Eesti Pank

ESTONIAN ECONOMY AND MONETARY POLICY

2/2017

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

The economies of Europe, including those of Estonia's neighbours, have improved substantially since the start of this year. The economies of neighbouring countries have grown at the forecast rate since the start of the year, or even faster than it, affirming the expected improvement in the external environment. The revival of the economies of trading partners is also reflected in Estonia's economic indicators, where growth in industrial output and exports has accelerated and on a fairly broad base. GDP growth rose to 4.4% in the first quarter of the year, which is the fastest rate since 2012.

Growth in the Estonian economy has stepped up sharply thanks to increased foreign demand, while problems in some individual sectors have also been alleviated. Growth was restricted in previous years by the Russian sanctions and a fall in Russian demand, which particularly affected the transport sector, agriculture and food processing. The low oil price caused problems for oil shale processing, while energy production has been volatile. Output has now increased again in most of these sectors, and accelerated economic growth. Alongside the exporting sector, areas of activity focusing on the domestic market have also done well thanks to rapidly rising demand. Strong figures for trade and construction volumes that are up one fifth on a year earlier and are approaching their peaks of a decade ago indicate a very strong growth cycle.

Increased demand and supply-side restrictions have lifted the economy above a sustainable level. Growth in the economy has been slow for the past four years, but the lack of investment has meant that potential growth has also been low and the economy has been running at close to its potential. The result of growth at the end of last year and in the first quarter of this has been that the output gap between actual and long-term potential GDP, which reflects the economic cycle, has turned positive. Other cyclical indicators mark stronger economic conditions, as the capacity utilisation rate, corporate confidence, and household confidence are above their earlier averages and order volumes for production and exports suggest that the upswing of growth will continue for the time being.

The cyclical upswing is particularly noticeable in the labour market. Unemployment has for years been so low that there has been excessive upwards pressure on wages and labour costs have risen faster than labour productivity. Companies find that labour shortages are already restricting production more firmly than in the past decade, and there is no sign of this easing in the near future. Equally, economic growth cannot be permanently based on employment growth, as that is only possible during an upswing in the economy, as the amount of labour is a limited resource that changes only very slowly.

Although the labour force is limited for the economy as a whole, the amount of labour available at company level depends on each company's advantages over its competitors, which are dictated by investment in productivity growth and the resulting wage level. Competition between companies has already led employees to change employer more frequently and when the movement is from companies with low value added to areas with higher value added, the limits on labour have a stimulating effect on economic growth. If the exchange of jobs is dominated by companies wanting to take temporary advantage over competitors in a wage race, it is not impossible that the labour market will overheat and the economy will suffer a hit.

Growth in investment gives grounds to hope that productivity is making an increasing contribution to GDP growth and the potential for growth in the economy is increasing. Corporate investment in fixed capital declined in the past four years despite the good accessibility of bank loans, low interest rates and the availability of the resources needed for investment. This is partly because of difficulties in individual sectors and the ending of earlier large-scale projects, but in the years of high unemployment companies were able to expand production by increasing employment, which was the optimal choice in many cases because of uncertainty about external demand. Increased investment at the start of this year may mark a turning point when employment-based economic growth is replaced by productivity-based growth. Other

possible routes for raising productivity alongside investment are the number of hours worked per employee, which has not yet fully returned to the level seen before the crisis, effective use of working time, digitalisation of processes, and more intensive utilisation of production resources.

The low interest rates of the single monetary policy of the euro area will encourage growth in the economies of member states in the years ahead, and an economy already facing strong growth does not need additional support from fiscal policy. The government programme foresees a deterioration of the fiscal position and additional injection of funds into the economy. Although the Estonian national debt is small and the rules of the pan-European Growth and Stability Pact allow a structural deficit to be used to fund general government spending, there are problems in this. Large public sector investments in construction could cause a construction sector that is already growing strongly to overheat and could hinder a realignment in the economy through the relocation of labour to more productive companies and sectors in particular. At the current point of the economic cycle attention should be focused on helping long-term growth, not on amplifying the cycle. It is good to plan government construction projects for times when demand for construction from the private sector is low.

An economy that is small and open to the impact of external events needs a strong fiscal position, which includes having sufficient reserves. Both the Estonian and the European economies have recently achieved faster growth, but this could easily be changed. Were an economic shock to occur, it could be difficult or very expensive for Estonia to borrow, and if there are no reserves there are fewer ways to stabilise the economy. The Eesti Pank forecast finds that the budget will remain in deficit for the next two years, with the structural deficit running at 1.1%. This means the structural deficit is deepening at a time when rapid growth in wages and consumption mean income tax revenues are exceeding their long term trend levels. If the economy then starts to cool again, there is a danger that the government would have to cut spending growth or take additional measures to increase revenues in order to balance the budget. This would worsen the slide in the confidence of companies and households that has already been caused by the frequent changes in the law and drafts for more changes.

THE EXTERNAL ENVIRONMENT

THE GLOBAL ECONOMY

Growth in the global economy was faster in the first quarter of 2017 as global trade picked up and investment increased, supporting growth in manufacturing output (see Table 1). Economic activity was increased in several parts of the world by fiscal spending and the accommodative monetary policies of central banks, which encouraged lending. Developments in the global economy have been positively affected by a reduction in political uncertainty since last year. Protectionist economic policies have not been introduced to the extent feared either. The VIX volatility index for stock markets was at its lowest level at the start of May since the start of the last global financial crisis (see Figure 1).

Growth has accelerated in emerging economies this year, largely because of the recoveries of the Brazilian and Russian economies. A major role in this has also been played by the continuing rapid growth in the Chinese economy, which has largely been supported by public sector investment. Data from the IIF[1] put economic growth in emerging economies at 4.5% in the first quarter of 2017. The financing conditions for emerging economies have improved, and the capital inflows into those countries have recovered after the outflow at the end of last year. Interest rates on long-term bonds have mainly fallen in those countries, while stock market indexes have risen. Emerging economies of the financing conditions for emerging economies as was earlier feared.

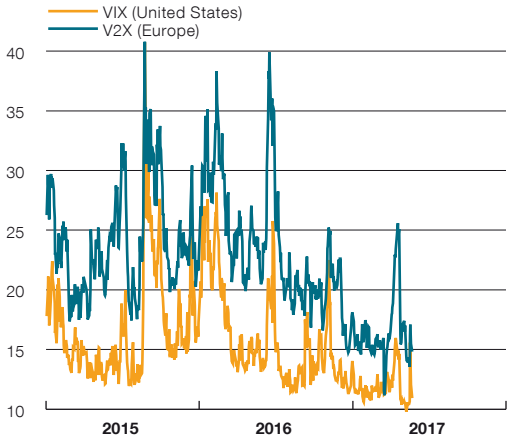
Table 1. GDP growth in different regions in 2011 - 2017 (change, %)*

	2011	2012	2013	2014	2015	2016	Q1 2016	Q1 2017	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			4.5
Euro area	1.6	-0.9	-0.3	1.2	2.1	1.8	1.8 (0.5)	1.7 (0.5)	1.7
United States	1.6	2.2	1.7	2.4	2.6	1.6.	2.0 (0.5)	1.9 (0.2)	2.3
China	9.5	7.9	7.8	7.3	6.9	6.0	6.8 (1.7)	6.9 (1.3)	6.6
Japan	-0.1	1.5	2.0	0.3	1.2	1.0	1.7 (0.3)	1.6 (0.5)	1.2
United Kingdom	1.5	1.3	1.9	3.1	2.2	1.8	1.9 (0.7)	2.1 (0.3)	2.0

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

Economic growth has slowed in advanced countries in 2017, but has still remained positive. Forward-looking survey-based activity indicators have surprisingly been better than the actual economic figures for several advanced economies. This is considered to be largely because of seasonal one-off factors. Economic growth has been supported by improved opportunities for exports and strong domestic demand. Because of the fall in commodities prices, inflation has risen more slowly this year than at the end of last year. Political uncertainty has declined in the euro area as financial markets reacted positively to the outcome of presidential elections in France. The monetary policy of the central banks of advanced economies remains accommodative and supportive of the economy, and financial markets have reacted quite calmly to the raising of monetary policy interest rates by the US Federal Reserve. It has not caused any tightening

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



Last observation 22.05.2017
Source: Bloomberg

1 The Institute of International Finance.

have already benefited from increased global goods trade this year. Inflation has mainly risen in those countries, except in Russia and Brazil, where it has fallen substantially.

Growth in the Chinese economy has again gradually increased. In the first quarter of 2017 the economy in China was up 6.9% over the year as large-scale public infrastructure investments are being made with support from stimulatory government fiscal policies. Investment in fixed assets plays a smaller part in the growth in the Chinese economy, but the contribution of consumption to economic growth has strengthened, and this is illustrated by increasing retail sales. Industrial output is growing fast and the trade surplus remains large. Inflation had fallen by April from 2% last year to 1.2% mainly because food prices were lower. As the economy develops ever faster however, it becomes harder and harder to find simple and effective sources of growth. For this reason more is being borrowed and the debt of the corporate sector has reached 170% of GDP, and a large share of debt is owed by state companies. The Chinese yuan has fallen against the US dollar and the foreign currency reserves of the central bank remained at close to 3.0 trillion US dollars in the first quarter.

Growth in the US economy slowed in the first quarter of this year as private consumption increased a little less than previously. The preliminary estimate put growth at a quarterly 0.2% and a yearly 1.9%. Export growth has also continued, driven by exports of capital goods and machinery. The trade deficit also narrowed. Industrial output continued to grow fast as manufacturing, mining and utilities all grew. The purchasing managers index for manufacturing[2] remains strong relative to recent years. The US consumer confidence index[3] has hit record highs because of the good state of the economy. The positive sentiment of consumers is confirmed by rapid growth in retail sales. The labour market is in a very good position and the labour market report for April showed more new jobs added than had been expected, and a fall in the unemployment rate to only 4.4%, its lowest level since 2007. Wage growth is also up in monthly comparison. Inflation had started to rise at the end of last year, but it was pulled back down by lower energy prices to 2.2% over the year in April.

The economy of the United Kingdom has proved resilient following the Brexit vote, but some volatility has arisen in the economic figures this year. Slower growth for services saw quarterly growth fall to 0.3% in the first quarter, though the economy still grew by a yearly 2.1%. Growth in industrial output was slower in the first months of the year, but the Markit Purchasing Managers Index shows companies were again more confident in April as manufacturing output grew together with new export orders. This is in line with faster growth in exports. The pound sterling was up around 8% against the euro from its lowest point in October. Unemployment remains at a record low of 4.6% but wage growth is still slow at a yearly 2.3% at present. Inflation was at a yearly 2.7% in April, mainly reflecting higher electricity prices, though a part of inflation is due to the exchange rate effect. Higher inflation made consumers more careful, and yearly growth in retail sales has been volatile, falling at the start of the year and then rising again in April. A slowing of growth in real estate prices has been evident in recent months, but the overheated housing market remains a source of concern in the United Kingdom.

The Japanese economy grew in the first quarter of this year with backing from consumption and exports. Quarterly growth was put at 0.5% by the flash estimate and yearly growth at 1.6%. Export growth has increased over the year and the trade surplus remains large, while growth in industrial output has also been high because of production of machinery and transport vehicles. This is confirmed by a strengthening of the purchasing managers index for manufacturing[4] and by surveys of businesses by the Japanese central bank[5], which find that the confidence of industrial companies

2 The Institute for Supply Management's US Manufacturing PMI.

3 Surveys of Consumers, University of Michigan.

4 IHS Markit.

5 Tankan, Bank of Japan.

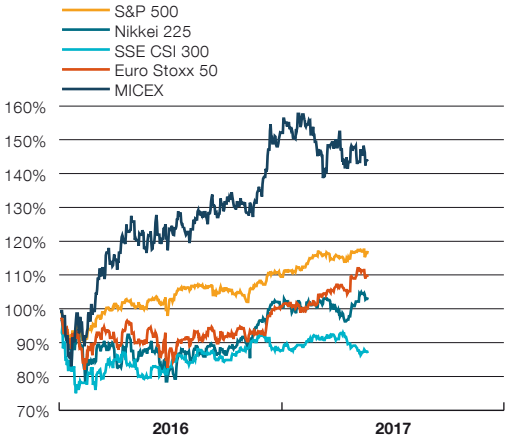
improved in the first quarter as the yen weakened and exports and profits grew. However, the consumer confidence index weakened a little in April as growth in incomes slowed unexpectedly. Consumers' expectations of inflation have also risen, as they fear that retailers will take advantage of the favourable economy to raise prices. Unemployment in Japan fell to its lowest level since 1994, at 2.8%. Inflation stood at 0.2% over the year in March as food prices fell. This means that inflation is moving in the opposite direction to economic activity.

Global stock market indexes were quite stable at close to their peaks in April and May after prices had risen for some months. Stock markets in Europe did best, partly because the price level of equities in Europe was lower than that in the USA, and partly because of the positive results of the presidential elections in France (see Figure 2). The optimism in the USA about the policies of the new president, which had earlier supported stock markets, has started to fade, and doubts have started to emerge about the capability of the administration. In a broader view equity prices should be supported by better economic figures and rising consumer confidence.

Interest rates on government bonds fell equally in nearly all the larger economic regions. The general improvement in the economic environment was overshadowed in April by a temporary sharpening of political and geopolitical tensions. The financial markets calmed down after the French presidential elections however, and the spread of interest rates on French and German government bonds narrowed noticeably. In the longer term a gradual rise in interest rates is expected around the world as central banks are starting to change their exceptionally accommodative monetary policies.

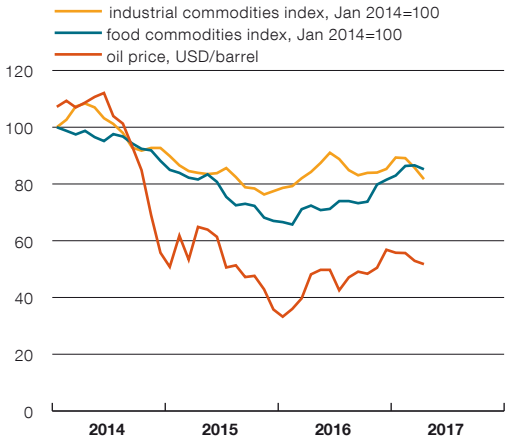
The oil price in commodities markets became more volatile again from March. This was because of contradictory information from OPEC countries about cuts in production, and from the US about stocks of crude (see

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



Last observation 22.05.2017
Source: Bloomberg

Figure 3. Commodity price indexes and oil price, USD



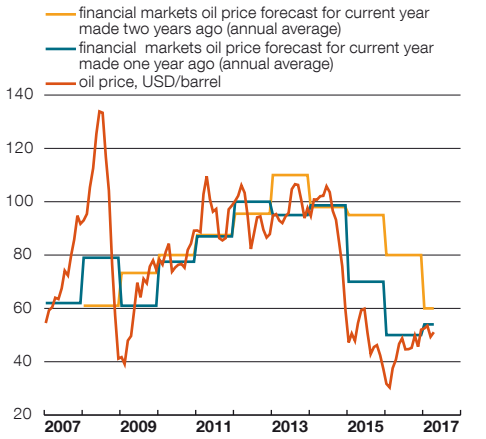
Sources: IMF, Bloomberg

Box 1 on developments in the oil market). Prices of precious metals rose in response to geopolitical tensions as they are considered safe haven investments and the prices of gold and silver rose in the middle of April to close to their highest levels of the past half year, but they fell again at the start of May as markets calmed (see Figure 3). Among other commodities there was a notable fall in the price of iron ore, which was down 30% from the start of March to the middle of April. This was because of rapid growth in domestic production in China and stocks hitting record peaks. At the same time, demand from metal processors for this commodity remains weak.

Box 1: The oil market is being reshaped by technological development

The forecast of the oil price is an important input in economic forecasting, as heating and energy costs are a substantial part of the consumer basket. At the same time, it has been hard for financial markets to forecast the oil price (see Figure B1.1), because the price of one of the most important natural resources is set in both the short and long terms by various political, macroeconomic and technological factors.

Figure B1.1. Oil price and financial markets historical oil price forecast (USD)



Sources: IEA, Bloomberg

The movement of the oil price is affected to a large degree by the policies of OPEC and by geopolitical factors. The policy of OPEC, the Organization of the Petroleum Exporting Countries[6], has historically had a major impact on the oil price, such as in 1973–1974 after the Arab-Israeli war, when OPEC put an embargo on trade with the USA and Western Europe, leading the oil price to quadruple. Alongside the decisions taken by OPEC, a further cause of rises in the oil price is geopolitical tensions in oil-producing countries, like the Iranian revolution in 1978–1979, the Iran-Iraq war in the 1980s, or the terrorist attacks in the USA in 2001 and the subsequent war against the government of Saddam Hussein.

At the start of the 2000s the oil price was raised by increased fuel consumption in emerging economies. The primary impact on the oil market came from China, which changed in the 1990s from being a net exporter of oil to being a net importer. In 2013 China became the world's largest net importer of liquid fuels[7]. Increased demand lifted the oil price[8] above 140 US dollars a barrel for a short time in 2008, but following the global financial crisis it fell back to 40 dollars by the end of that year. The price rose again in 2011–2014 and remained relatively stable, but then it fell sharply again.

In 2014 the oil price started to fall substantially, probably because of increased production. Production output was boosted by new technology that allowed oil to be produced from unconventional sources. The new technology was mainly introduced in the USA, where a wealth of natural resources and looser regulation made it possible to extract shale oil from shales deep below the surface. Shale oil is estimated to make up about half of US oil reserves, meaning that in 2016 the USA overtook Saudi Arabia and Russia to become the country holding the largest reserves of oil[9]. The cost of producing shale oil is notably higher than that of producing traditional crude oil, but a high global market price for oil in 2010–2014 made production of oil from shale profitable. The significantly increased production levels boosted US output by 60% from 2010 to 2014, bringing it close to the record levels reached in the 1970s. In 2015 shale oil

6 OPEC was founded in 1960 and its members are Algeria, Angola, Ecuador, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi-Arabia, United Arab Emirates, and Venezuela. In 2015 those countries supplied 43% of total global output of oil.

7 https://www.eia.gov/todayinenergy/detail.php?id=15531

8 The crude oil traded in the USA is WTI, in Europe the trade is in Brent.

9 The estimate of the Norwegian consultants Rystad Energy: https://www.rystadenergy.com/NewsEvents/PressReleases/united-states-now-holds-more-oil-reserves-than-saudi-arabia

provided 52% of total US production of oil[10]. The rapid growth in the oil production of the USA increased the oil supply on the global market, and reduced OPEC's market share. At the same time, OPEC members did not want to limit production as a fall in the oil price had substantially reduced the budget revenues of countries exporting fuel.

The lower oil price encouraged OPEC to decide in June 2014 not to cut production levels to boost market share. The subsequent sharp slide in the oil price made life much harder financially for shale oil producers, but reduced output and costs and flexible financing from banks helped spare the sector from a large wave of bankruptcies. The price of shale oil production was reduced, primarily by cutting production costs, and this meant it became profitable in 2015 from a price of around 50 dollars a barrel[11]. At the same time that the shale oil came to the global market, the supply of oil from Russia, the world's second largest oil producer by volume, was increasing. Oil from Iran also came to the market after sanctions were lifted in 2016, and this put further pressure on the oil price. To prevent the price falling further, OPEC decided in November 2016 to reduce daily production volumes for the first time in eight years. The new production quotas, applying from 2017, were agreed as 32.5 million barrels a day, which was 1.2 million less than it had been[12]. Russia, which is invited to OPEC meetings as a large producer but is not a member of the organisation, also signed up to the agreement. Preliminary agreement suggests the production quotas will be maintained.

Technological development is making the cycles of the oil price shorter and reducing price volatility. Data from the International Energy Agency (IEA) show daily global demand for oil increasing in 2016 by 1.6 million barrels to 96.6 million barrels. The IEA forecasts that this year daily demand will increase by 1.3 million barrels[13]. The IMF considers that OPEC production quotas may raise the oil price in consequence, though it should also be remembered that the shale oil sector has developed so that the cost of shale oil production has fallen a long way, allowing the supply of oil to be increased at short notice[14]. Oil production in the USA was running at 8.9 million barrels a day in 2016, but this will increase to 9.3 million barrels in 2017 and an estimated 10 million barrels in 2018[15]. In these circumstances, the IMF finds that a higher oil price will lead to increased investment in shale oil, and this in turn will raise production volumes and start the next oil price cycle.

10 https://www.eia.gov/tools/faqs/faq.php?id=847&t=6

11 https://www.imf.org/external/pubs/ft/wp/2016/wp16131.pdf

12 http://www.opec.org/opec_web/en/press_room/3912.htm

13 https://www.iea.org/oilmarketreport/omrpublic/

14 http://www.imf.org/en/Publications/WEO/Issues/2017/04/04/world-economic-outlook-april-2017

15 https://www.eia.gov/outlooks/steo/report/us_oil.cfm

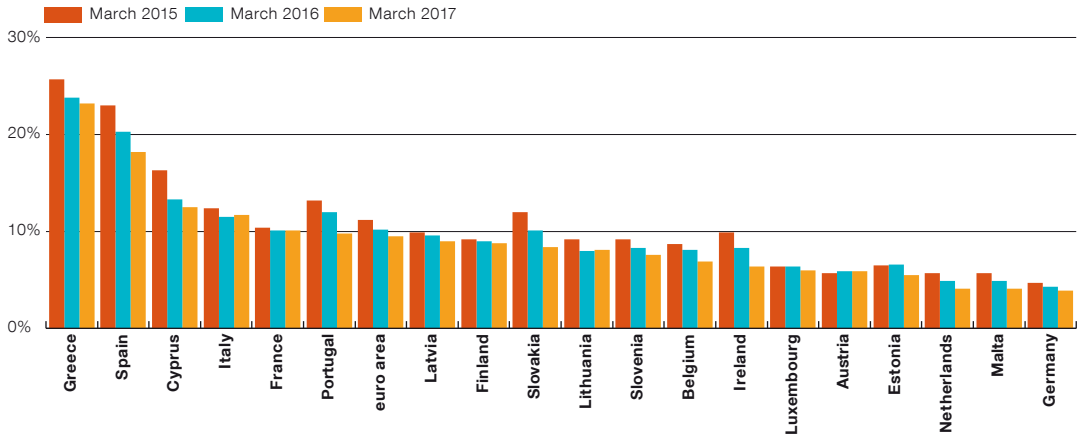
THE EURO AREA

Growth in the euro area economy has strengthened and become more broadly based. The preliminary estimate from Eurostat puts growth in the economy at 0.5% in the first quarter of the year, and 1.7% over the first quarter of last year. The Purchasing Managers Index (PMI) published by Markit has climbed steadily since the start of the year. The manufacturing and services indexes both reached six-year peaks in April, making it probable that growth in the second quarter will be at the same level as in the first quarter at least. Although detailed GDP statistics for the first quarter are not yet available, it is probable that private consumption continued to play an important role. Despite a rise in inflation, the improvement in the labour market and higher incomes have boosted consumer confidence, and retail sales have continued to grow strongly. It is probable that the recovery of investment has also continued at the start of this year.

This is indicated by corporate surveys and by the statistics already released for the production of capital goods and for construction volumes. Investments are supported by growth in domestic demand, improving external demand, and the favourable lending conditions that result from the accommodative monetary policy.

Inflation in the euro area has perked up to its target level of below but close to 2%. Higher inflation has primarily been caused by higher prices for energy and food. Price pressures in the internal market remain weak, so core inflation is well below its historical average of 1.4%-1.6% (see Figure 5). Core inflation did pick up to 1.2% in April, but this was partly because of one-off factors relating to Easter effect on prices of travel services. Inflation expectations have not changed significantly since the start of the year. Survey results show that companies and households expect the inflation rate to be similar or a little higher. Higher inflation in the euro area is supported by the accommodative monetary policy (see Box 2 on the monetary policy environment in the euro area).

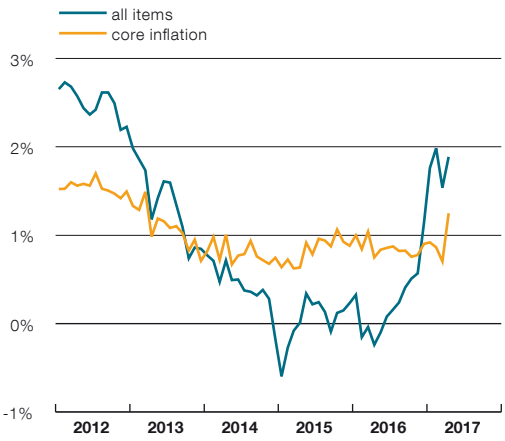
Figure 4. Unemployment in euro area countries



Last observation for Estonia and for Greece February 2017
Source: Eurostat

Labour market indicators also continued to improve, though unemployment remains high in historical terms. The unemployment rate fell to 9.5% in February, and remained at the same level in March, meaning that it was 2.6 percentage points lower than at its peak during the crisis in 2013. There is still a lot of variation between labour market conditions across the countries, with the highest unemployment still to be seen in Greece, where more than one fifth of the working age population is out of work, while the figure is only 4% or less in the countries with the lowest unemployment in the euro area (see Figure 4). However, differences in the growth rates for employment in euro area countries have narrowed in recent quarters and the number of people in employment approached its level from before the crisis in the final quarter of last year. The latest PMI survey results indicate that companies have been hiring new workers at the quickest rate seen in more than six years, so it may be expected that employment has continued to rise in the first half of this year. Wage growth picked up a little at the end of last year, but wage pressures remain mild in historical terms as there are still spare resources in the labour market.

Figure 5. Euro area inflation



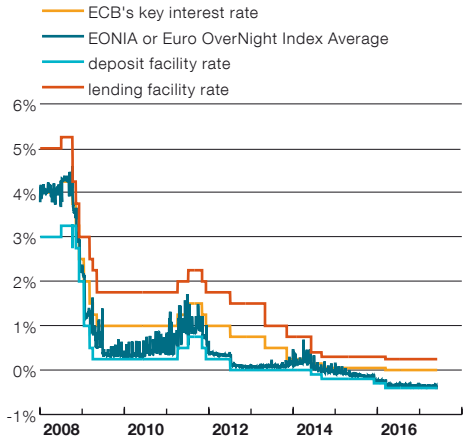
Source: Eurostat

Box 2: The monetary policy environment of the euro area

The objective of the Eurosystem monetary policy is to maintain price stability in the euro area. Price stability is defined by the Governing Council of the European Central Bank as inflation in the euro area of below, but close to, 2% over the medium term. The forecast from experts of the Eurosystem of June 2017 expects that inflation will climb to 1.6% in 2019[16]. Inflation is being boosted by monetary policy measures and by an expected recovery in economic activity.

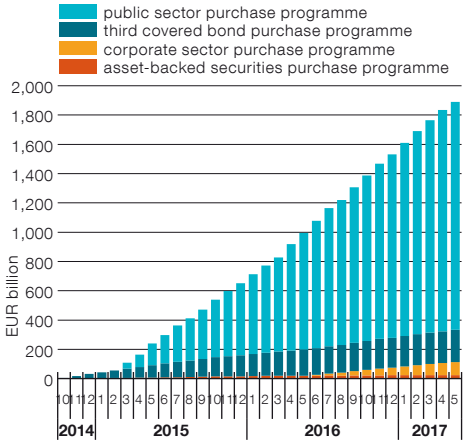
The Governing Council of the European Central Bank held monetary policy interest rates at their lowest levels under the economic and monetary union in the first half of 2017, with the minimum bid rate on main refinancing operations at 0.00%, the lending facility rate at 0.25%, and the deposit facility rate at -0.40% (see Figure B2.1).

Figure B2.1. Eurosystem key interest rates and EONIA



Last observation 31.05.2017
Source: European Central Bank

Figure B2.2. Eurosystem holdings under the expanded asset purchase programme



Last observation 26.05.2017
Source: European Central Bank

The package of monetary policy measures from the Eurosystem is large and varied. It is intended to help in meeting the goal of price stability and in supporting the functioning of the monetary policy transmission channels at a time of low interest rates, by easing financing conditions and revitalising the supply of credit. The monthly purchases under the expanded asset purchase programme[17] 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 sustainable rates of economic growth and inflation. The expected effect of the measures on the economy of the euro area and on inflation will be seen in the medium term.

The support from the monetary policy measures meant that the consolidated balance sheet of the Eurosystem in the middle of May stood at 4.2 trillion euros, which is double what it was in autumn 2014. The total volume of asset purchases stood at 1.9 trillion euros on 26 May (see Figure B2.2). At 1.6 trillion euros, the largest part of the portfolio consists of public sector securities, of which Eesti Pank's purchases accounted for 4 billion euros at the end of May 2017.

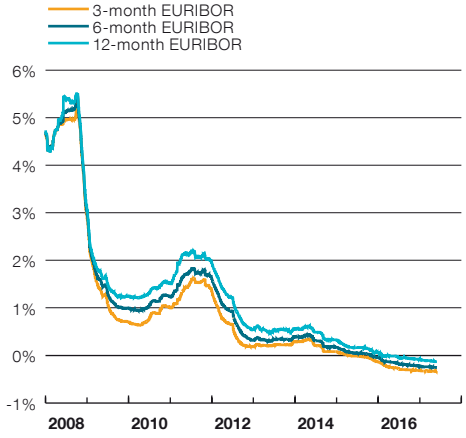
16 European Central Bank press conference, 8 June 2017.

17 The expanded asset purchase programme (APP) has four parts: covered bonds (CBPP3), asset backed securities (ABSPP), public sector securities (PSPP), and the corporate bond (CSPP) portfolio.

Yearly growth of the money supply in the euro area remains strong and is well supported by the package of accommodative measures taken by the Eurosystem. The average yearly growth in the broad money aggregate (M3) was 4.9% in the first quarter of 2017 and yearly growth in the narrower aggregate (M1) was 8.6%. The growth continued in April. 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. However, growth in the stock of deposits of households and companies was one percentage point faster in the first quarter of 2017 than it was a year earlier. The April statistics confirm the continuation of the same trend, 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 strongly 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 though. 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[18]. The latest Bank Lending Survey of lending by banks in the euro area shows that the lending conditions for companies and households have improved[19], 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.

Figure B2.3. Euro area money market interest rates



Last observation 31.05.2017
Source: Bloomberg

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[20] was quite stable from March to May at between –0.35% and –0.36%, holding just above the interest rate on the standing deposit facility. At the end of May the three-month EURIBOR[21] was at –0.33%, the six-month EURIBOR was at -0.25%, and the 12-month EURIBOR was at -0.13%, which was a little lower than at the end of March (see Figure B2.3). The money market yield curve as shown by the gap in the 1 and 12-month EURIBORs has been stable throughout the first half of the year

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

19 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.

20 Euro Overnight Index Average for overnight lending between banks in the euro area.

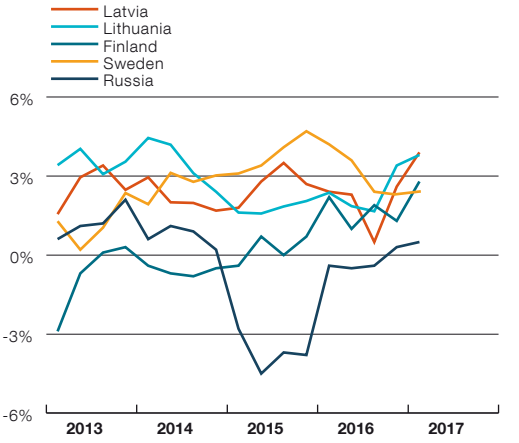
21 The Euro Interbank Offered Rate for lending between banks across Europe.

ESTONIA'S MAIN TRADING PARTNERS

The economies of Latvia and Lithuania are improving. Growth picked up in both countries in the first quarter of this year to close to 4% according to flash estimates (see Figure 6). Seasonally adjusted GDP grew strongly in quarterly terms too. Private consumption grew on the back of higher household incomes, and there was also strong growth in the industrial sector and in yearly terms in exports in the first quarter (see Figure 7). Equally, the construction sector in Latvia grew in the first quarter in both yearly and quarterly terms. Structural funds from the European Union are providing additional support for the construction sector in both countries, and public sector investments should increase significantly. Developments in the labour market have been positive as employment increased and unemployment fell in the fourth quarter over the year and in 2016 as a whole (see Figure 8). Inflation has picked up in recent months as steadily rising prices for services have been accompanied by higher goods prices brought on by higher prices for commodities and food. Consumer prices continued to rise fast in April (see Figure 9).

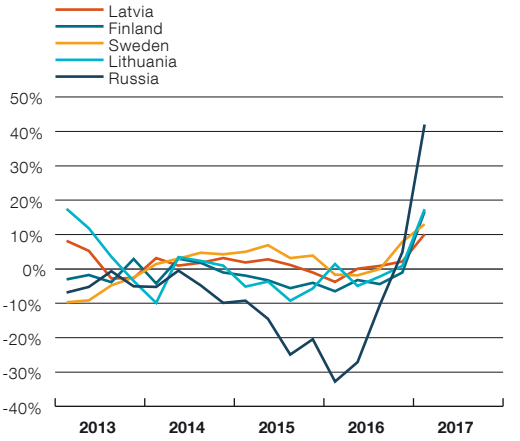
The Nordic economies are in a good position. Monthly GDP data for the first quarter show the yearly growth in the Finnish economy advanced to 2.8% and the economy also grew strongly in quarterly terms. Swedish GDP growth was 2.2% over the year in the first quarter, but this was mainly due to the high reference base. Quarterly growth remained positive and stable. Growth is being backed in both countries by investment in the construction sector and by domestic 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. Production of metals, chemicals and electronics has helped the Finnish industrial sector improve its performance substantially, and Swedish manufacturing also grew noticeably in the first months of 2017 with support from production of cars and electronics. There was also a major improvement in foreign trade and the value of goods exports from both Finland and Sweden increased significantly over the year in

Figure 6. Yearly growth rate of the GDP of trading partners



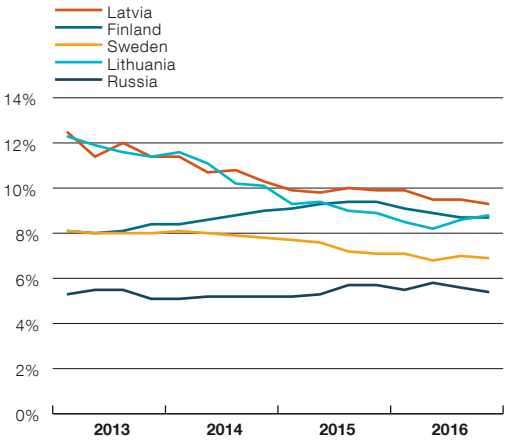
Source: Eurostat

Figure 7. Yearly growth rate of the exports of trading partners in euros



Source: Reuters

Figure 8. Unemployment rate of trading partners

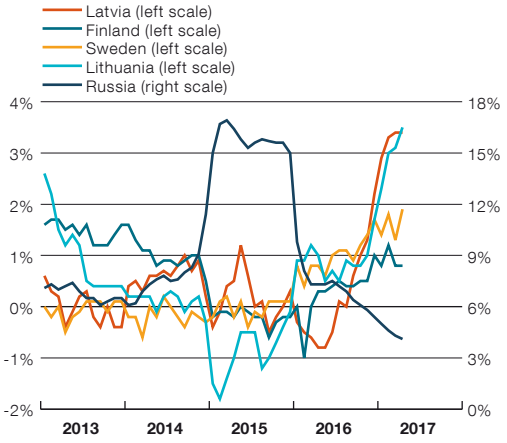


Sources: Eurostat, OECD

the first quarter. The labour market is improving in those countries as unemployment fell in the fourth quarter while the number in employment rose. Although consumer prices have mainly risen in recent months, price pressures remain low.

The Russian economy exited its two-year long decline. Growth returned in the fourth quarter of 2016 and the flash estimate shows growth continued in the first quarter of this year, with yearly GDP growth up 0.5%. Economic growth was supported at the end of last year by exports of goods and services and by changes in inventories. Economic activity also improved in the industrial sector, where food, chemical and forestry production grew last year alongside the growth in defence industries. In the first quarter of 2017 though, industrial production was at the same level as a year earlier, partly because of a stronger rouble. Higher commodities prices than a year earlier have given a good boost to foreign trade activity, as the yearly growth in the value of exports passed 40% in the first quarter. Although the main part of that growth was led by exports of crude oil, 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 steadily and so the retail sale volumes were lower in the first quarter than a year previously. Inflation pressures have eased substantially though, and in April the yearly consumer price inflation was down to 4.1%. Lower inflation made it possible for the Russian central bank to cut its repo rate to 9.25% at the end of April.

Figure 9. Consumer price inflation of trading partners



Source: Eurostat

THE ESTONIAN ECONOMIC ENVIRONMENT

ECONOMIC ACTIVITY

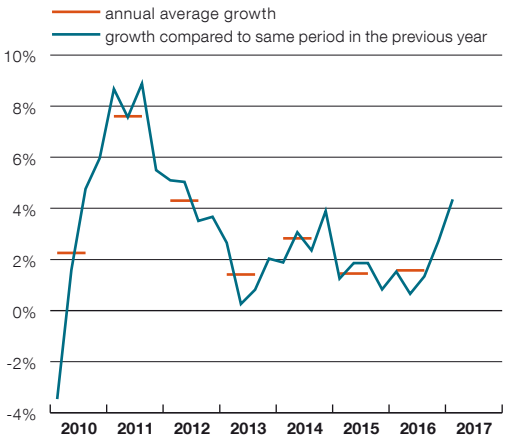
Several indicators of economic activity have improved since last summer, and growth in the economy has gradually picked up. GDP was up 4.4% over the year in the first quarter, and up 0.8% in quarterly terms (see Figure 10). It was not the better performance of just one single sector driving the growth, but stronger results in many areas. There was rapid growth in the first quarter in exports and investments, while growth slowed in the private consumption that has led the economy in recent years.

The nowcast, which takes account of the latest information on economic indicators, including tax receipts, industrial output, foreign trade, banking, confidence and so forth, indicates though that economic growth has slowed a little in the second quarter (see Figure 11).

Growth was fast in the first quarter and was broadly based across sectors. This is shown by the simultaneous good performance of manufacturing, which targets foreign markets, and construction, which principally serves the domestic market (see Figure 12). Despite the modest growth in private consumption, added value in the trade sector grew rapidly as inter-mediation activities did well, which is related to the development of exporting sectors. However, net product taxes had a significant impact on economic growth because of the rise in excise taxes at the start of the year. The tax rise meant that excise goods were stocked up at the end of last year, pushing part of the excise revenues from the first quarter of this year into the fourth quarter of last year. Furthermore, prices went up.

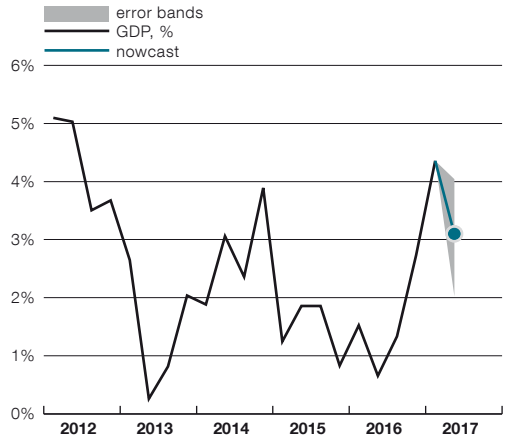
The growth in industrial output was broadly based in the first four months of 2017 and output corrected for number of days worked was 10% more than a year earlier, while manufacturing output was up 8%. Output rose very fast in the oil shale and energy sector, but growth was also strong in output in other sectors (see Figure 13). The only major branch of manufacturing to see output drop was production of electrical and optical equipment, which affected the turnover figures for the indus-trial sector, though its large share of imported

Figure 10. GDP growth



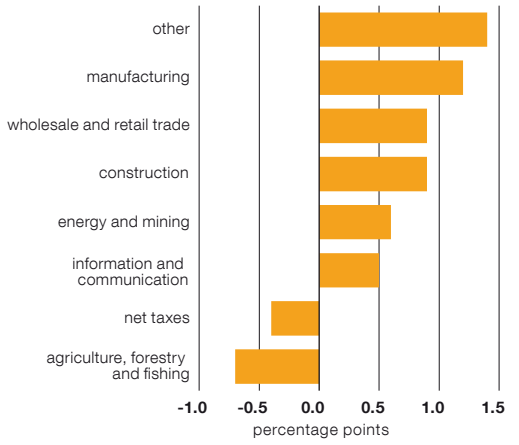
Source: Statistics Estonia

Figure 11. GDP growth and current quarter nowcast



The uncertainty related to the forecast is indicated by the mean historical absolute nowcast errors
Sources: Eesti Pank

Figure 12. Contributions of sectors to GDP growth in Q1 2017



Source: Statistics Estonia

components means that it has little effect on value added. Output in mining grew at a very fast 51% in the first quarter. The increase in production that had occurred in electricity and oil shale oil last year was felt as increased output in mining only in the first quarter of this year as the fall in the oil price in 2015 led stocks of mined product to be built up, and these were used throughout 2016.

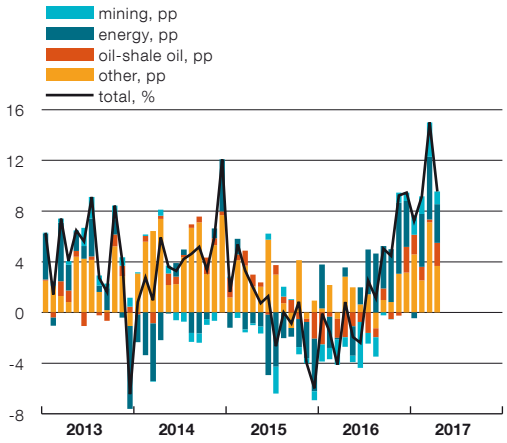
Expectations of industrial companies point to slower growth in production in May and June than in the first quarter. Expectations of manufacturing output in the coming months were lower in March, April and May, but remain strong and do not indicate any fall in production. The expectations of companies and households for the economy as a whole are strong and are clearly better than in recent years (see Figure 14).

Estimates of orders in the construction sector have risen markedly in the past half year, and estimates of the growth in production volumes in recent months have also risen. These developments indicate investment continued to grow in the second quarter as the construction sector produces inputs for investment in other branches of industry. Estimates of orders were up most at companies specialising in civil engineering, suggesting growth in investment by the public sector using the structural funds from the European Union that have previously only been used to a moderate extent.

The increase in economic growth that started in the second half of last year indicates a change in the cyclical stance of the economy, as the negative output gap has closed and the economy is exceeding its potential. A positive output gap is indicated by increased capacity utilisation in the industrial sector, a falling unemployment rate, and surveys showing tightening labour shortages. Inflation has also picked up, though it has mainly been driven by external factors and tax policies.

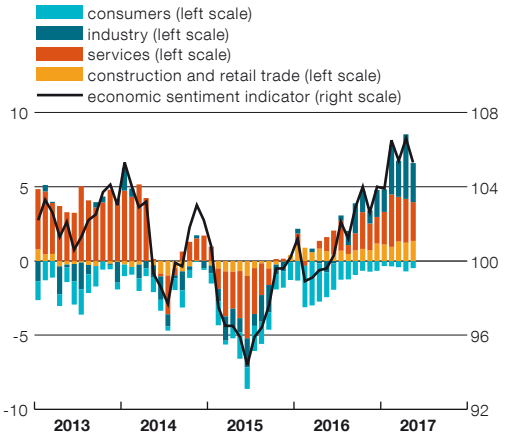
Labour shortages have become acute and are starting to limit the future growth of the economy, though they are still far from the level seen in the boom of 2006 and 2007. The dynamics of the utilisation level and labour

Figure 13. Yearly change in industrial production



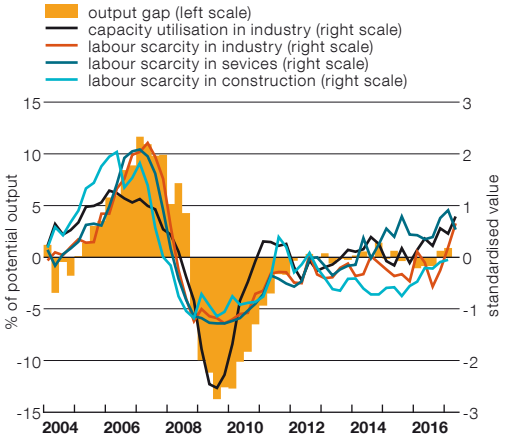
Sources: Statistics Estonia, Eesti Pank

Figure 14. Economic sentiment indicator and economic confidence of sectors



Source: European Commission

Figure 15. The business cycle



Sources: European Commission, Statistics Estonia, Eesti Pank

shortages have in the past closely mirrored the developments of the economic cycle. Some of these indicators have been pointing to a positive output gap in recent years and some to a negative one, but at the start of this year they all pointed more or less across the board to a positive gap (see Figure 15).

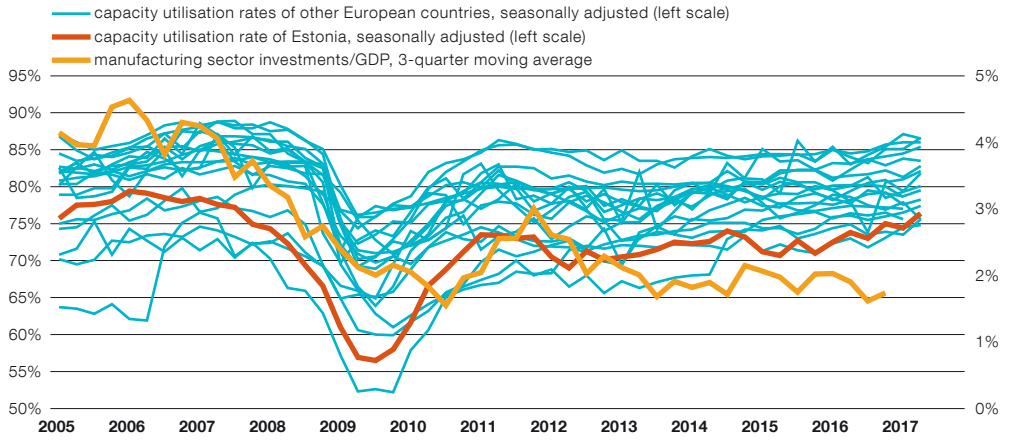
It is unlikely though that all the acceleration in economic growth can be explained by cyclical factors alone, and it is probable that increased potential growth is also partly responsible. The labour market participation rate has risen in recent years, increasing the supply of labour even as the number of people of working age has fallen. Part of the rise in the capacity utilisation level in the industrial sector reflects the investments in efficiency made in recent years, which have succeeded in making production processes more efficient. The level of capacity utilisation has in the past been lower in Estonia than in other European countries, but it has moved closer to the European average. The effects of several negative one-off factors, like the problems in the oil shale and transport sectors, have also faded. Box 3 considers the sources of growth in productivity more closely and shows that productivity growth in recent years has come from the more efficient use of resources and from investment.

Box 3: The efficiency of investments and total factor productivity

In the past three years, corporate investment in fixed assets has declined while gross domestic product has gradually increased at the same time. This means either that existing capital has been used more efficiently, or more has been invested in raising productivity. This box considers how the value added created, the production capacity in use, and investment have changed since 2012, and how this relates to the change in total factor productivity. This is done using the enterprise statistics published by Statistics Estonia and capacity utilisation rate data from surveys of manufacturing companies by the European Commission.

The utilisation of production capacity in manufacturing in Estonia has generally increased since 2012, with a slight slide back in 2015 (see Figure B3.1). Although output can be boosted in the short term by more intensive use of installed capital, increased utilisation of capacity should still create a need for extra investment. The rise in capacity utilisation has not yet led to any significant increase in investment. However, capacity utilisation in Estonia is still lower than in other European countries, and so there is room to raise productivity by using fixed assets more intensively.

Figure B3.1. Capacity utilisation rate

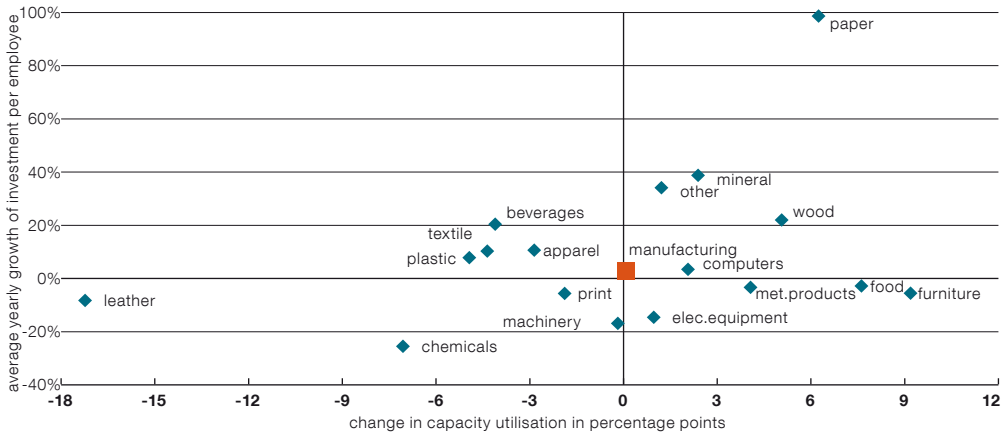


Sources: European Commission, Statistics Estonia

Branches of industry can be divided into four groups by the direction of change in their capacity utilisation and investment. The first group contains branches where both investment and capacity utilisation are increasing, as new and old fixed assets are in use and new equipment and production space is needed to increase production. The second group is where utilisation is increasing but investment is falling. This could indicate more intensive use of current capacity, but equally could be a sign of uncertainty about the future. The third group presumably sees conditions are currently poor and there are few prospects for growth, as both utilisation and investment are falling. The fourth group has rising investment but falling utilisation, which may indicate that fixed assets installed earlier are inefficient or unproductive, or it may be a sign of confidence about the future as investment is considered a viable proposition.

Data for the post-crisis period show that investment per employee has increased in half the branches of manufacturing, and in half of them utilisation has also increased[22], see Figure B3.2[23]. This means that low investment activity is not a feature of every branch of manufacturing, and a trend can be discerned where increased utilisation is connected to increased investment activity. The relation is not clear cut though, and it appears from the data that

Figure B3.2. Change in investment and capacity utilisation in manufacturing, 2013-2015



Sources: European Commission, Statistics Estonia

capacity utilisation can rise even when the investment per employee stays the same. This could indicate constant improvement in production processes and increased productivity, but the data used here do not confirm this hypothesis. In some cases the volatility in investment is due to individual large-scale projects, like the chemical industry, where the largest investments of the past decade were made in 2012 and the utilisation rate peaked in 2013, after which both utilisation and investment have fallen.

22 Following the principle of data confidentiality, utilisation rates are not published for: C19 manufacture of coke and refined petroleum products; C21 manufacture of basic pharmaceutical products and pharmaceutical preparations; C24 manufacture of basic metals; C29 manufacture of motor vehicles, trailers and semi-trailers; C30 manufacture of other transport equipment; C33 repair and installation of machinery and equipment.

23 The figure shows the following manufacturing industries: C10 manufacture of food products (food), C11 manufacture of beverages (beverages), C13 manufacture of textiles (textile), C14 manufacture of wearing apparel (apparel), C15 manufacture of leather and related products (leather), C16 manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (wood), C17 manufacture of paper and paper products (paper), C18 printing and reproduction of recorded media (print), C20 manufacture of chemicals and chemical products (chemicals), C22 manufacture of rubber and plastic products (plastic), C23 manufacture of other non-metallic mineral products (mineral), C25 manufacture of fabricated metal products, except machinery and equipment (met.products), C26 manufacture of computer, electronic and optical products (computers), C27 manufacture of electrical equipment (elec.equipment), C28 manufacture of machinery and equipment n.e.c. (machinery), C31 manufacture of furniture (furniture), C32 other manufacturing (other).

Productivity can be raised through more intensive use of existing fixed assets or through investment to increase the efficiency of production. A production function can be used to separate the two effects. A Cobb-Douglas production function is applied here to the branches of industry, where the value added of each sector, Y, can be stated as

$$Y = AL^{1-\alpha}(cK)^{\alpha} \quad ,$$

where c is the capacity utilisation rate for the sector, K is the fixed assets of the sector, L is the number of workers, A is total factor productivity (TFP) and α is the output elasticity of capital.

Rewriting the production function, we get value added per employee, y, as

$$y = A(ck)^{\alpha} \quad ,$$

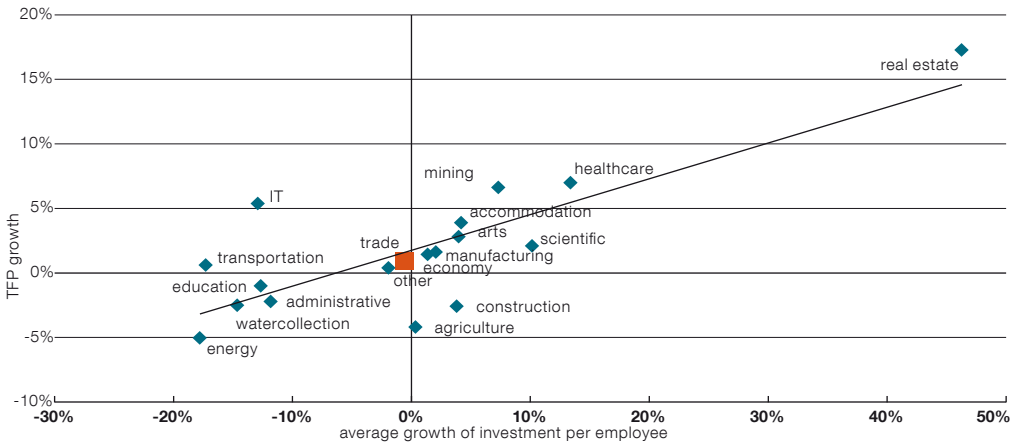
where k is the amount of fixed assets per employee.

Log-linearising and differencing this equation allows us to express the growth in value added per employee as a sum of growth in capital and the intensity of its use, and the change in productivity

$$\Delta \ln y = \underbrace{\alpha(\Delta \ln(c) + \Delta \ln(k))}_{\substack{\textit{contribution of capital and utilisation to} \\ \textit{growth in value added per employee}}} + \underbrace{\Delta \ln(A)}_{\substack{\textit{contribution of TFP to growth in} \\ \textit{value added per employee}}} .$$

The variable A for total factor productivity is not directly measurable in this equation, but it can be calculated for each sector using observed variables. The rate of utilisation for the whole economy and its sectors is not explicitly recorded and it is assumed to be the same as for manufacturing. The scatter plot in Figure B3.3 shows that there is a discernible positive relationship

Figure B3.3. Average changes in investment per employee and TFP, 2013-2015



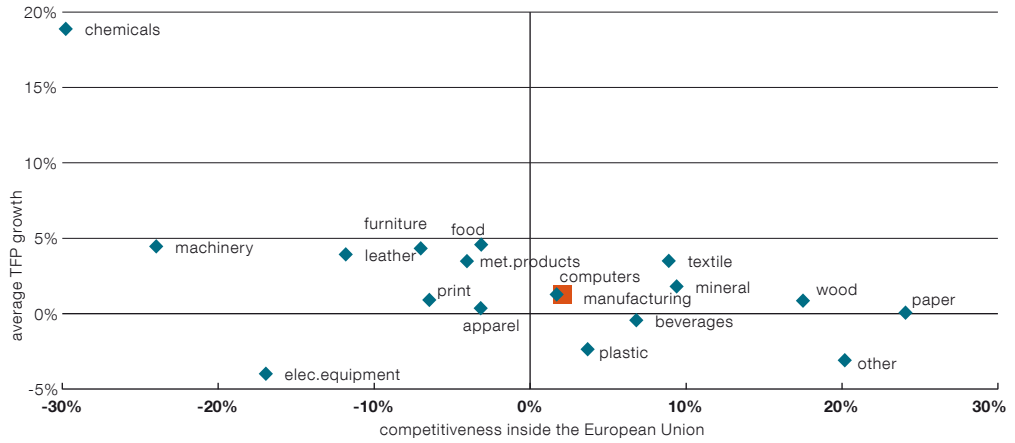
Sources: European Commission, Statistics Estonia, Eesti Pank calculations

between investment growth and total factor productivity growth for the economy as a whole. Investment per employee grew fastest in those years in the real estate sector, and that is where TFP growth has been fastest. At the other end of the scale is the electricity sector, where yearly growth in investment was running at over 40% in 2011–2012 and capital played an increasing role in creating value added. Consequently, in the years depicted on the figure investments were considerably lower and negative growth inevitable. The only sectors where more was invested

in those years but no growth was achieved in TFP were construction and agriculture, where the cyclicality of production may have been responsible in construction and Russian sanctions and problems in exporting were causing difficulties for agriculture.

The numbers for the entirety of the manufacturing sector, which is the main exporting sector, show that in 2013–2015 both investment per employee and total productivity increased by an average of around two per cent, though the differences were large between different branches

Figure B3.4. Average changes in investment per employee and TFP in manufacturing, 2013-2015



Sources: European Commission, Statistics Estonia, Eesti Pank calculations

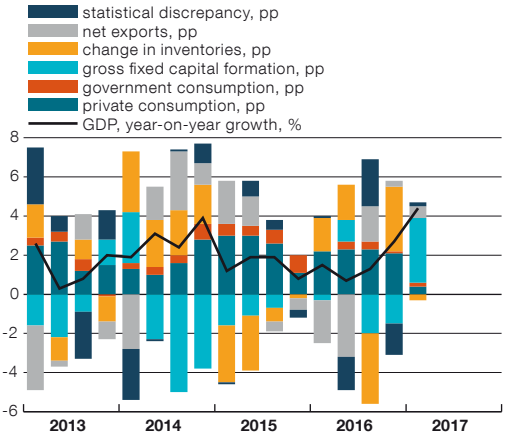
of manufacturing. The TFP of most branches of manufacturing increased in 2013–2015, but comparing sectors shows the relationship with the change in the amount of investment to have been very weak or non-existent. It follows from this that productivity has grown in manufacturing in recent years because although investment has been lower than previously in many sectors, that investment has been directed to increasing the efficiency of production.

DOMESTIC DEMAND

Strong yearly growth of 3.6% in domestic demand in Estonia in the first quarter of 2017 was backed mainly by increased investment in fixed assets (see Figure 16). Gross fixed capital formation increased mainly through increased corporate investment, though general government investment was also up (see Figure 17).

Investment by non-financial corporations in fixed assets was up 22.8% on the year at constant prices in the first quarter. Investment increased most in transport vehicles, and machinery and equipment. The sector of non-financial corporations that contributed the most to investment growth was manufacturing, where the high rate of capacity utilisation has led to a need for further investment in the sector.

Figure 16. GDP growth



Sources: Statistics Estonia, Eesti Pank

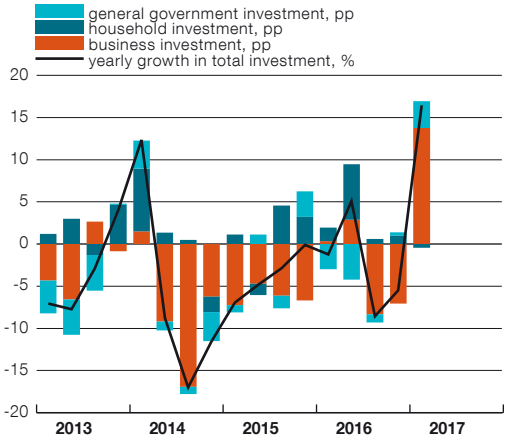
Yearly growth in private consumption at constant prices slowed to 0.6% in the first quarter of 2017 (see Figure 18). One of the main reasons that real growth in private consumption slowed was higher inflation, and at current prices the slowdown in growth in spending on private consumption was less steep. Spending on alcoholic drinks and tobacco products was less than it was last year and the growth in spending on leisure slowed. The growth in the stock of loans taken to fund consumption by households also slowed in the first quarter. Although inflation is expected to remain high in the months ahead, higher spending on consumption continues to be supported by high levels of consumer confidence about the future and rapid nominal wage growth.

The residential property market was very active in the first quarter of 2017. Despite this, gross fixed capital formation in residential space in the household sector fell at constant prices by 3.9% over the year in the first quarter. Data from the Land Board showed the average sales contract price for apartments was on average 11% higher in the first quarter than it was a year earlier (see Figure 19). Prices rose rapidly partly because the share of contracts with new and more expensive apartments increased. If the structure of contracts had remained the same, the rise in prices would have been around 7%, which is a little faster than the rise in incomes. Prices were no higher though in April and May than in the first quarter, and the yearly rate of growth had slowed to around 5%.

EXTERNAL BALANCE AND COMPETITIVENESS

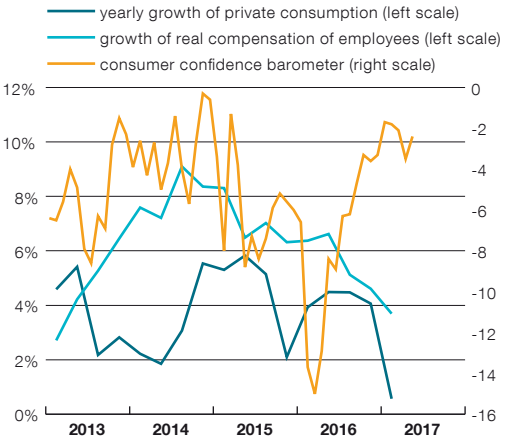
Nominal growth in exports sped up in the first quarter and the growth was broadly based. The balance of payments shows growth increasing in exports of goods and services to around 18% over the year at current prices (see Figure 20). A one-off transaction for transport vehicles had a major impact on this, and without that export growth would have been around 12%. Among other goods, export growth was affected most by rapid growth in exports of mineral products, metals, wood and chemical products, and this helped goods exports to grow by around 10% over the year if the one-off transport vehicles

Figure 17. Gross fixed capital formation



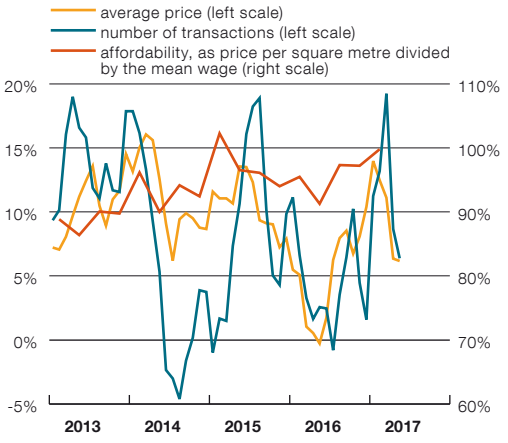
Sources: Statistics Estonia, Eesti Pank

Figure 18. Private consumption



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

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



Sources: Estonian Land Board, Statistics Estonia

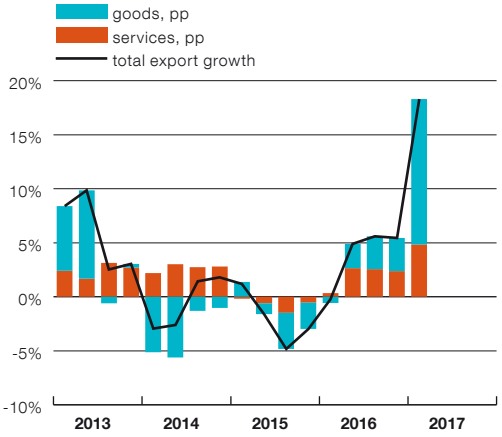
transaction is excluded. The growth in exports of mineral products was mainly in exports of output of Estonian origin, meaning that the share of exports of local production in this group of goods has increased in recent quarters to the average level. Exports of mineral products remain at about half of their peak level by value. Box 4 analyses the performance of Estonian origin exports in more detail.

The rapid growth of 16% in exports of services in the first quarter was supported by the return of growth after two years to exports of transport services. In November last year the Estonian and Polish air companies started to work together, sharply increasing exports of transport services to Poland. At the same time there was an increase in exports of sea transport services to Latvia. Exports of transport services to Russia continued to decline though. Other important service sectors where exports increased were construction, telecommunication, computer and information, and other business services.

One cause of the rapid growth in exports is the rise in prices of exports. Export prices for manufacturing were up by some 7% in the first quarter (see Figure 21). This indicates that Estonian production is sufficiently competitive on international markets because even as a small player in the market it has managed to ask for higher prices as global price levels rise. Prices cannot rise much faster than those of competitors for a long time as that would start to hurt competitiveness. The rise in Estonian export prices in the first quarter was a little faster than the rises in those of Latvia or Finland, though Lithuanian and, just, Swedish prices rose by more. Import prices rose at the same time in Estonia by a little less than 7%. This figure was also a little higher than that of the neighbouring countries. There is no direct one-to-one relationship in the aggregated dynamics for export and import prices in different countries, as the structure of exports and the share of imported components within exports varies from country to country.

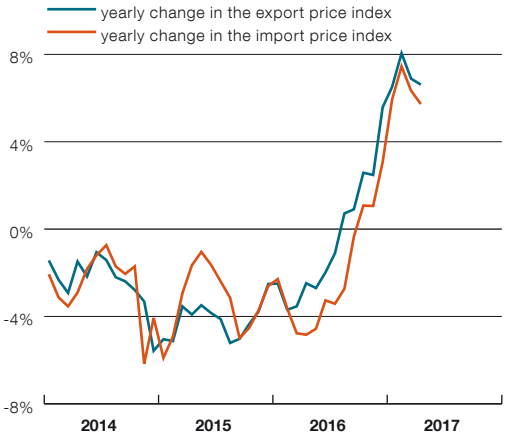
Estimates by companies of their competitiveness remain above the average levels of recent years. Surveys by the Estonian

Figure 20. Export growth decomposed



Sources: Statistics Estonia, Eesti Pank

Figure 21. Export and import price indexes in manufacturing

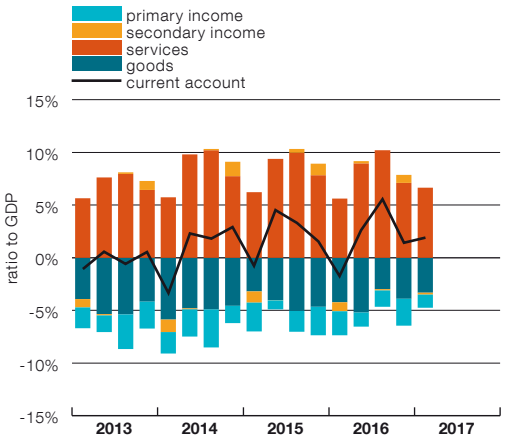


Source: Statistics Estonia

Institute of Economic Research found that a majority of respondents said their competitiveness has improved in Estonia and the European Union and outside the European Union. Slightly fewer respondents perceived an improvement in competitiveness in the European Union and Estonia in April than in January, but the figure still remained above the average. Estimates of improvement in competitiveness outside the European Union were at their highest level for some years. Developments favouring competitiveness are also shown by indicators of price competitiveness. The real effective exchange rate based on unit labour costs rose notably more slowly at the end of 2016, and the nominal effective exchange rate has been about 1% lower in the first months of this year than in 2016.

The current account was unusually in surplus in the first quarter. The balance of payments shows the surplus to have been 98 million euros, or around 2% of GDP for the period (see Figure 22). The surplus was mainly due to extraordinarily good export figures for companies, which meant that the surplus on the goods and services account was unusually large in the first quarter. On the income side, the net outflow was around half what it had been a year earlier, with both the outflow of investment income and the inflow of current transfers, or subsidies, falling.

Figure 22. Current account

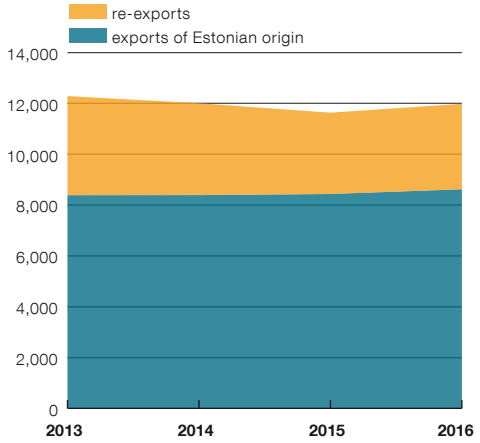


Sources: Statistics Estonia, Eesti Pank

BOX 4. The development of Estonia's goods exports by country of origin

The growth in goods exports that started in the second half of 2016 continued in the first quarter of 2017. Exports have increased for almost every group of goods each month. However, in assessing the competitiveness of manufacturing, the main exporting sector, it is important to consider firstly how exports have changed for goods made in Estonia and goods processed in Estonia. The other part of exports, which is the re-export of goods brought in from abroad, is more a reflection of general trade flows within a region, and its performance is important for the transport sector but does not really illustrate the export capacity of a country.

Figure B4.1. Goods exports by country of origin in million euros



Source: Statistics Estonia

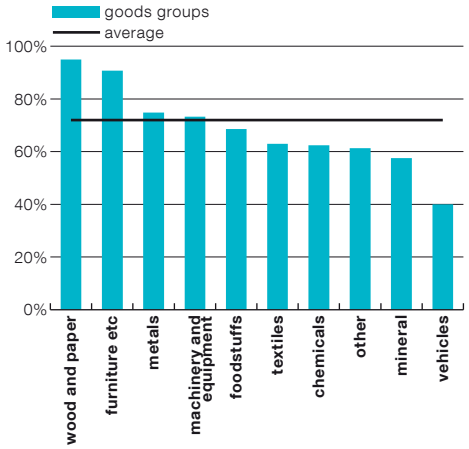
The first data from Statistics Estonia on exports of goods originating from Estonia date from 2013. Goods exports as a whole fell in 2013–2015, but exports of goods of Estonian origin remained at about the same level during that time (see Figure B4.1). This meant that the fall in exports had less of an effect in those years[24] than might be thought from the total drop in exports. If Estonian food exports to Russia had not been hit by Russian sanctions at the same time and had stayed at their levels of 2013, the growth in exports of local origin would have been 0.5 percentage point higher in 2014 and 0.8 percentage point higher in 2015. Both re-exports and exports of Estonian production increased in 2016, with the higher figure posted by re-exports, which were again more volatile. Exports of goods of Estonian origin have increased by around 3% in the past four years, and re-exports have declined by around 14% at the same time. As a result, the share of total exports that are of Estonian origin has increased by 4 percentage points from 68% to 72%.

24 See also Box 4 'The structure of exports and what lies behind the fall in exports' in the Estonian Economy and Monetary Policy 1/2016. http://www.eestipank.ee/sites/eestipank.ee/files/publication/et/RPU/2016/rpm_2016_1.pdf.

The increase in the share of exports of Estonian origin in foreign trade is a positive reflection on the competitiveness of Estonian companies. Earlier analysis[25] had shown that Estonian companies have increased their international market share in previous years mainly by improving their non-price competitiveness. An increasing share of local production of goods creates good conditions for closer cooperation between companies across the value chain. The activities with higher value added are usually toward the beginning or the end of the value chain, meaning that the more widely local companies are distributed across the chain, the more value added they can create for the economy.

The drawback to the data published by Statistics Estonia on the origins of exports is that there is no information on the amount of domestic value added, or how much of the value added created during the production or processing of a good comes from Estonia, as this may vary widely between groups of goods. In consequence, a larger amount of local production in exports does not necessarily mean increased value added in that sector. The biggest share of exports claimed by Estonian goods is in exports of wood products and furniture (see Figure B4.2). Wood is a very important input in both groups of goods, and so it is easy to base a business model on local resources. This means the share of transit goods in those groups of goods is very small. Even so, the share of exports of Estonian origin has still increased in both groups in recent years.

Figure B4.2. Proportion of exports that are of Estonian origin, 2016



Source: Statistics Estonia

The share of production of local origin in exports of machinery and equipment is at the average level. This is by far the group of goods with the biggest exports. However, the biggest exporters in this area are part of international groups that mainly subcontract in Estonia. This means that the share of goods of Estonian origin is probably not the best indicator of competitiveness for companies in machinery and equipment.

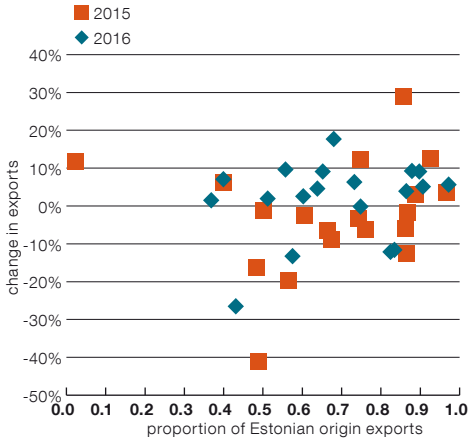
One of the smallest shares for goods of Estonian origin is in mineral goods, where the fall in the oil price in recent years has led to large changes in exports. In 2013–2014 exports of mineral goods made up more than 10% of total goods exports, and earlier they were more than 15%, but in 2016 they supplied only 8% of the total. The value of re-exported goods was about half as much in 2016 as it was four years earlier. Goods of Estonian origin were down only 12% though, and were up in yearly terms by 3% in 2016. Re-exports of mineral goods started to grow only in the first quarter of 2017, when they were up 3% over the year. The companies in this re-export-focused sector that have done better are those that have managed to prepare products in Estonia or at least to give them further value added during processing.

Although goods of Estonian origin have been more successful and stable than re-exports at the aggregate level, this is not necessarily the case in all groups of goods. Comparing the growth

25 See Box 4 'The competitiveness of Estonian goods exports and changes in market share since 2014' in the Estonian Economy and Monetary Policy 1/2017. http://www.eestipank.ee/sites/eestipank.ee/files/publication/et/RPU/2017/rpm_2017_1_est.pdf.

in exports for groups of goods and the share of Estonian production in those exports reveals that the share of local production only explains a little of the success of exports in the past two years in individual groups of goods (see Figure B4.3). The business logic for producing and exporting is different for different goods, and depends a great deal on whether local inputs are available, the position in the international value chain, the ambitions of owners, market demand, and much more. Equally the value of production of Estonian origin and of exports in general is very small in many groups of goods, and so a one-off contract can have a major impact on growth in the exports of a group of goods, though the effect is minor for the economy as a whole. So if re-exports are taken as the production of competitors, it can generally be said that companies exporting local production have succeeded in beating the competition. Not all groups of goods can see such a success story, and no certain regular patterns can be discerned for recent years however.

Figure B4.3. Export success and origin of exports by goods groups

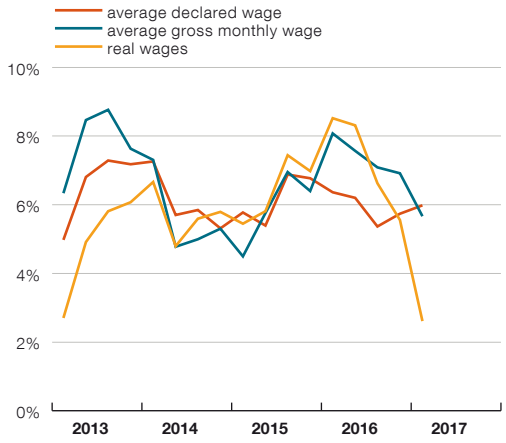


Source: Statistics Estonia

THE LABOUR MARKET

Growth in the average wage slowed at the start of 2017 even though productivity growth was strong and the demand for labour increased. Wage growth slowed in the service sector having been fast in recent years. At the same time wages rose in the industrial sector at the same rate as in the first quarter. Wage growth was slowed in services by smaller bonuses in the financial sector and by the delay of the wage agreement in health care. Wages in the industrial sector rose faster in mining and energy, and probably also in processing industries related to oil shale as output volumes recovered in the oil shale sector. Wages also rose faster in construction, which is rebounding strongly after several years of stagnation. As consumer price inflation rose, the rise in the purchasing power of those earning the average wage slowed sharply (see Figure 23). At the start of 2017, the rise in the minimum wage agreed in autumn 2015 from 430 euros a month to 470 started to apply. As the minimum wage has risen faster than the average wage for several years in a row, the share of people earning the minimum wage has increased over time and so the impact of a rise in the minimum wage also increases.

Figure 23. Yearly change in average wages



Sources: Statistics Estonia, Tax and Customs Board

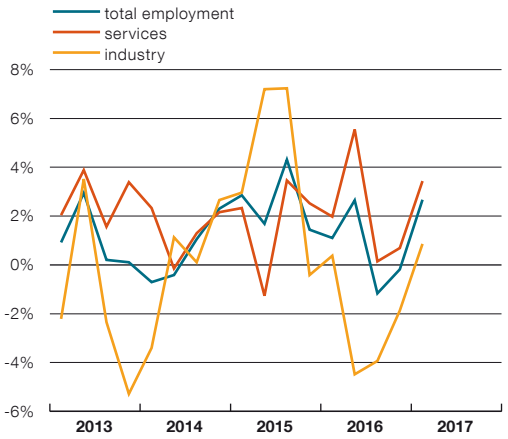
Stronger growth in the economy let companies increase their profitability at the start of 2017. Unit labour costs were down 0.6%. Companies had to take on extra staff and raise wages to meet rising external and domestic demand, and this boosted growth in the payroll of the whole economy. However, new employees were not hired at the same rate that GDP grew, as the productivity of employees increased.

After a temporary decline in the second half of 2016, the number of people in employment started to rise again at the start of 2017 (see Figure 24). The labour force survey shows this up 2.7% in the first quarter of 2017, after it had fallen by 0.7% in the second half of 2016. Within this, employment increased in both the service and industrial sectors. Growth in employment in the services sector has been built on growth in private consumption and strong consumer confidence. Employment in the industrial sector has been affected by the recovery in output growth in the oil shale sector, which covers mining and energy and some branches of processing industry. Employment in construction started to rise again in early 2017 as investment recovered in the economy, while manufacturing was affected by increased foreign demand. Growth in employment at the start of 2017 is confirmed by data from the Tax and Customs Board, though at a slightly slower rate than that found by the labour force survey. Equally, surveys by the Estonian Institute of Economic Research show improved expectations for employment at companies in construction, services and industry since the second half of 2016.

A rise in the vacancy rate indicates strong demand for labour and an increase in labour shortages. The vacancy rate rose in the second half of 2016, indicating that vacancies rose from 1.4% of all positions in 2015 to 1.8% (see Figure 25). The number of vacancies rose by 30% at the same time, and there was a notable increase in the number of jobs on offer on the website of Töötukassa, the unemployment insurance fund. The number of jobs mediated by Töötukassa continued to rise in the first quarter of 2017. The rise in the number of vacant positions in 2016 can partly be explained by increased labour mobility, as the number of separations at the initiative of the employee rose by 12.9% in the first three quarters of the year, indicating more frequent changes of job than previously.

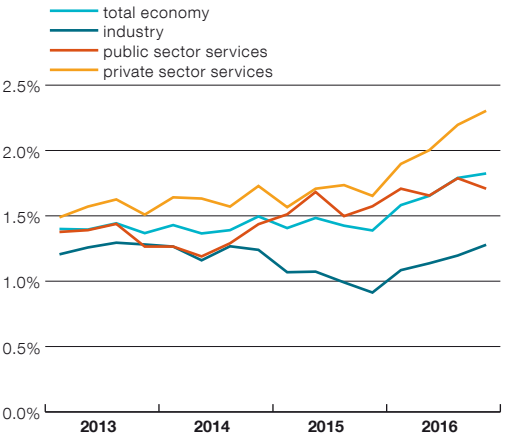
A rise in unemployment in the second half of 2016 proved temporary, and the effect of faster growth in employment brought the unemployment rate down to 5.6% at the start of 2017 (see Figure 26). The share of the unemployed who had been out of work

Figure 24. Yearly growth in employment from the labour force survey



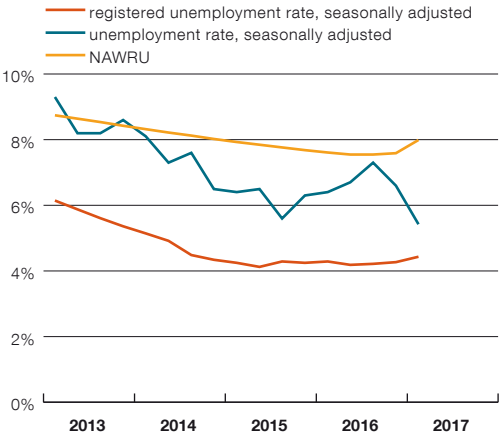
Source: Statistics Estonia

Figure 25. Vacancy rate, seasonally adjusted



Source: Statistics Estonia

Figure 26. Unemployment



Sources: Statistics Estonia, Töötukassa, Eesti Pank

for more than 12 months reached 34%, which is lower than the average of 50% seen before the economic crisis. The number registered as unemployed was down 2% at the end of 2016 in yearly terms, and down 1.6% in the first quarter of 2017. The number registered as unemployed who were partially capable of working increased over the year from around 4500 to 7800 people. Without this risk group, the number registered as unemployed was down by a sharp 13.9% at the start of 2017.

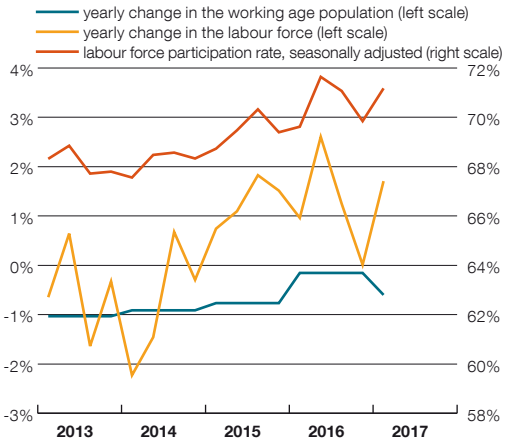
The labour supply has helped to ease wage pressures in the labour market. The decline in the number of people of working age has been more than balanced by the increase in participation in the labour force. Growth slowed for a time in the fourth quarter of 2016, but then the labour force increased by 1.5% in the first quarter of 2017 because of the higher participation rate. The number of people of working age was down by 0.6% over the whole of 2016, which was more than in 2015, but still a lower rate of decline than for many years prior to that. The decline in the population has been slowed by migration, as more people have come to live in Estonia in the past two years than have moved away (see Figure 27).

INFLATION

The growth in consumer prices accelerated in the second half of 2016 and reached 3% in the first quarter of this year. Inflation has been accelerating due to both external and domestic factors. The main reason was higher prices for commodities on world markets, which was transmitted through import prices into consumer prices for energy and food. At the start of 2017 the rally in commodities prices on the global market showed some signs of slowing. A notable domestic factor pushing prices up is the increase in economic activity.

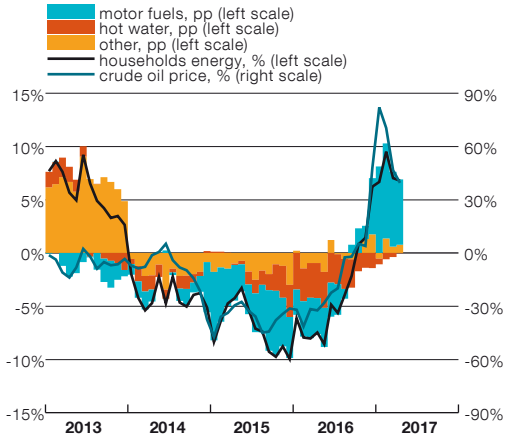
The decline in the markups of companies slowed in the second half of last year. Markups depend on the sales prices of products and on production costs. Companies were able to raise prices in foreign markets as foreign demand strengthened and export prices rose notably faster. On the cost side employment grew more slowly, but wage growth remained fast. As companies have absorbed a part of higher costs themselves, markups have been decreasing since 2014.

Figure 27. Labour supply



Source: Statistics Estonia

Figure 28. Change in energy prices



Sources: Statistics Estonia, Bloomberg

Energy prices rose sharply faster in the first quarter of 2017, by as much as 8%. The rise in prices was encouraged by higher commodities prices and by the slide of the euro against the dollar. Motor fuels were the energy good that saw the biggest rise, with the price up 21%, while prices for natural gas and heat energy continued to fall (see Figure 28). The rise in global prices for food commodities has been broadly based, and the excess supply on the European Union market that the Russian sanctions had created has been reduced. Food prices were also pushed upwards at the end of last year by the bad weather in Southern Europe that hurt the fruit and vegetable harvest. The rise in prices for horticultural

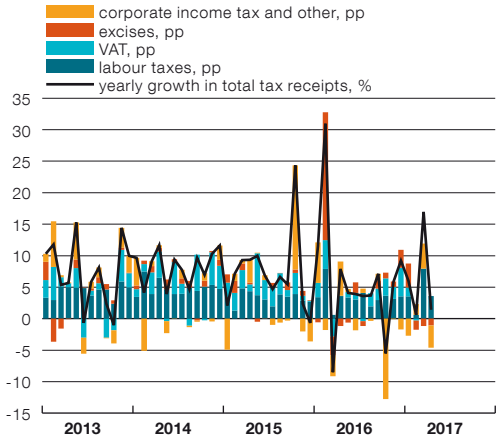
products that was seen in the first months of this year slowed in Estonia and in the European Union as a whole.

Core inflation, which shows price changes for manufactured goods and services, accelerated in the first quarter of 2017 from 0.4% to 1%, mainly because of higher services prices. Core inflation is driven by higher labour costs and import prices, which pass gradually into consumer prices. Among services, transport services saw prices rise, probably because of the higher oil price. The price level for accommodation services is higher this year because Estonia is taking the presidency of the European Union. Prices continued to fall for manufactured goods in Estonia in the first quarter of this year, though the average price level in the countries of the euro area was up over the year.

GENERAL GOVERNMENT FINANCING

Growth in wages and employment meant that tax revenues rose fast in the first quarter of the year. The state treasury received 5.6% more in taxes in the first four months of the year than it did in the same months of the previous year (see Figure 29). The wide variance in monthly revenues was caused by the stocking up of excise goods in advance of the rise in excise tax, and by corporate income tax, which produced less in total in those four months than it did a year earlier. Revenues from VAT were also very modest in the first months of this year, but they picked up substantially in March and April. Growth has been stable and as predicted only for social tax and personal income tax, although the usual tax rebates were paid a little earlier than last year. There will be a large temporary drop in income tax revenue in the months ahead when the Tax Board transfers the income tax refund for low-wage employees.

Figure 29. Tax receipts in the state budget



Source: Tax and Customs Board

Growth in general government spending increased in the first quarter as growth in public investment recovered. Government spending to acquire fixed assets was up 29% at the start of the year. The recovery in growth was expected as the central government has planned large-scale investment projects in the budget for this year. On top of this came a rise in investment activity among local governments. Growth in general government final consumption expenditure also grew quite fast at the start of the year, at a rate of almost 6%. This came mainly from growth in intermediate consumption, while growth in labour costs continued to slow. Monthly data show a fall in the rate of growth of social transfers as unemployment insurance benefit payments were down over the year. Social transfers will grow more quickly again in the second half of the year when family benefits are raised sharply. The growth in spending appears still to be limited by the reduction in external support, but this trend should be reversed in the months ahead.

ECONOMIC FORECAST 2017–2019

The Eesti Pank economic forecast is produced jointly by experts from the central bank's Economics and Research Department and Financial Stability Department. The Eesti Pank forecast is a part of the joint forecast for the euro area produced by the euro area central banks and the European Central Bank, which uses shared assumptions about the external environment. The assumptions about the external environment cover the interest rates in the euro area money markets, the exchange rate of the euro and commodity prices. The economic forecasts produced at the same time by the other central banks of the euro area are used for the assumptions for demand and prices in Estonia's trading partners. The external assumptions used in the forecast are based on information available as at 22 May 2017, and the Estonian economic indicators on data available as at 31 May 2017. The Eesti Pank forecasts are compiled using EMMA, the macro-model of the Estonian economy developed and regularly updated by Eesti Pank.

THE INTERNATIONAL ECONOMIC ENVIRONMENT

Growth in the global economy will accelerate this year as the demand environment improves, trade picks up and industrial output increases. The IMF forecast in April in its World Economic Outlook (WEO) that global growth would rise from 3.4% this year to 3.6% in 2018, while the OECD forecast is a little better, putting growth at 3.5% this year and 3.6% in 2018. The outlook for growth is now better than when forecasts were made at the end of last year as various geopolitical risks like an increase in protectionist economic policies have not yet materialised or have not had the negative impact that was feared. There are still downside risks to the outlook for global growth though. Significant uncertainty surrounds the lack of clarity about the economic and foreign policies of the new US administration and their global impacts. Rapid growth in the Chinese economy is certainly important for the global economy.

International institutions have raised their outlooks for growth in advanced economies from last year, with particular support from the rising growth in the US economy due to fiscal stimulus. Besides this, the economies of the euro area and Japan are recovering from their post-crisis slumps, primarily through improved opportunities for exports. This year the IMF[26] expects some increase in GDP growth in advanced economies to 1.9%, followed by a further rise to 2% in 2018.

Growth in emerging economies will increase this year and next, with help from increased production volumes around the globe and improved financing conditions. This will be encouraged by optimism in global stock markets. The most recent IMF forecast finds that growth in emerging economies should strengthen this year to 4.5%, and then to 4.8% in 2018. This would mark a turning point, as aggregate indicators for economic growth in emerging economies have been falling steadily for the past six years. It is important that the Chinese economy remain in a good position, which is backed up by increased public sector spending.

Prices continue to rise, but more moderately than at the end of last year as commodities prices are rising more slowly. Inflation in several advanced economies should be around the targets of the central banks in the coming years. The figures for emerging economies are moving in different directions, with inflation rising in China for example but falling in Brazil and Russia, where inflation is being restrained by a higher exchange rate or weak domestic demand.

The outlook for growth in the euro area is also better than it was in December. Several downside risks have eased, including political uncertainty about elections in the Netherlands and France. Uncertainty about the negotiations for the United Kingdom to leave the European Union and the future direction of US economic policy continues and could have a negative effect on the economic environment of the euro area. External demand is supported by faster global growth. Internal demand will be encouraged at the same time by low interest rates and improvement in the labour market, and by the oil price remaining relatively low. It is assumed that the 3-month EURIBOR will remain negative in the years ahead (see Table 2). An improved demand environment, good borrowing conditions, and the high level of capacity utilisation will support growth in investment. Price pressures will be backed by higher prices for inputs, which have

26 IMF WEO, April 2017.

Table 2. External assumptions in the forecast

					December 2016 projection		
	2016	2017	2018	2019	2017	2018	2019
Foreign demand growth (%)*	2.5	3.9	3.6	3.4	2.5	3.5	3.4
Oil price (USD/barrel)	44.0	51.6	51.4	51.5	49.3	52.6	54.6
Interest rate (3-month EURIBOR, %)	-0.26	-0.32	-0.19	0.03	-0.27	-0.18	-0.01
USD/EUR exchange rate	1.11	1.08	1.09	1.09	1.09	1.09	1.09

*Foreign demand growth is the weighted growth of imports of trading partners
Source: European Central Bank

been relatively strong compared to those of recent years because of rising global prices for commodities and a depreciation of the euro.

REAL GDP GROWTH

Estonian GDP growth will be boosted in 2017 by faster growth in exports of industrial production, larger corporate investment, and the increasing influence of the general government on gross demand. The forecast expects growth of 3.5% in 2017. The output gap turned positive in the first part of 2017 so there was no longer any slack in the economy that can be taken up to boost growth. This means that growth will slow to 3.3% in 2018 and 2.9% in 2019 (see Figure 30). The main indicators for the economic forecast are shown in Table 3, while Table 4 gives a comparison of growth and inflation forecasts with those of other institutions.

Table 3.Economic forecast by key indicators*

						Difference from December projection			
	2015	2016	2017	2018	2019	2016	2017	2018	2019
Nominal GDP (EUR billion)	20.25	20.92	22.37	23.74	25.1	0.14	0.64	0.76	0.85
GDP volume**	1.4	1.6	3.5	3.3	2.9	0.6	0.9	0.3	0.0
Private consumption expenditures***	4.8	5.1	2.1	4.7	2.9	1.7	-0.6	1.6	0.1
Government consumption expenditures	7.5	5.2	2.7	2.5	3.3	5.6	0.3	1.6	1.7
Fixed capital formation	-1.7	-2.5	11.2	3.2	3.9	-2.7	7.1	0.0	-0.2
Exports	-2.1	3.9	5.6	2.6	4.0	0.3	2.2	-1.3	0.0
Imports	-3.1	4.3	6.6	3.3	4.2	-0.7	3.5	-0.4	0.2
Output gap (% of potential GDP)	0.0	-0.5	0.6	1.2	1.3	0.4	1.0	1.0	0.6
CPI	-0.5	0.1	3.2	2.4	2.1	-0.1	0.4	0.0	0.1
Core inflation	0.9	0.7	1.4	1.3	1.5	0.0	0.5	0.0	0.3
Services	2.0	1.2	2.8	2.2	2.7	0.1	0.9	-0.4	0.3
Non-energy industrial goods	-0.2	0.1	0.1	0.4	0.4	-0.1	0.2	0.4	0.3
Energy	-7.0	-3.8	6.7	2.9	2.0	0.2	0.9	-0.5	0.3
Food, including alcohol and tobacco	0.9	1.6	4.8	4.3	3.4	-0.6	-0.9	-0.8	-0.7
HICP	0.1	0.8	3.4	2.7	2.5	-0.1	0.5	0.0	0.2
GDP deflator	1.0	1.7	3.3	2.8	2.7	0.1	1.3	0.1	0.1
Unemployment rate (% of the labour force)	6.2	6.8	6.8	8.7	9.4	0.0	-1.4	-1.1	-0.8
Employment****	2.9	0.3	0.9	-0.6	0.2	-0.1	1.5	-0.2	0.0
Average gross wage	5.9	7.4	5.7	5.1	5.4	0.1	0.7	0.1	0.1
ULC	7.2	4.3	2.6	1.7	2.6	-1.0	0.2	0.1	0.0
GDP per employee	-1.4	1.3	2.6	3.9	2.7	0.7	-0.6	0.5	0.0
Private sector debt, outstanding amount (non-consolidated)	1,3	2,0	5,1	5,9	5,7	-0,1	-0,4	0,9	1,1
Private sector debt, outstanding amount (% of GDP, non-consolidated)	129,0	127,4	126,2	125,8	125,9	-2,2	-4,4	-3,8	-2,7
Current account (% of GDP)	2.2	2.2	3.0	1.7	1.7	0.0	1.5	0.0	-0.1
Budget balance (% of GDP)*****	0.1	0.3	-0.5	-0.9	-0.9	0.0	-0.2	-0.5	-0.6
Cyclical component (% of GDP)	0.5	0.6	0.2	0.3	0.3	-0.1	-0.1	0.1	0.0
Temporary measures (% of GDP)	-0.6	-0.3	-0.4	-0.1	-0.1	0.0	0.0	0.0	0.0
Structural budget balance (% of GDP)	0.2	0.0	-0.3	-1.1	-1.1	0.1	0.0	-0.6	-0.6

* Numbers reported are annual rates of change in per cent, if not noted otherwise, ** GDP and its components are chain-linked, *** including NPISH, **** employment by domestic production units; ***** the budget balance forecast considers only those measures on which sufficient information was available at the date of the forecast.
Sources: Statistics Estonia, Eesti Pank

Table 4. Estonian economic forecasts by other institutions

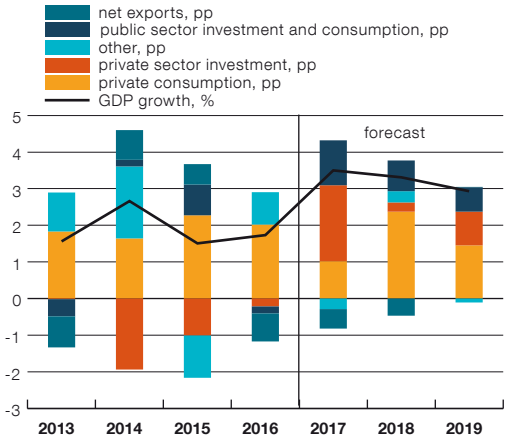
	GDP real growth, %					CPI inflation, %				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Eesti Pank	1.4	1.6	3.5	3.3	2.9	-0.5 (0.1*)	0.1 (0.8*)	3.2 (3.4*)	2.4 (2.7*)	2.1 (2.5*)
Ministry of Finance	1.4	1.6	2.4	3.1	2.8	-0.5 (0.1*)	0.1 (0.8*)	3.3 (3.4*)	2.7 (2.9*)	2.5 (2.6*)
European Commission	1.4	1.6	2.3	2.8		0.1*	0.8*	2.6*	2.7*	
IMF	1.4	1.6	2.5	2.8	2.7	0.1*	0.5*	1.4*	1.8*	2.0*
OECD	1.4	1.6	2,6	3,1		0.1*	0.8*	3.2*	2.6*	
Consensus Forecast	1.4	1.6	2.3	2.8		-0.5	0.3	2.1		
SEB	1.4	1.6	2.2	3.1		0.1*	0.7*	2.4*	2.8*	
Swedbank	1.4	1.6	2.2	2.8		-0.5	0.1	2.6	2.4	
Nordea	1.4	1.6	2.5	2.9		-0.5	0.2	2.6	2.3	

* HICP
Sources: Eesti Pank, June forecast 14.06.2017; MoF, Spring 2017 forecast 12.04.2017; European Commission. Economic Forecast. Spring 2017. 11.05.2017; IMF, WEO, April 2017, 18.04.2017; OECD, Economic Outlook, June 2017, 07.06.2017; Eastern Europe Consensus Forecasts, May 2017; SEB, Nordic Outlook, May 2017, 09.05.2017; Swedbank Economic Outlook 06.04.2017; Nordea Economic Outlook, 24.03.2017

Productivity growth will accelerate during the forecast horizon, and employment-driven economic growth will be replaced by productivity-based growth. Productivity growth has been slow in recent years partly because companies have hired more employees than they needed to meet current demand as firms have been expecting the labour market to become tighter and GDP growth to pick up. Rapid employment growth cannot continue as unemployment is low and labour market participation is already high. Increased demand makes work more intensive, which results in higher productivity growth. Furthermore, companies have started to use capital more efficiently, and the latest data put capacity utilisation in manufacturing companies at close to 76%. This means that despite the low investment rate, more can be produced using installed capacity than before. Even so, the potential for growth in the Estonian economy has contracted significantly over a decade or so, and GDP growth will not return to its earlier levels during the forecast horizon

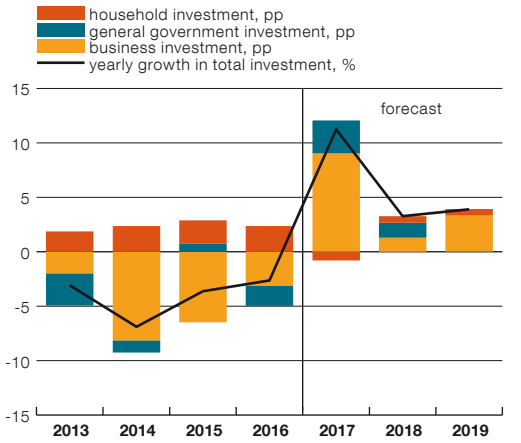
Improvement in the economies of trading partners and increased capacity utilisation will support an increase in corporate investment. One of the main brakes on growth in investment so far has been uncertainty about the outlook for exports. As investment activity has been low for some years, better opportunities for exporting and increased production volumes in the past half year have led to existing fixed assets being used more intensively. However, further

Figure 30. Contributions to GDP growth



Sources: Statistics Estonia, Eesti Pank

Figure 31. Gross fixed capital formation



Sources: Statistics Estonia, Eesti Pank

investment is still needed to meet foreign demand and increase production volumes further. For this reason it is expected that corporate investment will increase during the forecast horizon (see Figure 31). Alongside the growth in export opportunities, increased confidence and low interest rates will also boost investment as prices rising help improve corporate profitability. Access to funding will be supported during the forecast horizon by the good loan supply from the banks operating in Estonia and the development of the non-bank financial sector.

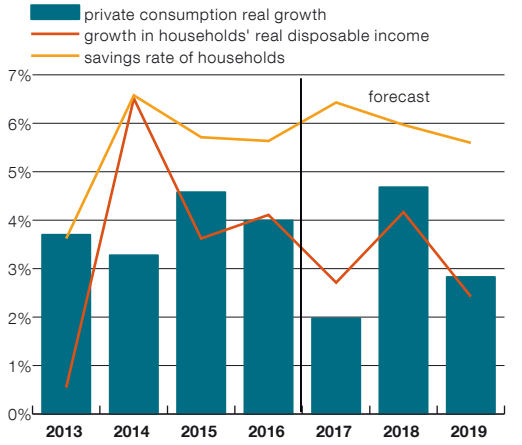
In the short term the course of the economy will be affected a lot by the general government, and this could lead to a temporary overheating in the construction industry. The postponement of several investments in 2016, the use of European Union structural funds and the local elections in autumn 2017 will sharply increase general government investment in 2017. They will also increase in 2018 and 2019, but at a slower rate. The dynamics of GDP will be affected greatly by the rise in general government spending in 2017 for the presidency of the European Union, and the subsequent fall in 2018. The rises in excise planned for the first years of the forecast will lead to volatility in inventories and indirect taxes.

The dynamics of inventories will be affected in both 2017 and 2018 by changes in the timing of stocks caused by rises in excise. Stocking up of excise goods generally occurs in the month preceding a rise in excise, but the rise in excise on alcohol and fuel in 2017 was postponed from 1 January to 1 February only in December 2016, so a large part of the stocking up had already occurred in 2016. It is assumed that the stocking of inventories prior to the rise in excise in February 2018 will mainly happen in January 2018. This means that growth in inventories in 2017 will limit growth in domestic demand, but inventories will grow faster again in 2018, favouring domestic demand.

The Estonian economy is exceeding its potential. Business surveys show that labour shortages have been more and more of a hindrance for growth in recent years, and it is not expected that the shortages will ease during the forecast horizon. For economic growth to remain fast needs potential growth, or growth in supply, to increase through more efficient and capital-intensive production processes. Growth built on temporary factors heating the economy could increase imbalances and reduce the ability of the economy to cope with external shocks in the future.

Higher inflation will hold growth in both household real incomes and private consumption back in 2017 (see Figure 32). Growth in private consumption adjusted for inflation will reach 2% this year. Inflation will be joined by slower wage growth in restraining the rise in household real income. In the second half of the year consumption spending will get a one-off boost when support is paid out to low-wage employees.

Figure 32. Private consumption and the disposable income of households



Sources: Statistics Estonia, Eesti Pank

A sharp rise in the tax-free income threshold in 2018 will lift the growth in the real incomes of wage earners and growth in private consumption substantially (see Box 5). Personal income tax reform will increase net incomes for some four fifths of wage earners. Consumption is expected to grow at about the same rate as the economy in 2019 as the government is not currently planning any reforms at that time that would notably boost growth in net incomes. The household saving rate will change little during the forecast horizon and will remain relatively high in historical terms.

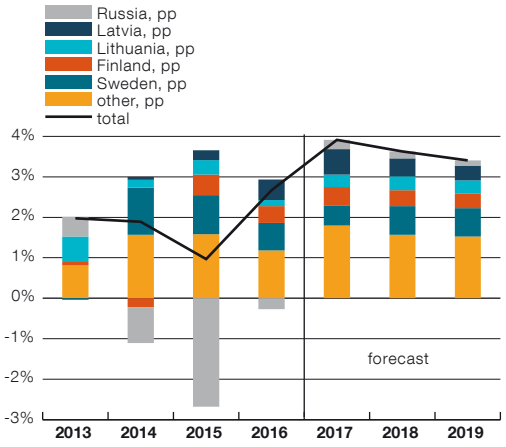
High confidence will keep the volume of investment in residential property by households high in the coming years. Demand for new residential space will be limited by the fall in the Estonian population, but the move to the towns and the wish to acquire newer and more modern property will keep demand relatively high. Further support for demand comes from the affordability of real estate for many people as rapid wage growth has made it possible to save more and more, while base interest rates remain low. Wage growth is expected to remain rapid in the years ahead and the lending conditions of the banks will not change significantly. Sales of new residential space will also increase in the coming years, but at a slower rate than in the past couple of years. As this will mean that the share of all real estate transactions that involve new residential space will increase more slowly, its statistical impact on the average price of real estate will diminish (see the section on the Estonian economy) and prices will rise more slowly.

The international competitiveness of companies will improve within the forecast horizon. Wages continue to rise fast, but the improvement in the economies of Estonia's trading partners and the resulting stronger foreign demand will make it possible for companies to increase productivity. This means that the growth of unit labour costs will be slower in the forecast horizon than in the preceding years, and the rate of decline of price-based competitiveness will slow. The estimates of companies for their own competitiveness in international markets have also improved and looking forward they see export orders increasing further.

Exports of both goods and services will increase faster in 2017 than in the past six years, growing by around 5%. Faster export growth will be backed by stronger foreign demand and higher confidence at companies. Almost all the major trading partners will contribute to the improvement in foreign demand, and unlike in earlier years, none of them expects import demand to decline (see Figure 33). In services, exports of transport services have stopped falling, and growth has turned positive. In future growth should continue through increasing exports of air passenger transport services, while goods transport services by sea and rail will not have a major negative impact on export growth any more. In goods, exports of mineral products have again started to grow and the low reference base last year means that growth could remain quite strong at least until the third quarter of 2017.

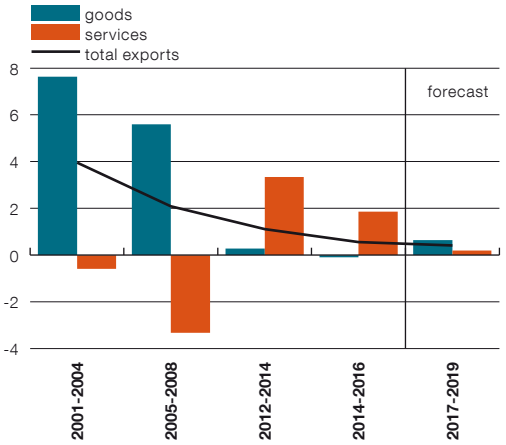
The market share of exports in trading partners will grow in the forecast horizon at a similar rate to that of previous years (see Figure 34). The market share for exports has increased since 2012 mainly because of the good performance of services exports, but in the forecast horizon goods exporting companies will also manage to increase their market share in partner countries.

Figure 33. Import demand in trading partners



Sources: Eurostat, European Central Bank, Eesti Pank

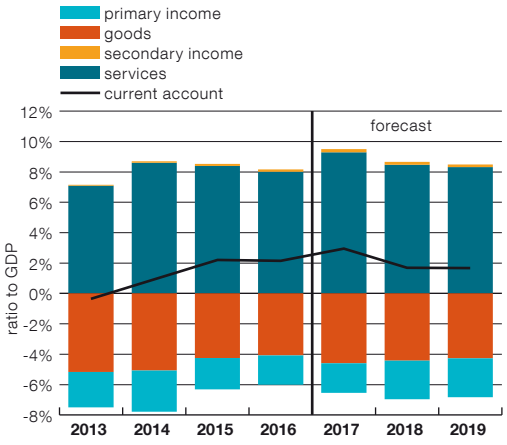
Figure 34. Market share gains in percentage points



Sources: European Central Bank, Eesti Pank calculations

The current account surplus will shrink in the years ahead (see Figure 35). Increasing investment activity will lead the current account surplus to narrow despite stronger exports. Imports of goods and services will grow faster than exports and this will reduce the surplus on the goods and services account. On the income side, improved corporate profitability will lead to an increased outflow of investment income, which will also lower the surplus on the current account. At the same time, the forecast horizon coincides with the period of active use of the structural funds from the European Union (see the forecast for the general government), meaning that money will come into the country in subsidies, and this will improve the current account by around 0.1-0.2 percentage point during the years of the forecast.

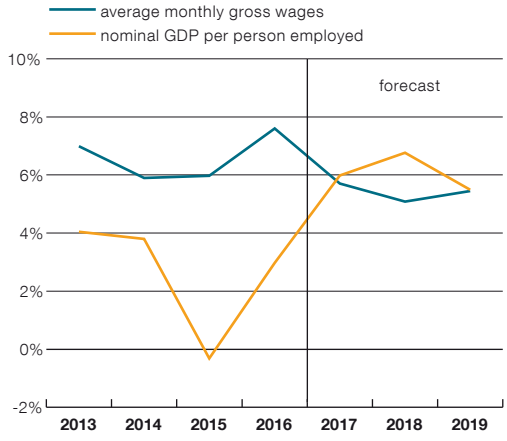
Figure 35. Current account



Source: Eesti Pank

Growth will slow in unit labour costs within the forecast horizon and the payroll will decrease a little as a share of GDP. This will be possible because of a recovery in foreign demand, from which the exporting sector is the biggest beneficiary. Although exporters will be able to increase their number of employees, the productivity of labour will also increase. Growth in productivity will be supported partly by more intensive use of labour, and partly by an increase in investment as companies feel more confident.

Figure 36. Wage and productivity growth



Sources: Statistics Estonia, Eesti Pank

The average wage will continue to rise fast, doing so by 5–6% in 2017-2019 as labour shortages continue in the labour market, and this will give employees more power in wage negotiations (see Figure 36). Increased productivity and higher inflation will make it easier for companies to raise wages. However, faster growth in consumer prices will also increase the wage demands of employees. Wage growth will also be boosted by a rise in the minimum wage throughout the forecast horizon.

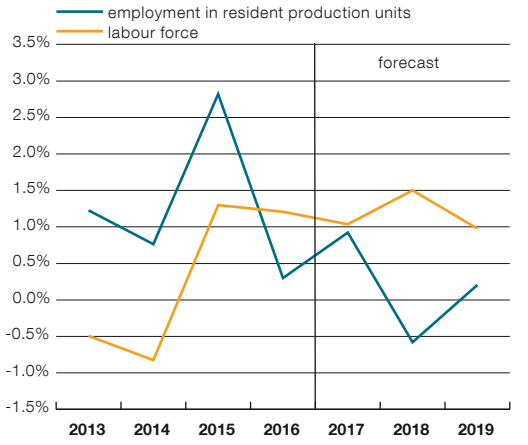
Wage growth will be restrained in 2018 by personal income tax reform, which will lower the tax rate for those earning below the average wage. Slower growth in gross wages will not necessarily cancel out the effect of tax changes on net wages, because how the tax effect is divided between employee and employer will depend on their positions in wage negotiations. When labour is short, it is the employee who is stronger. The effect of the income tax reform is covered in more detail in Box 5 on how the changes in the income tax system affect incomes and consumption.

Wage growth will be boosted by demand for labour recovering at a time when there is barely sufficient suitable labour available. Sentiment surveys and statistics for vacancies show that in the middle of 2016 companies became more interested in hiring new staff. However, survey results in construction and industry show the problem of labour shortages to have become more acute. Wage pressures will be eased by migration of labour into Estonia, though statistics on this are unfortunately scarce.

General government wage growth will be affected by the government's decision to set aside additional funding from the budget for raising the wages of teachers, by the wage agreements in healthcare, and by the presidency of the European Union in the second half of 2017. It is probable that the presidency will increase the workload and responsibilities of civil servants, and this will be compensated with bonuses. When the presidency ends, general government wage growth will slow. The downward trend in general government employment will also be halted by the presidency. At the end of the forecast horizon, employment in the public sector will start to be reduced because of administrative reforms, though the impact this will have is not yet clear.

The fall in employment in the second half of 2016 proved temporary, but the strong growth of early 2017 will not continue either (see Figure 37). Further increases in employment will be restrained by high wage levels and the shortage of available labour. Some increase in demand for labour in construction and production of construction materials can be expected as infrastructure projects financed from structural funds start up. Alongside the general government, the services sector may also see a temporary boost to demand for labour because of the European Union presidency.

Figure 37. Annual growth in employment



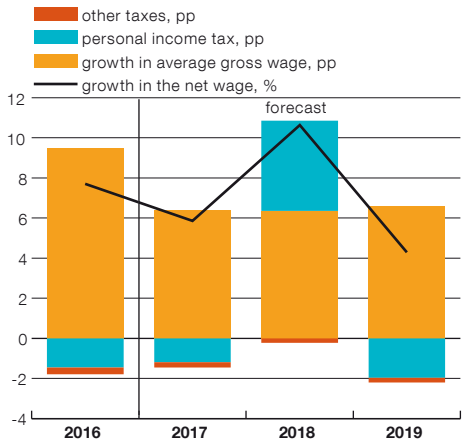
Sources: Statistics Estonia, Eesti Pank

The supply of labour in the economy is estimated to be a little larger than it was in the December forecast because of changes in the population forecast. The effect of the positive migration balance will probably be that the working age population declines more slowly. The rate of labour force participation will also rise. The effective labour supply will decline over time though as the number of people of working age falls, while the growth in labour force participation in the coming years will mainly be a consequence of the work ability reform, and there is a major risk that the people added by that to the labour force will be unemployed for some time.

Box 5. The impact of changes to the income tax system on incomes and consumption

A change will be introduced to the income tax system from 1 January 2018 that will see the tax-free threshold for private individuals rise. The tax-free allowance on incomes will be raised from the 2280 euros a year, or 190 a month, previously planned for 2018 to 6000 euros a year, or 500 euros a month. In a change to the income tax system that has applied for private individuals until now, the 500 euro monthly income allowance will only apply for those whose gross monthly income is not above 1200 euros. From 1200 euros of gross income, the tax-free threshold will be lowered by one euro for every additional

Figure B5.1. Growth in average net wage



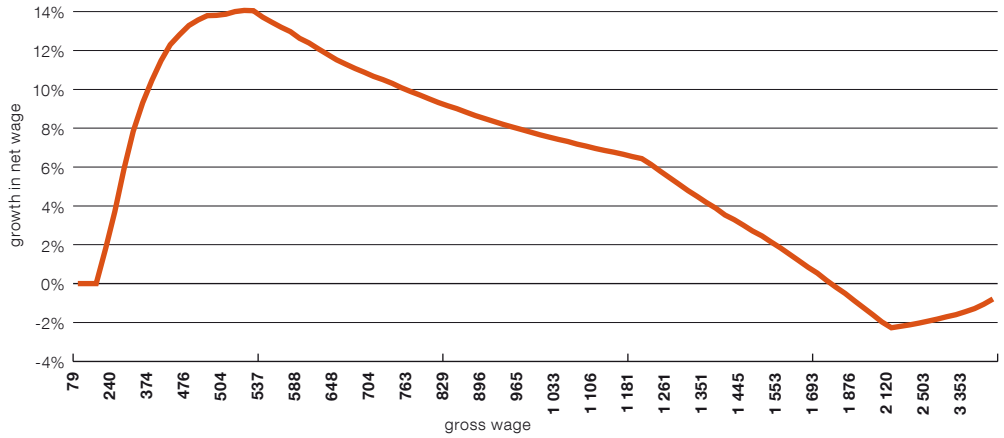
Sources: Statistics Estonia, Eesti Pank

1.8 euros of income, reaching zero when the gross monthly wage reaches 2100 euros. At the same time, the opportunity for wage-earners receiving less than 650 euros as their gross monthly wage to apply once a year for support for low-paid employees will be lost.

Eesti Pank forecasts that the average gross monthly wage will rise in 2018 to 1265 euros. The tax-free allowance on this income will be around 464 euros, meaning the personal income tax paid on that wage will be lower and the average net monthly wage will rise by 10.8%[27]. A little less than half of this growth will be due to the changes in the income tax system (see Figure B5.1).

Leaving aside the impact of the higher gross monthly wage, the new tax-free allowance system will raise the net monthly wage for four out of five wage-earners in comparison to the tax-free income threshold of 190 euros a month (see Figure B5.2). The net monthly wage will rise particu-

Figure B5.2. Effect of change in income tax system on monthly net wage



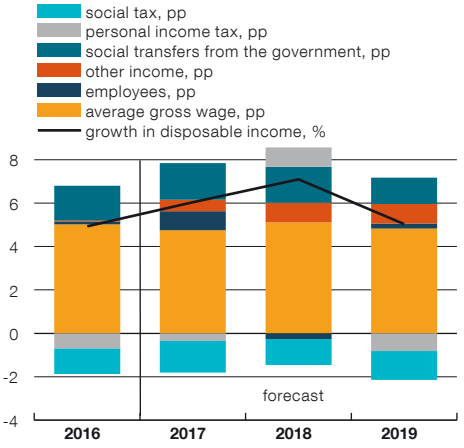
Sources: Tax and Customs Board, Eesti Pank

larly for those whose gross monthly wage is a little over 500 euros. The tipping point, where the tax-free income and the amount paid in income tax are the same under both the old and new systems is 1758 euros a month, and people earning a gross wage above that amount will see a reduction in their net wage following the change to the income tax law. The largest amount that can be lost from the net wage relative to the 190 euro tax-free threshold is 38 euros.

As the tax-free income threshold will rise a long way in 2018 for the majority of wage earners, the income tax paid by households will be less despite the growth in the payroll, and so growth in the disposable income of households will be faster (see Figure B5.3). It is estimated that the change to the income tax law will raise the total net wage of all wage-earners by 217 million euros in 2018, or 3.5%, from what it would have been with the threshold remaining at 190 euros a month. Given though that in 2018 those on low wages will no longer receive a one-off benefit payment based on their 2017 wage income, the total net income of wage earners for the year will rise by less in consequence of the changes to the tax system, increasing by around 193 million euros.

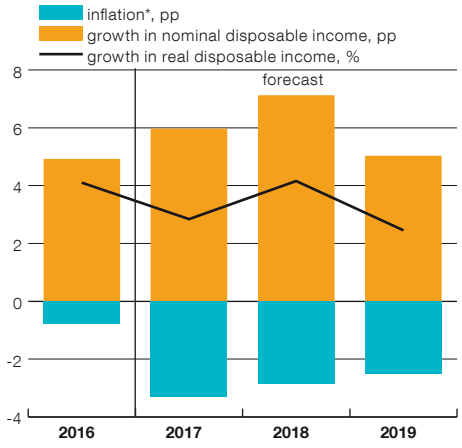
27 This calculation includes the mandatory 2% pension payment. Fewer than one fifth of wage-earners applied in 2013 to increase their pension contribution in 2014–2017 from 2% to 3%. As the period of increased payments into the second pension pillar ends in 2018, the net monthly wage of someone receiving the average wage in Estonia who has made the additional payments will increase by 11.9%, which is more than that of a wage-earner who did not make the additional payments.

Figure B5.3. Growth in households' nominal disposable income



Sources: Statistics Estonia, Eesti Pank

Figure B5.4. Real growth in households' disposable income



*Private consumption deflator
Sources: Statistics Estonia, Eesti Pank

Real household disposable income will grow one third more slowly than nominal income though, because of inflation (see Figure B5.4). One factor pushing inflation will be the government's plan to offset the budget deficit caused by the tax reform with higher excise taxes and new consumption taxes. This means that fiscal policy decisions will be raising household incomes at the same time that they are also raising costs. Alongside the consumption taxes, the government will offset its lower income tax revenues with a road tax on heavy vehicles and advance income tax for banks from 2018 (see the section in the forecast on general government financing).

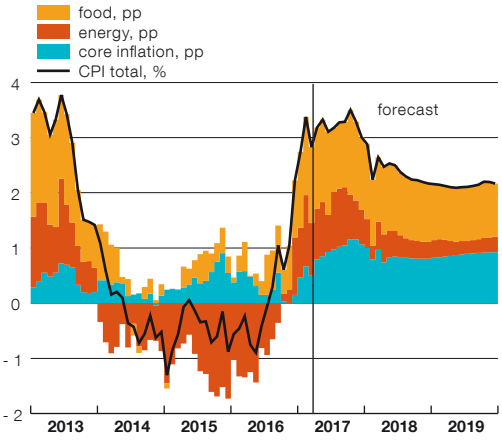
Higher incomes will give a boost to growth in private consumption in 2018. Data on the budgets of Estonian households make it clear that low income households, which will gain most from the changes to income tax law, have a higher marginal propensity to consume[28], and most of the additional income will be directed to consumption. Combined with this, slower growth in private consumption in 2017 will mean that private consumption will grow faster in 2018 than household disposable income and so the household saving rate will fall a little.

28 Marginal propensity to consume gauges how much of additional income goes on consumption, while the rest is saved.

PRICES

The acceleration in inflation this year has come from both demand and supply factors. The average rise in consumer prices for the year is forecast to exceed 3%. The pass-through of higher oil and food commodities prices to consumer prices will continue throughout 2017. Core inflation is expected to continue to rise steadily, driven this year by rapid GDP growth in Estonia. Economic growth is running at close to its potential, or even above it, fostering output price increases. Commodities price inflation will slow on global markets in the second half of the forecast horizon, and so inflation will fall in 2018–2019 to close to 2% (see Figure 38).

Figure 38. CPI growth



Sources: Statistics Estonia, Eesti Pank

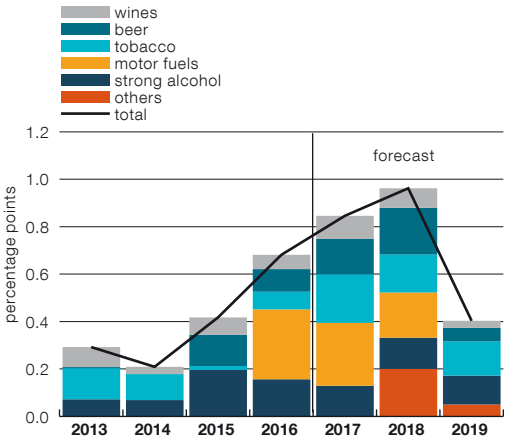
Energy price inflation, which was high at the start of 2017 because of the low reference base, will decline in the second half of this year. As it takes some time for trends in food price commodities on world markets to pass into Estonian consumer prices, food price inflation will notably fall from next year. As they did in 2016, the weather conditions may cause short term price volatility. Under normal seasonal conditions the effect of recent bad weather on prices for fruit and vegetables should ease in the coming months.

The new government that came into office last November has announced the introduction of higher indirect tax rates. Inflation due to rises in excise taxes will amount in the coming years to 0.8-1 percentage point (see Figure 39). Excise on alcohol will be raised twice in 2017, in February and July. Price rises in July will largely by caused by the rise of 70% in the excise on beer, which will push inflation up by around 0.2-0.3 percentage point. At the same time the effect on inflation of the rise in tobacco excise last July will fade out. A new factor will be the sugar tax that will apply from January 2018 and add some 0.1 percentage point to inflation. Inflation caused by taxes will be lower in 2019 at around 0.4 percentage point.

Administered prices, which fell last year, should also be flexible throughout the forecast horizon. Most prices in Estonia, accounting for 92% of the consumer basket, are set freely, but changes in the prices of electricity and heating and network fees have to be approved by the Competition Authority. Electricity network fees will come down for household consumers in July, depending on consumption volumes. Structural reforms will continue at the European Union level as regulation of mobile roaming charges comes into force. The European Union quota system for sugar production will be ended in September, and so sugar may become cheaper in the years ahead.

Survey responses show a sharp rise in consumer perceptions of inflation, and inflation expectations for the next 12 months are also high. The inflation expectations of both households and companies may be affected by how wages and prices are set. High inflation expectations will mean pressure on companies to raise wages.

Figure 39. Contribution of indirect taxes to inflation



Sources: Eesti Pank

GENERAL GOVERNMENT FINANCING

The government will use fiscal policy to direct extra money into the economy during the forecast horizon, thus boosting demand while worsening the structural fiscal position. Eesti Pank estimates that the output gap has already closed and the economy has reached its sustainable level, and so the fiscal policy in the years of the forecast will be pro-cyclical and there will be a risk of overstimulation. The government's decision to loosen the fiscal rules and increase spending will increase the structural budget deficit in 2018 by half a percentage point of GDP. Eesti Pank estimates that the structural budget deficit will reach 1.1% of GDP by the end of the forecast horizon, passing the maximum rate set by the government of 0.5% of GDP (see Figure 40). The difference partly arises because there is a lot of uncertainty around the impact of some tax measures. Furthermore it is considered that the growth in wages and consumption that has exceeded that in general economic activity for years has led to increased tax revenues, which are partly cyclical[29].

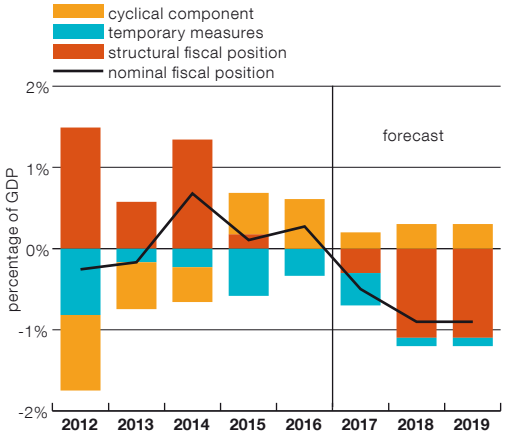
29 Eesti Pank assesses the government's impact on economic conditions by looking at the tax base. This is different to the government's official methodology, which is used for setting and assessing budget targets and is based on estimates of the output gap. The Ministry of Finance estimates the output gap will be negative out to 2020, and so tax revenues will be lower than normal and the budget will be better positioned structurally. The estimate by Eesti Pank indicates the opposite.

Government spending will increase broadly in the years of the forecast and the budget will fall into deficit. The government increased child support in its budget for 2017, restored agricultural subsidies, and set aside additional funds for investment, wage rises in education and healthcare, and holding the presidency of the European Union. As the average wage is rising fast throughout the economy and inflation has rebounded, labour and consumption costs will also rise in parts of the general government that are not specifically described in the Stability Programme. Furthermore, the use of structural funds is to increase dramatically in 2017, having been delayed by the very slow launch of new projects in the current multiannual financial framework of the European Union. It is forecast that government spending will rise by around 9% this year.

Spending will continue to grow rapidly in 2018 with the start of the strategic investment programme, which will raise the level of government investment in 2018-2020, while wages will continue to rise fast in education and healthcare, and various smaller spending plans agreed in the coalition agreement will be enacted. Growth in spending will be restrained by a decline in the contribution of EU transfers from 2018[30], though at the same time there will be growth in the part of spending that is funded from fiscal revenues or loans, widening the budget deficit to 0.9% of GDP.

Major changes are planned to the Estonian tax system both this year and next year, the largest of which will affect personal income tax. From 2018 the basic tax exemption will rise to 500 euros a month for someone earning the average wage, above which it will decline as income rises until it reaches zero at a wage of 2100 euros. This will make the tax system more progressive, but as there will be no substantial increase in the tax burden for those on higher wages, tax revenues will be down by a tenth from a year earlier. The reduction in personal income tax will largely be offset by new indirect taxes and rises in excise rates, which will occur in all the years of the forecast, and by an advance income tax for banks that will bring additional revenues

Figure 40. General government fiscal position



Sources: Statistics Estonia, Eesti Pank

into the budget in 2018 and 2019 in particular. This is part of the government's plan to shift the tax burden from labour to consumption, with the goal of supporting demand and supply for labour and so aiding growth in the economy (see Box 6). Tax revenues will also be boosted by the ending of additional payments by the state into second pillar pension funds. Overall the tax burden will increase by 0.2 percentage point of GDP in 2018.

The tax burden may be increased from 2018 by changes to the corporate income tax code, but there are also doubts about some of the new taxes coming into force. Although the draft law calls for the rate of corporate income tax to be reduced under certain circumstances, tax revenues may be increased if the low tax rate encourages companies to pay more dividends. As there is a lot of uncertainty around estimates of the impact of such a change, the forecast assumes that dividend payments and revenues from corporate income tax will follow developments in profits, with the historically high rate of payouts of recent years maintained. The tax burden may be lower than forecast if some of the tax measures in the budget strategy are not implemented. There is currently uncertainty about the rise in excise on alcohol, the tax on sweetened drinks, excise on packaging and the limits on the use of joint tax declarations, which have already been taken before the courts or about which some coalition partners have expressed doubts.

30 The forecast assumes that the structural funds will be distributed across the seven years of the budget period in a similar way to that followed in the 2007–2013 budget period. After recovering in 2017 the volume of subsidies will remain at a high level until 2020, but its rate of growth will slow.

Box 6. The tax structure and economic growth

The tax system of a country can be assessed with various criteria that do not always consider exactly the same goals. Assessment can be made of how tax policy affects economic growth or the distribution of income, how easy it is to make and collect payments, or how competitive the tax system is with those of other countries. Equally it should not be forgotten that the final impact of government policy does not depend only on how revenue is collected, but even more on how the state uses the money it receives.

Sources of economic growth and the role of tax policy

Taxes affect the choices of companies and households about saving and consumption, and also people's choices about whether to spend longer in education or go to work. The distorting effect on behaviour depends on the extent to which resources are taken from the private sector (the level of the tax burden), and what is taxed (the tax structure). The size of the tax burden does not always have a clear impact, because although the resources of the private sector are being reduced, government spending is increasing, which may offset the reduction. As the size of the general government reflects the preferences of society in how public goods are provided and how much is redistributed, the main focus is often on tax structures as a means of achieving political goals (Arnold 2008).

The OECD has proposed a ranking for taxes based on their growth-friendliness (Johansson et al 2008). It holds the most harmful to be corporate income tax, followed by personal income tax, consumption taxes and wealth taxes, which affect economic growth the least.

The neo-classical theory of growth (Solow 1970) finds that economic growth is driven by accumulation of production factors, which are labour and capital, and by technological progress. The more capital or labour there is, or the more educated the labour force, the more potential there is for the economy to grow. It follows from this that the most harmful effects on economic growth come from taxation of labour and investment.

- At the micro level, labour taxes affect supply and demand for labour by reducing (1) the motivation for workers to supply their labour, (2) the motivation for companies to employ workers, and (3) the choice of economic agents in earning taxable income. The size of the effect depends on the elasticity of labour demand and labour supply[31], which vary between types of labour. It is generally found that elasticity is higher for the low-paid and for women, who are more likely to be the second-earners in a family (Wöhlbier et al 2014).
- Taxes on labour income affect interest in education and further professional training, as investment in education is more profitable the larger the later net wage. Part of the effect of changes in labour taxes on economic growth may only be apparent when the people who have made choices under the new tax rules enter the labour market.
- Taxing capital income is considered harmful as it can reduce the incentive to save and invest. This channel is particularly important as fixed assets are accumulated over years, meaning that an impact on investment decisions is transferred into subsequent periods.

The economic growth associated with the accumulation of fixed assets gradually slows[32] and the growth in labour is limited, but technological progress can provide constant support for economic growth. It has been found that investment in human capital and in research and development

31 The greater the elasticity of labour demand to labour supply, the more economic agents will react to taxes, and the greater the possible loss of efficiency.

32 As the volume of fixed assets increases, so does their depreciation.

activities for example, and also increases in entrepreneurship, have positive externalities (see the endogenous growth model described at greater length by Lee et al 2005, Myles 2009 and others). From the perspective of tax policy it is important to favour investment in fixed assets, innovation and human capital, as these become more profitable as the tax burden is lowered.

To reduce distortionary labour taxes in a revenue-neutral way, several international institutions including the OECD and the European Commission recommend shifting the tax burden from labour to consumption. Consumption taxes, especially those with broad tax bases, are generally considered to distort the economy less as they do not directly affect the labour supply. Furthermore, shifting the tax burden from labour to consumption improves the price competitiveness of a country in the short term as although it raises domestic inflation, it also reduces production costs (Attinasi et al 2016).

Technological progress is also supported by direct investment, including technology transfers. In this case the international competitiveness of the tax system becomes important as business has become more global and companies can change where they are based. While the discussion so far has been about the structure of taxes and changes in it, the level of taxes also plays a part in international competitiveness.

The tax structure in Estonia and other European countries

The countries of the European Union can be divided by their tax structures into the groups of old member states, Nordic countries and new member states[33], which is where Estonia is. The Estonian tax structure is quite different from that of the Nordic countries or that of the old member states, where labour taxes are mostly progressive and rates are higher. Like other countries that regained their independence in the 1990s, Estonia was able to create a tax system from scratch, following international recommendations. In consequence a simple tax system was created and oriented to economic growth, with broad-based consumption taxes taking an important role and income being taxed at a single rate. Estonia's tax code is quite simple compared to those of other advanced countries, and there are few exemptions.

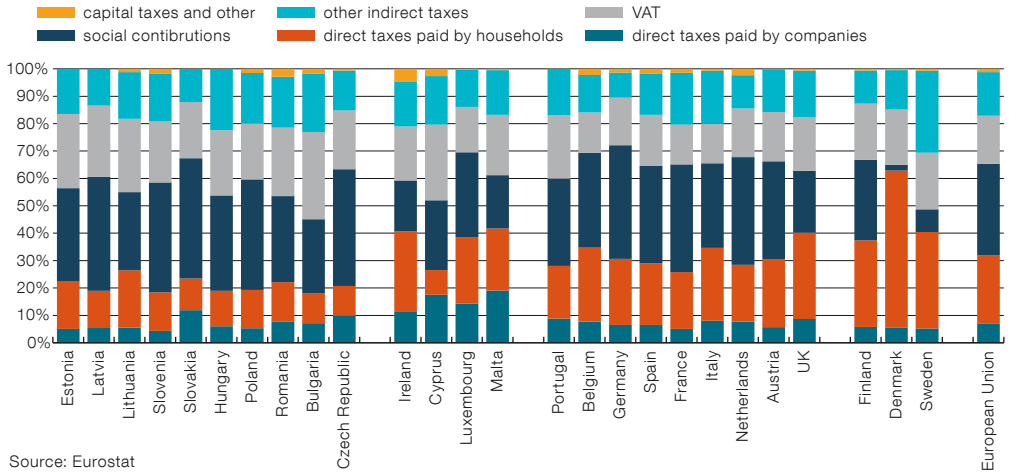
Data from 2016 put the tax burden in Estonia at 35% of GDP, which is around 5 percentage points below the European Union average. It should be noted here that the growth in the Estonian economy in recent years has been much more tax-rich than that in other European Union countries where wage growth has not particularly increased. Without this cyclical impact the tax burden in Estonia would have been about 34% of GDP.

Taxes on production and imports provided 44% of tax revenues, which is 11 percentage points more than the European average (see Figure B6.1). Indirect taxes also account for a larger share of consumption spending than the European average. A large part of the difference comes from VAT and not from the standard VAT rate but because the reduced rate is used quite little in Estonia.

Personal income tax raised only 17% of tax revenues in 2016, or 4 percentage points less than the European Union average. The tax system is not very progressive, which holds the share of income tax down, and while it favours the labour supply, it also limits the fiscal capacity of the state. Together with social tax, labour taxes and contributions provided 51% of all tax revenues, which is still below the European Union average. Taking income tax and social tax as a share of total labour costs makes it clear that labour in Estonia is taxed much less than the average for

33 A separate group consists of those small countries where corporate taxes are a disproportionally large share because various incentives have brought a lot of international capital there (CY, IE, MT, and LU).

Figure B6.1. Structure of tax revenue



Source: Eurostat

Europe. No distinction is made here whether the tax is paid by the employer or the employee. Social insurance contributions should be considered separately as they reflect the architecture of each country's social insurance system. If the healthcare system of a country is largely based on private insurance, the state social contributions may be low, but consumption expenditure on healthcare services may be higher.

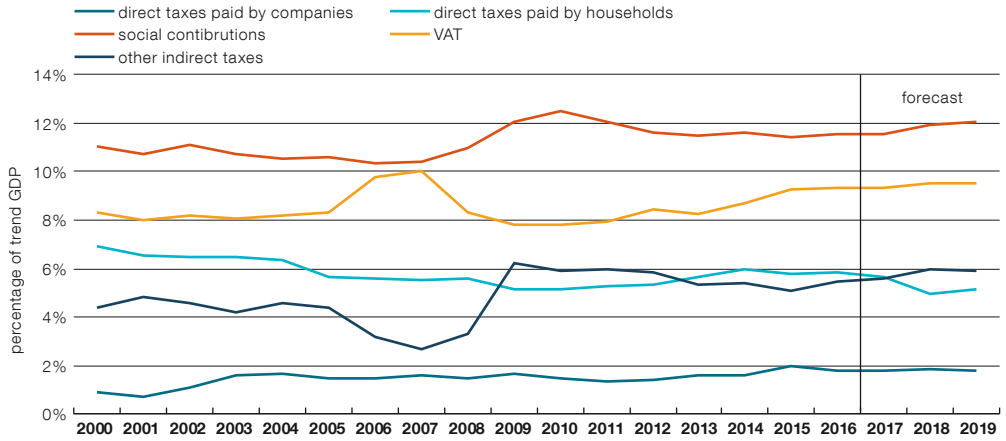
The main distinguishing feature of the Estonian tax system is the corporate income tax, which is levied only on distributed profits. The law was passed in 2000 with the aim of encouraging corporate investment. This system of delaying the moment of taxation is quite unique internationally. Although Estonian companies pay dividends irregularly (Sander et al 2013), the revenues from corporate income tax are around the European Union average at around 2% of all tax revenues last year, which is 1 percentage point below the average. As a ratio to the profit of the corporate sector[34] the share of corporate income tax is 2 percentage points below the European Union average.

To make the tax system more growth-friendly, most European Union countries have moved to shift the tax burden from labour to consumption. This has been a long-term process that picked up after the economic crisis. The Estonian government has also followed this strategy for a long time and cuts to tax rates on labour and rises in the tax exempt amount have been compensated for through higher consumption taxes and a broadening of the tax base. This development will continue in the years ahead as the government plans to reform the income tax system, raise several excise rates, and introduce new consumption taxes (see Figure B6.2).

It can be concluded from the tax structure that the Estonian tax system is quite growth-friendly, being based largely on consumption taxes and an income tax system that is not very progressive. The Estonian tax system is considered to be competitive internationally mainly because the tax burden is relatively low next to those of other advanced countries, there are few exemptions, a flat tax rate is mainly applied, and companies are not taxed on their profits. Tax Foundation, a US think tank that compiles an annual league table of the competitiveness of the tax systems of the OECD countries, put Estonia at the top of the table in 2016. A review by PWC, which particularly emphasises the organisation of taxation, also put the Estonian tax system in quite a high position.

34 The GDP statistical indicator "surplus and mixed income from activities" is used as a proxy for profit.

Figure B6.2. Cyclically adjusted tax revenue



Sources: Statistics Estonia, Eesti Pank

The review mainly describes the possible effects of taxes on economic growth, but that is not the only goal of government tax policy. The revenues received should ensure the redistribution of income within society and the supply of public goods and services to the extent desired. A low flat rate of tax may create a good climate for business for example but not raise enough income for redistribution by the state. In this, tax policies must weigh the pluses and minuses of various different goals.

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