unemployment rate in the euro area has fallen faster in recent months than forecast, and unemployment was 9.1% in the middle of this year, which is three percentage points lower than the peak reached in 2013 (see Figure 5). Although the gap between the growth rates of employment in different euro area countries has narrowed in recent quarters, there still remain substantial differences between countries. At the top end of the scale is Greece, where unemployment remains above 20%, and at the bottom of the scale is Germany, where unemployment is below 4%. As the situation has improved in the labour market, wage growth has increased slightly, but the underutilisation of labour resources means that wage pressures are still relatively modest in historical comparison.

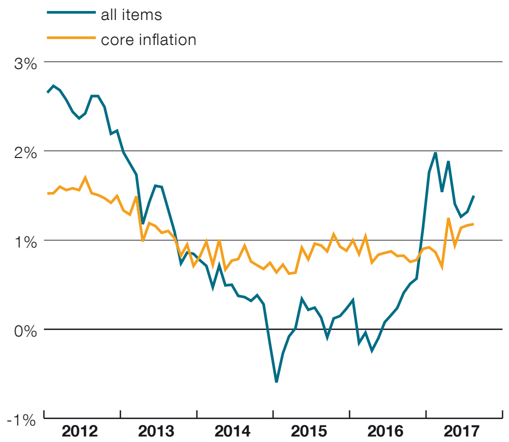
**Inflation has picked up in the euro area, but it still remains below the target level of the European Central Bank.** Inflation has mostly been pushed up by rising energy prices, but also

**Figure 5. Employment and unemployment in the euro area**




Source: Eurostat

**Figure 6. Euro area inflation**



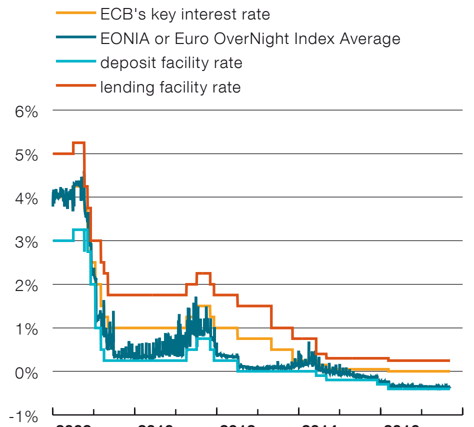

Source: Eurostat

by higher prices for food. Although core inflation in the euro area remains below its long-term average level of 1.4-1.6%, it has still risen because of domestic price pressures coming from the general improvement in the economic environment (see Figure 6). Forward-looking surveys and inflation expectations shown by financial derivatives indicate more clearly than last year that households, companies and financing institutions expect inflation to rise. Higher inflation in the euro area is supported by the accommodative monetary policy (see Box 1 on the monetary policy environment in the euro area). The long-term outlook of various institutions for inflation in the euro area still remains at 1.8%.

## Box 1: The euro area's monetary policy environment

The objective of the Eurosystem monetary policy is to maintain price stability in the euro area. The forecast from the European Central Bank of September 2017 expects that inflation will climb to 1.5% in 2019[6]. Inflation is being boosted by monetary policy measures and a recovery in the economy. The Governing Council of the European Central Bank has held monetary policy interest rates at their lowest levels under the economic and monetary union in 2017, with the minimum bid rate on main refinancing operations at 0.00%, the lending facility rate at 0.25%, and the deposit facility rate at -0.40% (see Figure B1.1). The Governing Council expects that these rates will remain at their current levels for a long time and for notably longer than the duration of the asset purchase programme.

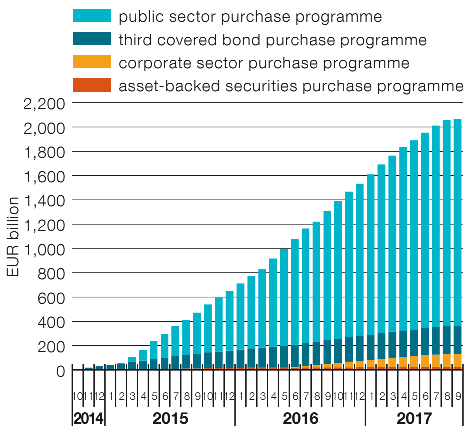
**Figure B1.1. Eurosystem key interest rates and EONIA**




Last observation 10.09.2017
Source: European Central Bank

The Eurosystem has complemented low interest rates with a variety of monetary policy measures, in order to ease financing conditions and revitalise the supply of credit even more strongly to help in meeting the goal of price stability and in supporting the functioning of the monetary policy transmission channels. The monthly purchases under the asset purchase programme are of 60 billion euros from April 2017 to December. Purchases are intended to continue until at least the end of 2017 or longer if necessary, until a lasting correction in inflation is apparent that is in line with the price stability goal of the Eurosystem. The Governing Council of the European Central Bank has declared its readiness to increase the volumes of asset purchases or extend the programme to maintain a supportive monetary policy stance and with a sustainable rate of inflation. The expected effect of the measures on the economy of the euro area and on inflation will be seen in the medium term.

**Figure B1.2. Eurosystem holdings under the expanded asset purchase programme**




Last observation 01.09.2017
Source: European Central Bank

The support from the monetary policy measures meant that the consolidated balance sheet of the Eurosystem in the start of September stood at 4.3 trillion euros, which is more than double what it was in autumn 2014. The total volume of asset purchases stood at 2.1 trillion euros on 1 September (see Figure B1.2). At 1.7 trillion euros, the largest part of the portfolio consists of public sector bonds, of which Eesti Pank's purchases accounted for 4.5 billion euros at the end of August 2017.

6 European Central Bank press conference, 7 September 2017.

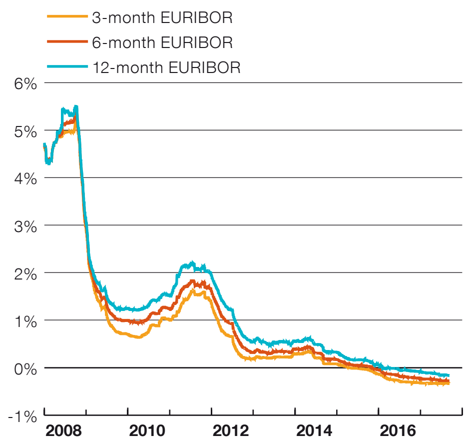
Yearly growth of the money supply in the euro area remains strong with support from the accommodative measures taken by the Eurosystem. The average yearly growth in the broad money aggregate (M3) was 5% in the first half of 2017 and yearly growth in the narrower aggregate (M1) was 9%. The growth continued in July. The extremely low monetary policy and money market interest rates have affected the return earned by the non-financial sector from term deposits, which has fallen to close to 0.3% in the euro area on average. The stock of corporate and household deposits grew at a similar rate in the first half of 2017 to that of a year earlier, which could to some extent indicate that consumption and investment are being postponed.

Yearly growth in the stock of loans to the non-financial sector has accelerated since the second half of 2015. The growth in the stock of housing loans and corporate loans has remained at close to 2% in the past 12 months, and this summer it reached 2.5%. Interest rates on loans are at record low levels. The spreads between interest rates for euro area countries facing problems and other member states, and those between rates for loans of over 1 million euros and under 0.25 million euros have narrowed significantly in the past year and a half.

Such changes indicate that monetary policy measures have aided a recovery in private sector lending channels[7]. The latest Bank Lending Survey of lending by banks in the euro area shows that the lending conditions for companies and households have improved[8], demand for credit is growing, and credit institutions have optimistic expectations for the near term. Banks report that their financing costs have been brought down with help from the monetary policy measures, and that the credit supply has been encouraged by stronger competition and lower risk assessments. It should however be noted that interest rates remaining low could lead to additional risks to financial stability and could hurt the profitability of the banks. The accommodative monetary policy in the euro area has helped short-term money market interest rates to fall to their lowest ever levels.

The expectations for short-term interest rates that are revealed by financial instruments remain low, and this also affects long-term interest rates. EONIA was quite stable from June to August at between –0.35% and –0.36%, holding just above the interest rate on the standing deposit facility. At the start of September the three-month EURIBOR was at –0.33%, the six-month EURIBOR was at –0.28%, and the 12-month EURIBOR was at –0.17%, and they were all at the same level as at the end of June (see Figure B1.3). The money market yield curve as shown by the gap in the 1 and 12-month EURIBORs has remained stable.

**Figure B1.3. Euro area money market interest rates**




Last observation 10.09.2017
Source: Bloomberg

7 See the ECB Economic Bulletin 1/2017, MFI lending rates: pass-through in the time of non-standard monetary policy, pp 40–63.

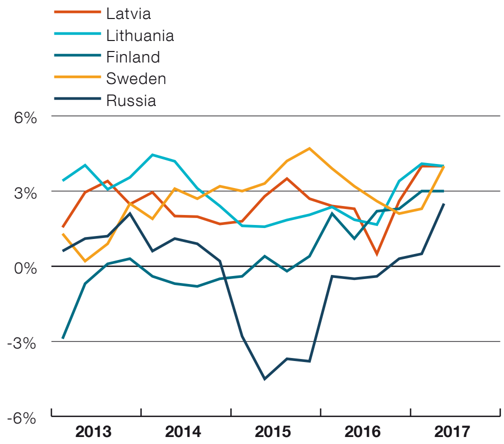
8 Changes in lending conditions are interpreted in the survey by analysing the net difference in the shares of those banks that have noted in the review that they have tightened credit conditions such as margins or collateral demands, and those banks that said they have loosened their conditions. A negative net rate means that a majority of banks have loosened their credit conditions.

## ESTONIA'S MAIN TRADING PARTNERS

**The Latvian and Lithuanian economies are in a good position.** Yearly growth in both economies remained near 4% for the second quarter in a row in the second quarter of 2017 (see Figure 7). Seasonally adjusted GDP also grew strongly in quarterly comparison. Alongside the increase in private consumption based on rising household incomes, there was strong growth in the industrial sector and especially in Lithuania annual growth in goods exports was fast (see Figure 8). Equally, both countries saw strong growth in investment and in the construction sector, which received significant additional support from the Structural Funds of the European Union. The labour market also improved further as the employment rate in Latvia climbed to its highest level of the past nine years and unemployment was down in quarterly and yearly terms (see Figure 9). Despite rapid wage growth, companies report difficulties in finding qualified labour. Inflation has held quite steady in Latvia in recent months, while yearly growth in consumer prices in Lithuania accelerated to 4.4% in August, which is the highest level of the past six years (see Figure 10). Steadily rising prices for services have been accompanied by rises in excise and higher food prices.

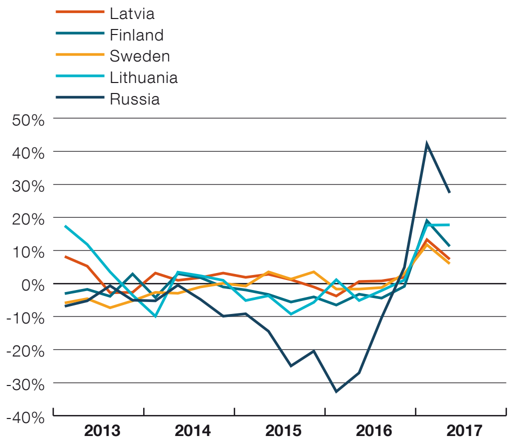
**Strong growth in the economies of Finland and Sweden has mainly based on investment.** Yearly growth in the Finnish economy was 3%, like in the first quarter, and the economy also grew in quarterly terms. Yearly growth in Swedish GDP picked up to 4% in the second quarter and growth from the first quarter was also very strong. The main base for growth for both countries has been investment in the construction sector and household consumption. This is particularly evident in Sweden, where the favourable financing conditions created by the loose monetary policy of the central bank have significantly increased investment by households in residential property. The resulting increase in imbalance in the Swedish real estate market could however pose a threat to the economy in Sweden. Foreign trade has picked up in both Finland and Sweden. The value of goods exports from both countries was significantly larger than a year earlier in both the second quarter and in the whole of the first half of 2017. Production of

**Figure 7. GDP of trading partners, yearly growth rate**



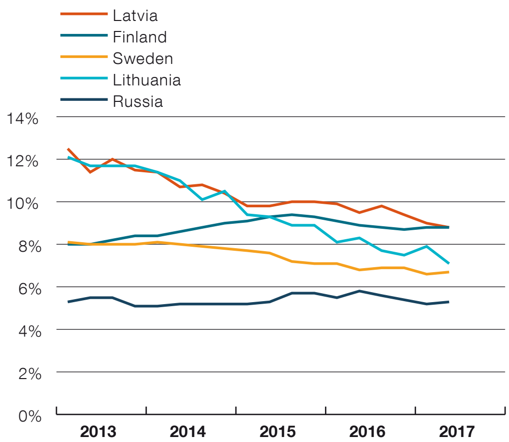

Source: Eurostat

**Figure 8. Yearly export growth of trading partners in euros**




Source: Reuters

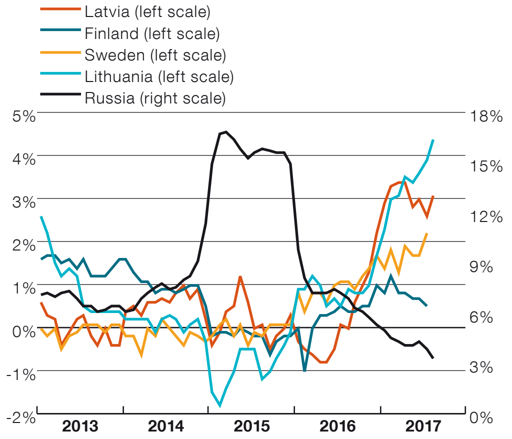
**Figure 9. Unemployment rate in trading partners**




Sources: Eurostat, OECD

metals, chemicals, wood and electronics has helped growth remain high in the Finnish industrial sector, and Swedish manufacturing has grown noticeably in recent months with support from the production of cars, metals and machinery. The labour market has been stable in those countries as unemployment was lower than in the second quarter of last year and the number of people in employment has risen. Price pressures remain very low in Finland as inflation came down to 0.5% in July. In Sweden however, inflation has mainly risen in the past half-year, and in July it reached 2.2% partly because service prices rose.

**Figure 10. CPI inflation in trading partners**




Source: Eurostat

**The Russian economy continues to grow.** Yearly growth in the economy picked up to 2.5% in the second quarter, which means that it has been increasing for three consecutive quarters now. Economic growth is mainly backed by exports and investment. The economy has been further boosted by construction and the industrial sector. The main part of the rapid yearly growth in the value of exports, which continued in the second quarter, came from exports of crude oil, but exports of metal products and chemical and food products were also up. Household consumption remains weak because of the poor purchasing power of households. Despite the growth in real wages, the real disposable income of households has fallen and so retail sales volumes were lower in the first seven months of 2017 than a year previously. Price pressures have eased substantially though, and in August yearly inflation was down to 3.3%. Lower inflation allowed the Russian central bank to cut its base interest rate to 9%.

# THE ESTONIAN ECONOMIC ENVIRONMENT

## ECONOMIC ACTIVITY

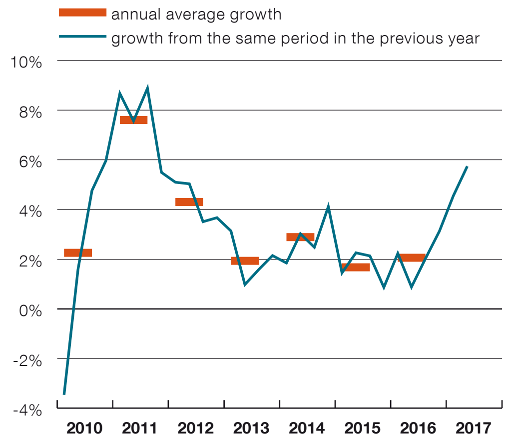
**Yearly growth in Estonian GDP was 5.7% in the second quarter (see Figure 11) and quarterly growth adjusted seasonally and for the number of working days was 1.3%.** Growth accelerated notably in summer 2016 and has remained at the same rate for four quarters now, with average quarterly growth in the second half of last year and the first half of this at 1.3%.

**The data already available for the third quarter do not indicate any sharp slowing of yearly growth** (see Figure 12[9]). The index of economic confidence, which reflects the expectations of consumers and companies (see Figure 13), was weaker in July and August than in June, though the average for the two months was higher than in the second quarter. The contribution of the energy sector to economic growth should decline in the third quarter, but the growth expectations of manufacturing companies for the months ahead remain high. There was a slowing in the growth in the industrial output index in July, and survey data for August also indicate slower growth in industrial output. Estimates by construction companies of orders were similar in July and August to what they were in the second quarter, while estimates of growth in demand by companies in the service sector improved significantly.

**Economic growth in the second quarter was largely supported by domestic demand, while growth in exports was modest despite an improvement in the external environment.** Although private consumption increased little, there was rapid growth in investment with investment and consumption by the general government contributing 1.9 percentage points to economic growth. Given that a year ago orders by the general government were declining, the increase in the general government contribution to demand and so to faster GDP growth is significant (see Figure 14). Although economic growth was driven more by domestic demand than by the exporting sector, imports did not grow notably faster than exports and so the contribution of net exports to growth remained around zero.

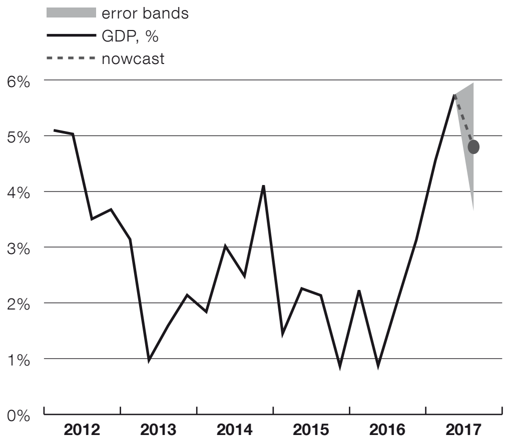
9 The nowcast produced by the Eesti Pank indicator model is a technical regression-based nowcast that takes in data as they are received. There are currently fifteen models in the set and the nowcast is the median of the individual forecasts. The uncertainty related to the forecast is indicated by the mean historical absolute nowcast errors.

**Figure 11. GDP growth**



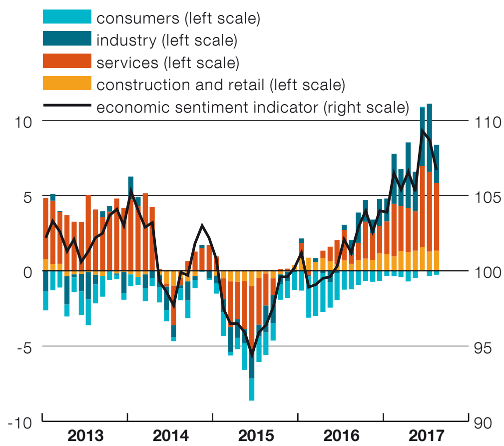

Source: Statistics Estonia

**Figure 12. GDP growth and current quarter nowcast**




Source: Eesti Pank

**Figure 13. Economic sentiment indicator and economic confidence by sectors**




Source: European Commission

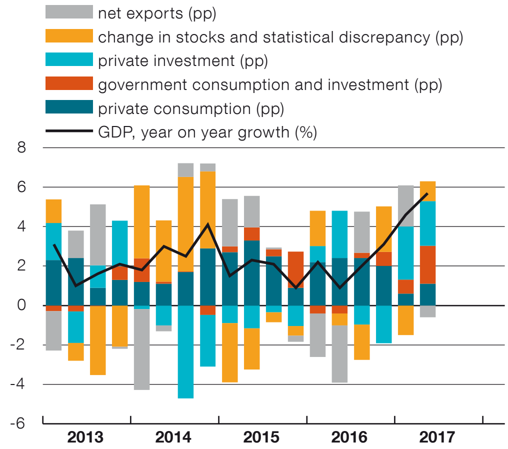
**The importance of domestic demand as a source of growth is also reflected in the sectors that contributed to higher GDP, where construction made an important contribution** (see Figure 15). The energy sector had a relatively large influence on growth, and its rapid growth was due to a recovery in output levels after the oil price bottomed out. The rapid growth in mining however reflected both the growth in the energy sector, which increased demand for oil shale, and the growth in road construction and the consequent demand for sand, gravel and similar products.

**It cannot yet be concluded from the relatively slow growth in exports that the competitiveness of the exporting sector has weakened, as other sources of data indicate faster growth in exporting branches.** The value added of manufacturing grew modestly in the second quarter at only 1.4% once price rises are discounted. The business survey by the Estonian Institute of Economic Research and the European Commission shows that the capacity utilisation level in manufacturing has fallen in almost all sectors. The index of output volumes in manufacturing shows however that manufacturing output increased by a total of 8% in the second quarter, which is notably faster than the average of recent years.

**The energy sector played an important role in the growth of industrial production (see Figure 16), as the industrial production volume index increased by a total of 11% in the second quarter.** This major impact of the energy sector on growth in industrial output was still temporary, as the changes in the oil price and developments in the Nordic electricity market in 2015 had significantly reduced output in the energy sector. Output volumes recovered last summer however, and since then the energy sector has been one of the main sources of growth in industrial output. The large impact of the energy sector passed out of the yearly growth of industrial output volume in July however, and growth in industrial output slowed from more than 10% in the preceding months to 5%.

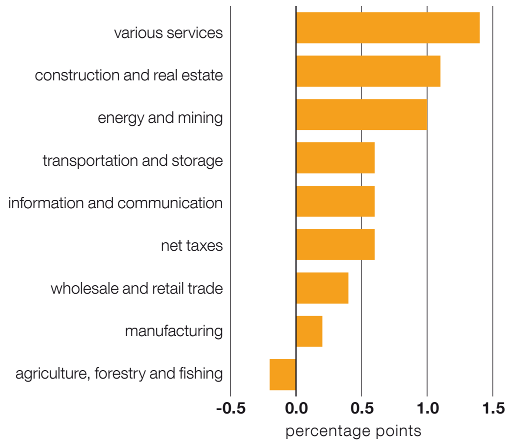
**The economy may overheat with economic growth at lower levels than before the global**

**Figure 14. GDP growth**



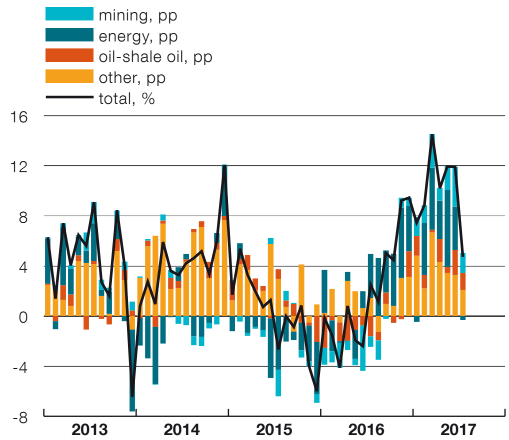

Sources: Statistics Estonia, Eesti Pank

**Figure 15. Contributions of sectors to GDP growth in Q1 2017**




Source: Statistics Estonia

**Figure 16. Yearly industrial production growth**




Sources: Statistics Estonia, Eesti Pank

**financial crisis.** Corporate investment has been at historically low levels in recent years, meaning that potential for growth in the economy has been reduced. Increasing profits in improved economic circumstances however will boost investment moving forwards and in this way will raise potential GDP growth. Although investment grew rapidly in the first half of the year, it remains lower than in the previous decade as a share of GDP.

**Estonian GDP currently exceeds its sustainable level.** This is indicated by business surveys that show an increase in the past half-year in the share of companies that are mainly restricted by labour shortages (see Figure 17), and a decline in the share of companies that face a lack of demand. Labour shortages are already cited by almost half the companies in the construction sector as the main factor limiting growth, and they are particularly sharp in residential construction.

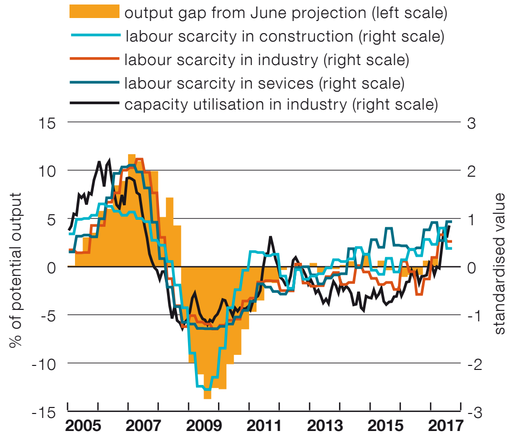
## DOMESTIC DEMAND

**Economic growth in the second quarter was based largely on the growth in domestic demand.** Domestic demand was boosted mainly by increased investment (see Figure 14), as gross fixed capital formation at constant prices was 18.2% higher than in the second quarter of the previous year (see Figure 18).

**Having fallen for the past three years, corporate investment increased in the second quarter, as it had in the first, by a fifth.** The growth in corporate investment was mainly driven by transport and storage, where new ferries were bought to go between the mainland and the islands. Capital formation increased especially in transportation vehicles, while investment in construction accounted for a quarter of the increase in corporate investment in capital. As investment has increased so has corporate debt to some extent. Profits also increased in the first half of the year (see Box 2), with the result that the capacity of companies to finance investments from their own resources also improved.

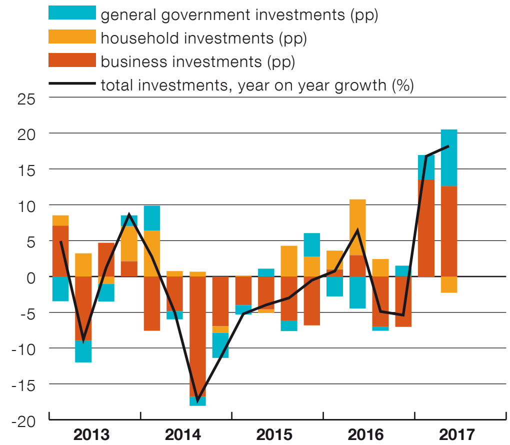
**While corporate investments increased strongly in the second quarter, so too did general government investment which was up by almost a half on a year earlier.** The growth of 48.5% was divided roughly equally between investments in construction and in machinery. Gross fixed capital formation increased for both local governments and central government (see also the section on general government finances).

**Figure 17. The business cycle**




Sources: European Commission, Statistics Estonia, Eesti Pank

**Figure 18. Gross fixed capital formation**



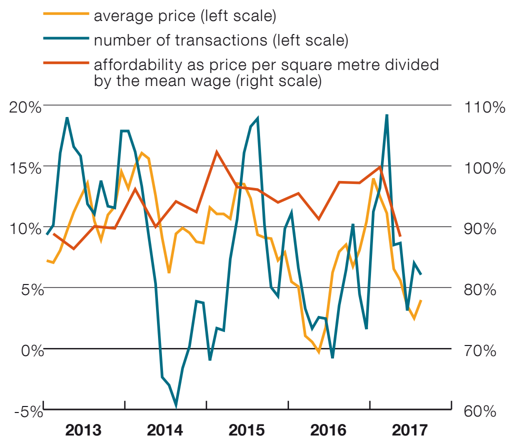

Sources: Statistics Estonia, Eesti Pank

**Household investment in new residential real estate was 12% lower at constant prices in the second quarter than a year earlier, though the real estate market remains active.** The fall was partly due to the exceptionally high reference base in 2016, and also partly due to the decline in the share of transactions with new real estate properties. The number of transactions with older properties continued to rise though. Data from the Estonian Land Board show that the yearly rise in the selling price for apartments was around 4% in the second quarter, but the growth increased by a couple of percentage points in July and August (see Figure 19). The use of credit to purchase real estate increased however, as around 15% more new housing loans were taken in the second quarter than in the second quarter of last year, and the rate of growth of the household loan stock caught up with the growth rate of household incomes.

**Spending on private consumption by households was 2% higher in the second quarter than a year earlier at constant prices** (See Figure 20). High inflation has meant that private consumption growth at constant prices has been lower than a year previously. Household spending on consumption increased by 6% over the year at current prices however, which is even faster than a year earlier. A similar increase in consumption spending over the year can also been seen in the data on retail sales. Sales revenues of retail companies were up by an average of 6.7% in the second quarter at current prices, and by 5.6% in July. The growth in the volume of sales revenue has however been restrained, like private consumption, by inflation, and it was up by an average of 2% in the second quarter and 1% in July.

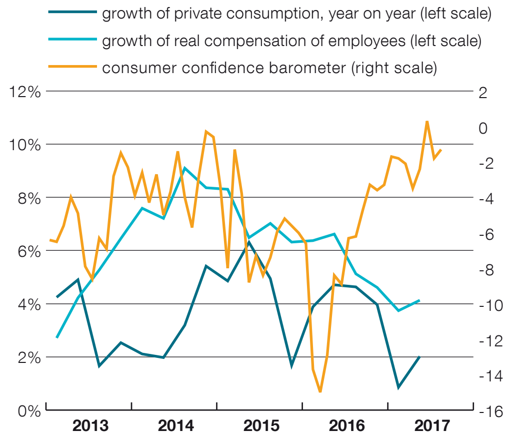
**Data from the Tax and Customs Board show that declared wages paid out have increased faster than consumption spending, meaning that household savings have also increased, and this is confirmed by the rapid yearly growth of 8.6% in the stock of household deposits.** The growth in private consumption in the second quarter was driven most by increased spending on residential property and transport, especially on fuel. Like in the previous three quarters, spending on leisure services and goods also increased rapidly. The decline in consumption of alcohol and tobacco products, which has lasted for three years, also continued.

**Figure 19. Annual growth of housing prices and the number of transactions (3-month average)**




Sources: Land Board, Statistics Estonia

**Figure 20. Private consumption**



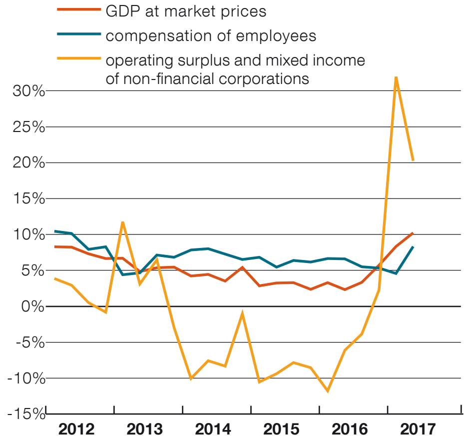

Sources: Statistics Estonia, Tax and Customs Board, European Commission

**The growth in domestic demand in the second quarter was restrained by the reduction in inventories.** Inventories were mainly reduced in the second quarter because stocks of goods bought for sale by retailers and wholesalers were reduced.

## Box 2: Developments in corporate profits in recent years

The operating surplus and mixed income of non-financial companies, which is equal to the total profit of non-financial companies in the system of national accounts, increased strongly in the first half of this year having fallen in the previous couple of years (see Figure B2.1). Profits vary more across the business cycle than wages and general economic growth do. Profits can serve as a buffer when there is a short-term decline, and when the economy is strengthening profits increase faster than wages do to make up for earlier declines.

**Figure B2.1. Yearly change in corporate profits in the national accounts**




Source: Statistics Estonia

This box considers the reasons for both the earlier fall in profits and the growth in the first half of 2017. The analysis uses corporate statistics from Statistics Estonia, which give more detailed data on changes in the profit of the business sector and other economic figures than the national accounts do by sector. It should equally be remembered that there are methodological differences in the time series for the operating surplus and mixed income of non-financial companies in the national system of accounts and the total profit in the corporate sector business statistics, as the national accounts figures also include assessments of the shadow economy among other things.

**Figure B2.2. Yearly change in total profits by economic sector**


The size of the bubble shows the share of the economic sector in total corporate profits
Sources: Statistics Estonia, Eesti Pank calculations

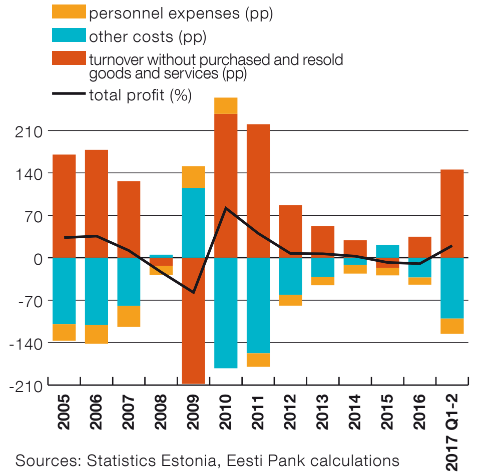
Data from the enterprise statistics show that total corporate profit, which is the difference between the income from sales and the total expenditure on creating the goods and services sold, fell by 8% in 2015 and by 9.9% in 2016. Profits had already been growing modestly for a couple of years before this though. Total profit fell for most sectors in both 2015 and 2016, declining in 13 out of the 17 main sectors (see Figure B2.2). The decline in profits in 2016 was a little more broadly based, and a larger fall in total profits was avoided because of the growth in profits in trade, which is a large part of the business sector. The fall in profits was driven most in both years by manufacturing. In the first two quarters of 2017, corporate profits were up by an average of one fifth on the same period of 2016, and as with the earlier fall, the recovery in profit growth was seen in most sectors. Profits were only down in a few individual sectors that account for a small share of total corporate profits.

The decline in profits was driven to a large extent by the fall in sales income in 2015, which was due to a drop in both domestic and export prices (see Figure B2.3). Companies succeeded in holding their spending under control at the time when sales revenues were falling, but wage pressures in the labour market meant labour costs kept rising and it was not possible to prevent profits being squeezed by making savings on other costs. The return of inflation and increased demand means that sales revenues grew markedly faster at the start of this year, and this allowed companies to increase their profits even as expenditures increased.

Profits reflect not only the difference between incomes and expenditures, but also how the value added that is created is divided between the income of employees and that of the owners of the company. As value added comes from sales revenues, then when sales revenue stopped growing in the past two years the growth in value added also slowed, even though value added increased slightly as a share of sales revenue (see Figure B2.4). In the division of value added between profits and labour costs, there was an increase in the share of labour costs. There were also some sectors in the past two years where the slightly faster growth in value added meant that profits grew despite the rise in labour costs (see Figure B2.5). The rise in labour costs has been slower than the average in those sectors where value added has been in decline.

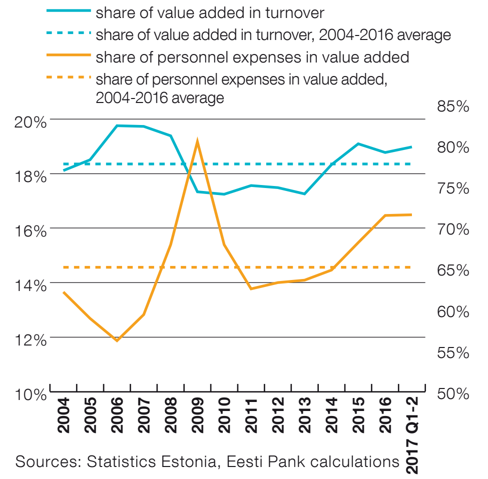
In the first half of this year, sales revenues were boosted strongly by growth in demand and by higher inflation, and this helped the value added created to grow faster than previously. Although the high level of demand for labour pushed labour costs up at the same time, the increase in value added allowed corporate profits to grow. If economic conditions remain favourable and inflation higher in the near future than previously, companies will probably be able to increase their profits further, though catching up with the income levels of richer countries in labour income and profits will depend above all on the ability to increase productivity.

**Figure B2.3. Factors in the changes in total profits**



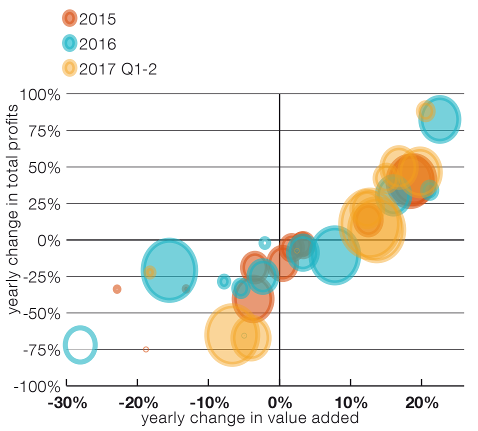

Sources: Statistics Estonia, Eesti Pank calculations

**Figure B2.4. Share of value added in turnover**




Sources: Statistics Estonia, Eesti Pank calculations

**Figure B2.5. Yearly change in value added and total profits**

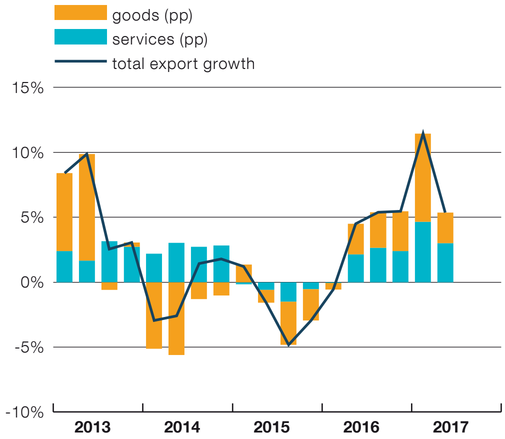



The size of the bubble depends on the yearly growth of personnel expenses. Empty circles show a decline in personnel expenses.
Sources: Statistics Estonia, Eesti Pank calculations

## EXTERNAL BALANCE

**The growth in trade accelerated in the second quarter.** The balance of payments shows that exports of goods and services were up 5.4% in the second quarter (see Figure 21), while imports were up 5.8% at the same time. As in recent years, exports of services grew faster than exports of goods. The growth rates were equal in July and the flash estimate shows exports of both goods and services were up 8% over the year. Imports in the European Union as a whole grew at a slightly faster rate in the second quarter than Estonian exports did, meaning that Estonian exporters lost a little market share in Europe.

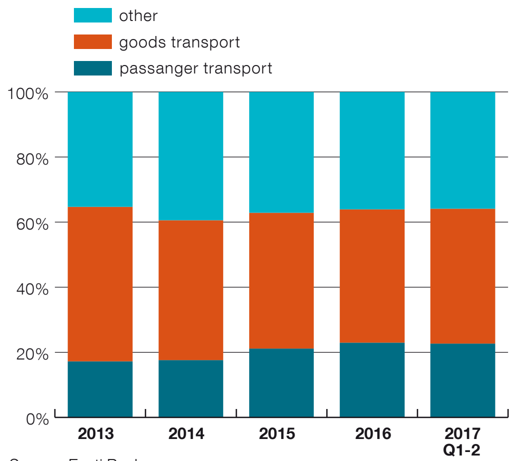
**Figure 21. Export growth decomposed**




Sources: Statistics Estonia, Eesti Pank

**Exports of goods increased by 3.6% in the second quarter, mainly due to exports of mineral products.** The rapid growth continued in July. Foreign trade statistics show that the export turnover of mineral fuels, which is mineral products without peat and electricity, was 98% higher in the second quarter than a year earlier and this accounted for around half of the growth in goods exports. This increase in turnover was largely due to price rises, as the volume of exports of mineral fuels increased by about 50%. Exports of fuels were 13% lower in July than a year previously, and in subsequent months yearly growth will not be very fast because of the higher reference base. Exports of machinery and equipment fell for the second consecutive quarter, which was largely down to the weakness in exports of communications equipment to Sweden. As communications equipment is mainly produced by subcontractors, the amount of it exported does not significantly affect the value added of the Estonian economy. Net exports of capital goods were negative for the second quarter in a row, meaning more capital goods were imported than exported. Unfortunately, transport vehicles have dominated among the capital goods imported in recent quarters, and their contribution to raising the productivity of the economy is generally smaller than that of machinery and equipment, imports of which have declined at the same time.

**Figure 22. Structure of transport services**

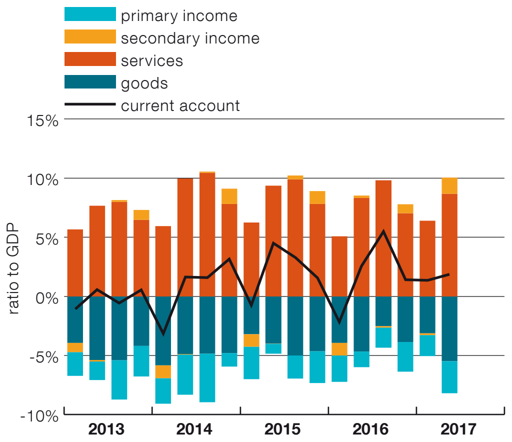



Source: Eesti Pank

**The growth in exports of services also remained fast in the second quarter and in July.** Having fallen for two years, exports of transport services started to have a significant impact again, as they were up 9% in the second quarter on a year earlier and 8% in July. The share of passenger transport in transport services has been increased by the partnership between Estonian and Polish airlines. Some years ago this share was 15-20%, but in the first half of this year it was more than 22%, and for the year as a whole it is likely to exceed one quarter of all exports of transport services (see Figure 22). Road transport of goods also increased. Exports of maritime and rail transport services were not significantly different from what they were a year earlier. Other important service sectors where exports increased were travel services, telecommunications services, computer and information services, and other business services.

**The surplus on the current account was 108 million euros in the second quarter,** or around 1.9% of the GDP of the period, which is about one fifth less than a year earlier (see Figure 23). The surplus declined largely because the outflow of investment income was twice as large, though this was offset to some extent by the larger take-up of the Structural Funds of the European Union. There was no significant change from a year earlier in the balance of the goods and services account. The current account surplus was also smaller in July than in the same month of the previous year. The decline in the current account surplus was in line with the general state of the economy, as the growth in investment increases the state's need for imports and the recovery in corporate profits increases the outflow of investment income. Box 3 analyses the reasons why the current account surplus has not shrunk even faster in recent years.

**Figure 23. Current account**




Sources: Statistics Estonia, Eesti Pank

**More direct investment came into Estonia in the second quarter than was made abroad from Estonia.** The amount of direct investment in Estonia was increased through investment in share capital, reinvested income, and investment in debt, while the money invested abroad mainly went into debt instruments. The amount of direct investment in manufacturing has been larger since the start of 2016 than the amount repaid to investors, indicating that money has moved into Estonia. The net inflow of direct investment in manufacturing has increased steadily and in the first quarter it reached 83 million euros, before falling to 27 million euros in the second quarter. The amount of direct investment in wholesale and retail has also increased steadily, while flows of direct investment in the financial sector remain volatile.

**Estonian companies still consider their international competitiveness to be strong.** Assessments by companies of their competitive position in the European Union and outside of it have improved over the past quarter. For the first time since 2011, companies considered that they had sufficient export orders and they were expecting that orders would increase strongly in the future. The real effective exchange rate based on unit labour costs was around 2% higher in the first quarter than a year earlier. The growth rate is quite slow in comparison with that of recent years. The nominal effective exchange rate has also risen slightly in recent months though it remains lower than in the second quarter of last year.

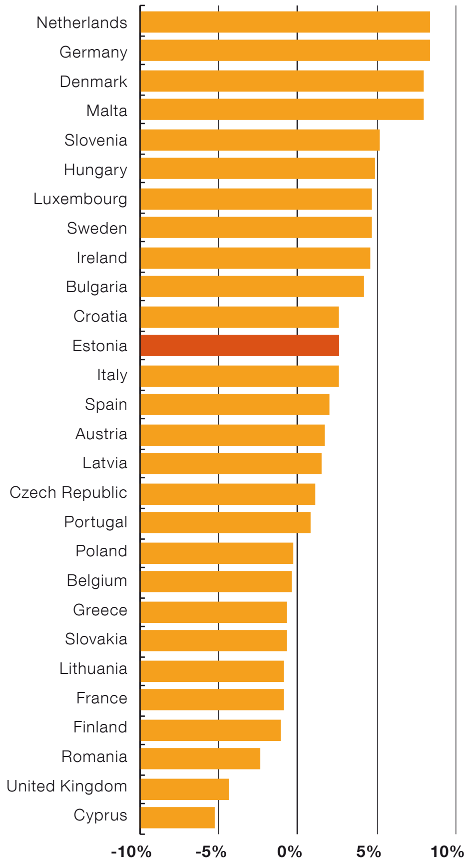
## Box 3: The impact on the current account of changes in the structure of domestic demand and exports

The Estonian current account has been in surplus for the past three years. The surplus was around 2% of GDP in 2016, and this put Estonia around the average for countries in the European Union (see Figure B3.1). Given that there was a deficit of 15% of GDP in 2007, Estonia is one of the countries whose current account balance has improved the most. Economic growth at close to or even above the long-term sustainable rate in Estonia suggests that the current account should be in deficit or at least close to balance, as the economy needs to import more than usual in such circumstances. This box analyses the structural changes in domestic demand and exports in recent years, and assesses whether and how much those changes have affected the current account. The changes are viewed in comparison to 2013, when the Estonian current account was last in deficit.

Domestic demand components like consumption and investment affect the current account surplus or deficit through the need for imports, which is created by the consumption or investment of goods and services in the economy. In other words each component has an import intensity, which shows how many units of imported content are needed for one unit to be consumed or invested. This analysis uses import intensities for the domestic demand and export components calculated on the basis of the 2010 table of inputs and outputs (see Table B3.1).

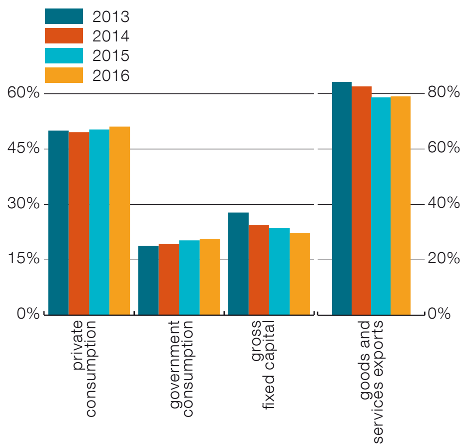
The domestic demand component with the highest import ratio is gross fixed capital formation, for which the ratio is 0.5, and the share of this in the structure of domestic demand has shrunk sharply in recent years (see Figure B3.2). In contrast there has been an increase in the share of final consumption spending by general government, which has a much lower import ratio of 0.16. The share in demand of private consumption, which has a ratio 0.4, has not changed significantly. There have also been structural changes in recent years in capital formation. There has been a notable decline in investment in machinery and equipment, including transport vehicles (see Figure B3.3), where investment has a high import content. In contrast there has been an increase in investment in intellectual property rights and to a smaller extent also in construction investment, where the import content is much smaller. A lack of data means it is not possible to calculate how much this shift in investment types has affected the import intensity of investment as a whole, but it may be surmised that the general reduction in the share of investment components in demand has been accompanied by a reduction in the import content of investments that have been made.

**Figure B3.1. Current account in European Union countries in 2016**




Source: Eurostat

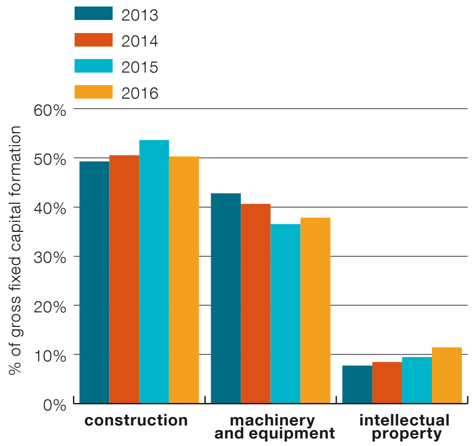
**Figure B3.2. Proportion of GDP components**




Sources: Statistics Estonia, Eesti Pank

The need for imports is affected not only by the structure of domestic demand, but also by exports and the structure of exports, because preparing products for export in a small country needs some of the knowledge, commodities and necessary machinery to be imported. The share of exports in GDP has fallen in recent years, mainly because of a reduction in goods exports. Exports of services, which have an import ratio that is less than half that of goods, have increased at about the same rate as the total output of the country. This means that the structural changes in exports have reduced the need for imports into the country and have instead aided the surplus on the current account. As with investment, it is possible to discuss here how much more the need for imports has been affected by the changes in exports of goods. The share of mineral products in goods exports fell by around a third in these years (see Figure B3.4), while there has been a rise in exports by the wood and furniture industry, which contain fewer imports. The absence of more detailed import intensities means that it is not possible to give a more precise assessment.

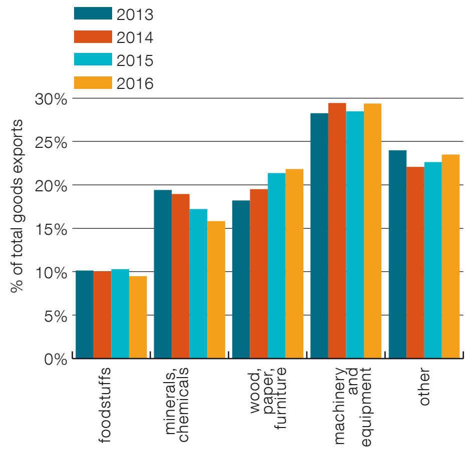
**Figure B3.3. Structure of gross fixed capital formation**




Source: Statistics Estonia

A final factor that affects the current account is the income account, which directly affects the current account through inflows and outflows of investment income and other transfers. A lot of money has flowed into the Estonian economy as direct investment by foreign investors over the years, and so it is logical that more investment income would now flow out of the country than flows in. Corporate profitability has declined in recent years and in consequence the outflow of income has also been smaller, though taken together with other incomes the balance has remained largely unchanged and the effect on the current account of the changes has been small (see Table 1).

**Figure B3.4. Decomposed goods exports**




Source: Statistics Estonia

The import intensities for 2010 have been used for the structure of domestic demand in 2014 to 2016 in assessing the effect of changes in that structure on the current account. In the same way the effect of changes in the structure of exports has been analysed by looking at the share of goods and services in exports and exports as a share of GDP in different years. It is apparent that the biggest positive effect increasing the surplus or reducing the deficit has come from the decline in the share of investment in domestic demand, which made the current account surplus in 2016 2.8 percentage points of GDP larger than it would have been with the domestic demand structure of 2013 (see Table B3.1). The largest negative impact reducing the surplus or increasing the deficit has come from the increase in the share of services exports, though this is covered by the low need for imported content and so the absolute volume is quite modest when compared with other factors. The table has a column showing comparison of the data for the first half of this year, but any assessments based on these data will be less reliable than those from earlier years because the data are very recent and incomplete.

**Table B3.1. Estimated impact of import intensity and structural changes in domestic demand and exports on the current account balance**

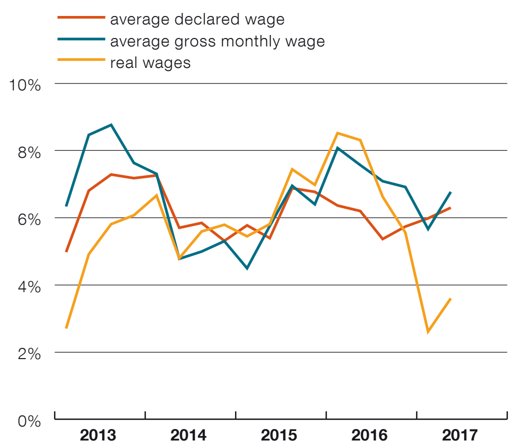
| | | import intensity | impact of the structural shift on the current account compared to 2013 (pp of GDP) | | | |
|---|---|---|---|---|---|---|
| | | | 2014 | 2015 | 2016 | 2017 Q1-2* |
| domestic demand structure | private consumption | 0.40 | 0.2 | -0.1 | -0.4 | -0.3 |
| | government consumption | 0.16 | -0.1 | -0.3 | -0.3 | -0.2 |
| | gross fixed capital formation | 0.50 | 1.7 | 2.1 | 2.8 | 1.8 |
| structure of exports | goods exports | 0.55 | 1.0 | 1.0 | 1.4 | 1.3 |
| | | 0.26 | -0.5 | -0.5 | -0.7 | -0.6 |
| | income balance | | -0.4 | 0.2 | 0.2 | |
| | **Total** | | **1.9** | **2.4** | **3.0** | **2.0** |

* Data are preliminary and not seasonally adjusted
Sources: Statistics Estonia, Eesti Pank estimates

## THE LABOUR MARKET

**The average gross monthly wage was 6.8% up in the second quarter of 2017 on the same quarter of the previous year.** The growth rate was faster than the 5.7% seen in the first quarter but was still below the average seen in 2016 despite inflation and the rapid growth in the economy (see Figure 24). Wage growth is notably better aligned with the increase in labour productivity than it had been in previous years.

**Figure 24. Yearly change in average wages**




Sources: Statistics Estonia, Tax and Customs Board

**The average wage growth was faster in services than in the industrial sector, but the difference between the growth rates was narrower than in earlier years.** If wages continue to rise quickly in the service sector for a long time, it may harm the competitiveness of the industrial sector, because it is harder for exporting companies that are price takers in foreign markets to pass increased labour costs on into the prices of their own products. As growth in output levels recovered, wage growth accelerated in the industrial sector in areas connected to oil shale and construction. Wage growth in the construction sector was still below the average for the economy, but looking forward it is probable that increased demand together with a shortage of suitable labour will boost wage growth further. Wages in services in the private sector rose by 7.6% in the second quarter, which is close to the rate seen in 2016. However, wage growth in health and education within the service sector slowed. This slowdown will probably prove temporary however, because from the 2017/2018 academic year it is planned that the wages of kindergarten teachers will be raised to at least the minimum rate for schoolteachers.

**The effect of faster inflation has sharply slowed the growth in real wages, meaning that the purchasing power of those earning the average wage is growing more slowly than previously.** It is probable that in future higher inflation, especially higher food prices, will affect the wage demands of employees. For companies operating in foreign markets and competing with imports in domestic markets, higher inflation in the external environment means that higher wage costs can more easily be passed into product prices.

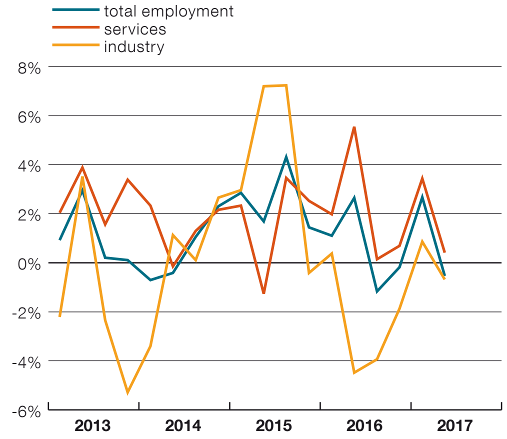
**Faster economic growth and higher inflation have allowed companies to increase their profits.** Revised GDP data show that unit labour costs fell by 2.1% in the first quarter and by 0.8% in the second quarter. This meant that the fall in the first quarter was larger than had previously been estimated. On the income side of GDP, growth in the payroll of the economy accelerated significantly from 4.6% in the first quarter of 2017 to 8.3% in the second. At the same time the productivity of employees rose by even more.

**The Labour Force Survey by Statistics Estonia shows that 66.9% of people of working age were in employment, and most sources of data indicate strong demand for labour.** The survey shows that the number of people in employment was down 0.5% in the second quarter of 2017 (see Figure 25), with the number remaining the same as a year previously at Estonian resident companies and institutions, while the number working abroad fell. Most other sources of data show, however, that employment increased in the second quarter, with the registry data of the Tax and Customs Board finding the number of people receiving declared wage income was up 0.9% in the second quarter, and this was due to the private sector. The sentiment surveys by the Estonian Institute of Economic Research show the employment expectations of companies have improved, and an ever larger share of the companies surveyed consider labour shortages to be a factor restricting production. Employment expectations have particularly increased in construction, where labour limits are particularly felt as well.

**Rapid growth in the number of vacancies indicates that companies are looking to hire more employees but it is becoming harder and harder to fill positions.** There were 12,027 vacancies in the second quarter of 2017, which is one quarter more than a year earlier (see Figure 26). The sector where the vacancy rate rose most was the industrial sector, where the rise was mainly due to manufacturing.

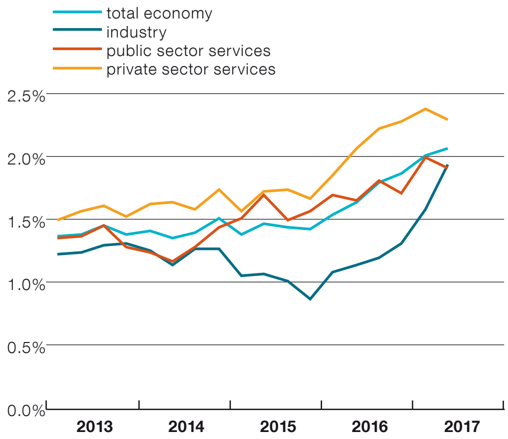
**The labour force participation rate has increased from a year earlier, and this has raised the unemployment rate.** Statistics Estonia put the unemployment rate at 7%, which is 0.5 percentage point higher than in the first quarter of last year (see Figure 27). The estimate by the Labour Force Survey of those who are out

**Figure 25. Employment year on year growth from the Labour Force Survey**



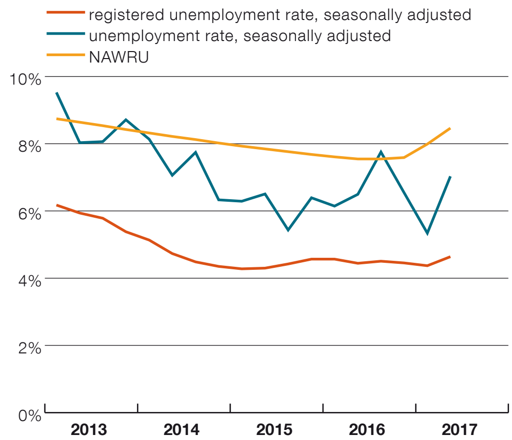

Source: Statistics Estonia

**Figure 26. Vacancy rate, seasonally adjusted**




Source: Statistics Estonia

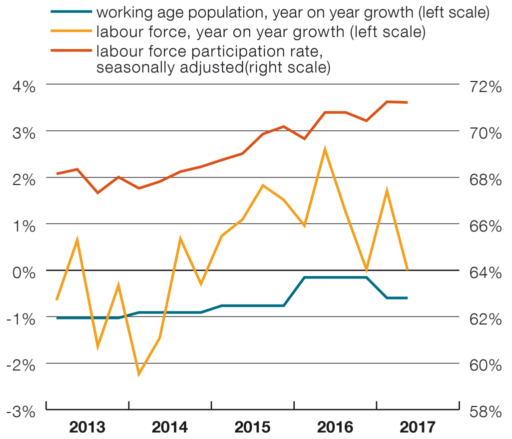
**Figure 27. Unemployment**




Sources: Statistics Estonia, Töötukassa, Eesti Pank of the labour market for health reasons was about the same as a year previously, but this varies quite widely from quarter to quarter. Data from Töötukassa, the Estonian unemployment insurance fund, put the number of unemployed who have restricted capacity to work at 10,000, indicating that the work ability reform has affected the unemployment rate and active participation in the labour force (see Box 4). Households have become more optimistic as fear of rising unemployment has dropped sharply during 2017 despite the low rate of unemployment.

**Favourable conditions for employees have brought an ever larger share of the working age population into the labour market** (see Figure 28). This has offset the slow but steady decline in the number of people of working age in recent years. The labour force participation rate was up over the year in both the first quarter and the second quarter of 2017, and in the second quarter it stood at 72%. Unlike in previous years, labour force participation increased among those aged under 50.

**Figure 28. Labour supply**




Source: Statistics Estonia

**Box 4: The introduction of the work ability reform**

**The work ability allowance act came into force in July 2016 and introduced the work ability reform, which significantly affected the labour market**. One of the aims of the new system is to bring the part of the inactive population that are partially capable of working back into the labour market, by making the work ability allowance conditional on activity[10], which for most applicants means working or looking for work. A range of active labour market policy measures to encourage the search for work are available. The transition to the new system for assessing the capacity to work and for paying the allowance is a gradual one, as the system started to apply in the second half of 2016 only to those applicants whose ability to work had not been assessed since 2010. From January 2017, this was expanded to include those who had earlier received an incapacity pension, and who were reapplying when this expired. This box discusses the introduction of the reform from the beginning.

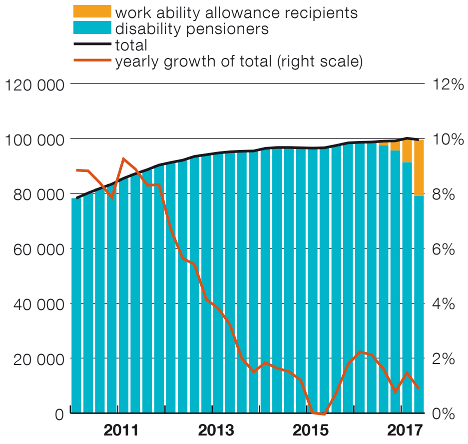
**The transition to the new system will largely occur in the years 2017-2019, because under the old system around 80% of cases classified as unable to work had a reassessment date within three years.** The number receiving an allowance rose slightly faster in the years before the reform was introduced, which is to be expected as the change in the rules about the assessment of incapacity for work caused some uncertainty. At the end of the second quarter of 2017 there were about 20,000 people receiving the work ability allowance, and 80,000 receiving a working incapacity pension (see Figure B4.1).

**There was no significant change in the first year of the reform in the number applying to have their ability to work assessed or in the proportion of cases where it was decided that work ability was reduced, but rather more such decisions were taken using the old rules in the first half of the year than using the new rules in the second half the year.** A total of 11,939 new applicants were assessed for their ability to work under

10 Activity can also include full-time education or caring for a child under the age of three. See https://www.tootukassa.ee/eng/content/work-ability-reforms/conditions-receiving-working-ability-allowance

the old rules in 2016, and 5239 were assessed in the second half of the year, according to their applications to Töötukassa. The total number of initial assessments was 17,173, which was close to the average for 2013 to 2015 of 16,559, and under the new rules 18% of applicants were considered incapable of work and 53% were considered to have reduced ability to work, meaning that 71% of decisions granted the right to some incapacity allowance. The most common reason given for partial ability to work was musculoskeletal and connective tissue disease, while the main cause of incapacity to work was tumours. For comparison, the medical expert commission in 2013 to 2015 assessed 77% of cases as being at least 40% incapable of work, which gave the right to an incapacity pension. An average of 23% of cases in those years were assessed as being highly incapable, at 80 to 100%, of work.

**Figure B4.1. Disability pensioners and work ability allowance recipients**




Sources: Social Security Board, Töötukassa

**It is probable that under the new system there will be a slight reduction in the chances of repeat applicants getting an extension, and so the work ability assessment system has become more restrictive.** In 2017 it was possible to apply for both initial and repeat assessment of capacity to work. Out of 28,514 applications for assessment in the first seven months of the year, 83% got a positive response, and of these 59% were partially able to work and 24% were unable to work. For comparison an average of around 90% of applications were granted in 2013 to 2015, as the probability of repeat applicants being given a positive answer was very high at 96% on average. If applications continue to be submitted and decisions to be taken at the same rate in the second half of 2017 as in the first half, and the same proportion of applications are approved, then by the end of the year the number with the right to receive a work ability allowance will increase to around 45,000 people.

**For those fully incapable of work, the proportion of allowances granted for the maximum period of five years is higher than under the old system.** In the first half of 2017, 28% of cases received a decision that applied for five years, and 43% of cases of incapacity for work. Under the old system between 6.5% and 10% of applicants were granted the maximum period of incapacity in 2011 to 2015. This change will in future reduce the administrative burden of assessing incapacity for work.

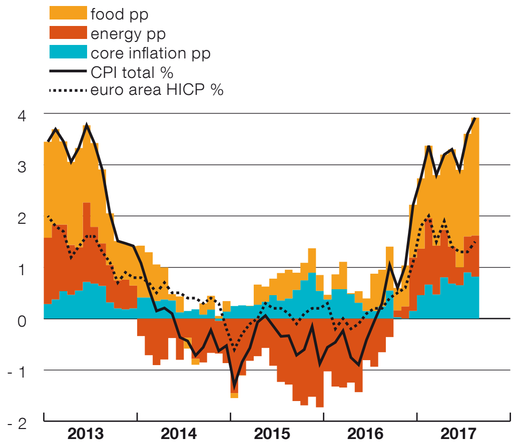
**The Eesti Pank June forecast found that the reform will have a beneficial effect on both the supply of labour and, in the longer term, on the production capacity of the economy.** Those receiving an incapacity pension for partial incapacity for work and new entrants will now have to meet conditions of activity, which for most will mean looking for work or working. In the second half of 2016 there were an average of around 1400 recipients of partial working capacity benefit each month, and at the moment of assessment 47% of those assessed as partially capable of work were not working. Assuming that such people would have remained out of the labour market under the old system, the number of people added to the labour market may be as many as 700, which is a little fewer than the 800 predicted by the Eesti Pank June forecast. Extrapolating the trend of the first seven months of 2017, the number of entrants to the labour market can be forecast at around 12,000 at the end of the year, rather than the 18,000 in the forecast. The estimate is lower than before because the reform takes time to introduce and a larger share of people with partial ability to work are already employed or otherwise active than was earlier forecast. Equally the estimate does not consider that the broader range of labour market services and better access to them will increase the participation in the labour market of people with restricted ability to work.

**It is difficult to estimate precisely the impact of the work ability reform on labour force participation, productivity and employment, but the labour market data were in line with the forecast in the second half of 2016 and in the first half of 2017.** The labour force participation rate has risen since the work ability reform was introduced, and so has the unemployment rate at the same time. Data from Töötukassa show that between March and June 2017 an average of around 5% of those registered as unemployed with partial working ability found work. This, as may be expected, is lower than the figure of 12% for those who are fully capable of work.

## PRICES

**In the first half of the year inflation was stable at close to 3%, but in July it rose substantially, mainly because of the rise in excises, and in August it reached 3.9%** (see Figure 29). The harmonised index of consumer prices shows that inflation in recent months in Estonia has been one of the highest in the euro area. Around half of the rise in prices was due to domestic factors, and the other half came from price trends in the external environment. Prices for food commodities on global markets have continued to rise, but the contribution of domestic factors to inflation has also increased.

**Figure 29. CPI growth**



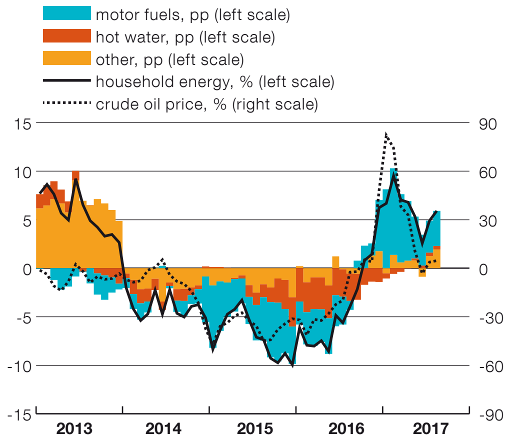

Sources: Statistics Estonia, Eesti Pank

**Domestic factors, especially faster economic growth, have strengthened the demand-side price pressures.** Figures for economic activity indicate that economic growth is currently above its long-term sustainable rate. Core inflation was boosted by higher services prices in the first half of the year, but the price level of industrial goods has not changed particularly. Service price inflation has been led by accommodation services and rent prices, but this has been offset by lower prices for communication services. Price rises for imported industrial goods may have been restrained by the appreciation of the euro by more than 10% against the US dollar since the start of the year.

**Alongside the rise in prices of production inputs, there has been a rise this year in corporate mark-ups.** Labour costs continue to rise for companies as there is little available labour in the economy, and wages continue to rise fast. Prices of domestic output, which are shown by the GDP deflator, rose by 4.6% in the second quarter. In recent years the deflator has risen by only 1-1.5% Manufacturing companies have been able to raise export prices in foreign markets particularly, but energy companies have also seen profits recover following several years of low oil prices.

**The structure of inflation changed significantly during the first half of the year.** Growth in energy prices was very rapid at the start of the year but then slowed gradually (see Figure 30), and now it is food that is driving inflation. Prices of food commodities started to rise in European Union markets in the middle of last year. The current price level of food commodities is still below the peak reached in the last growth cycle in 2012. Producer prices for butter have risen sharply and are now hitting new record levels on the European Union market. Higher prices for processed food on the European Union market have passed strongly into Estonian consumer prices and the transmission may last until the end of the year. Inflation for unprocessed food, particularly fruit and vegetables, has slowed in recent months as the weather improved. Higher prices for essential goods affect the price expectations of consumers, and this is discussed in Box 5.

**Figure 30. Growth in energy prices**




Sources: Statistics Estonia, Bloomberg

**Rises in excise are responsible for around 0.8 percentage point of inflation this year, and the planned tax changes will have an even greater impact next year.** Excise on alcohol was raised twice this year, in February and July. At the start of the year excise also rose on motor fuels and tobacco, and the impact of this had mainly passed into consumer prices by April. Excise on beer was 70% higher from July and the price of beer in shops rose by 27% in two months. Around 16 percentage points of the rise in the price of beer can be put down to the rise in excise, though at the same time companies increased their mark-up.

**Administered prices inflation has been subdued in recent years.** It is mainly the distribution fees for natural gas, heating and electrical energy that are regulated by the state. A reduction in network fees for electricity depending on consumption will be introduced in the second half of 2017. Inflation for natural gas accelerated throughout the first half of the year because of the earlier rise in the price of oil and reached 14% in August, meaning that the price of heating may rise further in the months ahead.

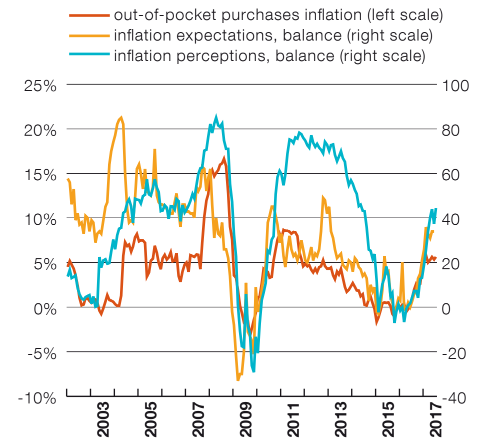
## Box 5. The consumer inflation assessment and factors affecting it

Both perceived inflation and inflation expectations have risen sharply in recent months, which could mainly be attributed to the rises in food and energy prices. However, the official statistics for CPI inflation, which also include industrial goods and services components, have risen notably more slowly. This box considers the possible factors that set the price assessment of consumers and their consequences.

The consumer survey of the Estonian Institute of Economic Research contains two questions on price developments. The first asks about the perceived changes in consumer prices in the past 12 months, and the second asks about price expectations for the next 12 months. There is a choice of six answers for each of the two questions, from which the balance statistics are calculated

Looking back, the inflation assessments of consumers were affected substantially by Estonia's accession to the European Union and by the adoption of the euro. Before Estonia joined the European Union in 2004, the inflation expectations of consumers increased sharply, but the subsequent perceived inflation remained relatively modest. In contrast, the euro adoption in 2011 had quite little impact on the prior price expectations of consumers but lifted the perceived inflation assessment for several years. In 2011-2014, the balance statistics of perceived inflation reached the levels seen during the economic boom years. This could only partially be attributed to the concurrent rise in food and energy prices on global markets. The long-lasting impact of the adoption of the euro on perceived inflation has been observed in several other countries. The balance statistics of inflation expectations have fallen over the years in conjunction with the convergence of the price and income level towards the European Union average.

**Figure B5.1. Inflation and inflation expectations**




Source: Estonian Institute of Economic Research

There are several reasons why the inflation assessments of consumers may differ from the official price statistics. The consumer price index covers a wide spectrum of expenditures, and some of those goods and services appear in the everyday basket of consumers, while others are purchased rather less often[11]. For this reason, consumers may have a more accurate notion of changes in food prices, but may be less aware of the latest price of furniture or domestic electronics. Some goods are most commonly paid for in cash, while others are paid for using direct debits through banks. The unit price of goods may vary because packaging is different, which the consumer may not necessarily pay much attention to. Another factor that the official price statistics take into account, but which consumers may find it hard to assess, is changes in quality. The bandwidth of internet connections increases with technological advances, but the price of communication services remains unchanged or may even fall, meaning the unit price of communications falls over time.

The inflation expectations of Estonian consumers correlate most strongly with changes in the price of those goods and services that are purchased most frequently. The inflation for frequent out-of-pocket purchases has been recently pushed up to above 6%, mainly because of the rise in the price of food and motor fuels (see Figure B5.1). Furthermore, the share of these items in the Estonian consumer basket is 57%, while the average for countries in the euro area in 2017 is 45%. Consumers' inflation expectations have probably been amplified by the coincidence of excise rate rises coming at the same time that the cycle of food prices has started to rise on global markets. The return of inflation has also been covered quite widely in the media in recent times.

A sharp rise in consumer expectations of inflation may harm consumer confidence and hinder economic growth. Higher inflation expectations may pass into the housing market and other asset prices which are not covered by the consumer price index. Furthermore, an indirect effect of inflation expectations may be to put upward pressure on wages and regulated prices. To avoid the negative consequences of a possible price spiral, the incentives to raise administrative prices should not encourage even higher inflation expectations.

11 See the ECB Monthly Bulletin 10/2003, Recent developments in euro area inflation perceptions, pp 24–25.

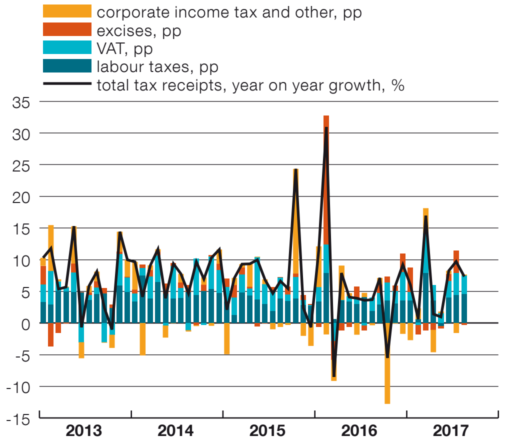
## GENERAL GOVERNMENT FINANCES

**General government investment increased even further in the second quarter, and this increased fiscal stimulus in the economy.** Spending on investment was 53% higher than in the second quarter of 2016, and the lion's share of this went on various construction projects. Both central government and local governments made large investments in construction, while local governments also bought transport equipment. There are several reasons for the strong recovery in investment in construction, which all coincided. Several infrastructure projects are timed to be ready for the centenary of the Republic of Estonia and the Estonian presidency of the European Union, local governments increase their investments in election years, and the money from the European Union Structural Funds for the budget period that started in 2014 have finally started to be used to a greater extent. Investment funded by Structural Funds contributed about half of the growth in general government investment in the second quarter.

**Growth in total general government spending was restrained by the slower growth in social benefits.** The yearly growth in social benefits slowed for the second consecutive year, and initial estimates put it at 5% in the second quarter. The growth was slower because unemployment insurance benefits decreased for the third quarter in a row. On top of this, growth in the average pension slowed in the second quarter, as a new pension index was applied from April, which was based on social tax receipts in 2016 and the inflation rate. Growth in social transfers will pick up again in the third quarter, when new rates for family benefits start to apply.

**Tax receipts grew by less than the economy as a whole, because revenues of personal income tax were reduced temporarily in the second quarter by tax rebates for the low paid** (see Figure 31). Growth in labour taxes recovered in June and is in line with the rise of the payroll. Excise receipts were sharply up before the tax rise in July, as both consumers and trading companies stocked up large quantities of alcohol at lower excise rates. Excise revenues were already lower again in August. The cycle of inventories that is caused by rises in taxes creates volatility in government financing and in the figures for economic growth, especially when the tax rises come unusually at times other than January, or are particularly large. However, as a long-term trend, excise income is being affected by decreasing domestic consumption of alcohol. This started in 2013, and in recent years it has also been affected by growth in cross-border trade.

**Figure 31. Tax receipts in the state budget**




Source: Tax and Customs Board

**Although real growth in private consumption slowed sharply this year, higher inflation means that consumer spending has still risen quite significantly and VAT receipts in the first eight months of the year are almost 9% higher than they were last year.** Data from the Tax and Customs Board show the largest contributors to VAT liability to be companies selling vehicles and manufacturing companies. In total the state budget received an average of 1% more in tax revenue in April and May than in the same months of last year, but in summer the increase had grown to 8%.