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LIETUVOS BANKAS
EUROSISTEMA

Lithuanian Economic Review

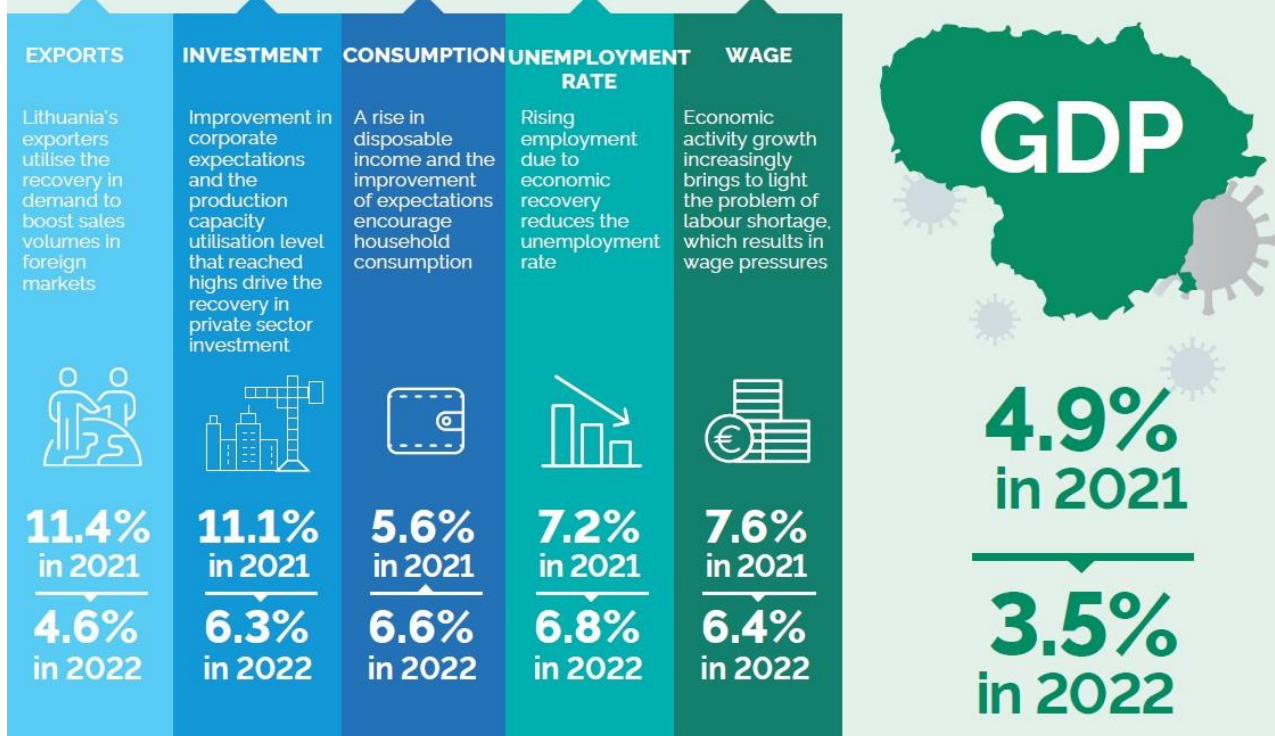
September 2021

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The second quarantine has not halted Lithuania's economic growth



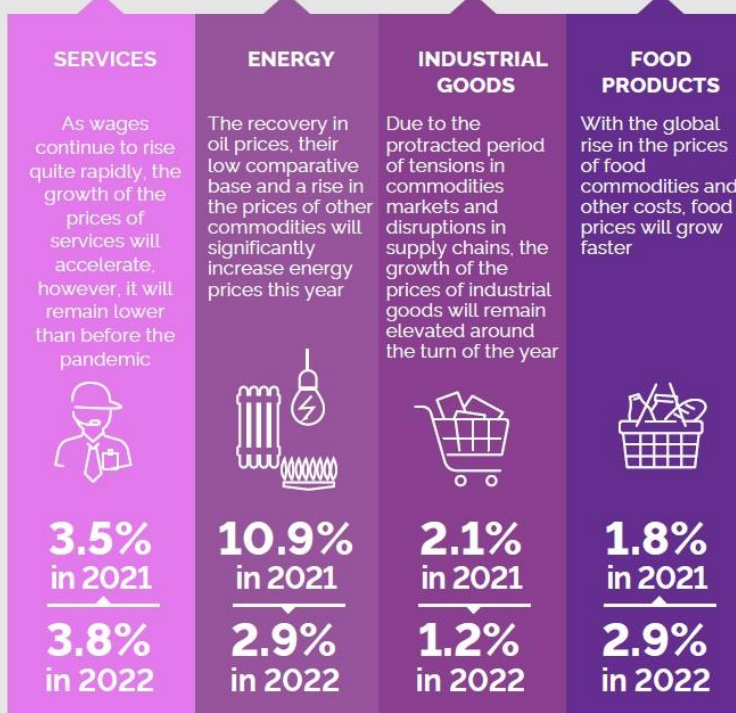
A rapid economic recovery in Lithuania and globally is accompanied by the rise in inflation, which is mainly determined by the growing prices of energy and industrial goods

INFLATION



3.3%
in 2021

2.6%
in 2022



Lithuania's economic development and outlook

With vaccination rates rising, the global economy is recovering from the pandemic slump. The global GDP is projected to grow by 6% this year and by 4.9% next year.¹ However, the recovery of various national economies has been uneven, with variations in recovery rates across countries mainly resulting from different paces of vaccination and volumes of fiscal support. The advanced countries, which have inoculated almost half of their populations, are expected to return to the pre-pandemic growth levels as early as in 2022, whereas the developing countries, which have only vaccinated approximately one-tenth of their populations and have limited fiscal stimulus potential, will take much longer to get back to those levels due to recurrent outbreaks of COVID-19. The coronavirus infection remains the biggest risk to the global economic recovery, given that the global economy will only be able to fully recover once the spread of the pandemic is halted all over the world. Hence the slower-than-expected pace of vaccination and the potential emergence of new vaccine-resistant COVID-19 strains as well as their outbreaks continue to be seen as the key risks to the currently expected recovery in the global economy. The ongoing COVID-19 pandemic also impedes efforts to correct other imbalances that have developed in the global economy. For instance, supply chain bottlenecks that have arisen as a result of the pandemic hamper efforts to resolve the problem of commodity shortages, which has been identified as one of the main factors behind the slower-than-expected growth of the world's top economies – the United States and China – in the second quarter of this year. It is also worth noting the challenges to sovereign debt sustainability: on the one hand, it is important for governments not to withdraw fiscal support too early in order to avoid a wave of corporate insolvencies amid the continuing pandemic, on the other hand, such support can make it more difficult for heavily indebted governments and businesses to keep their debts and related costs under control in the future, once the major world economies enter the cyclical upswing stage and interest rates get back on the path towards normalisation. Economic activity in Lithuania also feels the effect of all these factors via international trade and financial linkages.

The second lockdown failed to knock Lithuania's economy off its growth path. GDP growth recorded in both the first and the second quarters shows that Lithuania's undertakings managed to make adequate preparations for the new wave of the pandemic. Lithuania's exporters continued to increase their sales volumes in external markets, benefitting from the recovery of demand in main trade partners in the process of their reopening. Even though the biggest boost to the growth of exports came from chemical and furniture industries, many other manufacturing industries also contributed to higher export volumes. Many of these industries reached the highest output level in the history of the data series in the second quarter of this year. Successful expansion in external markets, robust financial health of the country's undertakings and new highs in terms of industrial capacity utilisation had a positive effect on business expectations, which in turn fuelled the recovery of the private sector's investment. A fall in external demand following the onset of the pandemic and uncertainty over the global economic outlook triggered a slump in investment. Even though investment entered the recovery mode in the second half of 2020, it was then mostly driven by the public sector, while the private sector waited until the beginning of this year to start stepping up its investment. Favourable dynamics in the tradable sector facilitated the continuation of labour market developments favouring workers. This coupled with the reopening of other activities and general government decisions led to improvements in household disposable income as well as in household expectations. All these factors contributed to an increase in household consumption, which followed an upward trend in both the first and the second quarters of this year. However, an increase in household consumption expenditure was rather moderate in the second quarter of this year, even though the government eased the lockdown restrictions substantially and

¹ IMF forecasts as of July 2021.

household disposable income continued to far exceed the expenditure. At the same time, according to the Bank of Lithuania, the country's households maintained their saving rate at a historically high level.

Economic growth leads to improvements in the labour market. Employment has been growing in the country since the beginning of this year, reversing the slump suffered in 2020. On top of that, the number of people at work got back to the pre-pandemic level in the middle of the year. However, job creation has varied significantly across economic activities. Employment in the activities less affected by the pandemic, such as information and communications, transport and warehousing or manufacturing, set on an upward path in early 2021. Meanwhile, it took until the second quarter of this year for employment in more affected activities, such as accommodation and catering services, to enter recovery, after the beginning of a gradual easing of lockdown restrictions imposed on those sectors. The pickup of hiring has increasingly brought to light the problem of labour shortage, which was evident even before the pandemic and has also been one of the main causes behind particularly rapid wage growth. Even though the average wage in the country has been already growing at a rather rapid pace before the pandemic, its growth picked up further after the first lockdown and, starting from the third quarter of 2020, salaries recorded double-digit growth on average in both the private and the public sectors. Such average wage dynamics were driven considerably by the government's decisions to raise salaries in the public sector and for the lowest-income earners. Wage growth was also likely supported by the disbursement of jobseekers' allowances, which possibly acted as a disincentive to search for work. The room for such rapid wage growth was also provided by the decisions made during the pandemic to bolster operational efficiency and to adapt to the pandemic conditions, which enabled Lithuania's businesses to achieve significant productivity gains. In fact, the pace of productivity growth in Lithuania was among the fastest across the EU in 2020.

Further growth of Lithuania's economy will continue to depend on the global handling of the pandemic situation, the increasing recovery of domestic demand and the development of export-oriented activities. The scale of the pandemic and the adjustment thereto will continue to have a decisive impact on economic activity, both in Lithuania and abroad. It is assumed that Lithuania will continue vaccinating its population successfully in the coming months, which, alongside other measures, will reduce the incidence of COVID-19 and, accordingly, will make it possible to avoid restrictions on everyday life and businesses, which could significantly affect economic activity. This will open up more opportunities for households to purchase the desired goods and services. Their appetite for consumption has been growing recently, which can be seen from the share of households considering major purchases that has hit the highest level since the beginning of the global crisis. The return to more normal consumption habits and the decline of excess savings should emerge as one of the key factors driving the rapid growth of household consumption, which should outpace even the increased growth of disposable income in the years to come. The expected economic recovery in advanced countries, which comprise a significant share of Lithuania's major trade partners, will fuel demand for Lithuanian-origin goods and, accordingly, will benefit the country's exporters. External demand for the goods of Lithuanian origin is currently expected to exceed its year-earlier level by more than 8% this year, but its pace of growth would halve in subsequent years. Demand is expected to increase in both domestic and external markets, boosting business expectations. This will continue to fuel the private sector's investment, which will also be driven by the intensified inflows of EU support funds. All these factors are expected to translate into rather substantial economic growth in the coming years, with Lithuania's real GDP projected to increase by 4.9% in 2021 and by another 3.5% in 2022.

The rapid recovery of the Lithuanian and global economy has been accompanied by rising inflation. Inflation has been pushed up mainly by the rising prices for crude oil, their low comparison base and higher prices for other commodities, such as metals. Longer than expected supply disruptions and tensions in the global commodity market have contributed to a pickup in the growth of prices for industrial goods. An increase in the supply of commodities should bring the demand and supply of many

commodities back into balance, which should be similar to their pre pandemic equilibrium in the future, whereas the reduced level of inventories should be restored, which makes it likely that prices for many commodities will tend to go downwards in the future. However, prices for industrial goods are expected to continue their rapid growth both in the remaining months of this year and early next year. Higher global prices for food commodities, a poor vegetable harvest and higher other costs, including higher wages, will trigger a pick-up in the rate of food inflation. Nonetheless, food inflation will be lower on average than before the pandemic in both 2021 and 2022. The expected rapid wage growth, which will be mostly driven by the labour shortage, convergence and built-up savings that will be increasingly channelled to the services sector, will also have repercussions for the services inflation, which will go up. Inflation is expected to reach 3.3% in Lithuania this year, exceeding the previous forecast by around 1.1 percentage points. Year-on-year, the inflation rate will increase by 2.2 percentage points, mostly due to rising prices for energy products and industrial goods. Next year, inflation will go down to 2.2% due to a lower upward pressure from energy prices. At the same time, it will come under a stronger impact from services prices that are more closely linked to domestic economic developments. Inflation may also be pushed up next year by stronger food inflation.

Outlook for Lithuania's economy

	September 2021 projection ^a			June 2021 projection		
	2020	2021 ^b	2022 ^b	2020	2021 ^b	2022 ^b
Price and cost developments (annual percentage change)						
Average annual HICP inflation	1.1	3.3	2.6	1.1	2.2	2.1
GDP deflator ^c	1.1	3.9	2.5	1.1	2.0	2.0
Wages	10.2	9.4	7.6	10.2	7.0	5.9
Import deflator ^c	-5.2	4.3	1.8	-5.2	3.9	1.5
Export deflator ^c	-3.5	2.9	2.1	-3.5	2.8	1.3
Economic activity (constant prices; annual percentage change)						
Gross domestic product ^c	-0.8	4.9	3.5	-0.8	5.1	4.1
Private consumption expenditure ^c	-2.1	5.6	6.6	-2.1	6.2	6.5
General government consumption expenditure ^c	0.5	0.1	0.0	0.5	0.3	0.0
Gross fixed capital formation ^c	0.1	11.1	6.3	0.1	8.5	5.5
Exports of goods and services ^c	0.0	11.4	4.6	0.0	8.2	5.9
Imports of goods and services ^c	-5.7	14.8	7.4	-5.7	11.4	7.9
Labour market						
Unemployment rate (annual average as a percentage of labour force)	8.6	7.2	6.8	8.5	7.1	6.6
Employment (annual percentage change) ^d	-1.7	0.6	0.2	-1.5	0.7	0.4
External sector (percentage of GDP)						
Balance of goods and services	10.0	7.4	5.8	10.0	7.7	6.3
Current account balance	8.3	5.4	3.6	8.4	5.6	3.6
Current and capital account balance	10.4	8.0	6.3	10.4	8.2	6.3

^a The projections of macroeconomic indicators are based on international environment assumptions based on information published by 18 August 2021 as well as other data and information made available before 31 August 2021

^b Projection.

^c Adjusted for seasonal and workday effects.

^d National accounts data; employment in domestic concept

1. International environment

The vaccination, which has been increasingly gathering pace, has propelled world economies towards recovery. However, different paces of vaccination and volumes of fiscal support have led to variations in post-pandemic recovery scenarios. The advanced economies have already inoculated more than half of their populations and therefore have moved towards the easing of lockdown restrictions. Moreover, these countries intend to maintain fiscal support beyond 2021. Hence, the economies of these countries are expected to return to the economic activity levels projected before the pandemic as early as in 2022 (see Chart 1). Meanwhile, the emerging market economies have lagged considerably behind in terms of job rates so far and have only vaccinated approximately 10% of their populations. Moreover, fiscal support measures in most of these countries expired already last year.² The IMF estimates that renewed outbreaks of COVID-19 amid lower vaccination rates and substantially lower fiscal support will subdue the recovery of these economies, which is one of the main reasons why the emerging market economies and low-income countries will lag behind the growth rates projected before the pandemic for a long time.

The pace of post-pandemic recovery has been uneven across countries.

Chart 1. Implications of the pandemic on GDP outlook

(index: 2019 = 100)



Source: IMF.

The IMF expects the global economy to grow by 6% in 2021 and by 4.9% next year. Compared to the April forecasts,³ the projection of global economic growth in 2022 was revised up by 0.5 percentage point due to faster-than-forecast growth of the US economy in the first quarter of this year. The IMF also estimates that, despite the disruptions that have developed in commodity supply and international production chains, global trade volumes should expand by 9.7% in 2021, before slowing down to 7% in 2022, while merchandise trade will recover more rapidly than services trade (for instance, tourism) due to new coronavirus outbreaks in certain countries. As regards price growth trends, the IMF forecasts the global annual inflation of 2.4% for 2021 and 2.1% for 2022.

With at least half of the total EU population having received at least one dose of vaccine and with lockdown restrictions getting relaxed across Europe, economic recovery has been especially pronounced, but uneven. Euro area GDP rose by 2% in the second quarter of this year, compared to the first quarter, exceeding the European Commission's forecast by 0.7 percentage point.

² For more details, see [here](#).

³ The IMF expected the global economy to expand by 4.4% in 2022.

Improvements in consumer confidence underpinned by progressing vaccination campaigns and the easing of lockdown restrictions have led to the recovery of the services sector, which was hit particularly hard by the pandemic wave in the first months of this year. This seems to be confirmed by the euro area's Services PMI, which hit record high 60.4 in July (up from the lows of 13.6 in April 2020).⁴ Nevertheless, despite the rapid rate of economic growth over the summer months, EU Member States have been recovering from the pandemic shock at an uneven pace. According to the European Commission's forecasts, the economies of, for instance, Poland, Germany, and the Netherlands will return to pre-pandemic levels by the end of this year, whereas Spain and Italy, which depend heavily on the tourism sector, will only reach the pre-pandemic GDP level in the final quarter of 2022 (see Chart 2). With EU economies getting back to their pre-pandemic levels, the European Commission nonetheless emphasises the ongoing uncertainty over new coronavirus outbreaks related to new COVID-19 variants and the threat posed by the infection to the further recovery of the EU economy.

The European Union countries have been recovering from the pandemic at an uneven pace.

Chart 2. Projected GDP level in selected countries compared to Q4 2019



Source: EC.

The growth of UK's economy exceeded forecasts in the second quarter of 2021, but the outbreaks of COVID-19 and outstanding Brexit issues have continued to be the main risks affecting the country's economic recovery. Last year, the UK's economy contracted by nearly 10% due to the pandemic shock, recording its worst performance in more than 300 years.⁵ Nevertheless, the country's economy expanded by 4.8% in the second quarter of 2021, compared to the previous quarter, on the back of a particularly fast vaccination campaign and the easing of lockdown restrictions. Despite this pace of economic recovery, which was among the highest among G7 countries, the growth of the UK's economy should decelerate in the second half of this year due to new outbreaks of COVID-19 related to the Delta variant. The slowdown in the UK's economic growth can also be seen from the composite PMI, which fell to 55.3 in August (from 59.2 in July 2021), reaching a six-month low, as the

⁴ A PMI of 50 is a neutral reading, meaning the sector's activity has neither expanded nor contracted.

⁵ For more details, see [here](#).

decline in consumer demand affected by new COVID-19 outbreaks as well as the shortages of raw materials and labour weighed on the performance of the UK's businesses in the last month of summer. Companies participating in surveys⁶ have been highlighting a lack of staff availability that has come to the fore due to the requirement to self-isolate after being in contact with a positive case of COVID-19. The fall in the number of employees has also been exacerbated by Brexit, as the UK has tightened immigration requirements after leaving the EU, which has also led to a low-skilled labour gap that used to be filled by migrants from Eastern European countries.⁷ Moreover, much of the uncertainty stems from an agreement between the EU and the UK on the provision of financial services, which still has to be sealed. On 26 March 2021, the parties signed a memorandum of understanding on financial services, which was the first step towards the development of common guidelines for regulatory cooperation in financial services between the EU and the UK. However, the substance of the agreement has been described as rather minimalistic and the issue of equivalence, which would give access to EU markets for UK-based companies, has not yet been resolved.

Massive⁸ fiscal support has boosted the US economy's recovery from the pandemic shock, yet the economic growth came in below expectations in the second quarter of this year. The US economy grew at an annual rate of 6.5% in the second quarter of this year, which was 2.2 percentage points lower than expected. Slower economic growth in the US was mainly due to the shortages of labour and commodities as a result of supply chain disruptions as well as new COVID-19 outbreaks in southern states. Despite the evident lack of labour, in particular, in the services sector, the IMF estimates that employment in the country still remains 3% below its pre-pandemic level as the Americans, in particular, those who receive unemployment benefits, remain reluctant to participate actively in the labour market. However, the IMF expects employment in the US to get back to the pre-pandemic level by the end of 2022. Despite slower-than-expected economic growth in the second quarter, the US economy has already exceeded its pre-pandemic level thanks to the growth of domestic consumption expenditure driven substantially by fiscal support. The economy is expected to continue its rapid expansion in the second half of this year. As estimated by the IMF, the US economy will grow by 7% this year, the fastest pace in several decades, and by 4.9% next year. However, this growth scenario is marred by significant uncertainty over the fate of the American Jobs Plan, worth \$2 trillion (equivalent to 9% of GDP), and the American Families Plan, worth \$1.9 trillion (8% of GDP), in the US Congress.⁹ Should these plans be rejected or scaled down, inflationary pressure in the US, as estimated by the IMF, would be milder and the growth of sovereign debt would be lower, but the pace of GDP growth would be slower as well.

China's economic growth decelerated in the second quarter of this year due to new outbreaks of COVID-19 and the shortage of commodities. The country's GDP rose by an annual 7.9% between April and June, missing the forecast by 0.2 percentage point. The readings of China's PMI have also reflected the slowdown trend of economic growth. Even though the level of the Manufacturing PMI has remained broadly unchanged compared to previous months, the Services PMI has been edging down slowly since April and reached 54.9 in July. Deceleration in the growth of the services sector has been mainly due to new outbreaks of COVID-19. In July, the highly transmissible Delta variant spread to 22 China's cities and the total number of confirmed cases surged to around 2,000. China's government, committed to the zero-tolerance COVID-19 strategy, responded with the re-tightening of lockdown measures and quarantining of approximately 100,000 people. However, such strong restrictions have severe consequences for the tourism and services sectors dependent on the mobility of people. Moreover,

⁶ For more details, see [here](#).

⁷ Employees from Eastern European countries have fallen by more than 100,000 (or 12%) since the end of 2019. For more details, see [here](#).

⁸ The pandemic relief package passed early in March 2021 amounted to \$1.9 trillion (8.5% of GDP) and included direct payments, additional federal unemployment benefits and other measures.

⁹ The IMF assumes in its forecasts that both the American Jobs Plan and the American Families Plan will be legislated in full proposed cumulative size.

China's government has been tightening its grip on private businesses, in particular in the IT sector, since the beginning of this year.¹⁰ China's stock indices have fallen over the past months amid this crackdown, despite the government's efforts to soothe the markets. For these reasons, the IMF has recently revised China's 2021 forecast down by 0.3 percentage points and now expects the country's GDP to grow by 8.1% this year and by 5.7% in 2022.

The neighbouring countries have been heading firmly towards recovery from the pandemic shock.

The economies of Poland and Latvia expanded by 10.9% and 10.3%, respectively, in the second quarter of this year, compared to the same period last year. Economic growth was mainly driven by inter alia the easing of lockdown restrictions, which used to weigh heavily on activity in the services sector of those countries. Jobless rates in the neighbouring countries moved down in the second quarter of this year, yet unemployment in Latvia and Estonia still exceeded its pre-pandemic levels in July. Unemployment rates reached 5.9% in Poland, 7.4% in Latvia, and 7.7% in Estonia. Moreover, the European Commission expects the GDP of Poland, Latvia and Estonia to grow by 4.8%, 3.8% and 4.9%, respectively, this year, and sees the economies of these countries getting back to their pre-pandemic levels by the end of this year (see Chart 2). The main risk for the economic outlook of the neighbouring countries continues to arise from new COVID-19 variants and related outbreaks both inside these countries and in their trade partners.

With the global economy recovering from the pandemic shock, manufacturers across the globe have found themselves facing increased prices for commodities and semiconductors.¹¹

Manufacturing companies from both the US and the euro area emphasise that they have to deal with the particularly elevated prices of protective gear, various metals used as production inputs (mostly copper and steel) and semiconductors. A surge in demand for chips that unfolded at the peak of the COVID-19 pandemic has led to significant delays in delivery times of certain products, for instance, cars, smartphones or PCs.¹² Semiconductor shortage has also triggered cuts to the output of certain products. For instance, Toyota, the world's largest carmaker, said in August that it was forced to reduce global car production for September by 40% from its previous plan due to the global chip shortage.¹³ In the short term, higher commodity prices should put upward pressure on inflation and downward pressure on production volumes in various countries. Nevertheless, the IMF maintains that elevated commodity prices are likely to be transitory and should get back to their pre-pandemic levels in 2022.

Outbreaks of new vaccine-resistant COVID-19 variants, a slow pace of vaccination in developing countries and elevated levels of corporate and sovereign debts continue to be seen as the key risks to the global economy.

The IMF has stressed that the global economy will only be able to fully recover once the spread of the pandemic is halted across the world. Hence the slower-than-expected pace of vaccination, in particular in developing countries, and the potential emergence of new vaccine-resistant COVID-19 strains as well as their outbreaks continue to pose the most serious threat to the global economy amid its recovery from the pandemic shock. Elevated levels of sovereign and NFC debts are yet another important risk factor. The non-financial corporations sector of advanced economies has found itself deep in debt in the context of the pandemic as well as the more than decade-long environment of low interest rates (for instance, debts of the euro area's non-financial corporations amounted to 282% of GDP in the second quarter of 2020, and those of US NFCs – to 286% of GDP). Should the interest rates be allowed to rise (return to normalcy), for instance, following the movement of economies into the rapid cyclical upswing, heavily indebted companies would face the challenges of higher costs of debt refinancing and of additional borrowing, which would also pose a risk of a potential

¹⁰ New regulations, essentially revising the rules around the collection and handling of personal data, are said to be aimed at curbing the rise of monopolies in the IT sector.

¹¹ For more details on commodity prices, see Box 2 "Are rising commodity and housing prices already driving inflation?".

¹² For more details, see [here](#).

¹³ For more details, see [here](#).

wave of corporate insolvencies. In addition, the IMF has stressed that corporate bankruptcies may also be triggered by a premature withdrawal of fiscal support. Early increases in interest rates or too early withdrawal of fiscal stimulus would hit the developing and low-income countries particularly hard. As estimated by the Institute of International Finance, the debt ratio of these countries increased from 52.2% to 60.5% of GDP in the course of 2020, hence a reversal in capital flows to developing and low-income countries and tightened funding conditions would be extremely painful for these economies amid the pandemic.¹⁴

¹⁴ For more details, see [here](#).

2. Monetary policy of the Eurosystem

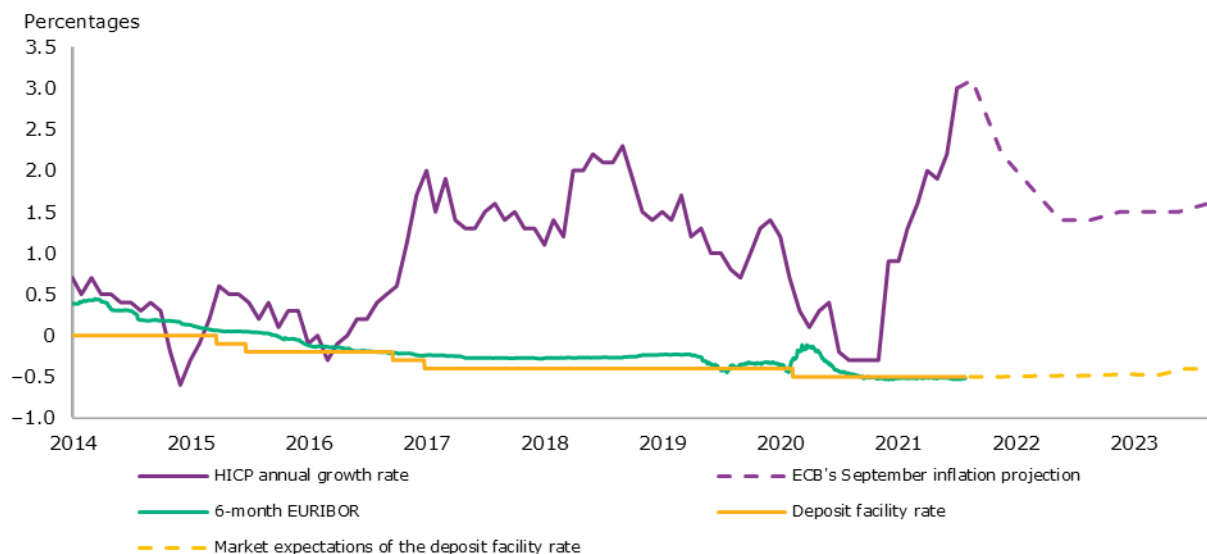
Over the past six months, the ECB Governing Council has further strengthened its accommodative monetary policy stance. The high level of the accommodative monetary policy is ensured by low ECB key policy rates, asset purchase programmes, long-term lending operations as well as forward guidance. At its March and June meetings, the Governing Council decided that asset purchases under the pandemic emergency purchase programme (PEPP) over the second and the third quarters of this year should be conducted at a significantly higher pace than during the first months of the year. Such decisions were adopted in order to maintain favourable financing conditions for all sectors of the economy and help counter the negative impact of the pandemic-triggered crisis on the path of inflation in the euro area. At its September meeting, the Governing Council decided that, in view of slight improvements in financing conditions and the inflation outlook, asset purchases under the PEPP over the fourth quarter of this year would be conducted at a moderately lower pace than in the previous two quarters.

In July, the Governing Council approved its new monetary policy strategy and, in this context, revised its forward guidance on interest rates. According to the new strategy, price stability is best maintained by aiming for a 2% inflation target over the medium term (for more details on the outcome of the monetary policy strategy review, see Box 1). In view of this inflation target and the existing circumstances, the Governing Council also revised its forward guidance on interest rates by establishing that the key ECB interest rates would remain at their present or lower levels until the Governing Council saw: 1) inflation reaching 2% well ahead of the end of its projection horizon and durably for the rest of the projection horizon, and judged that 2) realised progress in underlying inflation was sufficiently advanced to be consistent with inflation stabilising at 2% over the medium term. This might imply a transitory period in which inflation would be moderately above the target.

Even though inflation has increased strongly in the euro area over recent months, this spike has been seen as largely driven by temporary factors, hence market analysts do not expect interest rates to rise in the near future. The index measuring changes in the prices of a basket of goods and services in the euro area saw its annual pace of growth accelerate to 3% in August 2021, from -0.3% in December 2020 (see Chart 3), but this increase is expected to be temporary. Recently, inflation has been mostly driven by strong base effects stemming from a slump in oil prices, which occurred early in the pandemic and has already reversed, bringing the prices of oil back to their pre-pandemic level, and the reversal of the temporary German VAT rate cut in January 2021. Temporary disruptions in the supply of inputs and certain other goods as well as the recovery of demand for some services have added to the upward pressure on inflation. These factors are nonetheless expected to fade from the beginning of next year, bringing down inflation, which should be below the adopted target of 2% over the medium term. Hence market analysts continue to expect the ECB to maintain its accommodative monetary policy stance and the short-term interest rates set by the ECB to remain at their present or lower levels for at least a couple more years.

ECB interest rates have remained exceptionally low.

Chart 3. Actual ECB interest rates, euro area inflation and market expectations



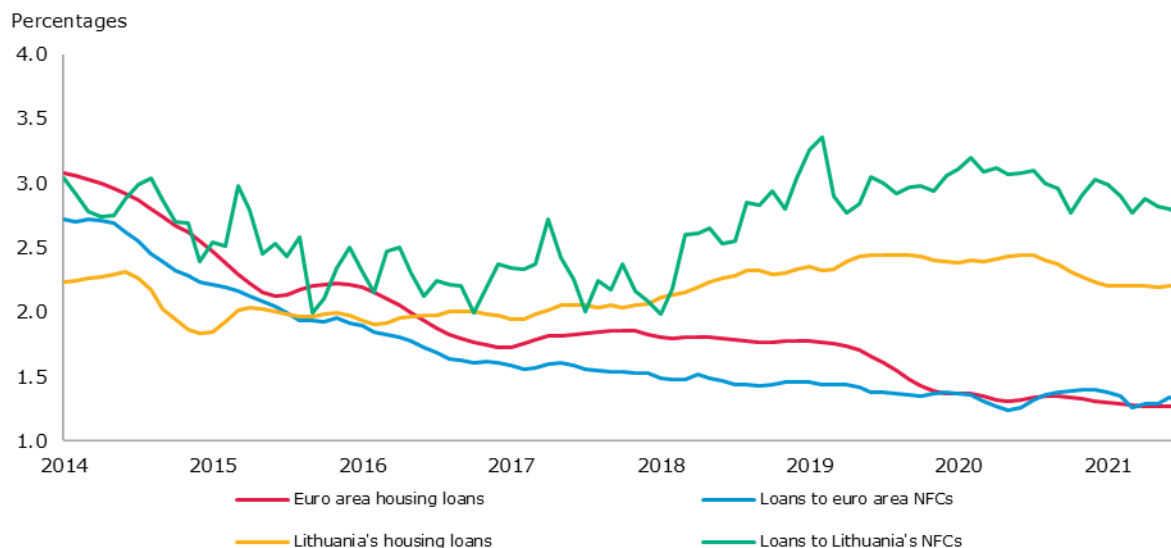
Sources: ECB and Refinitiv.
Note: Data as of 10 September.

The Eurosystem's accommodative monetary policy measures continue to contribute to exceptionally low loan interest rates. Loan interest rates in the euro area have been decreasing consistently since mid-2014. During the COVID-19 pandemic, the rates saw no significant changes (with only a slight decrease recorded for new housing loans) and still remain at historic lows (see Chart 4). In Lithuania, average interest rates on new housing loans and loans to NFCs even showed a minor decrease during the coronavirus pandemic. Despite that, average interest rates in Lithuania continue to exceed the euro area average due to inter alia high concentration in the banking sector and other factors.¹⁵ However, loan interest rates in Lithuania and the euro area would most probably have been higher, if the Eurosystem had not implemented its accommodative monetary policy.

¹⁵ Click [here](#) to read more about the situation with of lending to SMEs in Lithuania.

Financing conditions have remained favourable.

Chart 4. Average interest rates on new MFI housing loans and loans to NFCs



Sources: ECB and Bank of Lithuania calculations.
Note: 3-month moving average.

Box 1. Outcome of the Eurosystem's monetary policy strategy review

The review of the Eurosystem's monetary policy strategy, which was launched in January 2020, was previously conducted 17 years ago and, since that time, there have been many structural changes. The original monetary policy strategy of the Eurosystem was adopted in 1998 and was updated in 2003 following the first review. Since that time, the global economy and the euro area economy have been undergoing profound structural changes, such as slower productivity growth and population ageing as well as the legacy of the financial crisis, which has led to a general decline in the level of interest rates. These tendencies have exacerbated the risk that central banks and the ECB will have less scope for resorting, where necessary, to effective accommodative monetary policy by exclusively relying on changes in policy interest rates. For these reasons, a review of the Eurosystem's monetary policy strategy was launched in January 2020 but was then paused during the pandemic. In the framework of the strategy review, the ECB and the national central banks hosted numerous events to hear the opinions of the general public, including civil society organisations.¹⁶

On 8 July 2021, the Governing Council of the ECB published the results of the Eurosystem's monetary policy strategy review. The main results of the strategy review include the following elements:

- adoption of a symmetric inflation target of 2% over the medium term;
- confirmation that HICP remains an appropriate price measure and a recommendation to include the costs related to owner-occupied housing in this index over time;
- approval of an ambitious climate change action plan.

Price stability will be maintained by deploying both conventional and unconventional measures while aiming for the inflation rate of 2% over the medium term. The new definition is clearer compared to the previous formulation of "below, but close to, 2%". This new target is symmetric, meaning negative and

¹⁶ In Lithuania, the ECB Listens event took place online on 23 February 2021. The video of the event is available [here](#).

positive deviations of inflation from the target are equally undesirable. As previously, the set of ECB interest rates will remain the primary monetary policy instrument. However, when the economy comes close to the effective lower bound on nominal interest rates, it requires forceful or persistent monetary policy action to avoid negative deviations from the inflation target becoming entrenched. For this reason, unconventional instruments, such as forward guidance, asset purchases and longer-term refinancing operations, will also continue to be used as appropriate. As admitted during the strategy review, active use of various instruments may give rise to transitory periods, in which inflation will be moderately above target. Hence, 2% is not a ceiling, as was often the case with the interpretation of the previous formulation of the price stability objective.

It was decided during the strategy review to continue following the principle of medium-term orientation in pursuit of the inflation target. The medium-term orientation provides flexibility, given the time lags in the effects of monetary policy on the economy and inflation. This flexibility also allows to take account of other considerations relevant to the pursuit of price stability, such as the situation in the labour market, when adopting monetary policy decisions.

Despite the HICP remaining the appropriate measure for assessing the achievement of the price stability objective, it was recognised that the inclusion of the costs related to owner-occupied housing in the HICP would better represent the inflation rate relevant for households. This expectation was often conveyed during the ECB Listens events in various countries, including Lithuania. Therefore, the ECB asked the European Commission to develop as soon as possible a new HICP (or to supplement the current HICP) by including owner-occupied housing (OOH) costs, based on the transaction prices that households pay for the acquisition of homes,¹⁷ following the net acquisition approach.¹⁸ Recognising that the full inclusion of these costs is a multi-year project, the Governing Council in its monetary policy assessments will, in the meantime, take into account inflation measures that include initial estimates of the cost of owner-occupied housing to supplement its set of broader inflation measures.

The ECB Governing Council acknowledged the profound implications of climate change for price stability and, accordingly, committed to an ambitious climate change-related action plan. While governments and parliaments have the primary responsibility to act on climate change, within its mandate, the ECB also recognises the need to further incorporate climate considerations into its policy framework. The action plan contains the following commitments:

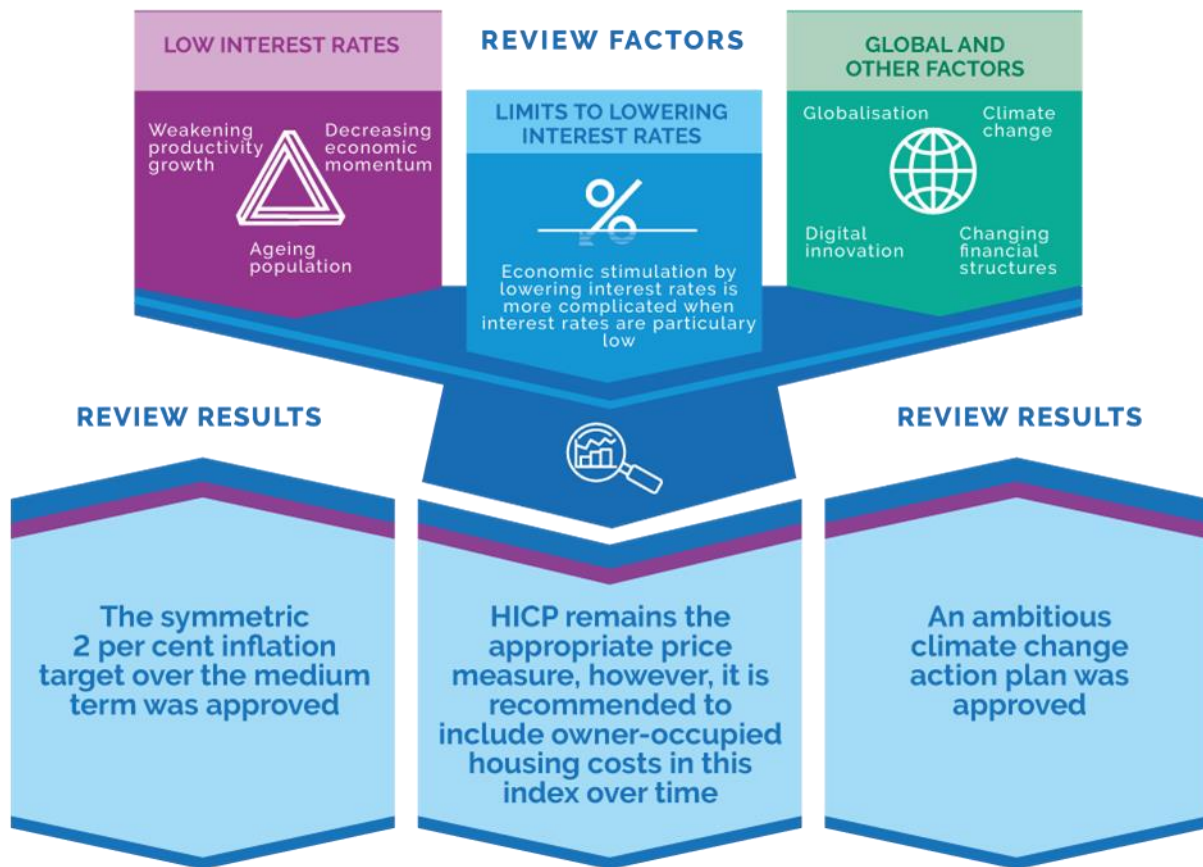
- to further incorporate climate change considerations into the monetary policy framework of the Eurosystem;
- to expand the analytical capacity in macroeconomic modelling, statistics and monetary policy with regard to climate change;
- to include climate change considerations in monetary policy operations in the areas of disclosure, risk assessment, collateral framework and corporate sector asset purchases;
- to implement the action plan in line with progress on the EU policies and initiatives in the field of environmental sustainability disclosure and reporting.

It was decided to review the monetary policy strategy on a regular basis in the future. Yet another important outcome of the strategy review was the commitment of the Governing Council to assess periodically the appropriateness of its monetary policy strategy, with the next assessment expected in 2025.

¹⁷ In addition to the purchase prices paid for new housing, the items that would be added to the index would also include the costs of major repairs, housing insurance and other expenditure related to the acquisition of housing or its ownership, for instance, fees.

¹⁸ Based on the net acquisition approach, actual transaction prices, and not imputed prices, would be included in the HICP.

The first regular monetary policy meeting of the Governing Council applying the new strategy was held on 22 July 2021. During that meeting, the Governing Council revised its forward guidance on interest rates to reflect the new inflation target.

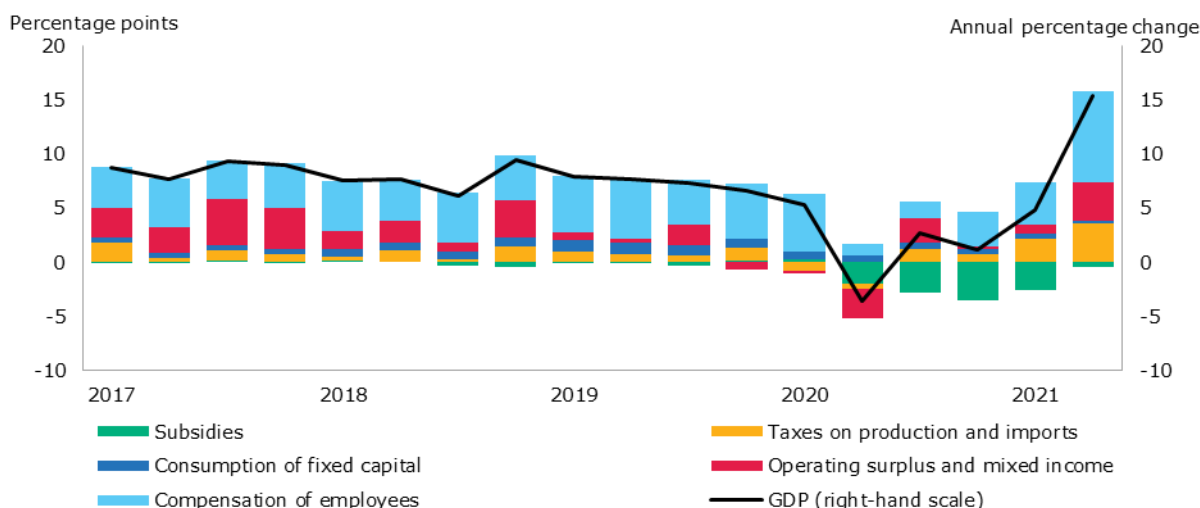


3. Real sector

The second lockdown failed to knock Lithuania's economy off its growth path. The country's GDP grew by 2.2% in the first quarter of this year and by 1.0% over the second quarter, which translated into an annual increase of 5.2% in the first half of 2021. GDP increases recorded in both the first and the second quarters show that Lithuania's undertakings managed to make adequate preparations for the new wave of the pandemic, in particular when considering the restrictions on the activity of many economic sectors as well as on movement and social life that were in place for almost the entire first quarter. This coupled with general government support to businesses and households, successful performance of the country's exporters and relatively low reliance of the economy on the most restricted and affected economic activities, such as hospitality, arts, entertainment and recreation, were the key factors facilitating economic growth. Against this background, private undertakings and households avoided a significant deterioration in their financial wellbeing, as the operating surplus and mixed income¹⁹ generated in the economy in the first half of this year increased by 1.4%, whereas compensation of employees soared by 12.3% year-on-year (see Chart 5). The growth of income and the easing of restrictions led to improvements in the sentiment and expectations of the country's households and businesses, which manifested themselves in the return to a more normal structure of consumption and the restoration of inventories, as well as in the rapid growth of imports of goods and services. However, growing imports, in tandem with higher-than-expected goods and services prices, will lead to somewhat slower economic growth. Real GDP is projected to increase by 4.9% this year and by 3.5% next year. Yet the outlook remains marred by high uncertainty over the further course of the COVID-19 pandemic and the related circumstances. Economic development may also be affected by recurrent bottlenecks in the supply chains of the raw materials and intermediate products used in the production process and by geopolitical factors, with risks related to overheating of the economy in the medium term also emerging.

Both compensation of employees and operating surplus as well as mixed income followed an upward path in the first half of 2021.

Chart 5. Contributions to nominal GDP measured by the income approach



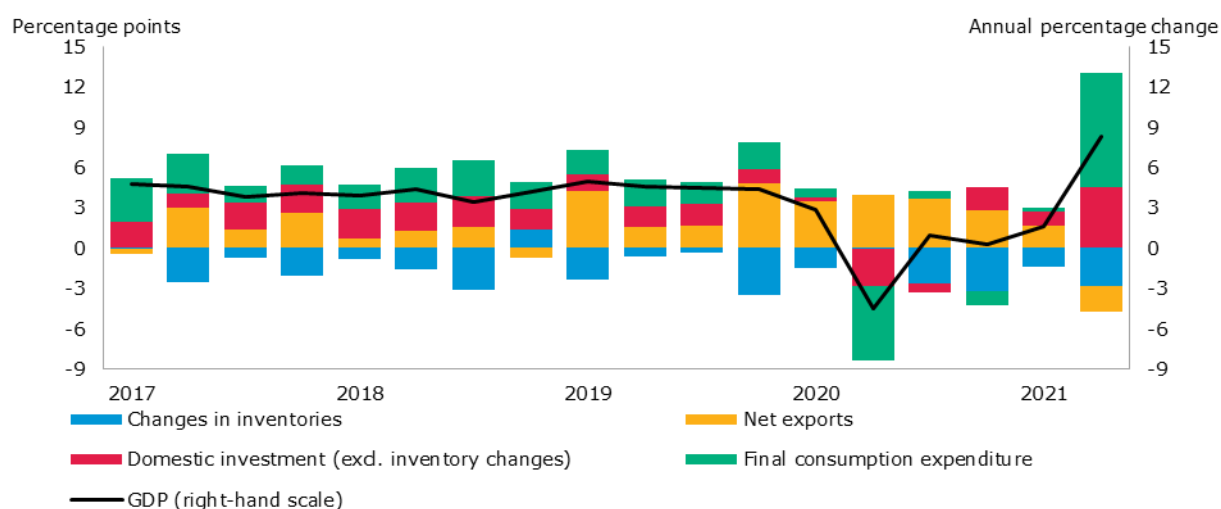
Sources: Statistics Lithuania and Bank of Lithuania calculations.

¹⁹ Operating surplus, as used in the System of National Accounts, is defined as the difference between the value added generated by the economy and compensation of employees as well as other taxes on production (less subsidies). Mixed income means income of unincorporated enterprises in the household sector (income from self-employment) having the characteristics of both wages and profit due to work carried out as an entrepreneur. For more details, see.

The growth of disposable income, the easing of pandemic restrictions and improvements in expectations fuelled household consumption, which increased by 6.7% year on year in the first half of this year (see Chart 6). However, such a pace of growth in household consumption should nonetheless be considered as limited, given that households were unable to implement some of their spending decisions (for instance, travel or some other entertainment) due to the restrictions in force. The country's households continue to hold sizeable financial resources built up by saving, which is reflected in both the volumes of deposits accumulated at MFIs and in the saving rate, which, as estimated by the Bank of Lithuania, remains at historic highs, and shows that the income of the country's households continues to far exceed their expenditure. However, the share of households considering major purchases has hit the highest level since the beginning of the global financial crisis, which signals the willingness of households to step up consumption. The return to more normal consumption habits and tendencies should act as one of the key factors driving the rapid growth of household consumption, which in the years to come should outpace even the elevated growth of disposable income that would result from the rapid wage growth as well as the growth of household property and entrepreneurial income as well as social welfare benefits. Should the country avoid the third strict lockdown, a decline in excess saving and the rapid growth of disposable income should offset the impact of temporary elevated inflation, which limits the growth of purchasing power. Household consumption is projected to increase by 5.6% this year and by 6.6% next year.

Even though the growth of disposable income, the easing of restrictions and improvements in expectations provided the impetus for household consumption, its growth remained limited.

Chart 6. Contributions to real GDP measured by the expenditure approach



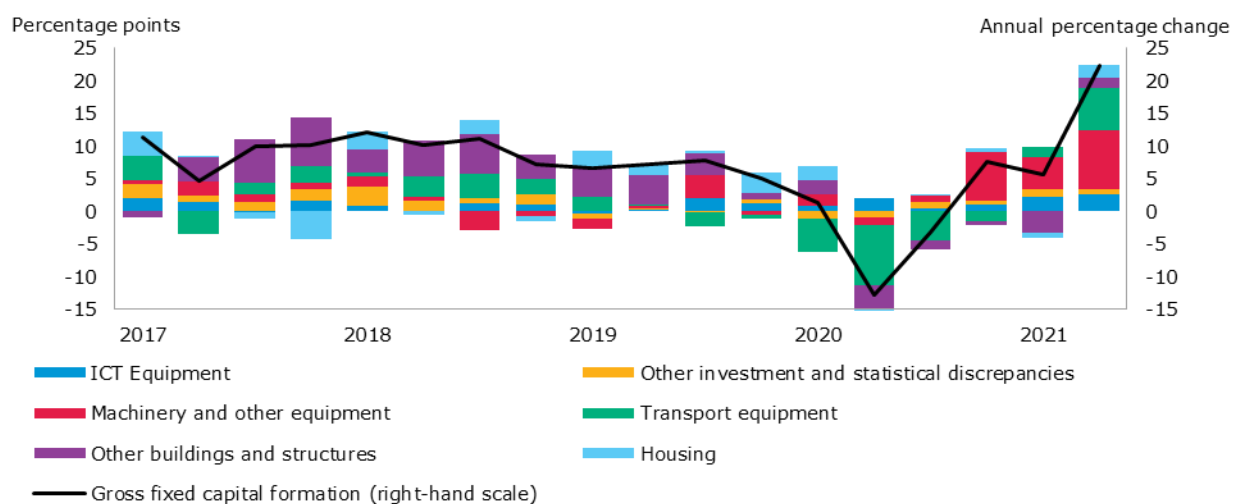
Sources: Statistics Lithuania and Bank of Lithuania calculations.

Investment has been growing at a rapid pace, driven by the recovery of private sector investment. A fall in external demand following the onset of the pandemic and uncertainty over the global economic outlook triggered a slump in investment, which, however, went into the recovery mode as early as in the second half of 2020. Investment was initially mostly driven by the public sector while the private sector waited until the beginning of this year to start stepping up its investment. As a result, investment rose by 15.1% year on year in the first half of this year, with increases recorded in almost all investment categories (see Chart 7). Between January and June, private sector investment was mostly driven by the recovery of external demand, improvements in business expectations, robust financial wellbeing of the country's businesses and the production capacity utilisation rate that approached record highs in that period. These factors acted as the main driving forces of the growth of investment in capital

goods. However, the short-term development of this type of investment is likely to be limited due to a slowdown in the construction of production facilities, which was observed last year and only went into reverse this year and which also led to delays in the installation of capital goods in those premises. Looking at all investment categories in general, the recovery of investment in non-residential buildings and structures have been the most subdued thus far due to not just the private sector's decisions (for instance, those related to uncertainty over the outlook of demand in hotel or office services), but also because of general government investment, which contributes significantly to investment in engineering works, but is not expected to increase substantially this year. On the other hand, the situation observed in another segment of the construction industry – investment in housing development – has been the opposite. This type of investment rose by 6.1% year on year in the first half of this year, which was mostly due to the growing financial capacity of the country's households, which gives rise to demand for developers in this segment. The numbers of building permits issued and the volume of construction starts point to the expected further growth of this type of investment. The first half of the year also saw a particularly rapid growth of investment in vehicles. Even though the annual growth rate depends to a considerable degree on the base effect, the data indicates that the transport sector has been scaling up investment despite a range of challenges (such as the Mobility Package, the reduction of labour quotas or geopolitical tensions). Investment in information and communication technology (ICT) equipment demonstrated the most rapid growth last year, driven by the huge and sudden demand for digitalisation triggered by the COVID-19 pandemic in 2020, and has continued to increase at a rapid pace this year. Moreover, the level of this investment should remain high in the future, as both Lithuania and the entire world become increasingly focused on the digitalisation solutions. Investment is projected to increase by 11.1% this year and by another 6.3% next year.

In the first half of the year, investment was driven by the recovery of external demand, improvements in business expectations, robust financial wellbeing of the country's businesses and the capacity utilisation rate that approached record highs.

Chart 7. Contributions to investment



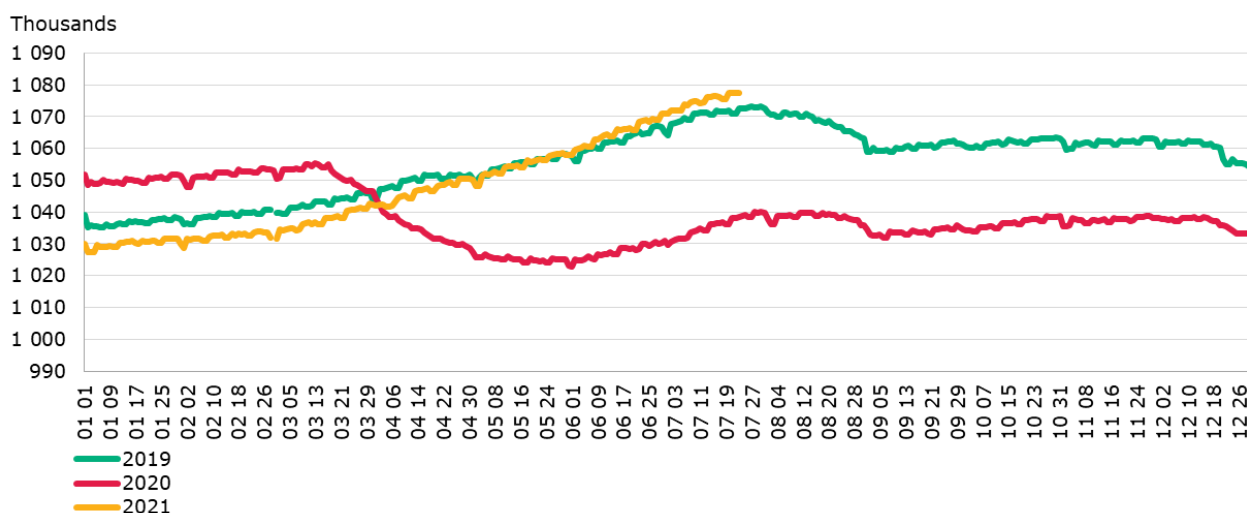
Sources: Statistics Lithuania and Bank of Lithuania calculations.

4. Labour market

The recovery of economic activity in Lithuania and foreign countries has led to improvements in the labour market. During the pandemic, the labour market faced the most extreme conditions in the first year of the crisis. In 2020, when the future was surrounded by uncertainty about the evolution of the epidemiological situation, the increase in downtime and the unemployment rate was observed, while the number of employees has decreased. Labour market indicators moved onto the positive path, once it became increasingly evident that many businesses could continue their economic activity uninterrupted even despite the high incidence of COVID-19 and the repeated emergence of new hotspots. The viability of businesses was also underpinned by the increased prevalence of remote work and better preparedness of the country's undertakings to detect and respond to potential clusters of COVID-19 cases among their employees. All these factors and the recovery of demand as well as the continued implementation of stimulus measures had a beneficial effect on the development of companies and on the hiring of employees. The number of employees in the country started growing in early 2021 and got back to the pre-pandemic level in the middle of the year (see Chart 8). At the same time, hiring developments varied greatly across economic activities. In the first half of 2021, a particularly large increase in the number of employees was recorded in information and communications, transport and warehousing as well as manufacturing sectors. Meanwhile, employment in the accommodation and catering services sector, which suffered the biggest fallout from the pandemic, continued to decrease in early 2021 and only moved into the recovery mode in the middle of the second quarter following the easing of restrictions applied to the supply of these services.

The number of employees started growing in early 2021 and got back to the pre-pandemic level in the middle of the year.

Chart 8. The number of employees in the private sector



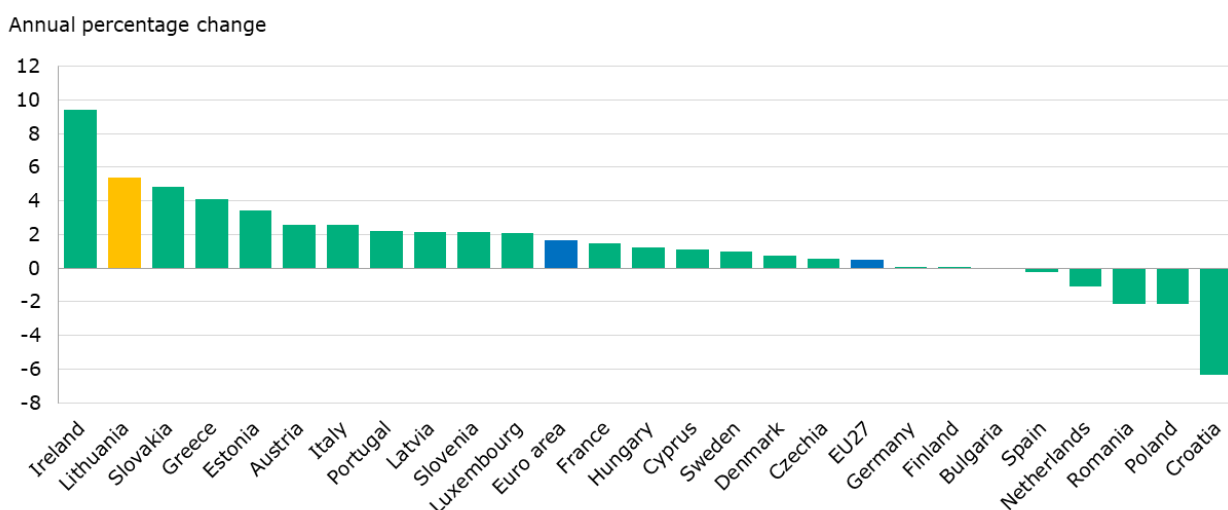
Sources: Sodra and Bank of Lithuania calculations.

During the pandemic, Lithuania's businesses stood out among their European peers in terms of rather robust growth in labour productivity. Last year, the fall in demand and the ensuing necessity to cut costs led to a decline in the total number of hours worked by employees in Lithuania, which decreased by 5.9%. The downward trend in hours worked prevailed in many EU countries: the number of hours worked across the EU fell by 6.6%. However, both Lithuania and other EU countries sought to boost the efficiency of using labour resources in difficult times. In other words, employers looked for opportunities to enhance productivity in a bid to offset, at least partially, the negative shock of the

pandemic. As a result, the added value per hour worked increased by 5.4% in Lithuania in 2020. Labour productivity growth in Lithuania was among the fastest across the EU and its rate was approximately ten times as fast as in the whole of the bloc (see Chart 9). Such labour productivity developments in Lithuania were also likely driven by the solid growth of investment prior to the pandemic, in particular, the investment more conducive to operational efficiency. For instance, in the period of 2017 to 2019, investment in information and communication equipment increased by approximately 18% on average per year, while investment in intellectual property products grew by around 11% on average. The above-mentioned investment continued to grow considerably in 2020 – the year that brought the need for immediate solutions allowing to improve productivity and adapt to the pandemic environment.

The growth rate of labour productivity in Lithuania was among the fastest across the EU in 2020.

Chart 9. Labour productivity in the EU countries in 2020



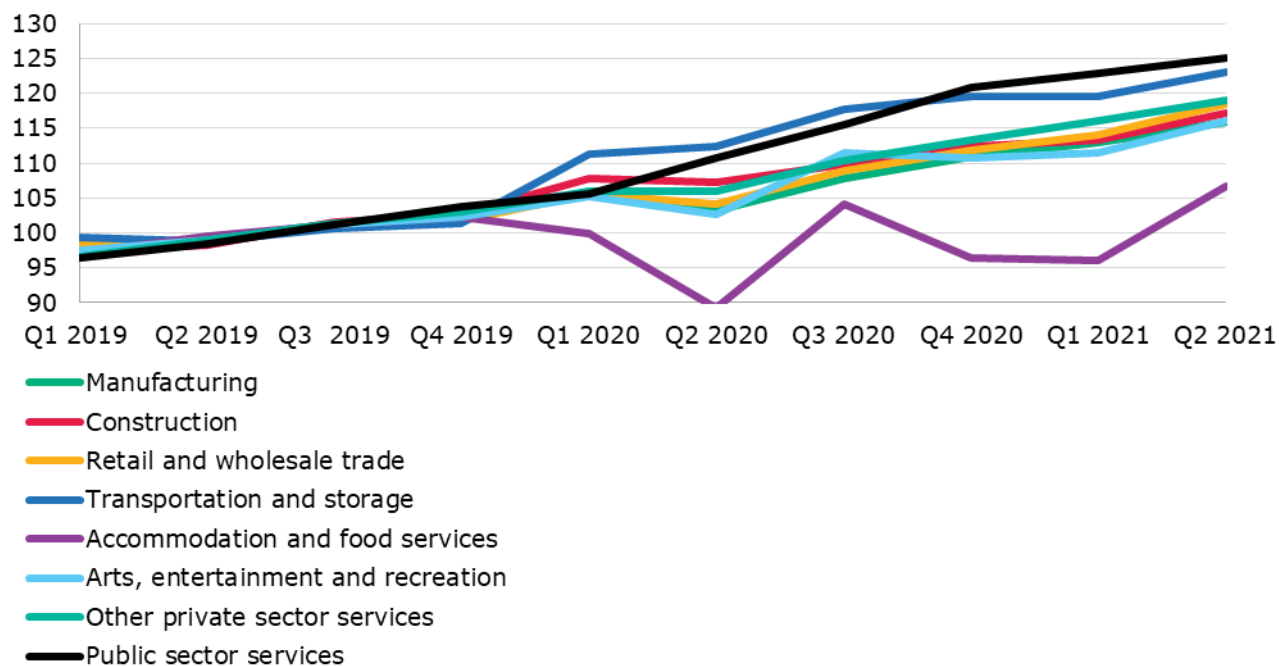
Sources: Eurostat and Bank of Lithuania calculations.
Note: based on the hours worked data.

The pickup of economic activity has increasingly brought to light the problem of labour shortage, which, in turn, has put upward pressure on wages. The lack of labour was evident even before the pandemic crisis and was one of the main causes behind substantial wage growth. Wage pressures diminished briefly at the onset of the pandemic amid high uncertainty over the economic outlook and the decreasing demand for workers, which even led to a decline in average wages in the private sector in the second quarter of 2020, compared to the previous quarter. The rebound of economic activity brought back to light the long-standing problems in the labour market, in particular, the problem of labour shortage exacerbated by the deterioration in the domestic demographic situation amid broadly balanced international migration of the country's population, which contributed to wage growth even during the period of re-tightened restrictions on movement and business activity, i.e. in late 2020 and in early 2021. As a result, wages continued their upward trend in many economic activities during that period (see Chart 10), which, however, was not the case with the accommodation and catering sector that was hardest hit by the pandemic and recorded a somewhat larger decline in wages at that time. Throughout the pandemic period, the growth of average wage in the country was driven substantially by the government's decisions to raise salaries in the public sector. Wages of healthcare workers logged a particularly steep rise in 2020 and 2021, which was partly due to the nature of the crisis. Wage dynamics were also likely affected by other general government decisions, namely the disbursement of jobseekers' allowances, which possibly acted as a disincentive to seek work.

Average wage showed solid gains in late 2020 and in early 2021, despite re-tightened restrictions on movement and business activity.

Chart 10. Wages in selected economic activities

Index: 2019 = 100



Sources: Statistics Lithuania and Bank of Lithuania calculations.
Note: seasonally adjusted data.

5. External sector

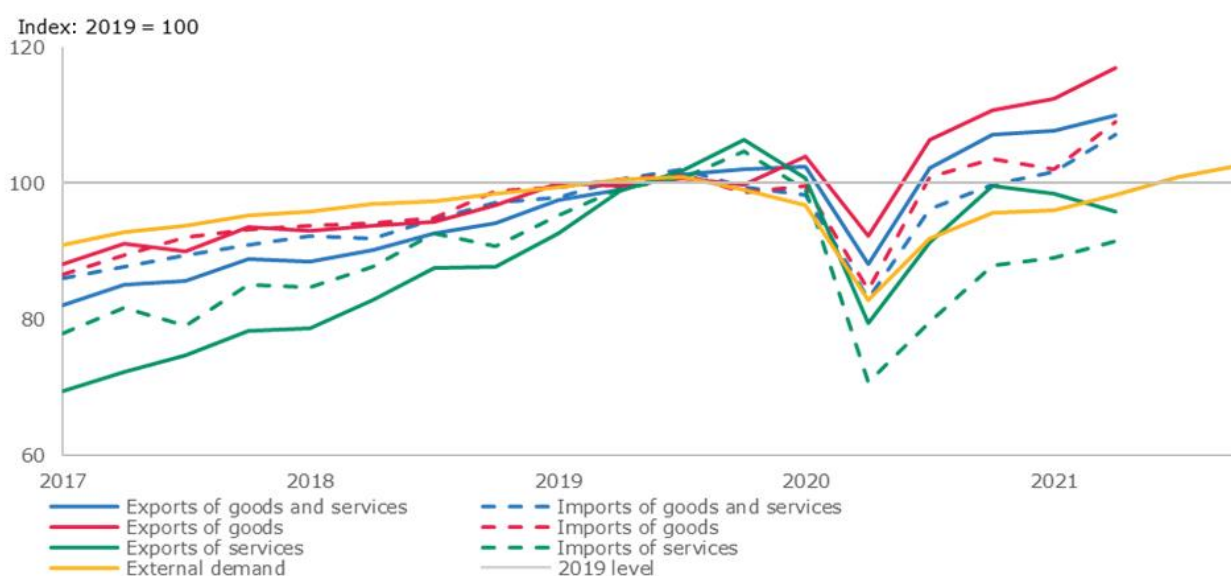
Lithuania's export and import volumes followed an upward trend in the first half of 2021.

National accounts show that real exports of goods and services increased by 3.9% between January and June, compared to the previous six-month period, while imports grew by 6.6%. The recovery of external demand and the adaptation of Lithuania's businesses to the pandemic environment fuelled further growth in export volumes, whereas improvements in expectations about the future coupled with increasing household income and the ensuing growth in consumption acted as a driver of imports. The contribution of merchandise trade to the growth of exports in the first half of 2021 was more than twice as strong compared to the effect of trade in services. The difference between the effect of merchandise and services imports was even more pronounced. The growth of exports continued to be mostly driven by chemical products and plastics as well as wood and the articles of wood. The former category of goods also contributed to the rapid growth of imports, contrary to the latter category. With demand in external and domestic markets following an upward trajectory, Lithuania's exports and imports are expected to rise, yet imports are seen expanding at a faster pace due to the expected stronger demand for commodities and equipment underpinned by the development of production as well as due to the recovery of household consumption. The main sources of risk to the expected foreign trade developments include the further course of the pandemic, disruptions in global commodity supply chains and geopolitical factors.

Foreign trade volume has been growing, supported by increasing external and domestic demand, yet merchandise and services trade has been recovering at varying paces.

Chart 11. Dynamics of Lithuania's foreign trade and external demand

(at constant prices, seasonally adjusted data)



Sources: Statistics Lithuania, Bank of Lithuania and Bank of Lithuania calculations.

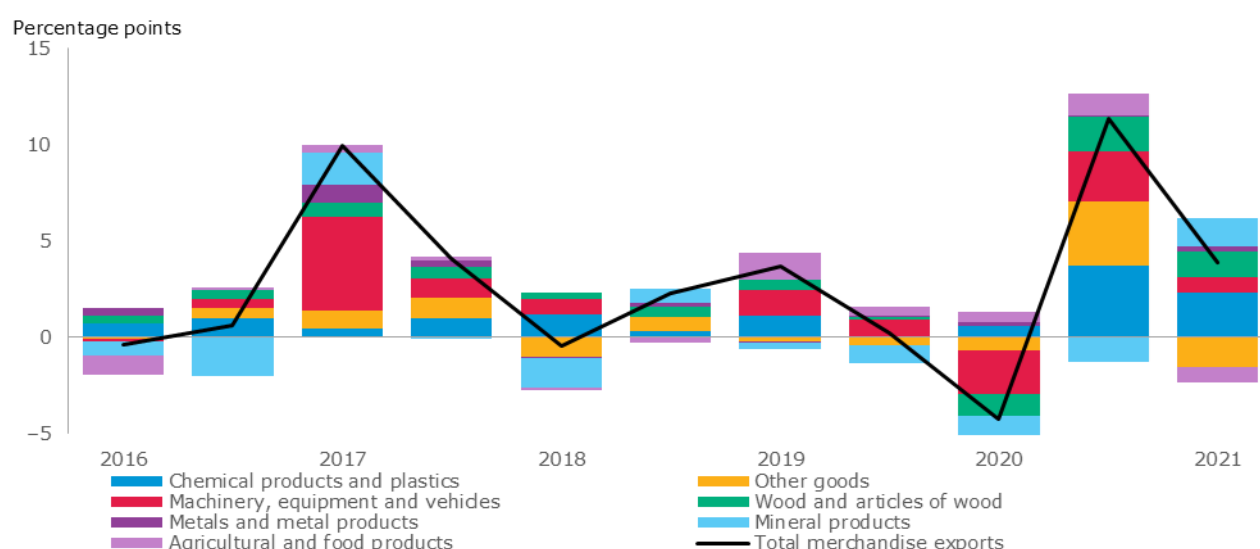
Lithuania's chemical and furniture industries have demonstrated the best performance in external markets, but the latter industry saw changes in structure in the first half of this year, compared to the previous six-month period. Chemical products, wood and furniture had the biggest impact on the growth of merchandise exports, when measured at constant prices. Exports of reagents soared in the second half of 2020 and continued to increase in the first half of 2021, but at a slower pace,

possibly due to growing supply and the entrance of new market participants.²⁰ Exports of furniture and wood as well as the articles of wood, as measured at constant prices, have been getting back to normalcy lately. Disruptions in production chains and the recovery of demand in the market led to a shortage of these products in the period under review. Capitalising on stronger demand, Lithuania's exporters boosted their output levels and sales abroad simultaneously. Meanwhile, agricultural and food products had a strong dampening effect on the growth of exports in the period under review, which, however, was due to the high base effect. Exports of goods in this category reached an exceptionally high volume in the second half of 2020 thanks to the exports of cereals to faraway markets, where the country sold its last year's abundant harvest.

Chemical and wood industries have provided the biggest boost to the growth of merchandise exports.

Chart 12. Growth factors of real and seasonally adjusted merchandise exports

(change from the previous period)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

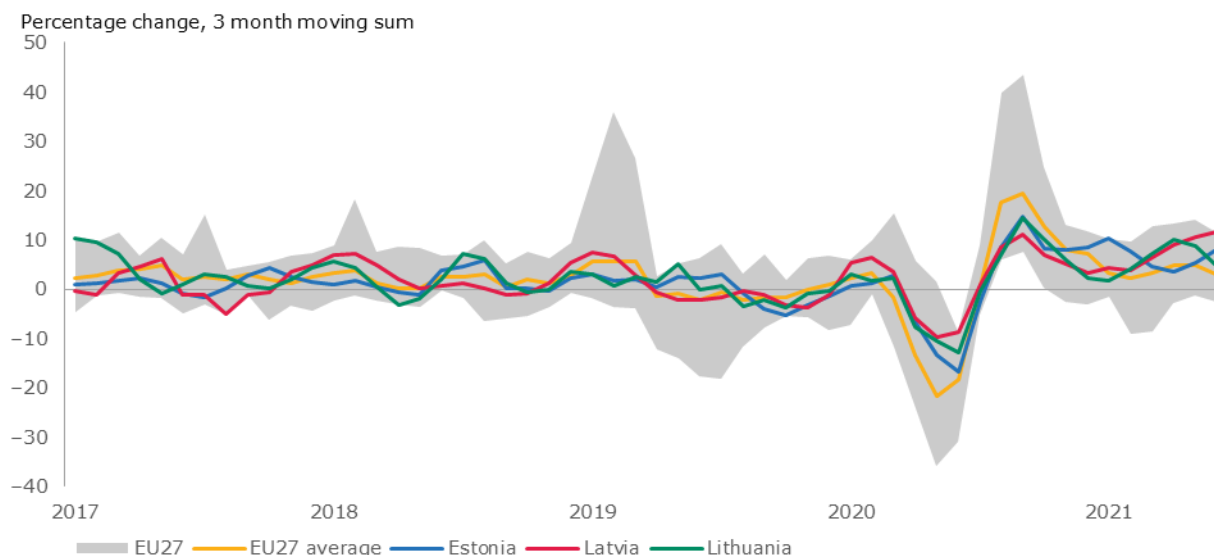
With global foreign trade recovering, the growth in market shares of Lithuania's merchandise exports has lost momentum. The pace of growth in the global market share of Lithuania's merchandise exports slowed down in the first quarter of 2021 on a year-on-year basis, getting back to its long-term trend. In 2020, the exceptionally rapid growth in Lithuania's market shares resulted from the pandemic-driven factors. During the pandemic, Lithuania's chemical industry launched the production of reagents and other products required to contain the spread of the virus and was able to boost its exports rapidly on the back of elevated demand. The country's wood industry recovered sharply from the initial shock, given that it never stopped working during the pandemic and invested in production capacity. The culture of work from home opened up by the pandemic and built-up savings, which were partly channelled into home renovation, led to an increase in demand for wood products and furniture in the period under review, which propelled the sales of Lithuania's wood products in external markets. Nearly all EU countries have recorded increases in foreign trade volumes in 2021 amid the recovery of the global economy, which have been driving supply in the international markets towards its pre-pandemic level. The growth in the market share of Lithuania's foreign trade should remain unchanged in the short term, but its evolution might be affected by the capacity utilisation rate, which has reached historic highs. A

²⁰ Between January and May 2021, Lithuania saw its share in EU trade in these goods get back to the pre-pandemic level and the shares of the largest exporters (for instance, China and the US) increase during the same period.

shortage of production capacity, which may arise due to a lack of dedicated investment in the medium term, may restrain the development of production and exports.

Merchandise exports have been recovering in most EU countries.

Chart 13. Development of merchandise exports of the Baltic and EU countries



Sources: Eurostat and Bank of Lithuania calculations.

Note: EU27 means the interval between the minimum and the maximum value in EU countries.

With uncertainty over the pandemic becoming less pronounced, businesses have been investing and rebuilding their inventories. Lithuania's imports experienced a much steeper fall than exports early in the pandemic, but their ensuing growth underpinned by the commensurate recovery of domestic demand has also been more rapid. The volume of imports, as measured at constant prices, exceeded its 2019 level as early as in the second half of 2020. It has continued its upward trend in 2021, supported in particular by intermediate consumption goods, which are used in production and represent the bulk of the country's merchandise imports. A significant impetus for the growth of imports has also been provided by investment goods. However, the growth of imports has mostly been driven by the category of merchandise including motor vehicles, trailers and semi-trailers. Parts of products falling into this category are re-exported, but the majority of these goods represent investment made by transport and other sectors. Growth in the imports of intermediate consumption goods has been linked with the rebuilding of inventories fuelled by positive expectations about the future outlook, but it has also likely been driven by elevated demand due to the shortage of commodities in the market.

The recovery of services trade has been more subdued, and the volume of their imports and exports, as measured at constant prices, has remained below the level of 2019. In 2021, imports and exports of services have still remained below their pre-pandemic levels, but the volume of foreign trade in services has also been recovering gradually. The recovery of exports has been driven by the growing exports of information and communication as well as other business services. The development of Lithuania's transport services has been marred by uncertainty in 2021 in particular as the restrictions on trade with Belarus and the suspension of fertilizer re-exports in the second half of the year may have negative repercussions for the sector's performance. Improvements in the pandemic situation have led to the recovery in the exports of travel services amid the resumption of trips to many destinations and the increasing tendency among people to choose a vacation abroad. The recovery of services imports has mostly been fuelled by the growing volume of transport services.

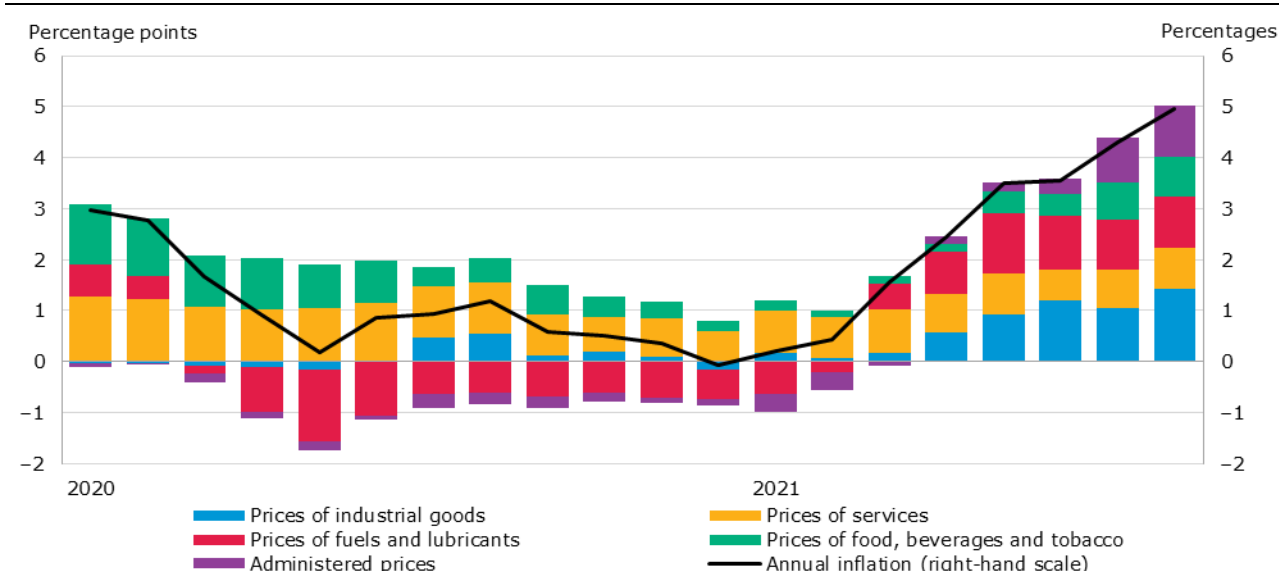
The projected return of foreign trade development to normalcy may be hindered by certain unfavourable factors. The recovery of the external sector has been broad-based, but its growth has been uneven. The Bank of Lithuania expects the country's exports to increase by 11.4% in 2021 and its imports to rise by 4.6%. Even though the evolution of the pandemic is still hardly predictable, the economies of Lithuania's main trade partners have been recovering, leading to stronger demand in 2021, which should get back to normal in 2022. Potential downside risks lurking in 2021 include the effect of supply chain disruptions, a stronger than expected impact of restrictions on trade with Belarus and a potential deterioration in trade conditions with China.

6. Prices

Annual inflation has accelerated significantly in Lithuania since March 2021 and has stood at 4.6% on average over the past couple of months. Higher inflation reflects the rapid recovery of both Lithuanian and global economies as well as the increased prices of commodities and certain components affected by supply and demand imbalances. Inflation has been pushed up mainly by the rising prices for crude oil, their low comparison base, and higher prices for other commodities, such as metals. These factors have contributed to a pickup in the growth of prices for fuels and industrial goods as well as administered prices (see Chart 14). Even though the existing supply disruptions, leading to higher prices of commodities as well as increased costs and longer times of their delivery, and the base effect are seen as temporary, the annual inflation rate is nonetheless expected to remain elevated both late this year and early next year. The average annual inflation is projected to reach 3.3% this year before slowing down to 2.6% next year.

The acceleration of inflation in Lithuania has been driven mostly by external factors.

Chart 14. HICP inflation and its contributions



Sources: Statistics Lithuania and Bank of Lithuania calculations.

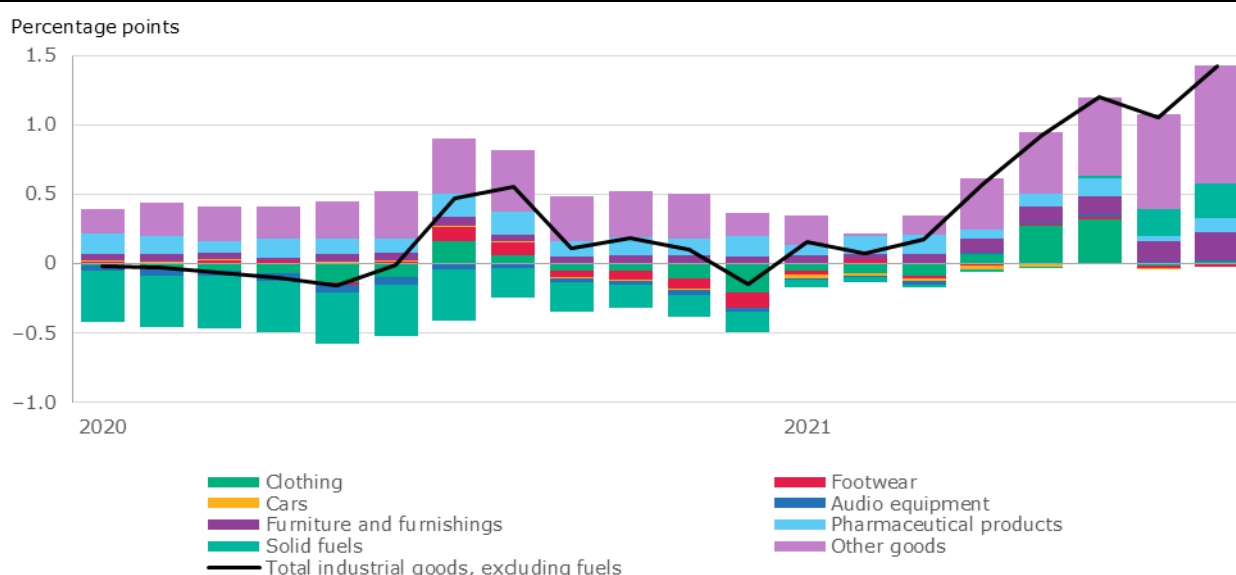
Early in 2021, energy prices still continued to put downward pressure on the consumer price index but have since turned into the main driver of inflation. In July and August, fuel prices in Lithuania exceeded their year-earlier levels by approximately one-fifth, driven by the recovery of oil prices from their early pandemic slump and the base effect. Even though annual fuel inflation indeed appears significant, it is however important to note that the prices of the most popular types of fuel (diesel fuel B7, gasoline A-95) in July were close to their levels recorded in the respective month of 2019. Oil prices are not expected to go much higher, given the crude output hikes implemented by OPEC+ from August and in view of the downward risk to oil demand posed by the rapid spread of the Delta variant. In addition to higher fuel prices, energy inflation has also been driven substantially by the developments in the prices of electricity and natural gas. With electricity and natural gas exchange prices tracking an upward trend, prices charged to household users followed suit in July and, as a result, electricity prices rose by 7.8% on average that month, whereas prices of natural gas and cooking gas soared by 38.6% on average.

The rise in commodity prices and the rebound of demand in goods, which has been outpacing the recovery of supply, have led to a pickup in the growth of prices for industrial goods. The

swift recovery of global production triggered a surge in demand for various commodities, components and their transport services, which far exceeded their supply and therefore led to increases in the prices of these goods and their transport services as well as in their delivery times.²¹ In addition to these factors, supply disruptions were also due to new outbreaks of COVID-19 and a short-term blockage of the Suez Canal by a grounded container vessel.²² As a result, annual industrial goods inflation (excluding energy) accelerated year on year to 2.6% on average from April to August, from 0.6% between January and March. As regards the industrial goods demonstrating more rapid price increases, it is worth mentioning the prices of furniture and other house furnishings, which rose by nearly 9% year on year in August, contributing 0.2 percentage point to headline inflation (see Chart 15). Prices of many commodities should decrease in the future, once the commodity demand and supply are brought back into balance similar to their pre-pandemic equilibrium, yet industrial goods inflation will nonetheless remain elevated both in the remaining months of this year and early next year. Prices for industrial goods are projected to increase by an annual 2.1% on average this year and by 1.2% in 2022.

The rise in commodity prices has contributed to a pickup in the growth of prices for industrial goods.

Chart 15. Effect of industrial goods prices on annual inflation



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Annual growth in food prices has accelerated in recent months. In early 2021, food prices stood below their year-earlier levels on average, but later annual food inflation gathered steam to reach 3.2% in August, which was largely due to the lower production of vegetables harvested in Lithuania this year that led to a pickup in vegetables inflation. In August, prices for vegetables rose by more than one-tenth year on year, contributing 0.3 percentage point to headline inflation. Food prices in Lithuania have also been affected by recent rises in global prices for food commodities. Global food prices declined somewhat from the peak reached in May but nonetheless exceeded their year-earlier level by nearly one-third in August. In the remaining months of 2021, food inflation will continue to be substantially driven by higher global prices for food commodities as well as higher than a year ago purchase prices for certain agricultural products in Lithuania.

²¹ For more details about the situation in the commodity market and the transmission of commodity prices to domestic inflation, see Box 2 "Are rising commodity and housing prices already driving inflation?".

²² The canal was blocked for traffic between March 23 and 29.

The annual pace of growth in services prices has remained subdued, compared to the pre-pandemic period (they reached 3.5% in August). However, the growth trends in the prices of services rendered by many sectors hit hard by the pandemic have been getting back to their pre-pandemic levels. With the base effect wearing off, the annual pace of growth in the prices for dental services decelerated to mere 4.9% in August, from more than 14% in April and May, while the annual medical services inflation slowed down to 6.6% from more than 10%. The recovery of demand and the rise in oil prices have reversed a decline in the prices for flight services, which rose by approximately 9% in August year on year. Moreover, the prices for services provided by catering, sport and cultural sectors have followed an upward path, even though the VAT rate applied to the sectors was cut to 9% from 21% in July. For instance, the prices of catering services increased by 1.4%, while the prices of movie, theatre and concert tickets picked up by as much as 4% in July, while in August they were higher by 5.6% and 7.7% respectively than a year ago. Given that wage costs make up a large portion of services costs, the relatively rapid wage growth will put upward pressure on services prices. Services inflation is expected to accelerate late in 2021 and is seen reaching 3.5% on average this year. Next year, it should rise to 3.8%, but will nonetheless be lower than in 2020.

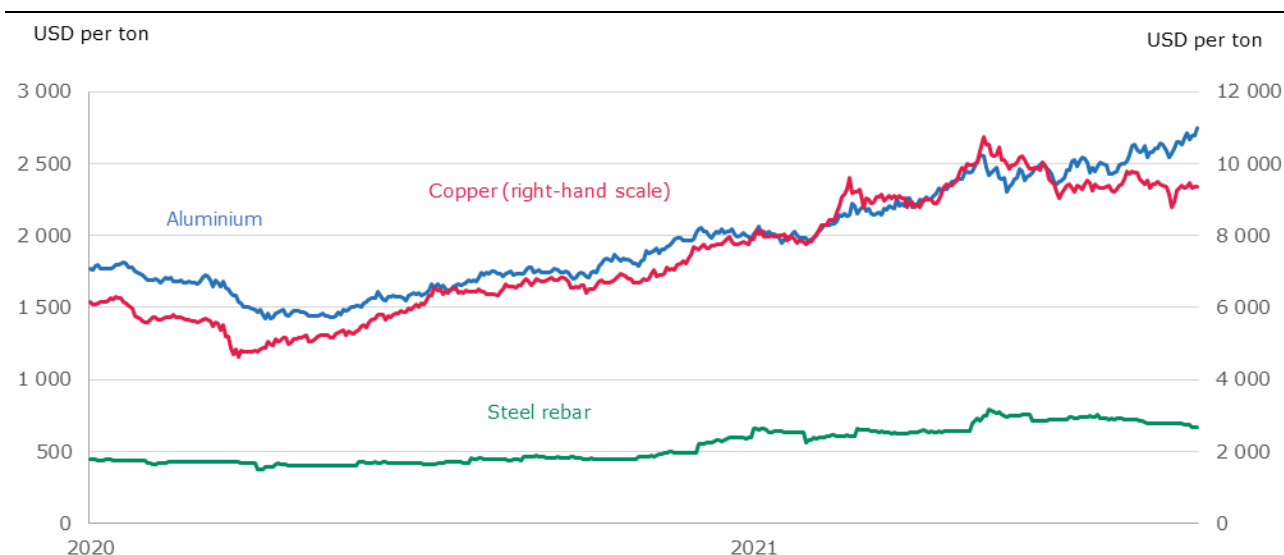
Box 2. Are rising commodity and housing prices already driving inflation?

Increases in the prices of a wide range of raw materials used in industrial production, construction and food production as well as in housing prices have been observed in recent months. How does that affect the dynamics of the general level of consumer prices, i.e. inflation?

A disequilibrium between the supply and demand for commodities, brought about by the swift rebound of the global economy, has led to a spike in commodity prices. The outbreak of the pandemic triggered the rollout of various restrictions on activities and movement and dampened future expectations all across the world. As a result, many manufacturers suspended factory operations and used existing inventories to meet sales. As governments started easing restrictions, the global industry rebounded swiftly, which led to a substantial increase in demand for commodities and other production components as well as to a rise in international orders. With demand growing faster than supply, commodity inventories followed a downward trajectory, which triggered increases in commodity prices and a series of shipping disruptions (longer delivery times and higher shipping costs).²³ For instance, the prices for some of the most popular metals, such as aluminium, copper and steel, on the London Metal Exchange in early September were approximately 1.5 times higher than before the pandemic in early 2020 (see Chart A). However, the prices of some metals, such as copper or steel, have already decreased somewhat, compared to the peak recorded in May 2021. Meanwhile, the prices of lumber futures in the US market have fallen approximately threefold from their May peak, even though they continue to exceed their pre-pandemic levels. An increase in the supply of commodities should bring the demand and supply of many commodities back into balance, which should be similar to their pre-pandemic equilibrium in the future, while the reduced level of inventories should be restored, which makes it likely that the prices for many commodities will tend to go downwards in the future. However, the demand for certain goods has been additionally driven by changes in consumer habits and the trend of industry towards modernisation, which implies that it will be more difficult and take longer to ensure their adequate supply. For instance, semiconductor shortages have been particularly acute lately amid booming demand for TVs, game consoles or computers as well as demand from carmakers investing in technology intensive electric mobility.

²³ Supply was also aggravated by new outbreaks of COVID-19 and such factors as a short-term blockage of the Suez Canal by a grounded vessel in March 2021.

Chart A. Prices of aluminium, copper and steel rebar



Source: London Metal Exchange.

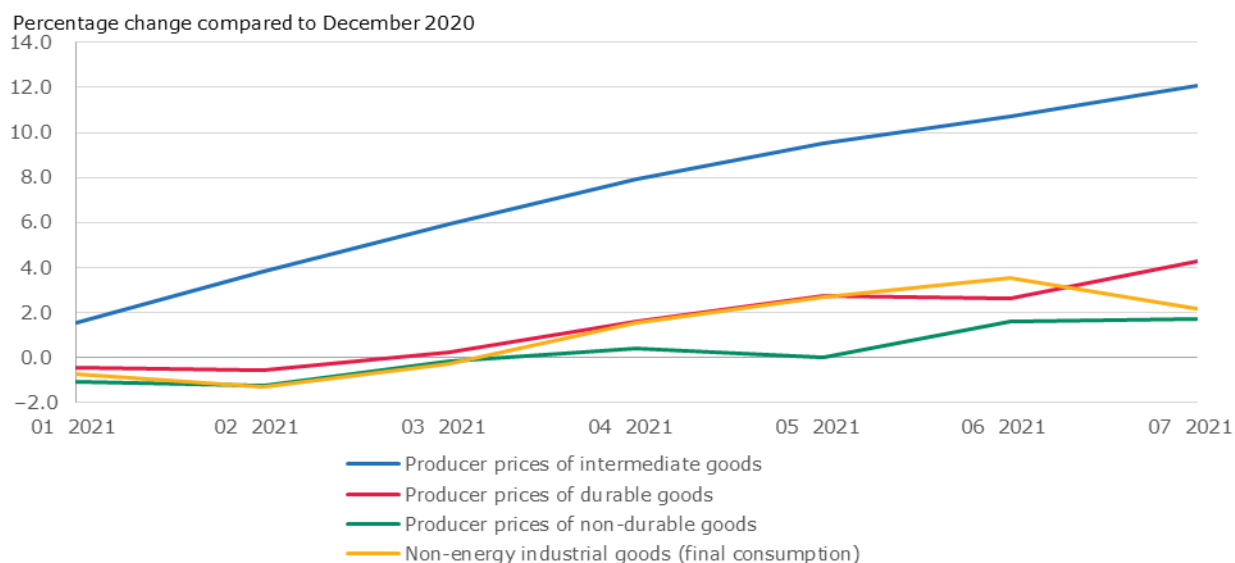
Calculations of consumer price inflation do not include commodity prices as a direct component of CPI. Changes in commodity prices primarily affect producers' costs while their effect on inflation is limited to an eventual impact on prices of consumer goods and services as a result of a pass-through to producer prices. A study carried out by ECB economists²⁴ has shown that a 1% increase in industrial raw material prices in the euro area²⁵ would have the strongest effect on the producer prices of intermediate goods, which would rise by approximately 0.11% on average, while the effect on the producer prices of consumer goods would be smaller – just 0.03%. The contribution to the prices of goods and services purchased by consumers, which form the basis for calculating consumer price inflation, would be even smaller: 0.023% for processed food prices, 0.016% for non-energy industrial goods prices and 0.009% for services prices. As global commodity prices moved onto an upward path late last year, the highest and fastest growth in Lithuania was recorded in the producer prices of intermediate goods, corroborating the findings of the said study (see Chart B). However, the prices of goods purchased by consumers in Lithuania have been rising at a sufficiently rapid pace in recent months (compared to changes in producer prices), which might have been due to the robust economic situation and strong demand for these goods, facilitating the pass-on of a greater share of cost increase to final prices. The impact of increases in commodity prices tends to become more muted in later steps of the pricing chain, given that commodities represent only a fraction of the costs incurred in the production of products or the provision of services. Moreover, producers or traders can absorb part of a cost increase by lowering profit margins or find other ways to reduce other incurred costs. The effect of increases in commodity prices on the prices of goods is not immediate either: it can be noticed as early as after one quarter in the initial stages of production, but it may take a couple of quarters or even a longer period for this impact to be felt more significantly in the later production stages.²⁶

²⁴ Landau, B. and Skudelny F. (2009). Pass-through of External Shocks along the Pricing Chain. Working Paper Series, No 1104. Available online [here](#).

²⁵ Commodity prices in this case should be interpreted as a commodity price index.

²⁶ Landau, B. and Skudelny F. (2009). Pass-through of External Shocks along the Pricing Chain. Working Paper Series, No 1104. Available online [here](#).

Chart B. Changes in producer prices and in the prices of non-energy industrial goods



Sources: Statistics Lithuania and Bank of Lithuania calculations.

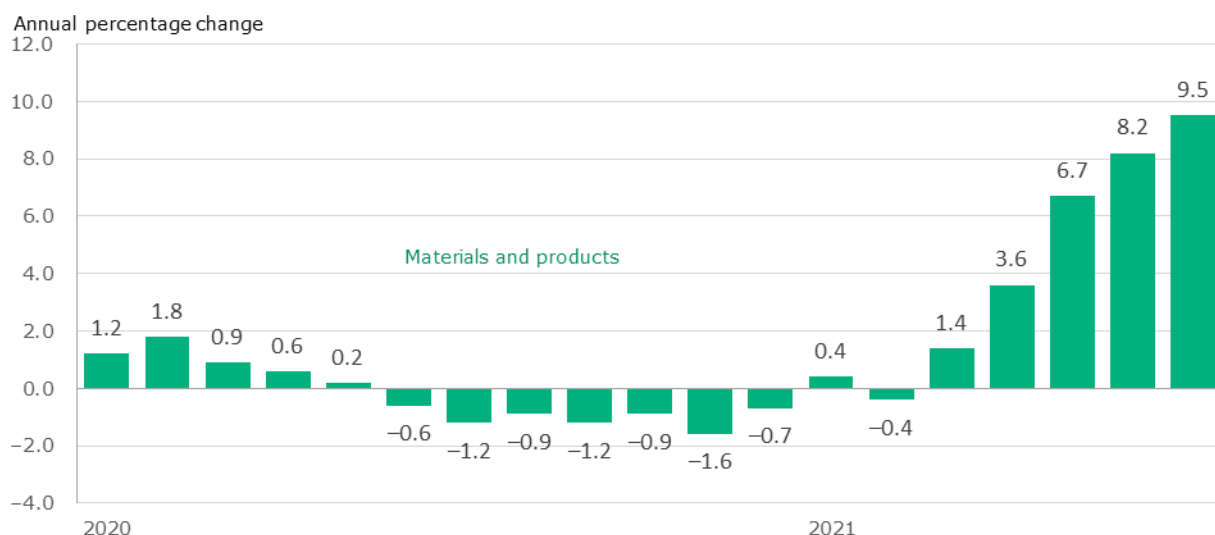
Housing prices themselves are not included in inflation calculations. A substantial increase in the activity of homebuyers led to a year-on-year rise of 12% in housing prices in the first quarter of this year, which fuelled discussions as to how much the inflation index reflects changes in housing prices. Statistics Lithuania publishes housing price quarterly statistics designated to track changes in house prices, which, however, are currently excluded from the statistical consumption basket and therefore are not included in the inflation indicator. Inflation calculations include housing rental costs, which on average account for approximately 1.1% of the consumption basket, as well as other housing service costs, for instance, utility costs. The ECB has recommended in its new monetary policy strategy to consistently include consumption expenditure related to owner-occupied housing (OOH) in the inflation index, as this would better show the actual inflation level to households. Nonetheless, it will be a long-term project, as it would require separating the consumption component from the investment component.²⁷

The effect of construction input prices on inflation is limited to the extent of their pass-through to consumer prices. Changes in construction costs, which are affected by fluctuations in the prices for construction commodities, are measured by calculating a construction input price index capturing the prices of building materials and products reported by the companies performing actual construction work and the wholesale prices of building materials and products reported by trading companies.²⁸ Construction input price data reflect the current increase in commodity prices and show, for instance, that the prices of building materials and products rose year on year by 9.5% in July (see Chart C). Meanwhile, the effect of changes in construction commodity prices on inflation is limited to the extent they are passed through to the consumer prices of materials and products purchased for housing maintenance and repairs. These goods have a relatively small weight in the HICP (2%), which is determined taking into account the share of consumption expenditure spent on such products.

²⁷ Click [here](#) for more details.

²⁸ Click [here](#) for more details about the compilation of the construction input price index.

Chart C. Changes in the prices of construction inputs – materials and products



Source: Statistics Lithuania.

Hence, the rising prices of commodities and housing do have a more substantial effect on individual sectors, but only an indirect effect on inflation measuring the expenditure of an average consumer. Commodity prices affect inflation only indirectly – to the extent their increases are passed through to the consumer prices of goods and services. Housing prices are currently excluded from inflation calculations, but the new monetary policy strategy envisages the consistent inclusion of consumption expenditure related to owner-occupied housing in the inflation index in the future.

7. Financing of the economy

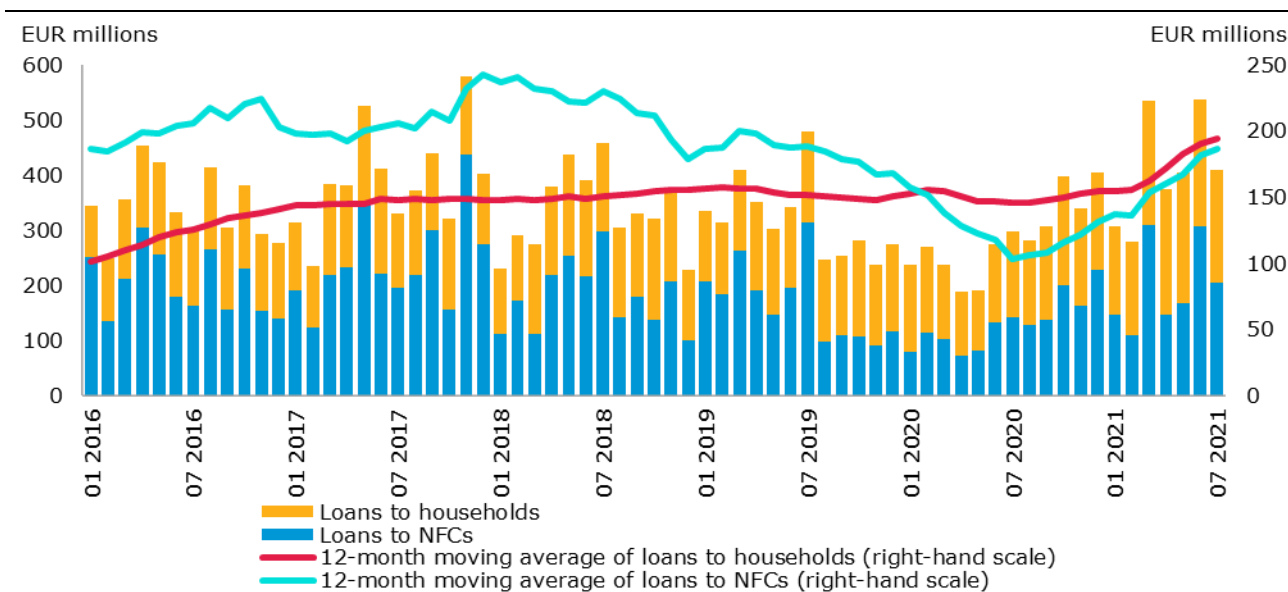
Financial liabilities of the country's households edged up in the first quarter of 2021, while the liabilities of NFCs followed the opposite path, but the deposits of both households and NFCs with MFIs demonstrated rapid growth. Even though the financial assets of the country's households have outpaced their liabilities in terms of growth in recent years, household financial assets remained largely unchanged in the first quarter of 2021, compared to the previous quarter, but liabilities inched higher (by 2.6% quarter on quarter and by 0.9% year on year), which led to a slight decrease in net financial assets (the difference between financial liabilities and assets). The growth of liabilities was mostly driven by other liabilities of households not related to the loans extended by creditors,²⁹ which increased by 22.6% over the quarter, but fell by 37.4% year on year. Despite a slight increase in household liabilities, household savings achieved a rapid pace of growth in the period under review: for instance, the deposits held by households with MFIs soared year on year by 20.2% (or €3.3 billion), according to July 2021 data, which was the highest rate of increase across the euro area. In contrast to households, NFCs saw their financial liabilities edge down by 1.1% over the quarter and by 2.6% year on year (to €40.5 billion) in the first quarter of 2021, while their financial assets followed an upward path, which led to an increase in their net financial assets. With the economic situation improving and with businesses increasingly adapting to the pandemic environment, trade credits, deferred tax arrears and other short-term liabilities of NFCs decreased by 7.3% quarter on quarter and by 4% year on year in the period under review. Just like households, NFCs ramped up deposits with MFIs and their annual growth pace hit 21.7% (or €1.7 billion) in July 2021, but has been decelerating in recent months.

With the flows of lending for house purchase, consumption and other purposes following an upward trend, the portfolio of loans granted by MFIs to households moved along the same path in the second quarter of 2021. The flow of new loans granted by MFIs to households in the second quarter of 2021 increased by 25.5%, compared to the previous quarter, and exceeded the average quarterly flow recorded in 2019 by 54.5% (see Chart 16). This growth in the flow of loans was mostly driven by housing loans, as their flow grew by one-fifth (19.7%) during the second quarter supported by strong activity in the housing market. The flow of new loans for consumption and other purposes soared by 49% in the second quarter from the previous quarter, and its growth was fuelled by improvements in the labour market and the easing of lockdown restrictions over recent months. The growth in the flow of loans to households led to the widening of the MFI household loan portfolio, which achieved an annual growth pace of 8.6% in July 2021 (up by 1.6 percentage points, compared to the growth rate recorded in April) (see Chart 17). The growth of the portfolio was mostly driven by housing loans, which saw the annual growth pace of their portfolio hit 10.9% (up by 1.4 percentage points from April). With the flows of loans for consumption and other purposes following an upward trend, the annual pace of contraction in this loan portfolio decelerated to 1.6% in July, from 4.1% in April.

²⁹ Trade credits and other amounts payable as well as derivatives.

MFI lending to NFCs and households has been gathering pace.

Chart 16. Flows of MFI loans to NFCs and households

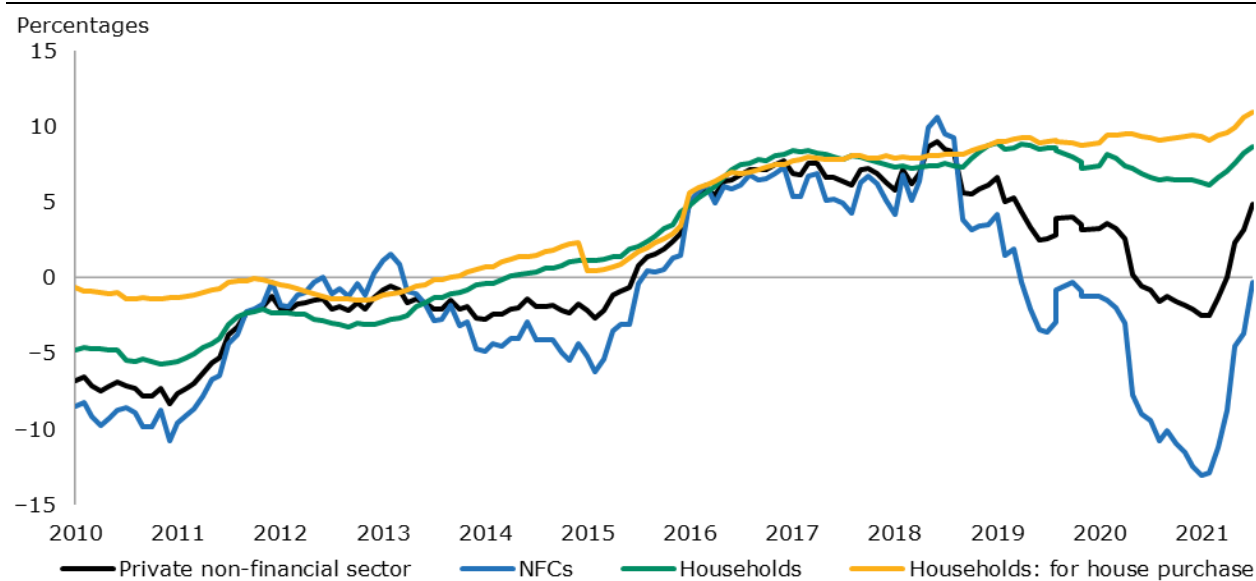


Source: Bank of Lithuania.

The flows of MFI lending to Lithuania's NFCs demonstrated a growth trend in the second quarter of 2021, which led to a deceleration in the annual pace of contraction in the portfolio of loans granted to these corporations. The flow of MFI lending to NFCs gathered pace in the second quarter of 2021 and increased by 10%, compared to the first quarter, or by 22.9%, compared to the average quarterly flow recorded in 2019. Quarter-on-quarter, the flows of lending to businesses engaged in manufacturing, construction and real estate operations registered the highest quarterly growth rates. With lending flows increasing, the portfolios of loans granted to separate economic activities stopped shrinking or contracted at a slower pace in most cases as well. The overall portfolio of loans granted by MFIs to NFCs shrank year on year by 0.3% in July 2021 (yet its annual pace of contraction decreased by 8.4 percentage points, compared to April), but increased by 2.7% from April and hit the highest level since October 2020. The annual decrease in the overall portfolio was mostly due to the continued contraction in the portfolios of loans granted to trade as well as professional, scientific and technical activities. Meanwhile, the portfolio of loans granted to real estate operations followed the path of growth.

Growth in the MFI household loan portfolio has gathered steam thanks to the rapid pace of lending for house purchase, whereas the contraction of the corporate loan portfolio has been losing pace.

Chart 17. Annual change in the portfolio of MFI loans granted to NFCs and households



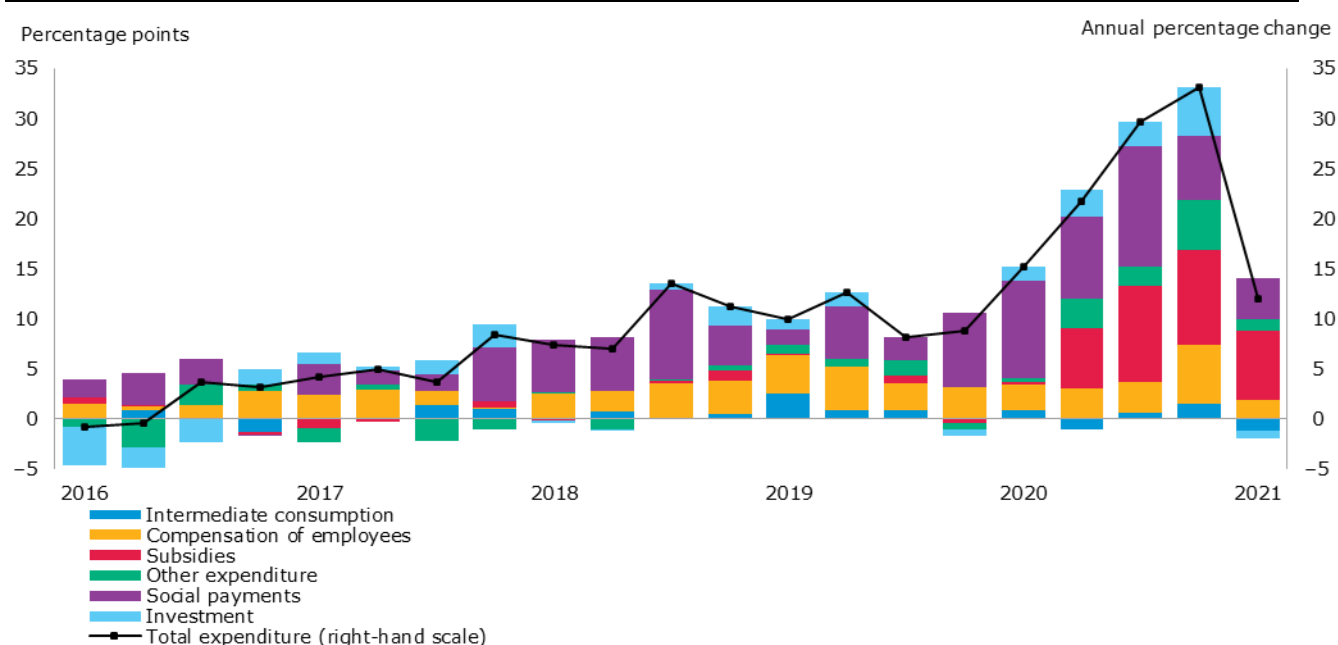
Source: Bank of Lithuania.

8. General government finance

In 2021, the general government deficit is projected to be 0.5 percentage point lower than in 2020, reaching 6.9% of GDP, according to the 2021 budget revised in June. The narrowing of the deficit has been facilitated first and foremost by the growing economic activity leading to a more rapid growth in revenue from major taxes and social contributions as well as to the above-target revenue collection. The improved performance has also been driven by the shift of tax arrears to a downward path. Tax arrears soared by more than €800 million last year due to a temporary tax deferral option offered to the businesses hit by the pandemic. Even though this option remained available until 31 August, the arrears have set on a declining trajectory, which implies its use by only some of the companies, while some of the businesses that deferred taxes last year have already started paying off their arrears. The reduction of the VAT rate for catering, cultural and sport sectors in the middle of the year will act as a temporary drag on tax revenue. The preferential rate should remain in effect until the end of 2022.

A year-on-year decrease in the scale of fiscal measures implemented in 2021 to mitigate the fallout from the pandemic and restrictions on economic activity have led to a slower growth of expenditure.

Chart 18. General government expenditure dynamics and its contributions



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The growth of general government expenditure, which soared by one-fourth last year, has decelerated substantially this year (see Chart 18), mostly due to a year-on-year decrease in the scale of fiscal measures implemented to mitigate the fallout from the pandemic and restrictions on economic activity. This year, these measures account for approximately 3% of GDP,³⁰ down from 4.1% of GDP last year. Subsidies paid to companies to partly cover the salaries of the employees put to downtime (€330 million was allocated to this measure till September) and subsidies to the undertakings affected by the pandemic (€137 million), as well as benefits for the self-employed (€114 million), jobseekers' allowances (€96 million) and sickness benefits (€59 million) have represented the bulk of measures implemented this year, in addition to increased healthcare spending. State aid, with

³⁰ Excluding investment and measures not affecting the general government balance, such as loans or guarantees.

its stabilising effect, has been provided to businesses and households for more than a year, but its volume has been reduced progressively and most payments will be wound up at the end of September. In subsequent years, economic activity will gain additional impetus from higher than usual investment planned by authorities. Investment will be supported by the measures being launched pursuant to the plan “New Generation Lithuania”, which was adopted by the government in July and will be financed with funds made available through the EU’s Economic Recovery and Resilience Facility. The amount of funds planned to be absorbed under the plan this year will account for 0.2% of GDP, but the flows will subsequently intensify and reach 0.6–1.0% of GDP in 2022–2023. In July, the government rolled out a new type of social benefit, called a single person benefit, setting a limited funding requirement for this instrument for this year (approximately €15 million). However, this requirement will be rather substantial in the next and subsequent years, exceeding €100 million (0.2% of GDP), and will therefore contribute to higher expenditure and a larger deficit. General government expenditure and its deficit will also be driven substantially higher next year by the funds required to implement the decisions amending the indexation and payment arrangements for pensions, should these be adopted.³¹

The ratio between general government debt and GDP will increase both this year and in the medium term. In accordance to the revised 2021 budget, the debt will be close to 50% of GDP this year and will increase in subsequent years, before stabilising at 52% of GDP. The growth in the debt ratio will be driven by the deficit planned throughout the medium term, although its effect will be subdued to some extent by the expected growth of nominal GDP and the average interest rate on government debt, which has decreased in recent years.

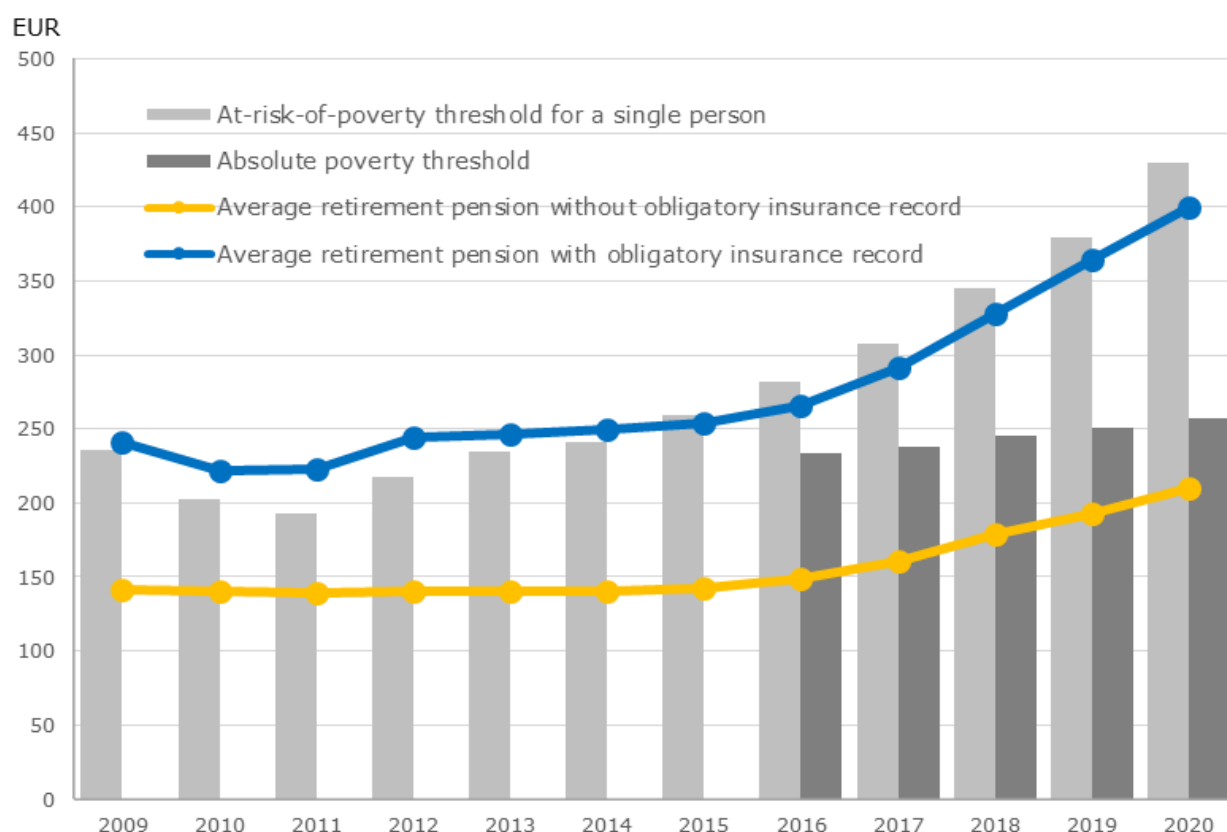
Box 3. Are the proposed changes to the indexation of Sodra’s retirement pensions effective in addressing the problem of small old-age pensions?

The problem of relatively small retirement pensions in Lithuania is nothing new, but it has become somewhat more acute in recent years: the rather rapid growth in the average wage and, simultaneously, in the at-risk-of-poverty threshold,³² which has been observed for some considerable time, have led to a situation where the average retirement pension awarded to those having the obligatory insurance record has remained below the poverty threshold for a single person since 2015 (see Chart A). This situation has arisen due to several factors.

³¹ For more details, see [here](#)

³² [At-risk-of-poverty threshold](#) refers to a relative level of disposable income earned by a household, below which it qualifies as living in poverty. The at-risk-of-poverty threshold set at 60% of the median equivalised disposable income is considered to be the main poverty criterion.

Chart A. Evolution of average retirement pension and poverty threshold in Lithuania



Sources: Statistics Lithuania and Bank of Lithuania calculations.

It should be pointed out that the rather rapid increase in the poverty threshold, which has been observed in recent years, has been driven by the rapid growth of wages recorded across all wage intervals. The automatic adjustment mechanism for the indexation of pensions in line with the multi-annual average growth rate of the wage bill was only rolled out in 2018, replacing the previous approach to pension increases, which was based on discretionary, or ad hoc, decisions of the Lithuanian government and was insufficient to make sure that the growth pace of the average pension at least matched the rate of increase in the at-risk-of-poverty threshold. Therefore, the gap between the average retirement pension and the poverty threshold, which remained positive between 2009 and 2014, slid back in the negative territory in 2015 and has been widening ever since.

It should be noted that the pension indexation mechanism³³, which entered into force in 2018 and was based on the arithmetic average of the annual wage bill growth rates for seven consecutive years, nonetheless cannot ensure a match between the increase in the poverty threshold and the growth pace of the average pension, given that, firstly, the seven years' average represents a relatively inert measure and depends on the rates of growth during the previous three years, which implies that it takes longer for the average pension to accelerate growth during the expansion stage (upswing) of the economic cycle. Secondly, the indexation coefficient also largely depends on the accuracy of wage bill growth forecasts (for instance, the growth of wage bill often exceeds forecasts in the expansion years of the economic

³³ The indexation coefficient is calculated as the arithmetic average of the annual wage bill growth rates for seven consecutive years: for three years preceding the year of calculation (t-3; t-2; t-1), in the year of calculation (t), and three forecast years (t+1; t+2; t+3). For more details, see [Article 8 of the Republic of Lithuania Law on Social Insurance Pensions](#).

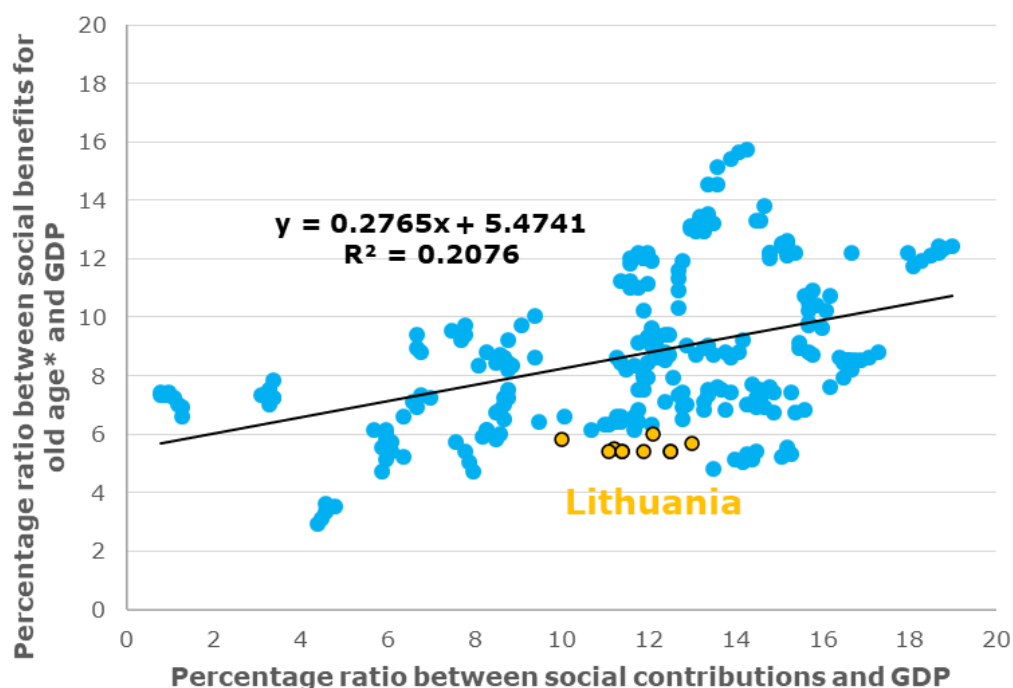
cycle and, conversely, lags behind the projected targets during the years of contraction). Thirdly, the average retirement pension will increase at a slower pace than wages in the long term due to this indexation mechanism: wage growth will outpace the growth of wage bill that will be dampened by a future decline in employment due to the worsening demographics in the country (decreasing population and the ageing society). In other words, the average retirement pension will remain below the poverty threshold in the near future as the latter indicator depends on wages that will grow faster than the wage bill.

Hence the country has found itself in a situation where the status quo – the average pension below the at-risk-of-poverty threshold for a single person – is unsatisfactory, but should not change substantially in the near future, based on the legislated indexation mechanism. This leads to a natural question: what should be done?

On 15 July 2021, the Ministry of Social Security and Labour of the Republic of Lithuania (SADM) put forward [proposals](#) for the reduction of poverty among older persons, which stipulated that, firstly, in the years when the State Social Insurance Fund Board (hereinafter – Sodra) is projected to run a budget surplus, 75% of that surplus, minus working capital, should be diverted to additional increases in the individual pension component. Secondly, it proposed to set the general component of the pension, paid to the persons having minimum-to-obligatory insurance record, equal to the full amount of the basic pension (instead of the share of the basic pension corresponding to the ratio between the person's insurance record and the obligatory insurance record, according to the current practice).

In the opinion of the Bank of Lithuania, these proposals are insufficient to resolve the problem of small retirement pensions, as they only partly address the main causes of the existing situation. These causes are two: firstly, a relatively small share of revenue from pension social insurance contributions allocated for the payment of retirement pensions, and, secondly, the existing structure of the retirement pensions paid by Sodra, which does not help to aptly reduce poverty of small pension beneficiaries. This is due to the fact that the general pension component accounts for a relatively high proportion of the total amount of pension, in particular in cases of lower income (ranging from the minimum wage to the average wage). Efforts to make effective use of existing limited resources for lifting the income of the poorest retirement pension beneficiaries, for instance, by increasing the amount of the basic pension, will lead to an across-the-board rise in pensions of all pension beneficiaries, including those who receive larger pensions, due to a respective increase in the general component of their pensions. Hence, a substantial share of limited available resources will not achieve the intended purpose.

Chart B. Relation between social insurance contributions and social benefits for old age in EU countries in 2010–2019



Sources: Eurostat and Bank of Lithuania calculations.

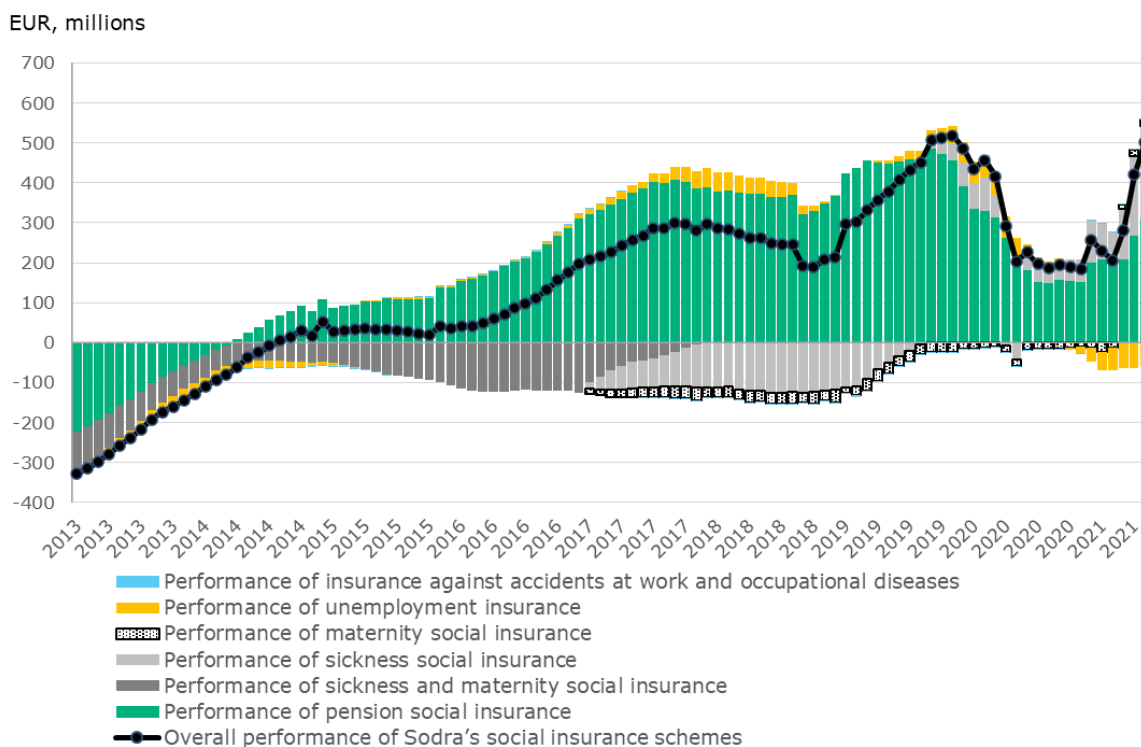
Note: *Social benefits before taxes.

The analysis of the data on social contributions collected by EU countries and social benefits allocated to the elderly (before taxes) has shown that the proportion of revenue from contributions allocated for the payment of retirement pensions in Lithuania is relatively small (see Chart B). It should be noted that the gap between the social contributions-to-GDP ratio in Lithuania (11.6% on average in 2010–2020) and the respective ratio of euro area countries (15.3% on average in 2010–2020) is far narrower compared to the social benefits' gap, as social benefits for old age in Lithuania accounted for 5.5% of GDP on average between 2010 and 2020, as opposed to the euro area's average ratio of 10.1%. In order to bring the relation between social contributions and benefits in Lithuania in line with the trend among all EU countries, the ratio between social benefits for old age and GDP in Lithuania should be higher by approximately 2.5 percentage points. This would imply that, for instance, in 2020, total expenditure on retirement pensions should have reached €4 billion instead of €2.8 billion, and the average retirement pension should have been larger by approximately 40% (€575 instead of €400). In this case, the average pension would have exceeded the at-risk-of-poverty threshold for a single person substantially.

The analysis of balances of the social insurance schemes administered by Sodra clearly suggests that Sodra is not fully capable of implementing this proposal in a sustainable manner, as its pension social insurance surplus amounted to €180 million on average per year in 2012–2020, i.e. comprised approximately one-sixth of the amount required for the proposed pension increase (see Chart C). The reserves accumulated by Sodra would only suffice for a one-off increase of at least 2.5% of GDP (or

approximately €1.2 billion³⁴) in the amount allocated for the payment of retirement pensions, which implies that other sources of revenue are also necessary for this increase to be sustainable. At least part of the necessary funds could be raised, for instance, by including more persons in the pension social insurance system (for instance, smaller farmers) or by broadening the pension social insurance contribution base (for instance, by requiring the persons engaged in individual activity on the grounds of a business certificate to make social insurance contributions based on a higher share of income instead of the minimum wage).

Chart C. Social insurance balance broken down by insurance scheme (12-month moving sums)



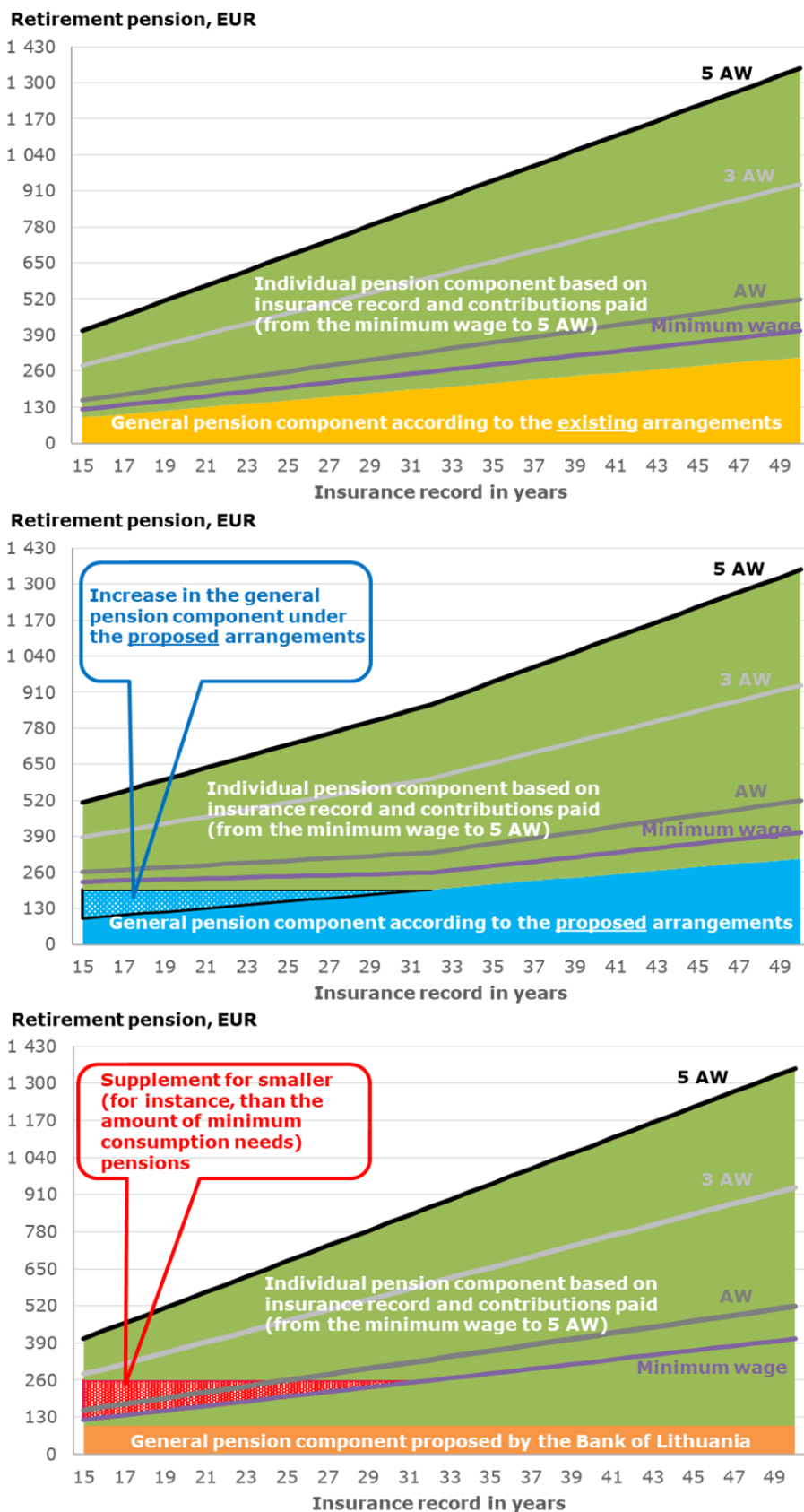
Sources: Sodra and Bank of Lithuania calculations.

In 2018, the Bank of Lithuania put forward a package of [proposals](#), which might help address the problem of small retirement pensions. The package included, inter alia, proposals to significantly reduce the weight of the general pension component in the total structure of Sodra's retirement pension, to recalculate the individual component and to introduce a notion of the "Minimum Income in Old Age" (MIOA),³⁵ i.e. the minimum income necessary for subsistence (in old age) that would be ensured by the social assistance system instead of the pension system (see Chart D). Such proposals were put forward in view of the fact that it was not evident that the problem of relatively small income in old age should (only) be addressed by modifying the pension system. In the opinion of the Bank of Lithuania, the guaranteeing of sufficient income in old age is a task of both the pension system and the social assistance system, in particular in cases where the contributions paid to Sodra by certain persons are relatively small due to one reason or another.

³⁴ The analysis of balances of the social insurance schemes administered by Sodra has shown that the sum of all balances of social insurance revenue and benefits in 2012–2020 was positive and amounted to approximately €1.1 billion, but the revenue of pension social insurance exceeded benefits by approximately €1.6 billion in that period. Part of this surplus was spent on sickness and maternity social insurance benefits as the amount of benefits in these insurance schemes exceeded revenue by approximately €590 million in 2012 through 2020.

³⁵ Minimum income in old age could also be ensured by the retained system of supplements for small pensions whereas the necessity of such top-ups and the target amount of minimum income in old age (whether it should match or exceed the amount of minimum consumption needs) could be a subject of a separate discussion.

Chart D. Comparison of structures of Sodra's retirement pensions (existing structure (top panel), proposed by SADM (middle panel), proposed by the Bank of Lithuania (bottom panel))



Sources: Sodra and Bank of Lithuania calculations.

The substance of the proposed changes (see the right panel of Chart D) is the following: a higher weight of the individual pension component in each income category (from the minimum wage to five times the average wage (AW)) would encourage to participate in the labour market, pursue higher wages and therefore ensure a larger retirement pension paid by Sodra due to a stronger link between contributions and benefits. As can be seen in the bottom panel of Chart D, the individual pension component (even assuming that a person earned the minimum wage during the entire insurance record) exceeds the general pension component as early as after 25 years of insurance record, i.e. the green area under the curve denoting the minimum wage is bigger than the orange area at the point denoting 25 years of insurance record. The impact would be even stronger should the government dare to adjust the existing indexation mechanism and provide that the individual pension component would be indexed at a more rapid pace than the general pension component in the future.³⁶ In the long term, such changes should also help increase Sodra's resources and capacity to pay larger pensions. The adequacy of income of pension beneficiaries whose retirement pensions are smaller than the defined amount³⁷ should be ensured by paying them supplements from the resources of the social assistance system. In this case, the problem of small retirement pensions would be addressed using social assistance measures, which would facilitate more targeted reduction of poverty among small pension beneficiaries, as the adjustments in relation to "minimum income in old age" would allow increasing the income of the poorest retirement pension beneficiaries more accurately, avoiding the distribution of limited resources to all pension beneficiaries, including those receiving larger pensions.

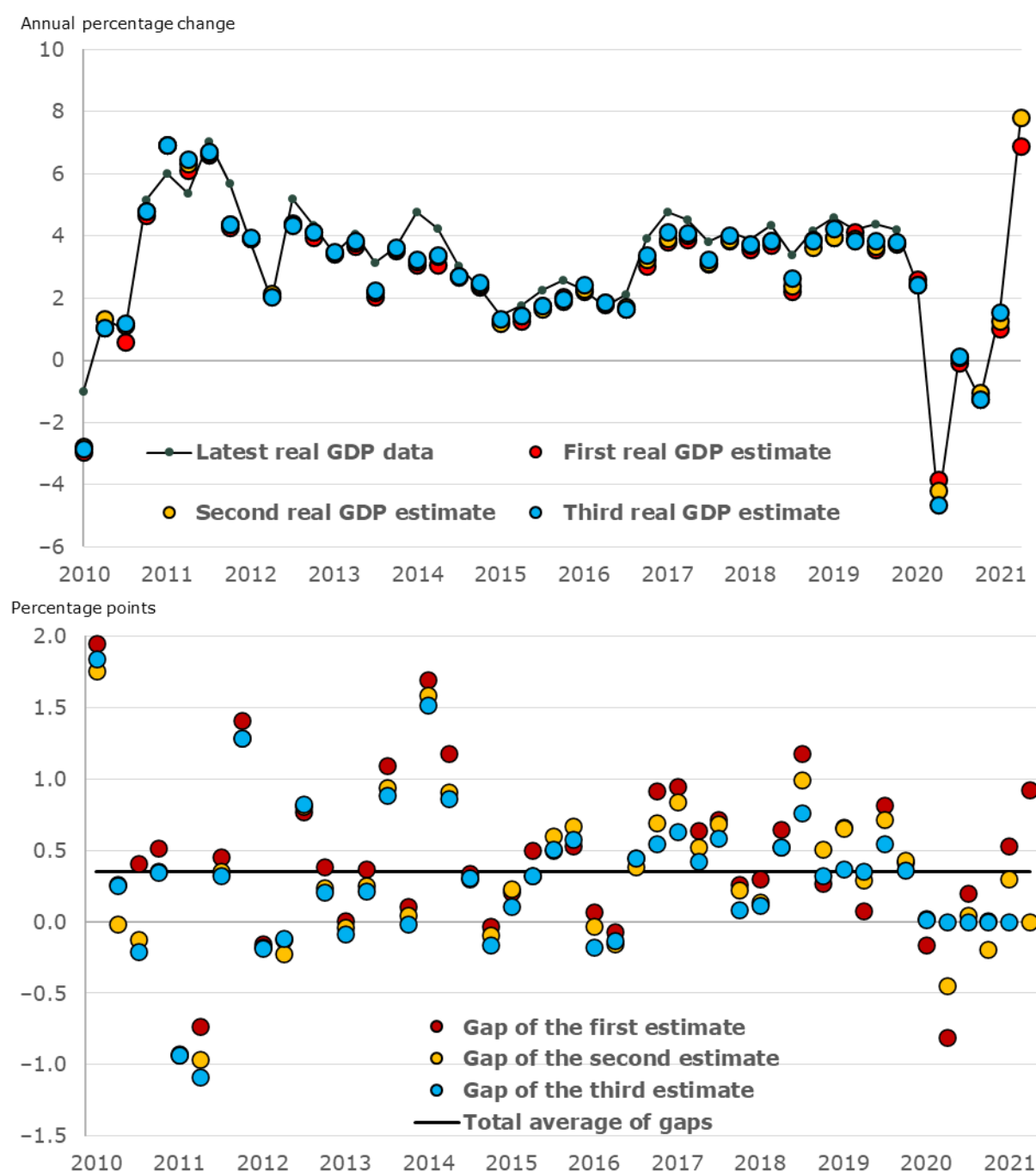
Box 4. Uncertainty and deviation of macroeconomic projections

The forecasts of economic indicators made by various institutions, including the Bank of Lithuania, are released as point estimates, i.e. specific future values or growth rates, thus reflecting the most probable development of the selected indicators during the period under review. Still, the economy is affected by many different factors, their effect and interrelations are complex and diverse, and they may change due to various unforeseen circumstances, therefore, the results of economic processes and their interaction are usually not clearly known. Moreover, it is almost impossible to foresee certain phenomena (for example, geopolitical tensions, pandemic, etc.) and it is very difficult to forecast their precise impact on the economic developments. Therefore, even when the most progressive methods are applied, it is necessary to have in mind that deviations of economic forecasts are unavoidable in forecasting. In other words, it is always necessary to have in mind that the forecast of any economic indicator is always related to a certain amount of uncertainty.

³⁶ According to the current version of the Republic of Lithuania Law on Social Insurance Pensions, „From 1 January each year, the amounts of the basic pension and the value of pension points as well as the basic amount of the widow's/widower's pension, which are used in awarding and paying pensions of the types established in this Law, shall be indexed in accordance with the indexation coefficient calculated and approved in the previous year“, i.e. the basic pension and the value of pension points are being increased at the same pace.

³⁷ The bottom panel of Chart D shows, on an indicative basis, the amount of minimum consumption needs, but the target amount of minimum income in old age (whether it should match or exceed the amount of minimum consumption needs) could be decided during separate discussions.

Chart A. The latest real GDP growth rates and their estimates (top of the chart) and the differences in the latest real GDP growth rates and their respective estimates (gaps, bottom of the chart)

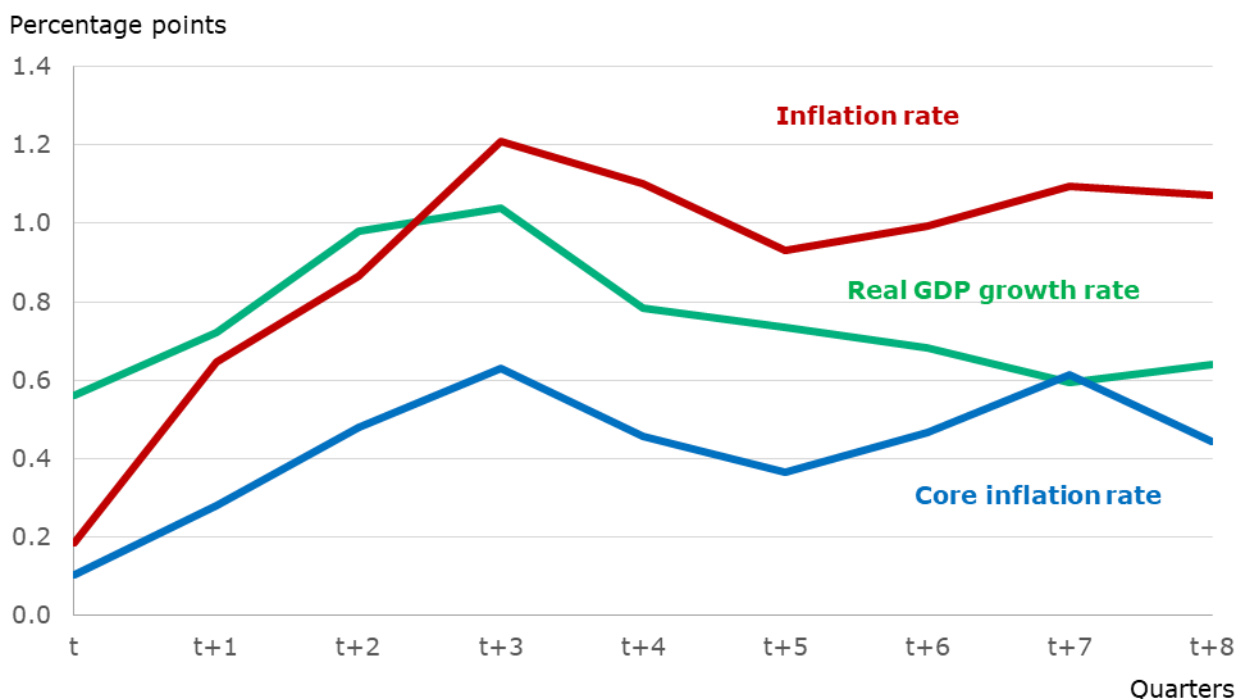


Sources: Statistics Lithuania and Bank of Lithuania calculations.

In addition to other factors, forecast deviations are also determined by statistical data reviews. For example, Statistics Lithuania publishes and updates the real GDP growth rate at least several times according to additional information received, and this is a usual practice in all EU Member States. It can be seen from Chart A that the differences between the first real GDP growth rate estimates and subsequent updated or final growth rates may be quite significant in some quarters, reaching 0.5 to 1 percentage point or more (see the bottom part of Chart A). In the period from Q1 2010 to Q2 2021, the average difference between the latest available updated data and the first, second and third estimate of the annual real GDP growth rate was positive and comprised almost 0.4 percentage point. This means

that the first growth rate estimates were lower on average during this period, compared to the growth rates calculated according to the latest data. As forecasting real GDP growth rates uses several first GDP growth estimates (the first one, more rarely also the second one) for the last quarters, their reviews, in addition to other factors, determine the deviation of the GDP growth rate forecasts.

Chart B. Average absolute deviation in each quarter of the two years of the forecast



Sources: Eurostat, Statistics Lithuania and Bank of Lithuania calculations.

The forecast deviation ranges are one of the ways to show forecast uncertainty. On the basis of historical GDP, headline inflation and core inflation forecast data, mean absolute deviations of the forecasts of these indicators were estimated in 13 forecasting rounds (from December 2014 to December 2017³⁸): after eliminating the largest deviations, the mean absolute deviation in each quarter from the two-year period of the forecast was calculated from the current quarter t to the last quarter of the forecast period $t+8$ (see Chart B). The calculations revealed that, first, the mean deviation of core inflation forecasts was historically the lowest, while that of headline inflation forecasts was the highest. Second, for all three indicators, the absolute deviation was the highest when forecasting the fourth quarter of the forecast period ($t+3$), whereas the deviation of all subsequent quarterly forecasts was lower. These calculations were used to construct forecast deviation ranges equal to 1 and 2 mean absolute deviations for real GDP, headline inflation and core inflation forecasts made by the Bank of Lithuania in September 2021, which are presented in Chart C).

³⁸ In order to avoid the impact of the COVID-19 pandemic on the deviations, the data of 2018–2019 forecast rounds projecting the economic indicators for 2020 were excluded from the calculations.

Chart C. Inflation (top), core inflation (middle) and real GDP (bottom) developments and forecasts



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Owing to high volatility of energy and food prices, the highest uncertainty surrounds the gross inflation forecast. It can be seen from Chart C that the width of the range of 1 and 2 average absolute deviations for gross inflation is larger than the width of the range of deviations for real GDP and significantly larger than the range of deviations for net inflation. The fact that net inflation forecast deviations are significantly lower than those of gross inflation is not surprising, as the deviations of gross inflation forecasts is significantly increased by the deviations of forecasts for such difficult to project variables as energy and food prices. After the exclusion of these two product groups where prices are highly volatile, the average forecast deviation of other prices (or net inflation) is substantially lower and comprises around 0.5 percentage point, whereas net inflation forecast margins equal to one or two typical deviations comprise around 1 and around 2 percentage points respectively.

It should be noted that such forecast ranges should be interpreted as most probable ranges indicating the margin of a certain indicator's evolution on the basis of historical accurateness of indicator forecasts³⁹. However, these ranges are not meant to show, for example, the potential (asymmetrical) impact of currently most probable risks (risk set) on the evolution of forecast indicators. Significantly more complex econometric methods are used for such analysis. For example, asymmetrical risk ranges could be modelled by combining the regression of past deviations with future-oriented warning indicators for the purpose of enabling the projection of future risks. Asymmetrical risks could be included in forecasting by means of a survey of experts, in order to construct weighted probabilities of deviations of individual dependent variables of the model. This methodology is not considered in this box. Taking into account the above arguments and a high volatility of Lithuania's macroeconomic indicators, the Bank of Lithuania considers using the ranges that indicate forecast uncertainty and asymmetrical risks when publishing forecasts of macroeconomic indicators.

³⁹ If certain assumptions are made, these forecast ranges may also be treated as having a probability meaning. If forecast deviations were distributed according to a normal distribution, the projected indicator would fall within the forecast range equal to one average absolute deviation with a probability of around 60% and within the forecast range equal to two average absolute deviations – with a probability of around 90%

Abbreviations

CPI	consumer price index
EC	European Commission
ECB	European Central Bank
EU	European Union
EURIBOR	Euro Interbank Offered Rate
Eurosystem	European Central Bank and euro area national banks
Eurostat	statistical office of the European Union
GDP	gross domestic product
HICP	harmonised index of consumer prices
IMF	International Monetary Fund
MFI	monetary financial institution
NFC	non-financial corporation
PEPP	pandemic emergency purchase programme
PMI	purchasing managers' index
UK	United Kingdom
USA	United States of America
VAT	value-added tax

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