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LIETUVOS BANKAS
EUROSISTEMA

Lithuanian Economic Review

2021

MARCH

The Lithuanian Economic Review analyses the developments of the real sector, prices, public finance and credit in Lithuania, as well as the projected development of the domestic economy. The material presented in this review is the result of statistical data analysis, modelling and expert assessment. The review is prepared by the Bank of Lithuania.

The cut-off date for the data used in the publication is 2 March 2021.

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ABBREVIATIONS

CIS	Commonwealth of Independent States
CPI	consumer price index
EC	European Commission
ECB	European Central Bank
EU	European Union
EURIBOR	Euro Interbank Offered Rate
Eurostat	statistical office of the European Union
Eurosystem	European Central Bank and euro area national banks
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
R&D	research and development
Sodra	State Social Insurance Fund
TLTRO	targeted longer-term refinancing operation
UK	United Kingdom
US	United States of America
VAT	value-added tax



EXTERNAL SECTOR

Positive net exports had the largest positive impact on GDP. This was determined by the favourable structure of exported goods and a significant drop in imports.



HOUSEHOLDS

State stimulus measures reduced the adverse effects of the pandemic on the labour market. Household disposable income grew at a rapid pace.



External demand

7.6%
in 2021

5.9%
in 2022



Exports

5.9%
in 2021

5.9%
in 2022



Imports

9.8%
in 2021

6.7%
in 2022



Consumer spending

4.8%
in 2021

6.7%
in 2022



Wages

6.3%
in 2021

5.5%
in 2022

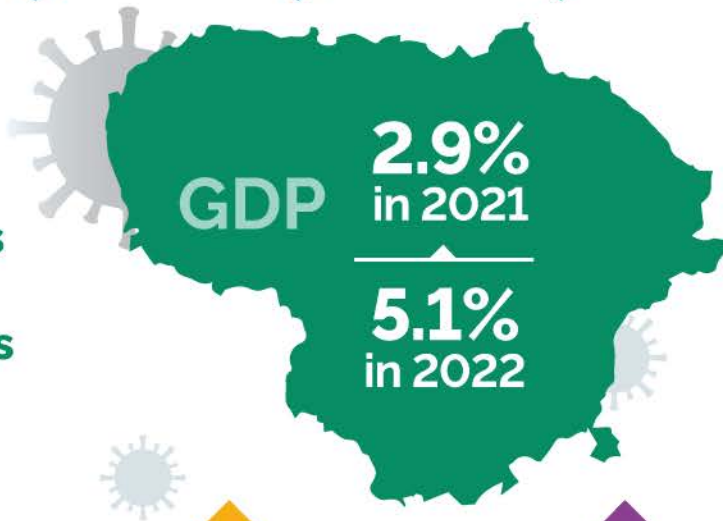


Unemployment

8.4%
in 2021

7.0%
in 2022

Lithuania's economic downturn was among the mildest across the EU



Uncertainty over the future course of the pandemic and its management remains high



Investment

5.0%
in 2021

5.0%
in 2022



Private investment will grow



Public investment will grow



Inflation

1.6%
in 2021

1.9%
in 2022



Fuel prices are set to rise



Prices of services and food will increase at a slower rate

INVESTMENT

The corporate sector managed to maintain strong financial performance, supported by declining private investment and growing public investment, which in turn boosted demand.



PRICES

In 2021, average annual inflation will increase but remain rather subdued. Compared to 2020, inflation will be slightly accelerated by energy prices that are expected to rise due to higher oil prices.



LITHUANIA'S ECONOMIC DEVELOPMENT AND OUTLOOK

While the ongoing COVID-19 crisis definitely has its toll on global economic activity, its current impact is not as severe as it was during the onset of the pandemic. Due to better adapting to the risks posed by the pandemic, both corporate and household sentiment has deteriorated to a lesser extent compared to the first wave of COVID-19. The experience gained in accumulating information on new cases and applied containment measures helped governments impose more appropriate restrictions on economic activities and mobility in order to reduce negative implications on the economy. Therefore, in recent months, in contrast to the beginning of the pandemic, manufacturing production in many countries continued to grow – same as global trade in goods. At the end of 2020, the latter already reached the level observed a year ago. However, in addition to the significant global improvement, the recovery of global trade in goods may also be determined by pent-up demand for goods that households and companies did not purchase during the previous months. The services sector is in a worse situation, especially when it comes to the euro area. During the second wave of the pandemic, it contracted once again, thus contributing to the overall economic downturn in the aforementioned group of countries. Compared to the levels recorded at the onset of the pandemic, further decline in euro area economic activity is quite limited. This is signalled by provisional indicators of both real GDP and the labour market, as the latter did not deteriorate at the end of 2020.

Although Lithuania's economic activity still lags behind its pre-pandemic levels, the country's economic contraction during the second wave of COVID-19 has been relatively mild. With recovering international trade in Lithuania's export partners and other countries, manufacturing production continued to grow substantially in late 2020 and early 2021. Manufacturing output volumes of many branches in this field have already exceeded the levels recorded before the pandemic. The overall manufacturing development is also supported by newly developed products oriented towards containing the pandemic situation. At the end of 2020, a rise in construction works also contributed to the growing levels of economic activity in Lithuania. Intensive use of EU funds and more active public sector investment allowed carrying out more civil engineering projects. With quite a substantial demand, there was also an increase in residential building construction. Having been in decline for a few quarters, non-residential building construction also started showing signs of recovery at the end of 2020. Construction of offices, warehouses and other buildings necessary for business development is most affected by the current crisis, therefore, its volumes exhibit the highest fluctuation. In contrast to the mentioned activities, the situation in the services sector deteriorated when the second wave of the pandemic gained momentum. The largest change was observed at the end of 2020 when more restrictions on economic activities and mobility were imposed. Retail trade volumes fell once again. In late 2020 and early 2021, their total decrease amounted to around 11% (compared to 17% during the first wave of the pandemic). A milder drop was recorded in many retail components. Fuel sales stood out the most: during the first wave, they slumped by around one quarter, whereas during the second one – by roughly 8%. This also indirectly suggests that the second wave of COVID-19 turned out to be less destructive in terms of the country's economic activity.

The labour market has also exhibited relatively few changes during the second wave of the pandemic. There are still no significant changes in employment, while the number of the short-term unemployed (those unemployed for up to 1 month) is also not increasing. And yet, it should be noted that during the downturn, the labour market and the overall economic developments tend to vary. In the second quarter of 2020, when Lithuania's economy experienced the hardest hit from the pandemic, employment did not decrease as much as real GDP. However, when the economy started recovering in the second half of the year, employment did not bounce back as much as the overall economic activity (at the end of 2020, economic activity almost approached its pre-pandemic levels, whereas more than half of residents who had lost their jobs did not manage to find new ones). Such developments are likely to be influenced by the fact that only a short-term crisis was expected at the beginning of the pandemic. This, in hand with state measures supporting the labour market, contributed to employment. However,

prolonged economic uncertainty deterred companies from hiring new employees even when economic activity started showing signs of recovery. The present situation has led firms to seek solutions for higher productivity, whereas recruitment has been postponed until sometime in the future.

The pandemic situation and its management will continue to have a significant effect on economic development throughout the projection horizon.

In the nearest future, economic activity is projected to remain restrained, as there are still relatively severe restrictions on economic activities and mobility imposed both in Lithuania and abroad. The number of new COVID-19 cases varies quite significantly across different countries and still has no clear direction, whereas new medical solutions (vaccines) in most countries are only in the early stages of their rollouts. The baseline scenario of macroeconomic development assumes that the economic activity restrictions currently applied in Lithuania will be loosened in 2021, although some of them will still remain in place over the next few quarters. Moreover, the vaccination process is expected to gain considerable momentum this year. Should this scenario materialise, economic activity would be rather sluggish in the first quarter and should start to recover in the second quarter of 2021. Less restrictions imposed on both companies and households should lead to an evident rise in private consumption which could be further encouraged by pent-up demand.

A consistently improving pandemic situation would give a boost to confidence of both the corporate and household sectors, which would result in new investments and recruitment. State measures that supplemented household income and provided aid to enterprises in 2020 are projected to be less extensive in 2021, yet last year's decisions should continue to support economic activity, since such measures usually have a lasting effect. Lithuania's major foreign trade partners are likely to experience similar economic development. It is assumed that in 2021 their pandemic and economic situations will also gradually change for the better, which in turn will have a positive effect on Lithuanian exports. Another factor to contribute to better prospects in the tradable sector is the EU-UK agreement on trade. After a 0.8% drop in 2020, Lithuania's real GDP is expected to return to a positive growth path in 2021, increasing by 2.9% this year and 5.1% the following year.

Lithuania's and global economic developments start being reflected in inflation dynamics. Having previously plummeted, oil prices shoot up quite significantly in the last few months, driven by both improved expectations of global development in the near future and reduced oil output. It is currently assumed that after a 35% drop recorded last year, oil prices in euro will increase at almost the same rate in 2021. This will fuel headline inflation and be the key factor behind its growth this year. In contrast to crude oil prices, prices that are most closely linked to domestic economic developments usually tend to change to a lesser extent. When economic activity went down in 2020, underlying inflation that includes prices of services and manufactured goods declined, but only gradually. Besides other factors, underlying inflation was supported by a rather significant wage growth that outpaced productivity. Substantial wage growth is projected to continue in the near future, although not at the same rapid pace as in the recent years. Therefore, growth in prices that are most closely linked to domestic economic developments is expected to be more moderate. Lithuania's inflation rate, which stood at 1.1% in 2020, is projected to amount to 1.6% in 2021 and 1.9% in 2022.

Table 1. Outlook for Lithuania's economy – baseline scenario

Indicators	March 2021 projection ^a			December 2020 projection		
	2020 ^b	2021 ^b	2022 ^b	2020 ^b	2021 ^b	2022 ^b
Price and cost developments (annual percentage change)						
Average annual HICP inflation	1.1	1.6	1.9	1.1	1.1	–
GDP deflator ^c	0.7	1.8	2.0	0.7	1.3	–
Wages	10.2	6.3	5.5	7.0	2.2	–
Import deflator ^c	-5.2	3.4	1.7	-5.5	1.0	–
Export deflator ^c	-3.5	2.8	1.5	-4.1	0.6	–
Economic activity (constant prices; annual percentage change)						

Indicators	March 2021 projection ^a			December 2020 projection		
	2020 ^b	2021 ^b	2022 ^b	2020 ^b	2021 ^b	2022 ^b
GDP ^c	-0.8	2.9	5.1	-2.0	1.9	–
Private consumption expenditure ^c	-1.5	4.8	6.7	-3.5	2.5	–
General government consumption expenditure ^c	0.1	0.0	0.0	0.3	0.2	–
Gross fixed capital formation ^c	0.1	5.0	5.0	-7.7	2.1	–
Exports of goods and services ^c	-1.3	5.9	5.9	-3.8	4.2	–
Imports of goods and services ^c	-6.4	9.8	6.7	-8.5	4.8	–
Labour market						
Unemployment rate (annual average as a percentage of labour force)	8.5	8.4	7.0	8.7	9.3	–
Employment (annual percentage change)	-1.5	0.5	1.5	-1.6	-0.9	–
External sector (percentage of GDP)						
Balance of goods and services	9.5	7.0	6.4	9.3	8.8	–
Current account balance	7.9	5.3	4.0	8.0	7.3	–
Current and capital account balance	10.0	8.1	6.6	10.3	9.4	–

^a The projections of macroeconomic indicators are based on international environment assumptions based on information published by 16 February 2021 as well as other data and information made available by 1 March 2021.

^b Projection.

^c Adjusted for seasonal and workday effects.

The pandemic situation is difficult to predict, as it may shift in a different direction than anticipated under the baseline scenario of macroeconomic development, thus alternative scenarios have also been set out. The mild scenario assumes that the number of COVID-19 cases diminishes more rapidly and effective medical solutions (new vaccines) are implemented faster than under the baseline scenario. This scenario may materialise if, for example, potential COVID-19 mutations turn out to be less threatening and the vaccination process faces less challenges. It would allow for a quicker easing of the restrictions imposed on economic activities and mobility, which would be essentially removed in 2021, thus boosting the economy in the nearest year. Most of economic activities would see improvement, especially those more oriented towards services, as they were most negatively affected during the downturn. The labour market would also recover faster and unemployment could reach its pre-pandemic levels as soon as in 2022. Under the mild scenario, Lithuania's real GDP is projected to increase by 3.8% in 2021 and 6.0% in 2022. The severe scenario assumes that the containment of the pandemic is limited and new COVID-19 clusters continue to emerge. It also foresees that the vaccination process, as an important means in fighting the crisis, takes a relatively long time, i.e. about two years. Such a prolonged vaccination process may be determined, for instance, by new COVID-19 strains that vaccines would need to be adapted to. The severe scenario would mean that the restrictions imposed on economic activities and mobility, which weigh down on the economy, would stay in place longer and their mitigation process would require more time. This would affect many macroeconomic indicators – domestic demand would take a lot longer to recover, household income would increase less, while unemployment would also remain heightened for a longer period of time. It is estimated that under the severe scenario, economic activity would not actually decrease, yet its growth rate would be quite meagre, with Lithuania's real GDP increasing by 1.1% in 2021 and 3.5% in 2022.

Table 2. Outlook for Lithuania's economy – alternative scenarios

Indicators	March 2021 mild scenario ^a			March 2021 severe scenario ^a		
	2020 ^b	2021 ^b	2022 ^b	2020 ^b	2021 ^b	2022 ^b
Price and cost developments (annual percentage change)						
Average annual HICP inflation	1.1	1.7	2.1	1.1	1.6	1.7
Wages	10.2	8.0	8.0	10.2	5.7	4.0
Economic activity and the labour market						
GDP (constant prices; annual percentage change) ^c	-0.8	3.8	6.0	-0.8	1.1	3.5
Unemployment rate (annual average as a percentage of labour force)	8.5	8.0	6.4	8.5	9.0	8.0
Employment (annual percentage change)	-1.5	1.0	1.8	-1.5	0.0	1.1

^a The alternative scenarios are based on international environment assumptions based on information published by 16 February 2021 as well as other data and information made available by 1 March 2021.

^b Projection.

^c Adjusted for seasonal and workday effects.

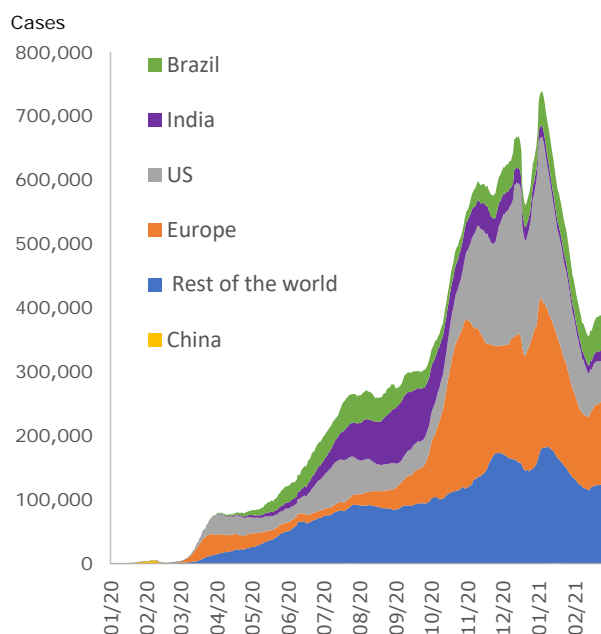
I. INTERNATIONAL ENVIRONMENT

Despite the rollout of COVID-19 vaccination, the epidemiological situation remains the key factor constraining global growth. Although the number of new COVID-19 cases is declining, containment of its spread still remains a global challenge.

During the first month of 2021, approximately 600,000 new cases were recorded daily (see Chart 1). Controlling the pandemic is more complicated by new and more transmittable strains of the virus. It is now obvious that the global economy will not be able to return to sustainable growth until after the pandemic is over. Therefore, many governments are now speeding up the processes related to purchasing vaccines and their authorisation as being safe to use.

The global number of reported COVID-19 cases started declining in 2021.

Chart 1. New COVID-19 cases globally



Sources: Bank of Lithuania and Macrobond.

The IMF expects global economic growth to stand at 5.5% in 2021, whereas advanced economies are projected to reach a 4.3% rate and still not return to the levels recorded in 2019. One of the main factors

contributing to recovery after the shock experienced in 2020 will be vaccine distribution and effectiveness. The IMF expects international trade to increase by 8% in 2021 and 6% in 2022, while trade in goods should recover faster than trade in services. Recovery in global trade volumes was already witnessed at the end of last year – after a sharp fall in spring, the annual change in global trade volumes and RWI/ISL Container Throughput Index¹ in December stood at 1.3% and 5.7% respectively. As for global price growth, the IMF projects inflation rates in advanced economies not to exceed 1.5% in the nearest two years.

The fallout from the pandemic on

different EU Member States has been uneven. In 2020, the sharpest GDP fall was recorded in southern countries where tourism and services have more influence on the economy. Spain's

economy was hit by the largest downturn reaching 11%. Economies of Italy and France followed closely behind with more than a 8% drop each, while Germany's economic contraction amounted to 5%. The annual GDP change of the whole euro area stood at -6.8% (see Chart 2). According to international institutions, these countries are expected to reach their pre-pandemic levels only in 2022. The lockdown measures enforced in autumn and winter have so far had a milder effect on the economy compared to the first one announced last spring. Despite the fact that the virus in autumn was spreading much faster, less severe restrictions to manufacturing and business adaptability thereto resulted in less damage to European economies in the fourth quarter of 2020. The euro area's PMI data reflects the manufacturing sector's developments: in February, the index stood at 57.9. This was mostly determined by strong foreign demand and the growing construction sectors in some countries. On the other hand, the services sector has been suffering substantial losses due to the deteriorated epidemiological situation and severe lockdown restrictions. Having contracted for six months in a row, the euro area services sector's PMI in February was 44.7. Evidently, the euro area countries with larger services sectors were more affected by

¹ A monthly index for global container throughput published by the Institute of Shipping Economics and Logistics (ISL) and Leibniz-Institut für Wirtschaftsforschung (RWI).

the pandemic than those whose economies are more oriented towards manufacturing. The recovery prospects for the EU countries are currently dimmed by the slow vaccination process and the supply of vaccines which has turned out to be not as smooth as expected. According to the IMF's January projections, Spain's economy in 2021 should grow by approximately 6%, Italy's – 3%, France's – 5.5% and Germany's – 3.5%. For the euro area as a whole, the growth rate is expected to stand at 4.2% (see Chart 2).

In December 2020, the EU and the UK signed a trade agreement, thus avoiding a no-deal Brexit. However, there are still some unresolved issues regarding regulation of the financial services sector, which means that negotiations will continue in 2021. The UK's economy was one of the hardest hit by the COVID-19 crisis. In 2020, the country's GDP change amounted to -9.9% (see Chart 2). Its economic recovery has been hindered by the spread of a new COVID-19 strain. The impact of more severe lockdown measures imposed after Christmas due to an increase in new cases is evident from the UK's PMI data. Having contracted for four consecutive months, its services sector's PMI in January was 49.7. Meanwhile, the manufacturing PMI has been showing the sector's development since June and stood at 55.1 in February. Although the UK signed a trade agreement with the EU, some of the issues regarding the regulation of financial services remain unresolved and are planned to be settled in the first half of 2021. With the relocation of trading in financial instruments to the EU exchanges, the UK's financial services sector is estimated to have lost 5,000–7,000 jobs² and around €6 billion at the beginning of 2021³. Moreover, starting from 2021, vehicles transporting goods between the UK and the EU have to clear customs. This creates bureaucratic obstacles for exporters and slows down international trade. Therefore, it is likely that, despite the agreement which is more oriented towards trade in goods, the flow of goods between the UK and EU will be reduced in 2021.

Despite a 3.5% contraction in 2020, the US economy withstood the shock of the pandemic better than expected. Due to anticipated generous fiscal support and so-far successful wide-scale vaccination, the IMF projects the country's economic growth to reach 5.1% in 2021. Despite record numbers of new COVID-19 cases, the US economy continued to expand in the fourth quarter of 2020 – its GDP increased by 1% compared to the third quarter of the year. Manufacturing was also able to bounce back faster due to less stringent restrictions as opposed to the services sector, similarly to measures taken in Europe. It should be noted that generous direct payments to households and milder lockdown measures helped the US economy to be less severely affected than that of the euro area. A drop in the US annual industrial output observed in January was the smallest since the beginning of the pandemic, whereas annual growth of retail trade volumes exceeded 5% each month since June and surpassed 10% in January. Expectations over the future of the US economy were heightened by a fiscal stimulus package with a total envelope of USD 900 billion (4.6% of GDP) passed at the end of December and another one worth USD 1.9 trillion (9.7% of GDP) introduced in late February. The latter includes USD 1,400 stimulus checks to the US residents, USD 350 billion assistance to state and local governments as well as extended additional aid to the unemployed.

In 2020, China's economy expanded by 2.3%. The main challenges to its future growth have been posed by the vaccination process, consumer confidence and the continuing rapid spread of the virus in developed countries, which still negatively affects China's export demand. China's annual economic growth was positive despite a record drop in the first quarter of 2020. The main reasons behind the quick recovery were effective management of the pandemic, fiscal stimulus amounting to 6% of GDP and growth in exports of medical supplies and pharmaceuticals. China's consumer confidence remains lower than before the pandemic and, despite the fact that the changes in the country's retail trade volumes have been positive in recent months, weak domestic consumption is still hampering economic growth. It should be noted that, due to a poor social security system, saving rates in China were higher than in most other largest economies even before the pandemic. Low consumer confidence is

² More information can be found [here](#).

³ More information can be found [here](#).

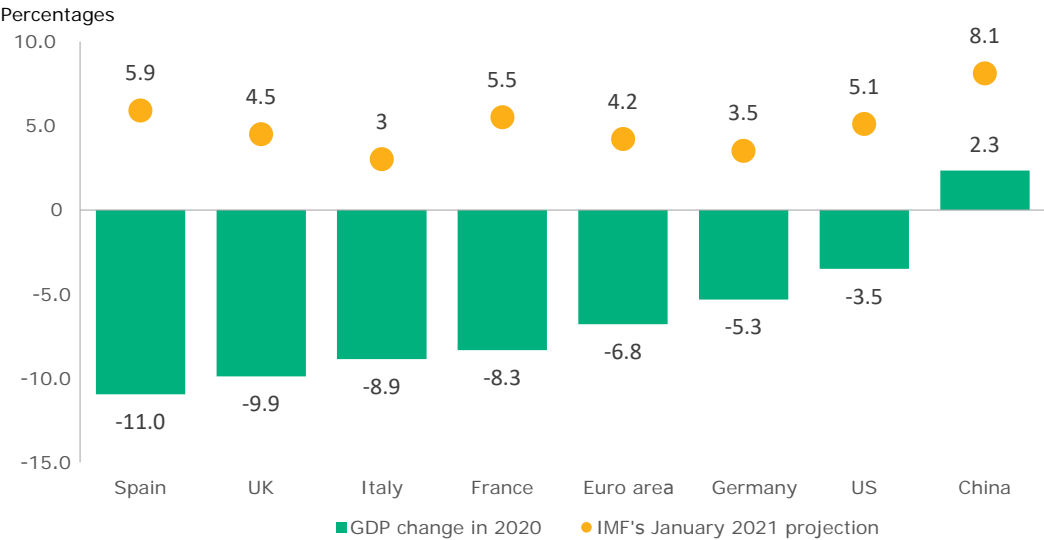
also evident from China's price dynamics – the country's core inflation has been close to 0 since July. However, China's business sentiment gives rise to expectations of CPI growth because purchasing managers' surveys point to an increase in costs incurred by manufacturers, which should soon be passed down to consumers. In January, China's PMI showed a weakening growth in both services and manufacturing, and stood at 52 and 51.5 respectively.

Lithuania's EU neighbours' GDP decreased less in 2020 than the euro area average. Labour market, export and industry indicators show that Estonia, Latvia and Poland have, up until now, withstood the COVID-19 crisis better than the euro area's largest economies. These countries are currently better at it because their export partners were relatively less affected by the pandemic and they managed to more efficiently contain the first wave of the virus in spring. It should be noted that Poland's industrial output and export data looks especially strong. The annual change of the country's export volumes of goods was positive for a seventh month in a row and amounted to 12.2% in December, whereas the annual change of industrial output stood at 5.7% in January. The annual changes of Estonia's and Latvia's exports of goods were also on an upward trend. The unemployment rate statistics of the neighbouring countries were close to the EU average (7.5%) in December, standing at 8.3% in Estonia, 7.7% in Latvia and 6.2% in Poland.

The key risks to the global economic outlook stem from the potential immunity the mutated COVID-19 may have to the new vaccines, slow vaccination rollout, potential inflation growth and a higher level of non-performing loans that would increase the number of corporate bankruptcies. When the pandemic is contained and lockdown restrictions are softened, pent-up demand is likely to stimulate price growth of goods and services. The economies that applied wide-scale financial stimulus may see more evident growth in prices. It should be noted that after more than a decade of low interest rates, the NFC sector of developed countries has become heavily indebted (e.g. in the second quarter of 2020, the NFC debt in the euro area amounted to 282% of GDP, while in the US – to 286%). It means that the central banks of these countries have limited power in curbing inflation by increasing interest rates because more expensive borrowing and debt refinancing would likely cause a wave of bankruptcies. On the other hand, it might also start if fiscal stimulus is cut too early, thus the governments of countries affected by COVID 19 are unlikely to significantly reduce the stimulus programmes in the nearest half-year. It should be noted that according to the IMF, prices of shares in global financial markets are overrated, leading to a risk of more severe price corrections. Another risk to the stability of the global financial system is the sustainability of sovereign debts (especially those borrowed in foreign currencies). However, the main threat to the global economy is still posed by COVID-19. The success of the pandemic's containment now essentially depends on whether new strains immune to vaccines keep emerging and how fast a critical number of people get vaccinated worldwide in order to achieve herd immunity.

In 2020, most of the world’s largest economies entered the steepest recession since World War II, yet recovery should start already in 2021.

Chart 2. Economic developments in 2020 and the IMF projection for 2021



Sources: Macrobond and IMF.

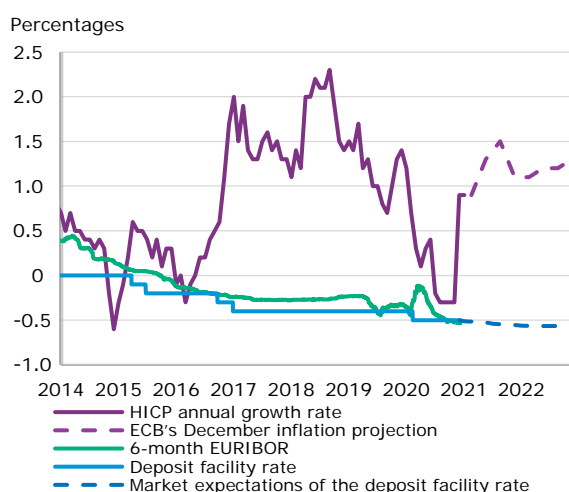
II. MONETARY POLICY OF THE EUROSISTEM

Over the past six months, the Eurosystem has further been strengthening its accommodative monetary policy stance in order to mitigate the negative implications of the second wave of COVID-19 on the economy and inflation rates. The high level of the accommodative monetary policy is ensured by the exceptionally low ECB key interest rates as well as new and already existing long-term lending operations and asset purchase programmes. Another important factor is that in September 2020, the ECB Governing Council resumed its monetary policy strategy review.

In December 2020, the ECB Governing Council took several important monetary policy decisions. First, the envelope of the PEPP was increased by €500 billion to a total of €1,850 billion (15% of the euro area's GDP in 2020). The term for net purchases under this programme was extended for nine additional months, i.e. at least until March 2022, with a commitment to ensure flexibility of purchases over time, across asset classes and among jurisdictions. Second, the Governing Council decided to extend the period over which banks would be offered TLTROs under considerably more favourable terms by 12 months (until June 2022). Moreover, three additional operations will also be conducted between June and December 2021. All of these decisions taken over the past six months have further strengthened the Eurosystem's accommodative monetary policy stance with the aim of reaching inflation levels that are below, but close to, 2%. Although inflation rates have significantly increased in January and February 2021 (see Chart 3), such trends were determined by temporary factors rather than recovering aggregate demand. In January, after a temporary reduction, Germany's VAT rate was increased to 19%, while global transportation costs of goods rose as well. Therefore, market participants still expect short-term interest rates set by the ECB to remain at their current level for at least a couple more years.

The ECB interest rates remain at very low levels.

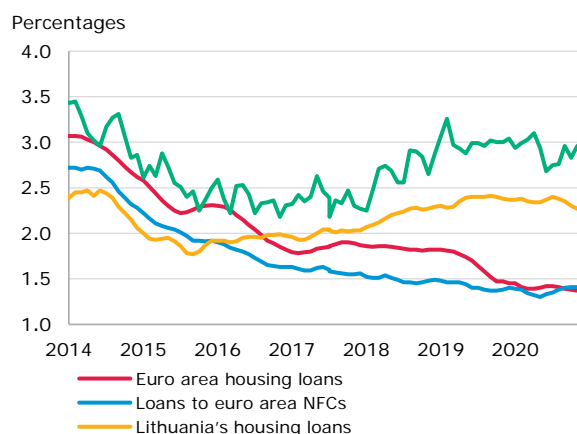
Chart 3. Actual ECB interest rates, euro area inflation and market expectations



Sources: ECB and Refinitiv.
Note: Data as of 2 March.

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. All revisions of current loan conditions are included.

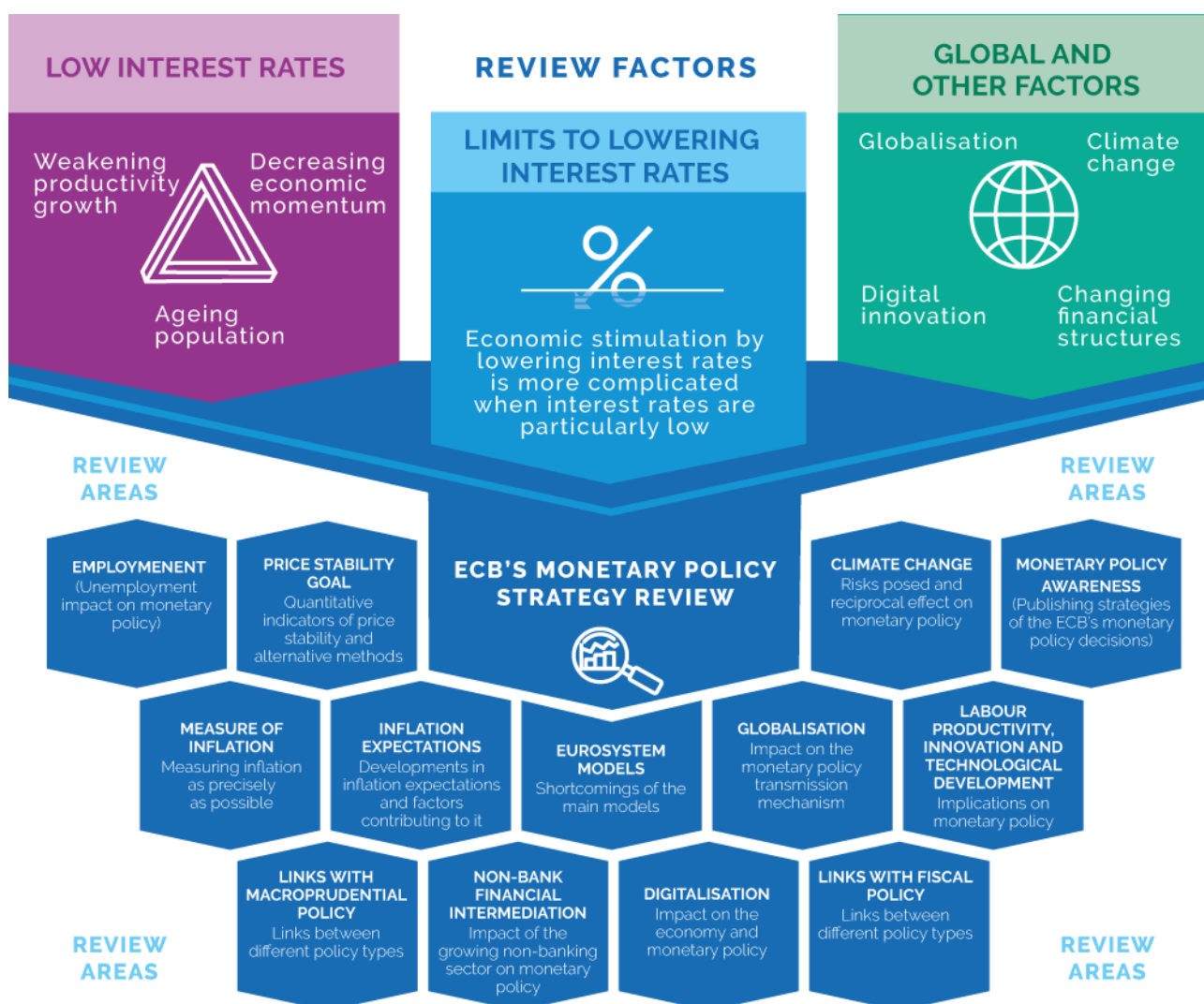
The Eurosystem's accommodative monetary policy measures contribute to exceptionally low interest rates. The euro area's interest rates on new housing loans and loans to NFCs had been on a steady decrease since mid-2014, yet then stabilised during the COVID-19 pandemic and still remain at historic lows (see Chart 4). In Lithuania, average interest rates on loans to NFCs have slightly increased but, on average, are still lower compared to the pre-pandemic levels. Despite that, average interest rates in the country remain higher than the euro area average – such trends are determined by high concentration in the banking sector. It should be noted that if the Eurosystem had not implemented its

accommodative monetary policy, loan interest rates in Lithuania would most probably have been even higher.

In September 2020, the ECB Governing Council restarted its monetary policy strategy review.

The Eurosystem's monetary policy strategy was adopted in 1998 and clarified in 2003. However, since then, the euro area and global economies have been undergoing profound structural changes. Weakening productivity growth and declining potential economic momentum, an ageing population as well as the legacy of the financial crisis have driven interest rates down. Such trends in turn increase the risk that the ECB will have less possibilities to implement effective accommodative monetary policy when needed. Due to this, the Eurosystem's monetary policy strategy review started in January 2020 but was temporarily halted due to the crisis caused by the first wave of COVID-19. Restarted in September 2020, the process is expected to be finished in the second half of 2021.

The Eurosystem's strategy review encompasses multiple relevant areas. The ECB Governing Council's priority focus is on the quantitative formulation of price stability (the current formulation is to maintain inflation rates below, but close to, 2% over the medium term) as well as on assessing the effectiveness and potential side effects of the current monetary policy toolkit. In addition, the review also analyses how financial stability, employment, digitalisation and climate change influence the implementation of the ECB's monetary policy. Finally, the Governing Council will also review its communication practices.



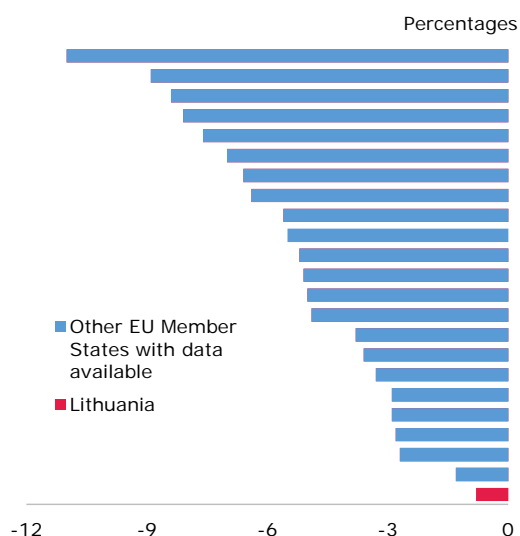
During the strategy review, opinions of the euro area residents, including Lithuania, are also taken into consideration. Before making decisions regarding the monetary policy strategy, the ECB Governing Council strives to hear and understand what concerns the euro area residents the most and how the monetary policy could contribute to their prosperity. Therefore, the ECB and national central banks organise events to hear out the opinions of the general public and civil society organisations. In Lithuania, the [ECB Listens event](#) was held remotely on 23 February.

III. REAL SECTOR⁴

Economic activity momentum gained during the summer and autumn months was almost sufficient to offset the fallout from the second lockdown imposed in early November. Lithuania's GDP fell by a quarterly 6.2% in the second quarter of 2020, before advancing by 6.1% in the third quarter and shrinking by only 0.2% in the final quarter of the year. Against this background, in 2020 Lithuania's GDP decreased by only 0.8% year on year, which was one of the mildest declines across the EU. Such rapid recovery was largely driven by the general government support, a quite small scale of the first wave of COVID-19, successful performance of the country's exporters and relatively low economic reliance on the most restricted and affected economic activities, such as accommodation and catering, arts, entertainment and recreation. Particularly strong economic performance in the second half of 2020 will lead to much more positive GDP developments than previously expected. GDP is now projected to increase by an annual 2.9% this year and 5.1% in 2022. The outlook, however, remains clouded by high uncertainty over the further course of the COVID-19 pandemic and the circumstances related thereto, e.g. vaccination progress, potential emergence of new outbreaks, introduction of new containment measures, new virus strains and their resistance to vaccines. This may result in either better or worse economic development than is expected under the mentioned scenario.

The rate of Lithuania's GDP decline in 2020 was among the smallest across the EU.

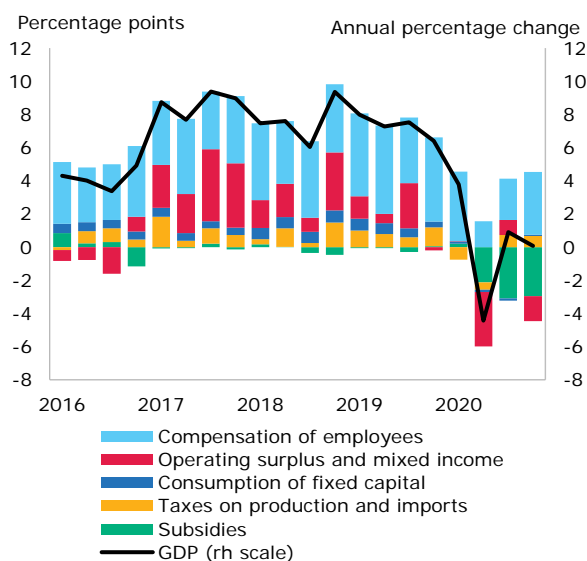
Chart 5. GDP changes by EU countries⁵ in 2020
(not adjusted for seasonal and workday effects)



Sources: Eurostat and Bank of Lithuania calculations.

Operating surplus and mixed income showed a rather modest decline, whereas compensation of employees recorded an increase.

Chart 6. Contributions to nominal GDP measured by the income approach
(not adjusted for seasonal and workday effects)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

In 2020, private companies and households managed to avoid a substantial deterioration in their financial wellbeing, which was mainly determined by economic stimulus and recovery measures implemented by public authorities. Operating surplus generated by the country's economy and mixed income, measured at current prices and not adjusted for seasonal effects, decreased by only 3.1% year

⁴ All statistics provided in this chapter are adjusted for seasonal and workday effects, unless stated otherwise.

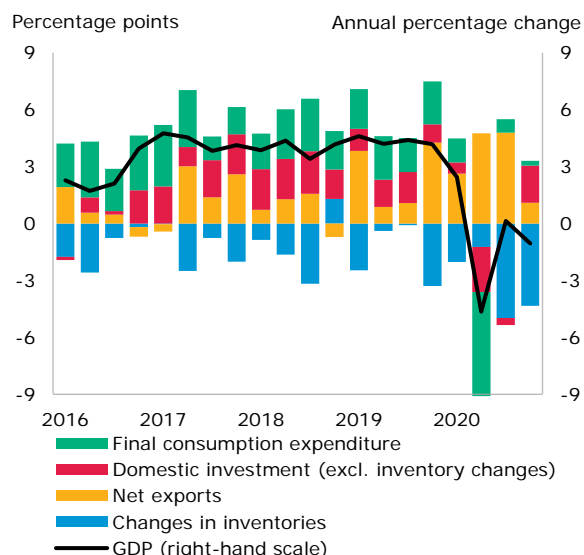
⁵ The following EU countries have been included: Austria, Belgium, the Czech Republic, Denmark, Estonia, Spain, Italy, Cyprus, Croatia, Latvia, Poland, Luxembourg, Malta, the Netherlands, Portugal, France, Slovakia, Slovenia, Finland, Sweden, Hungary and Germany.

on year. Following a particularly steep fall in the second quarter of 2020, in the second half of the year operating surplus and mixed income reached a level (-0.9%) only slightly below the last year's figure. Household disposable income, as estimated by the Bank of Lithuania, increased by 6.6% in 2020. Both operating surplus and mixed income as well as household disposable income benefited from economic recovery measures. For instance, the total amount of subsidies paid out by the general government in the first three quarters of 2020 increased by €660 million (1.8% of GDP during the period under review) on a year-on-year basis, whereas the amount of net social transfers surged by €777 million (2.2% of GDP). Moreover, the private sector benefited from a nearly one-third rise in general government investment and a 7.1% growth in consumption over the first three quarters of 2020 (for more details, see Chapter VIII "General Government Finance").

Robust corporate performance was well underpinned by successful expansion in foreign markets, streamlined inventories and cuts in investment. In 2020, Lithuanian exporters were able to increase their market shares in key trade partners almost twice as fast as they did in 2015–2019. Such trends were mainly determined by Lithuania's specialisation in the production of goods and provision of services that were less affected by the COVID-19 pandemic or even saw their demand increase during this period. The manufacturing activities that demonstrated relatively stronger performance compared to the majority of other industries both in Lithuania and across the EU included food, chemical, wood and furniture industries. In Lithuania, these industries account for more than half of all value added created by the entire manufacturing sector. The transport sector, which accounts for nearly two-thirds of service exports, also managed to maintain a positive growth rate in freight transportation. A significant part of sold goods and provided services came from existing inventories, which led to an improvement in corporate performance in the short term. A similar effect on the performance of private companies was produced by lower investment. It should be noted, however, that the scale of investment in the country last year remained broadly unchanged from its 2019 level due to solid public investment. Successful expansion in foreign markets, streamlined inventories and stagnant investment also contributed to the particularly favourable dynamics of net exports that produced the largest positive effect on GDP dynamics in 2020. However, these developments in net exports should be short-lived, given that businesses will have to purchase raw materials or other commodities and invest in the development or resumption of operations in a bid to maintain or increase their sales volumes, which will in turn promote growth in imports of goods and services.

Successful expansion in foreign markets, streamlined inventories and cuts in investment contributed to the particularly favourable dynamics of net exports.

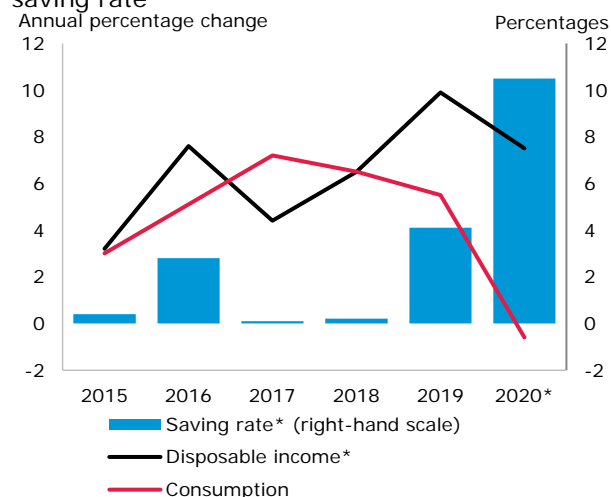
Chart 7. Contributions to real GDP
(not adjusted for seasonal and workday effects)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Although household disposable income increased at a rapid pace, consumption was subdued.

Chart 8. Real household disposable income, consumption expenditure and saving rate



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

* Disposable income and the saving rate for 2020 are estimated by the Bank of Lithuania.

Even though household disposable income increased at a rapid pace, consumption was subdued.

Consumption shrank by 1.5% in 2020, while real disposable household income, as estimated by the Bank of Lithuania, increased by 5.7%. A significant mismatch between growth in household income and consumption expenditure was observed not just in the second quarter, which saw the introduction of the lockdown, but also throughout the entire second half of the year. According to Bank of Lithuania calculations, the household saving rate in this period hit the highest level since the beginning of the data series. However, these trends should not be attributed solely to lower propensity to consumption and precautionary savings by Lithuania's households, as they were also substantially driven by constraints on supply of certain goods and services. For instance, in 2020, there was a lengthy period when it was impossible to travel abroad for vacation, while various accommodation and catering, artistic, entertainment and recreational activities were subject to restrictions and the prevalence of remote work led to a decline in demand for clothing and footwear. All this taken together forced the country's households to modify their usual consumption basket. Consumer sentiment surveys also show that the country's households are not overly pessimistic. In February, for instance, the consumer confidence index stayed above its historical average, as did the indicator reflecting household intentions to make major purchases over the next 12 months, whereas the assessment of the financial health of households was the highest since the beginning of the data series. Such trends in household income, expenditure and sentiment give rise to expectations for a rather rapid consumption recovery following the lifting of restrictions imposed on movement and economic activities in response to the COVID-19 pandemic. Taking all this into account, household consumption is projected to increase by 4.8% in 2021 and by 6.7% in 2022.

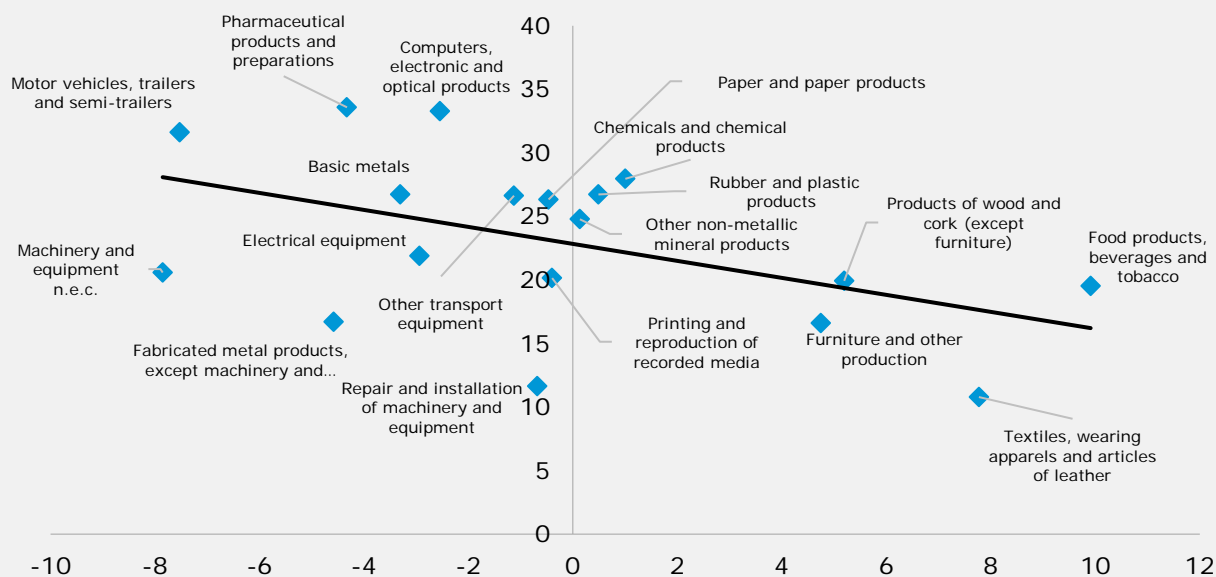
BOX 1. MANUFACTURING STRUCTURE'S IMPACT ON INVESTMENT⁶

In 2003–2017, the investment-to-value added ratio in Lithuania was lower than the EU average, although quite close to its level. Despite the fact that investment intensity of most economic activities in Lithuania is similar to the corresponding EU indicators, it was substantially lower in the country's several major economic activities. One of them is manufacturing. Investment expenditures of this activity in the EU Member States amounted, on average, to 22.7% of value added, while in Lithuania this indicator stood at only 15.7%. Such a lag raises some questions, as from the perspective of economic theory, developing countries need to invest more in order to catch up with more advanced economies. Very often it was related to the factors from the supply side, e.g. unfavourable credit conditions or lack of motivation to invest on the back of low labour costs. However, a part of the answer to this question may lie in Lithuania's manufacturing structure.

Lithuania's manufacturing sector is more oriented towards manufacturing activities with lower investment intensity.

Chart A. Relation between EU Member States'⁷ investment intensity of manufacturing activities and differences in the manufacturing structure between Lithuania and other EU Member States (at current prices)

Y – the average EU investment-to-value added ratio (percentages)



X – differences in the manufacturing structure between Lithuania and other EU countries (percentage points)

Sources: Eurostat and Bank of Lithuania calculations.

One of the factors that could partly explain a lower investment intensity level in manufacturing, compared to the EU, is Lithuania's specialisation in the manufacturing of products that are less capital-intensive and receptive to investment. Despite the fact that the investment data of the Lithuanian manufacturing activities is not publicly available, when evaluating indicators of the EU Member States⁷, differences in investment intensity can be observed across manufacturing activities. In general, investment intensity in engineering, chemical and pharmaceutical industries is higher than in textile, food, wood and furniture industries. This is important, as in fact the latter industries create a larger share of value added in the Lithuanian manufacturing sector than the EU average (see Chart A). In Lithuania, the value added generated by the manufacturing of food, tobacco and

⁶ For more information on the impact of Lithuania's economic structure on investment performance, see the article entitled "[A Picture of Investment in Lithuania](#)", Bank of Lithuania, *Occasional Paper Series*, 2021, No 35.

⁷ Due to limited data, indicator of the EU Member States in the box is comprised by the average of Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Greece, the United Kingdom, Latvia, Portugal, Romania, Slovakia, Finland, Sweden and Hungary.

beverages is higher by almost 10 percentage points compared to the EU average, the manufacturing of clothes and leather – by roughly 8 percentage points, while that of wood and cork products as well as furniture – by nearly 5 percentage points. The fact that the structure of the Lithuanian manufacturing activities is less investment-intensive is demonstrated by the counterfactual analysis where the structure of manufacturing activities in the EU Member States was replaced with the Lithuanian structure without changing the investment intensity level of separate manufacturing activities. The indicator resulting from this calculation was by 1.7 percentage points lower than the factual investment intensity of manufacturing in the EU Member States. This difference corresponds to almost a quarter of the lag between Lithuania's and EU Member States' manufacturing sectors' investment intensity levels and, when assessing the overall investment intensity of the country, to almost a fifth.

The manufacturing structure is also one of the factors that could partly explain the manufacturing sector's weak investment in R&D (see Chart B). The manufacturing sector of the EU Member States allocated 4.4% of its value added to investment in R&D, while in Lithuania this indicator amounted to only 0.5%. Despite the fact that, as in case of the total investment, the data on investment in R&D by the Lithuanian manufacturing activities is not publicly available, when evaluating the indicators of the EU Member States, differences in investment in R&D can be observed across manufacturing activities. At the EU level, the highest investment level in R&D is observed in the pharmaceutical and engineering industries, the medium level – in the chemical industries, while the lowest one – in other fields, such as the textile, food, wood and furniture industries. Differences between the levels of investment in R&D are also substantial: during the reference period, the ratio between investment in R&D and value added in the pharmaceutical and engineering industries ranged from 5.9% to 16.3%, whereas in the textile, food, wood and furniture industries it rarely surpassed a 2% margin. Chart B suggests that during the period under review Lithuania specialised in the manufacturing activities that are less investment intensive in terms of R&D, as during the reference period none of the Lithuanian manufacturing activities with the highest investment level in R&D created a share of value added larger than the EU average. The fact that Lithuania's manufacturing structure is less investment-intensive in regards to R&D is demonstrated by the counterfactual analysis conducted in the same way as in case of total investment. The indicator resulting from this calculation was by 1.6 percentage points lower than the factual manufacturing activities' investment intensity in R&D within the EU Member States. This difference corresponds to around 40% of the difference in the level of the manufacturing sector's investment in R&D between Lithuania and the average of the EU Member States.

The analysis presented in this box demonstrates that the Lithuanian manufacturing sector is lagging behind the EU in terms of the investment level, partially due to the structure of the country's manufacturing sector. This is particularly relevant in the context of investment in R&D, as it partly shows that the manufacturing sector is still lacking industries oriented towards this type of investment. Taking this into account, the institutions involved in the shaping of innovation policies would benefit from paying a closer attention to and allocating more funds not to the direct promotion of investment in R&D but rather to the creation of the needed physical and human capital⁸, which requires quality education, proper infrastructure for the implementation of R&D, a functioning national innovation framework as well as the private sector's ability and inclination towards innovation⁹.

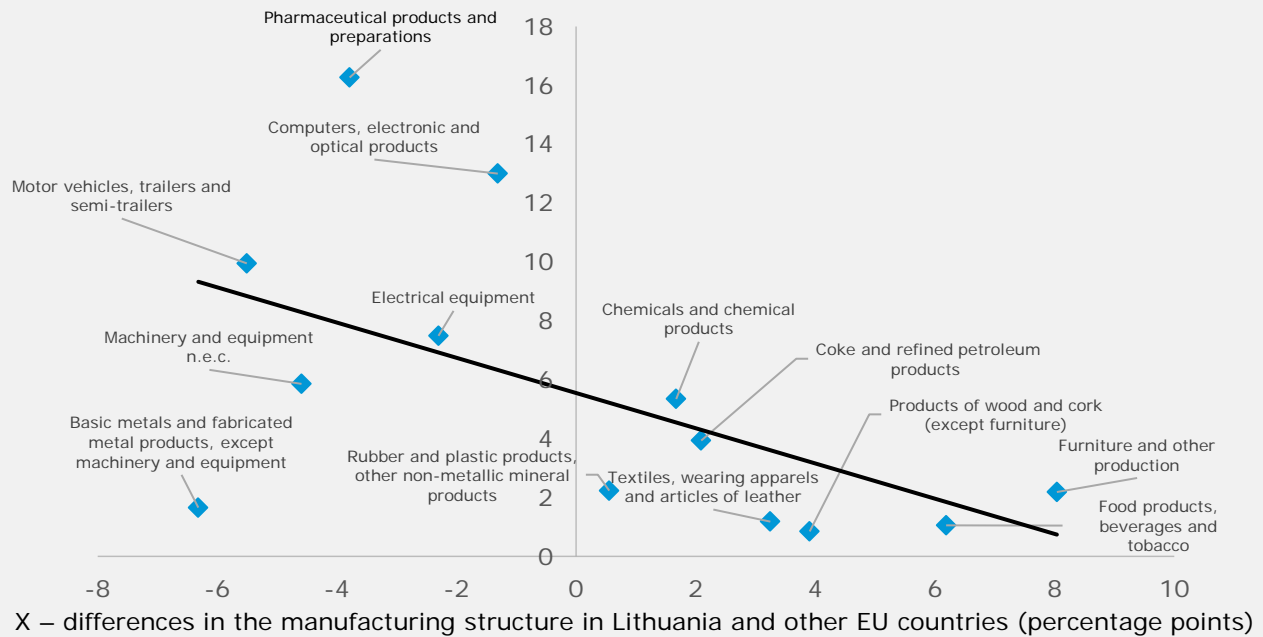
⁸ Cirera, X. and Maloney, W. (2017), "[The Innovation Paradox: Developing-Country Capabilities and the Unrealized Promise of Technological Catch-Up](#)", World Bank.

⁹ Goñi, E. and Maloney, W. F. (2014), "[Why Don't Poor Countries Do R&D?](#)", *Policy Research Working Paper*, No WPS 6811, World Bank.

Industries that do not tend to invest in R&D create a higher value added in Lithuania's manufacturing sector

Chart B. Relation between the level of EU Member States' manufacturing sectors' investment in R&D and differences in manufacturing structures in Lithuania and the EU Member States (at current prices)

Y – the average EU investment in R&D and value added ratio (percentages)



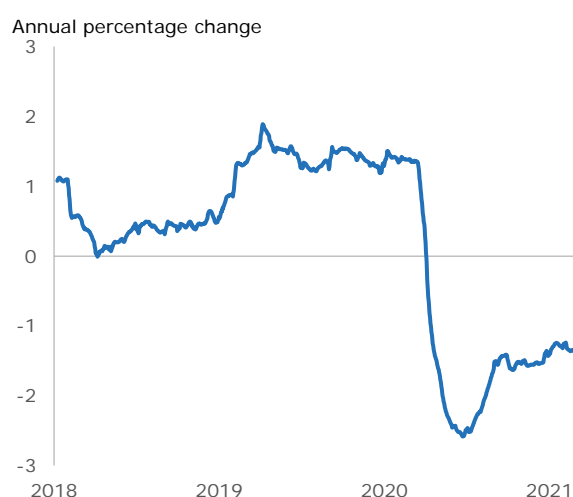
Sources: Eurostat and Bank of Lithuania calculations.

IV. LABOUR MARKET

The fallout from the second wave of COVID-19 on unemployment rates was much milder. This was contrary to the first wave of the pandemic, which saw a very rapid growth in job losses. For instance, in mid-June 2020, the total number of jobs fell by nearly 3% compared to the same period in 2019. Later, however, the situation improved and, starting from early September, the annual decline in employment stabilised at approximately 1.5%. It did not gain momentum despite the introduction of new containment measures and even the severe restrictions on many economic activities that were imposed in mid-December. However, the annual unemployment growth did accelerate in several economic activities, such as accommodation and catering, arts, entertainment and recreation, as they were almost fully restricted. Nonetheless, the second wave of the pandemic had a substantial effect only on a rather minor part of the economy, as opposed to the first one which led to significant job losses nearly across the board. The lower impact was determined by several factors. The first wave of COVID-19 showed that countries were capable of containing this pandemic and, as a result, the second wave triggered a much lower uncertainty over the future. Moreover, businesses learnt to adapt to the deterioration brought about by the virus and the ensuing restrictions introduced in spring as well as were able to put these lessons to use in autumn. Finally, the corporate sector was aware that, if necessary, it would be granted state support and therefore felt more confident in the decisions to keep jobs.

The second wave of the pandemic had almost no effect on employment rates.

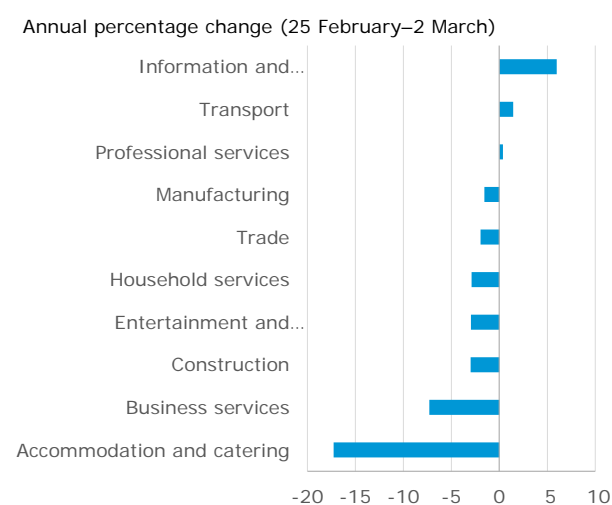
Chart 9. Number of workers



Sources: Sodra and Bank of Lithuania calculations.

The pandemic affected accommodation and catering much more than other activities.

Chart 10. Number of workers broken down by economic activity



Sources: Sodra and Bank of Lithuania calculations.

In the second half of 2020, the unemployment rate stabilised and then started showing a slightly declining trend. According to the data from Statistics Lithuania, the unemployment rate rose by 2.7 percentage points year on year, to 9.1% in the final quarter of 2020, yet, compared to the third quarter, shrank by 0.5 percentage point on a seasonally adjusted basis. The registered unemployment rate, however, showed a different trend. This rate increased by a significant margin – by as much as 6.9 percentage points – and reached 15.6% in January. However, this indicator appeared to be a very inaccurate reflection of the actual labour market situation, given that its increase was mostly driven by the payment of jobseekers' allowances, authorisation for granting the status of an unemployed person to full-time students, a positive migration balance and other factors, rather than the drop in employment. The rise in unemployment rates was mainly fueled by layoffs in trade, transport, accommodation and catering activities. During the pandemic, youth unemployment showed the steepest increase, which was followed by the largest decline at the end of the year. The unemployment rate may increase in the first

quarter due to the stringent restrictions put in place in mid-December but should later return to a declining path, given that a substantial part of undertakings face a lack of workers that is very similar to labour shortages observed before the pandemic. In 2021, the unemployment rate is expected to remain broadly unchanged and stand at 8.4%.

In the second half of the year, the unemployment rate stabilised and started slightly declining.

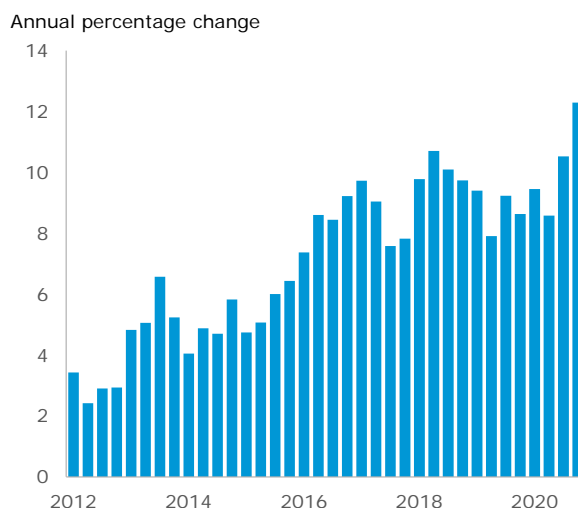
Chart 11. Unemployment rate



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The country broadly escaped a slowdown in wage growth despite the pandemic.

Chart 12. Wages



Sources: Statistics Lithuania and Bank of Lithuania calculations.

In 2020, the pandemic led to the highest positive migration balance in 20 years. In 2019, Lithuania recorded the first positive migration balance from the outset of data collection, which increased twofold (to 20,000 people) in 2020 as a result of, inter alia, the pandemic and the ensuing restrictions that had the biggest impact on migration of Lithuania's residents. Emigration fell steeply between March and June, mainly due to the suspension of international flights. The subsequent lifting of many travel restrictions only led to a partial recovery in emigration rates, which were substantially lower than in 2019. This was determined by uncertainty over the outlook of the Lithuanian and foreign economies, which prevailed throughout the year. With this situation in the background, residents avoided or postponed making important migration decisions. Improvements in the migration balance were also driven by the fact that the economies of some western European countries were harder hit by the pandemic compared to the Lithuanian economy. For instance, wage growth in Lithuania continued at the pace exceeding 10% in the fourth quarter, which was similar to that observed during the previous several years, substantially outpacing the rates recorded in other EU countries. Foreigners' migration did not undergo any major changes last year and its balance was broadly similar to the level of 2019. As regards the transport sector, which is the top employer for foreigners, the number of its workers decreased substantially during the first wave of the pandemic but the tendency reversed to the upward direction since the middle of the year.

The country broadly escaped a slowdown in wage growth despite the pandemic. During the spring lockdown, wages followed a slower growth trend, most likely on the back of subsidies paid in the amount matching the minimum wage. Starting from July, however, wages reverted back to the trajectory of rapid growth similar to that observed during the previous three years. For instance, in the fourth quarter, average wages increased by an annual 12.2%. This rapid growth was substantially driven by the public sector, where wages grew by 15.2%, i.e. much more compared to the country's average. Such growth was largely determined by bonuses paid to healthcare staff for their pandemic-related work. However, some activities not related directly to the pandemic, e.g. education and public administration, also witnessed truly rapid wage rises (reaching 19.1% and 10.9% respectively). In the private sector, wages

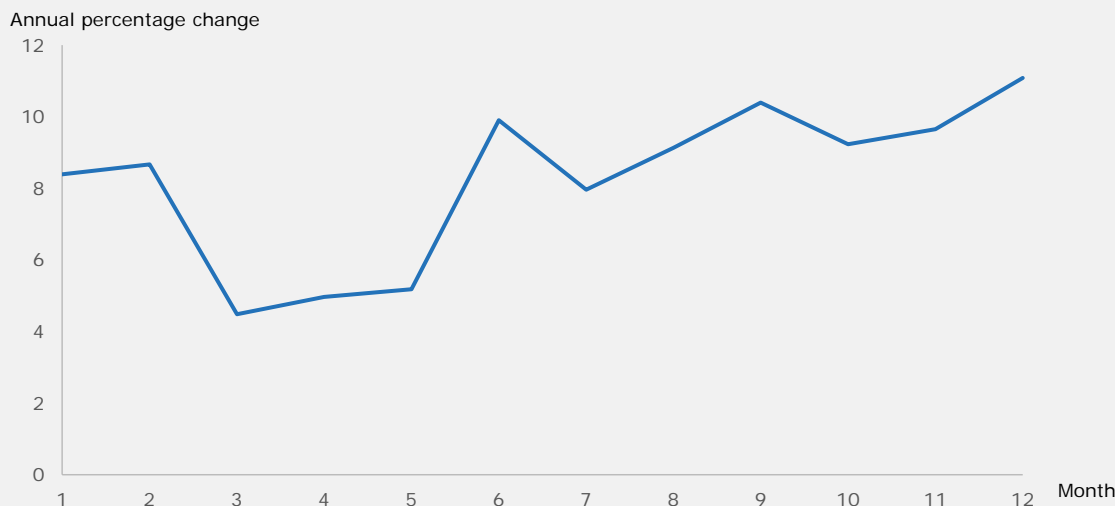
grew rapidly as well (by 10.6%), given that the pandemic had a rather moderate impact on a major part of the economy. For instance, a share of undertakings facing a lack of demand increased early in the pandemic before starting to decline and broadly returning to the pre-pandemic levels in many activities by February 2021. Nonetheless, the pandemic is expected to have a greater impact on wages in 2021 and the pace of wage growth is projected to slow down to 6.3%.

BOX 2. ASSESSING WAGE DYNAMICS DURING THE COVID-19 PANDEMIC

Real wages in Lithuania continued to grow at a double-digit rate despite the pandemic¹⁰. Chart A portrays the annual growth rate of real wages at a monthly frequency. Before the onset of the first wave of the pandemic – in January and February – wages grew by more than 8%. The effect of the pandemic could already be observed in March when wage growth slowed down yet remained positive and higher by roughly 4% compared to 2019. After remaining at this level for three months, wages bounced back and finished the year with a strong growth of more than 10% despite the second wave of the pandemic.

Real wages in Lithuania continued to grow at a double-digit rate despite the pandemic.

Chart A. Average real wage growth in 2020



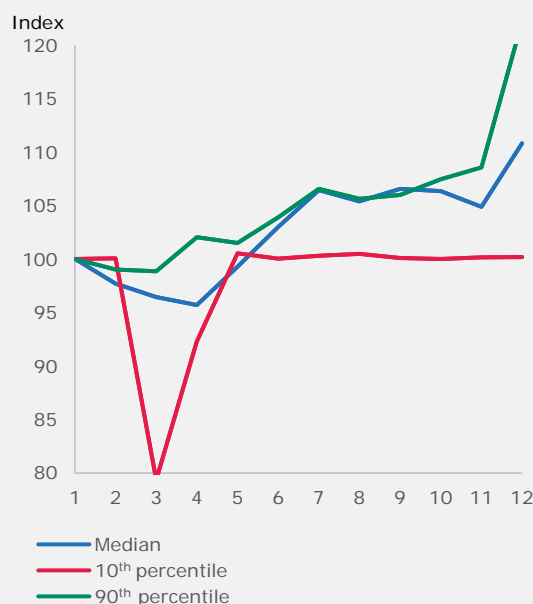
Sources: Sodra and Bank of Lithuania calculations.

Aggregate wage dynamics hide significant trends in inequality. The effect of the pandemic on average real wages appears to be limited (see Charts B and C). Median real wages did not move significantly during the first half of the year, before picking up growth in June and accelerating even further by the end of the year. The bottom 10% of wage earners suffered a 20% loss in their wages in March, then reduced their losses to less than 10% in April and finally returned to the initial level in May 2020. Importantly, their wages remained unchanged during the rest of the year. Average wages at the top 10% of the wage distribution, in contrast, grew significantly above the pre-pandemic level during 2020. The effect is also present when comparing the 25th and the 75th percentiles of the distribution of labour market earnings (see Chart C).

¹⁰ The data source comes from administrative records provided by Sodra. The dataset is publicly available and updated on a monthly basis. It includes all insured workers who were employed in private or public institutions for at least 30 days each month between July 2013 and December 2020. The information available is not fully comprehensive: only total monthly labour income, age and sex are reported. A key limitation of the dataset is that part- and full-time workers cannot be distinguished.

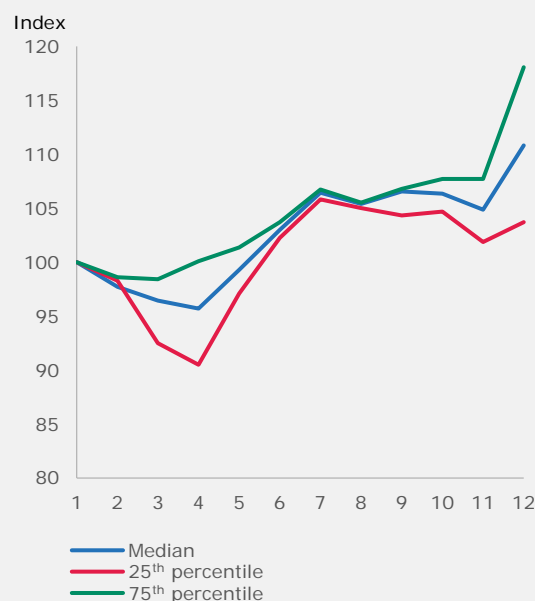
Growth trends of labour income diverged: wages of top earners grew significantly more than those at the bottom of the wage distribution.

Chart B. Real monthly wage index in 2020
(January 2020 = 100)



Sources: Sodra and Bank of Lithuania calculations.

Chart C. Real monthly wage index in 2020
(January 2020 = 100)



Sources: Sodra and Bank of Lithuania calculations.

Low-income earners were more often employed in the fields that were restricted by the imposed containment measures, while high-income earners were more likely to continue working on a remote basis, which in turn led to increased inequality in 2020. Such dynamics were shaped by various factors, including the increasing number of employees – many at the bottom of the wage ladder – that had to work reduced hours or received government subsidies at the minimum wage rate as part of the rescue policy. On the other hand, many high-wage earners had the opportunity to continue working remotely during the pandemic and still earn full wages. As a result, the distribution of labour market earnings has become more unequal: the ratio of labour earnings of the 90th and the 10th percentiles increased from 4.2 in 2019 to 4.3 in 2020. The trends in the labour market have potentially had a negative impact on the disposable income¹¹ inequality in Lithuania since unequal growth in labour market returns is one of its main drivers¹². However, the increased benefits might have counteracted the negative developments in the labour market. Learning about the effect of the pandemic on the disposable income inequality as well the characteristics of workers whose income has been affected the most is key for policy purposes.

The pandemic has taken a more significant toll on women: their total number in employment plummeted by more than 6% during the peak of the crisis, as opposed to a 2% decline experienced by their male colleagues. Among the key reasons why the COVID-19 measures are taking a disproportionate toll on women in the labour market is the gender imbalance across different jobs. While the 2008–2009 global financial recession dealt the hardest blow to the male-dominated sectors that are more sensitive to the business cycle, the current crisis presents novel characteristics due to its atypical nature. The difference in response to the crisis is most likely driven by a compositional effect: women are overrepresented in the industries that involve frequent contact with customers, such as wholesale and retail trade, accommodation and food services, which were hit the

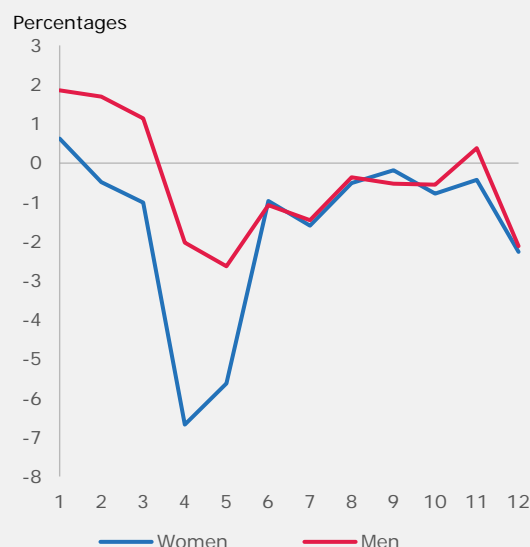
¹¹ Disposable income is the amount of money that an individual or household can spend or save after income taxes have been deducted and social benefits received.

¹² Černiauskas, N., Sologon, D. M., O'Donoghue, C. and Tarasonis, L. (2020), "Changes in income inequality in Lithuania: the role of policy, labour market structure, returns and demographics", Bank of Lithuania, *Working Paper Series*, 71.

most by the pandemic. **This evidence is in line with the findings of the majority of advanced countries.**¹³ However, the gender shock in Lithuania appears to be less persistent: the gap in year-on-year changes in total employment by gender was eliminated by June 2020, and remained around zero throughout the rest of the year.

The pandemic took a more significant toll on female employment, yet women's wages grew at a faster rate.

Chart D. Number of workers by gender, year-on-year change (2019–2020)



Sources: Sodra and Bank of Lithuania.

Chart E. Real monthly wage index by gender, 2020 (January 2020 = 100)



Sources: Sodra and Bank of Lithuania.

Gender differences in real monthly wages uncover the opposite story. While wage growth evolved in a similar manner during the first three months of 2020, women's wages started to grow faster in April and continued to do so reaching an almost 10 percentage point difference with respect to men's average wages by the end of the year. As a result, the average gender wage gap, expressed as a difference between average male and female wages, fell by more than 1% – from 13.6% in 2019 to 12.5% in 2020.

It is likely that a certain part of these developments has a temporary character. First, women are overrepresented in the public sector which experienced a stronger growth in wages. Second, selection can be another potential explanation: if low-paid jobs were more likely to be lost by women during the crisis, the composition effect could explain why wages for female employees grew at a faster rate. If female employees start filling low-wage jobs at a higher rate than their male colleagues when the business cycle recovers, we might observe the opposite – an increase in the gender wage gap.

¹³ Alon, T., Doepke, M., Olmstead-Rumsey, J., and Tertilt, M. (2020), "This Time it's Different: The Role of Women's Employment in a Pandemic Recession", National Bureau of Economic Research, No 27660.

BOX 3. RELATION BETWEEN POST-DOWNTIME SUBSIDIES AND INCOME CHANGES

After the onset of the pandemic, downtime and post-downtime subsidies (sometimes called employer subsidies) became one of the main measures supporting the economy. The goal of downtime subsidies was to preserve jobs. These subsidies, aimed at compensating a certain share of wages, were paid to employers who had to put their employees on downtime due to the restrictions imposed on their activities or lack of clients or orders. This was to reduce the number of cases where employers decided to dismiss their employees. The aim of post-downtime subsidies was to help employers during the period of economic hardship after the spring lockdown (in case of a possible slowdown or only a partial recovery in demand) and contribute to the retention of employees.

Post-downtime subsidies were granted to companies in the following main cases¹⁴:

1. If they announced downtime during the lockdown. The subsidies were paid for employees who were on downtime;
2. If they were included in the State Tax Inspectorate list of companies affected by COVID-19. The subsidies were paid for 10 employees, if the company employed up to 20 staff members, and for 50% of employees, if the company employed 21 staff members or more;
3. If the company employed new supported unemployed persons, e.g. persons with disabilities, low-skilled workers and young employees.

It should be noted that in the second and third cases announcing downtime was not necessary. Post-downtime subsidies were paid during a period of 6 months: in general, during the first two months, the subsidy amounted to 100% of a certain employee's wage, in the third and fourth months – to 50%, while in the fifth and sixth months – to 30% (but the subsidy could not exceed the minimum monthly wage). Employers were obliged to retain at least 50% of the employees for whom this support was paid for at least 3 months after the end of the subsidy payment. If the obligation was not fulfilled, there was no liability to return the subsidy, yet the employer could not be eligible for supported employment, job creation, adaptation subsidy and local employment initiative projects for the next 12 months.¹⁵

Post-downtime subsidies were one of the main state support measures. In 2020, state support amounted to €611 million, comprising approximately 50% of the direct state support for businesses and around 5.7% of state budget revenue in 2020 (excluding EU support funds). The amount of subsidies paid during downtime was almost three times smaller – only €213 million. As there was a significant number of post-downtime subsidies paid, it would be useful to determine whether they were indeed paid out to the sectors that were most significantly affected by the pandemic.

The impact of the pandemic can be determined from the decline in sales revenue observed between March and December, as compared to the same period in 2019. According to this criterion, only three out of ten types of activities that received most of post-downtime subsidies (catering services, sales of motor vehicles and manufacture of wearing apparel) faced a dramatic decline in sales revenue (over 10%) and received €89 million in subsidies (see table below). Two types of activities (wholesale trade and healthcare services) experienced a significant increase in sales revenue (over 5%) (at a similar pace as in 2017–2019) but were also paid €89 million. Other five activities faced a relatively small decline or mild increase in sales revenue (up to 5%) and received €184 million in subsidies. As a matter of fact, a decline in income may have been influenced by factors other than the pandemic, e.g. global market trends and allocation of companies to other economic activities.

¹⁴ More information can be found [here](#) (available in the Lithuanian language).

¹⁵ More information can be found [here](#).

In general, only €120 million or 20% of the total amount of subsidies was paid to companies carrying out economic activities that experienced a decline in sales revenue reaching over 10%.

Almost half of subsidies were paid to companies engaged in activities where sales revenue did not significantly change (annual change of -5% to 5%). Enterprises engaged in activities where sales revenue substantially increased (over 5%) received €138 million. Ten activities which faced the highest revenue growth (in euro) received €173 million, while ten activities that encountered the steepest revenue decline received €156 million in subsidies. Therefore, such allocation of support funds means that both the severely-hit sectors and those that were not significantly impacted by the pandemic received rather similar amounts in post-downtime subsidies. If the same amount had been paid out only to those activities that experienced a decline in revenue, they would have received more than twice as much in subsidies.

Subsidies received and changes in sales revenue by economic activity

Economic activity	Post-downtime subsidies, EUR millions	Downtime subsidies, EUR millions	Ratio of downtime and post-downtime subsidies	Annual change in sales, %	Annual change in sales, EUR millions
G47. Retail trade	66.0	21.6	3.1	1.6	172.8
G46. Wholesale trade	57.4	14.4	4.0	5.5	1,112.6
H49. Land transport	46.3	11.0	4.2	-2.6	-168.0
C31. Manufacture of furniture	42.7	7.9	5.4	0.8	12.7
I56. Catering	41.0	30.9	1.3	-27.3	-210.4
G45. Sale of motor vehicles	34.2	9.7	3.5	-12.0	-431.5
Q86. Healthcare	31.5	10.3	3.1	7.5	70.1
F43. Specialised construction	14.9	4.7	3.2	-0.1	-1.3
C14. Manufacture of wearing apparel	13.8	4.1	3.3	-13.4	-46.2
C10. Food production	13.5	3.1	4.3	1.3	45.9
F41. Construction of buildings	11.9	4.1	2.9	1.2	32.1
P85. Education	11.7	4.8	2.4	-8.6	-17.3
C25. Metal products	11.7	2.7	4.3	-2.5	-25.8
C16. Wood	11.3	2.2	5.2	0.7	7.5
C13. Manufacture of textiles	10.1	3.9	2.6	-3.0	-11.8
H52. Warehousing	9.9	3.3	3.0	-3.5	-152.7
I55. Accommodation	9.6	8.9	1.1	-56.7	-146.8
C29. Manufacture of vehicles	8.0	1.7	4.8	7.9	27.8
N78. Employment activities	6.7	1.3	5.2	-7.3	-24.7
M69. Legal and accounting activities	6.2	1.1	5.6	11.2	33.6
C22. Rubber and plastic products	6.1	1.1	5.7	-1.3	-13.5
R93. Sports activities and recreation activities	6.1	4.9	1.2	-38.4	-51.0
L68. Real estate transactions	6.0	2.8	2.2	-0.2	-3.0
C33. Repair and installation of machinery and equipment	5.9	1.1	5.5	-10.1	-60.8
M70. Activities of head offices and management consultancy activities	5.7	1.5	3.7	-7.0	-55.3
C27. Electrical equipment	5.7	1.1	5.4	-7.3	-25.4
C32. Other manufacturing activities	5.7	2.6	2.2	28.6	70.4
S96. Other personal service activities	5.3	2.8	1.9	-1.4	-1.1

Sources: Employment Service, Interdepartmental Tax Data Warehouse and Bank of Lithuania calculations.

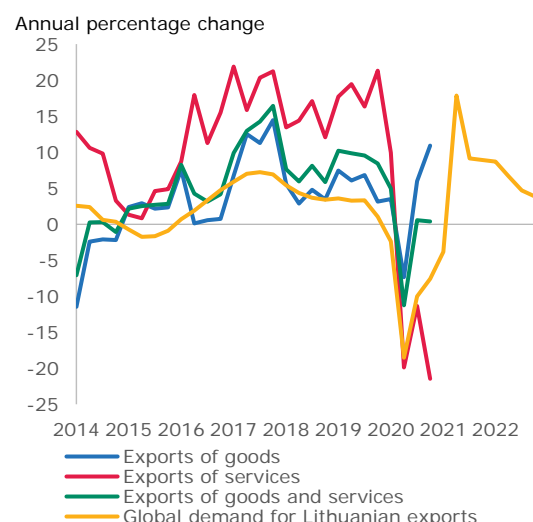
V. EXTERNAL SECTOR

In 2020, Lithuania's real exports shrank less than expected. National accounts show that real exports of goods and services fell by 1.3% over the year, while nominal exports – by 5.4%. This was for the most part caused by a decrease in oil prices and a large drop in exports of mineral products. When the first lockdown was introduced in order to contain the spread of COVID-19, the export volumes of goods shrank significantly, declining by 16.5% in the second quarter of the year. This fall was extensive, as it affected all groups of goods. During the first lockdown, wood and furniture, machinery and equipment as well as mineral products exerted the most significant negative impact on export growth. In the second half of the year, when the pandemic situation improved both worldwide and in Lithuania, the drop in exports of furniture, machinery and equipment halted, although exports of mineral products continued to decrease, thus slowing down the total recovery of exports of goods in the third and fourth quarters. However, the growing demand for chemical products, especially in the biotechnology sector, and the increase in production capacity made up for this decline. Based on the 2020 data on trade in goods, the volume of Lithuanian exports, excluding mineral products, in nominal terms increased by 3.4%, whereas exports of Lithuanian-origin goods, excluding mineral products, grew by 6% over the year.

The drop in exports of mineral products was counterbalanced by exports of grains, tobacco and reagents. Recovery of exports in the second half of 2020 could be linked to two groups of goods: agricultural output and chemical products. Agricultural output is characterised by less complex goods that have inelastic demand. Last year's good cereal harvest was exported to faraway markets, such as Turkey, Nigeria, China and Saudi Arabia, which partly increased the significance of markets other than those of the EU or CIS countries. Tobacco and its products, which are processed in Lithuania, are also attributed to agricultural output. In 2020, the largest share of these products was exported to the EU, mostly to the Netherlands. Significant structural changes were recorded with regard to chemical products. After the initial shock of the pandemic, Lithuania's foreign trade structure saw a significant increase in the share of chemical products. Both in Europe and worldwide, tests became one of the main means for fighting the pandemic, while reagents made in Lithuania have also been used in their production. With growing demand, Lithuanian exports of chemical products also increased, especially those of reagents. Since the pandemic situation remains difficult to predict, it is likely that testing is going to remain one of the most important means for controlling the pandemic, thus the rapid growth in the country's exports of chemical products is expected to continue in 2021.

In 2020, Lithuanian exports of goods shrank less than expected.

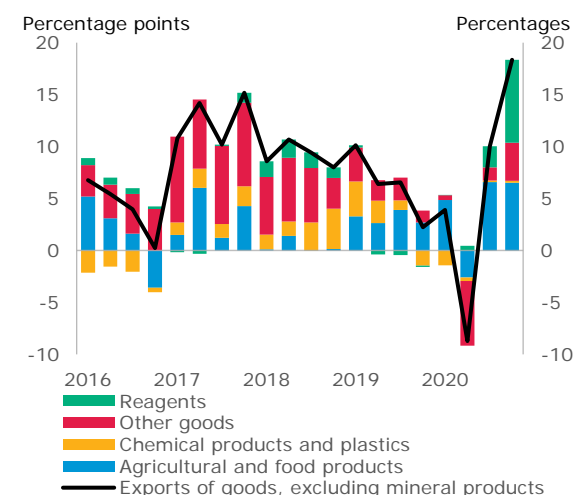
Chart 13. Annual growth of real exports of Lithuanian-origin goods and services and external demand for Lithuanian exports



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

The share of exported reagents in the structure of exports of goods significantly increased.

Chart 1. Growth in nominal exports of Lithuanian-origin goods, excluding mineral products, by country group



Sources: Statistics Lithuania and Bank of Lithuania calculations.

While the EU demand for Lithuanian exports of goods had decreased in the face of the pandemic, it recovered in the second half of the year, with growing importance of other than the EU and CIS markets continuing to have a positive effect on exports. Amidst the initial COVID-19 shock, the steepest fall was recorded in the EU market. As it comprises the largest share of the Lithuanian export structure, it caused a dramatic drop in April and May (see Chart 14). Weakening demand forced Lithuanian companies engaged in international trade to seek markets where they could sell goods produced throughout the pandemic (during the first lockdown, industrial activities were not restricted). While the EU market was recovering, export volumes to non-EU countries (e.g. the US) also increased. Such upward trends recorded during the third quarter were followed by a rapid growth in the fourth quarter of the year. While global trade was shrinking, Lithuanian exporters successfully adapted and found new markets, therefore Lithuania's share in the export market of goods continued to grow.

Although exports of goods are recovering, import growth remains sluggish. During the first lockdown, imports of goods dropped by more than 20%. This could be linked to uncertainty clouding the future, which forced to delay investment decisions and, with lower demand, imports of raw materials. Intermediate consumption goods, excluding fuels, as well as investment goods were the key contributors to the decline in imports in 2020. After the end of the first lockdown, import volumes started decreasing at a more moderate pace in the second half of the year, yet this recovery was sluggish and only reached positive growth in the fourth quarter. A significantly slower recovery in imports, when compared to exports, helped Lithuania to achieve a positive balance of trade in goods. In other words, the country recorded more cash inflows than outflows.

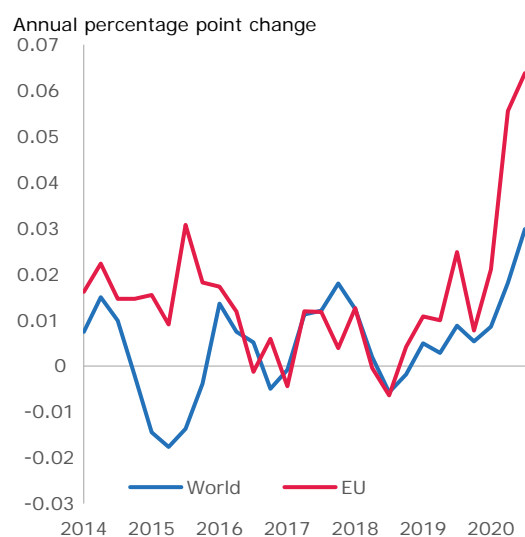
The value of exports of services continued to decrease rapidly in the second and third quarters of 2020. In the third and fourth quarters, the annual growth of real exports of services amounted to -11% and -22% respectively. This was largely determined by severely restricted provision of travel and tourism services. Although in 2016–2019 these services amounted to an average of 14% in the structure of Lithuanian exports of services, their share shrank by almost 70% in 2020 on the back of the measures employed to tackle the pandemic. Another factor weighing on the exports of services was transport services, yet this sector saw a more significant drop during the first lockdown (13% in the second quarter), while in the third quarter, i.e. during the second lockdown, this decline was significantly milder (4%). It should be noted that since

the importance of remote working during the pandemic increased, exports of Lithuanian information and communication services rose by more than a third in 2020.

In 2021, foreign trade development will return to its normal course, while growth in exports will continue to approach the trend observed before the pandemic. Lithuania's external sector overcame the challenge of the pandemic, however, the extent of its impact depended largely on the type of production being sold, while the shock experienced by businesses spread out very unevenly. In 2021, the Bank of Lithuania projects the recovery of exports to reach 5.9%, whereas growth in external demand should stand at 7.6%. Under the baseline scenario of macroeconomic development, Lithuania's main trading partners' pandemic and economic situations should gradually change for the better and the recovering external demand should be favourable to Lithuanian exporters.

In 2020, Lithuania's export market share in trade of goods continued to grow both in the EU and globally.

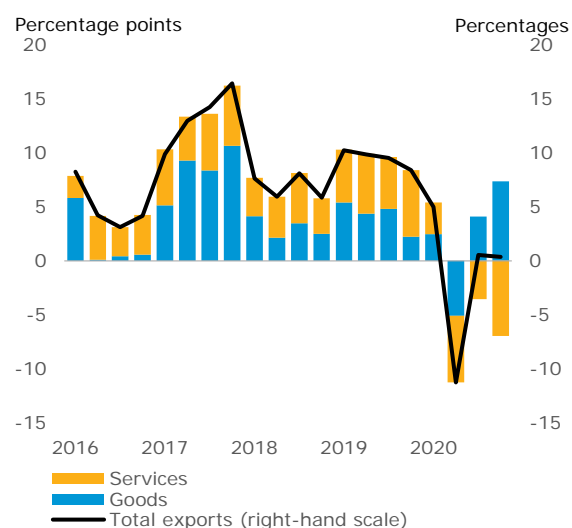
Chart 15. Dynamics of Lithuania's share in the EU export market of goods (excluding mineral products)



Sources: Eurostat, IMF and Bank of Lithuania calculations.

The value of exports of services continued to decrease rapidly in the second and third quarters.

Chart 16. Impact of nominal exports of Lithuanian-origin goods and services on the total export growth



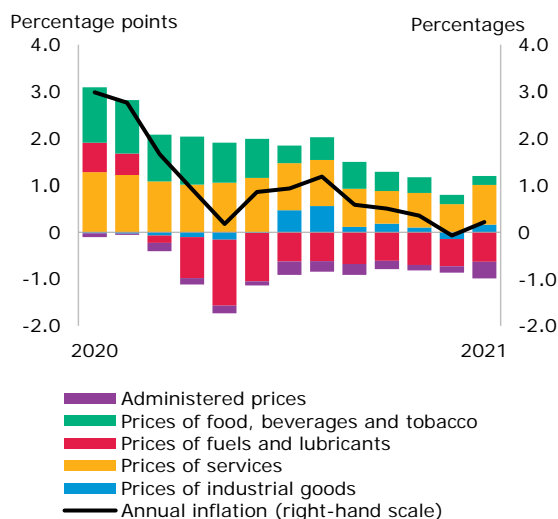
Sources: Statistics Lithuania and Bank of Lithuania calculations.

VI. PRICES

Price developments have been greatly affected by the COVID-19 pandemic. Last year, the average annual inflation amounted to 1.1% – half the rate recorded in 2019, whereas in the first month of 2021 it stood at 0.2%. Although oil prices started rising at the end of 2020, fuel prices still remain one of the main factors putting downward pressure on inflation rates (see Chart 17). Another contributor to lower inflation is prices of food and services that have increased to a lesser extent. However, oil prices are projected to be higher this year, thus fuel prices are also set to grow and will not have such a disinflationary effect as they did last year. This will mostly be counterbalanced by a slower growth in prices of services. The average annual inflation is expected to go up in 2021, yet should remain subdued and amount to 1.6% (see Chart 18).

A drop in fuel prices and slower growth in prices of food and services put downward pressure on inflation.

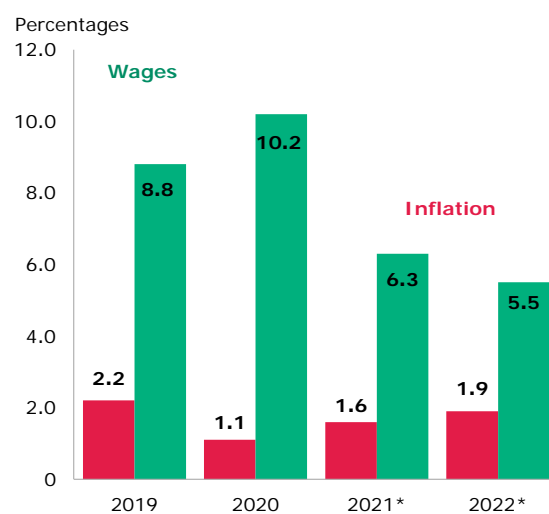
Chart 17. HICP inflation and its components



Sources: Statistics Lithuania and Bank of Lithuania calculations.

In 2021, inflation rate is projected to be higher than in 2020.

Chart 18. Wages, inflation and projections



Source: Statistics Lithuania.
*Bank of Lithuania projection.

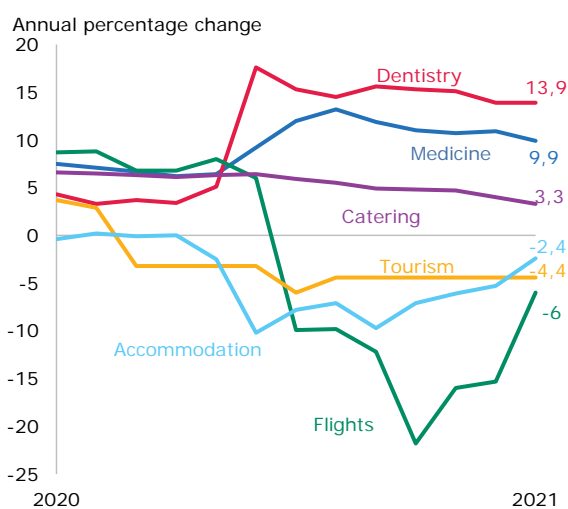
Energy prices – last year's key factor behind lower inflation – are expected to rise in 2021. This will largely be determined by higher oil prices. When COVID-19 vaccination started in December and expectations of recovering demand for oil and cuts in oil output grew stronger, oil prices soared to more than USD 50 per barrel. Reduced oil output and new vaccines continue to support the positive outlook and growth in oil prices which exceeded USD 60 per barrel in February. The average oil price is expected to stand at around USD 59 per barrel in 2021. With oil prices going up, an increase is also expected to be recorded in prices of related products, e.g. fuels and lubricants. In 2020, lower prices of fuels and lubricants, in contrast, were the key contributors to lower inflation rates (prices slumped by an average of 9.1%). In addition to rising fuel prices, energy prices will also be pushed up in 2021 by electricity and natural gas prices that have been increased for households since 1 January. This year, higher energy prices should account for around 0.4 percentage point of the average annual inflation.

Since June 2020, growth in prices of services has significantly decreased – its annual rate in June 2020 was 4.8%, whereas in January 2021 it stood at only 3.3%. The services sector has been severely hit by the pandemic. It was affected both directly by the imposed containment measures as well as by changing consumer habits when people started avoiding flights or, for example, tourism services because of the risk of COVID-19 infection. Lower demand was one of the main factors behind a drop in prices of some services or their weakening growth (see Chart 19). In recent months, prices of flights, accommodation and tourism services dropped, while growth in prices of catering services slowed down. However, it is likely that in addition to decreasing demand, a significantly slower growth in food prices

has also had a hand in slowing growth of prices of catering services. However, medical and dental services saw the opposite effect of the pandemic – their inflation accelerated and in January (in year-on-year terms) they were 10% and 14% higher respectively. Up until now, supply and demand factors have had the largest impact on growth in prices of services, whereas increasing labour costs continued to exert pressure on prices – wage growth last year was basically the same as in 2019. However, this year it is going to decelerate, with its rate standing at 6.3%. It will in turn ease the pressure on prices of services, halting their growth to an average rate of 2.9%. And yet, with regard to household savings, successful continuation of the vaccination process and recovering travel or entertainment activities, there still remains the risk that growth in prices of services may pick up.

Prices of some services are falling, whereas others tend to soar.

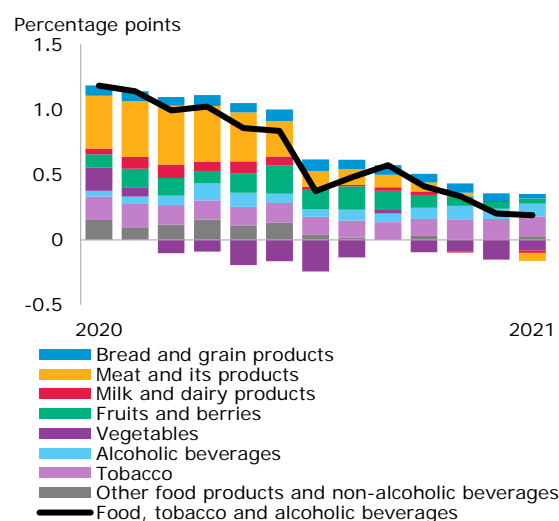
Chart 19. Price developments by group of services



Source: Statistics Lithuania.

Growth in food prices is affected by cheaper vegetables and meat.

Chart 20. Impact of prices of food, tobacco and beverages on the annual headline inflation



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Annual growth in prices of food, including alcohol and tobacco, amounted to 0.6% in January and was roughly 6 times lower than at the beginning of 2020. The decelerated growth in food prices was mainly determined by the fading effects of the African swine fever that caused meat prices to go up in the first half of 2020 as well as cheaper vegetables after a good harvest (see Chart 20). As a result, in January pork was 4.9% cheaper, while vegetable prices declined by 3.7% on a year-on-year basis. Provided that there are no unexpected shocks in the food commodity market or bad weather conditions that would affect the yield, food prices should be increasing at a lower pace this year.

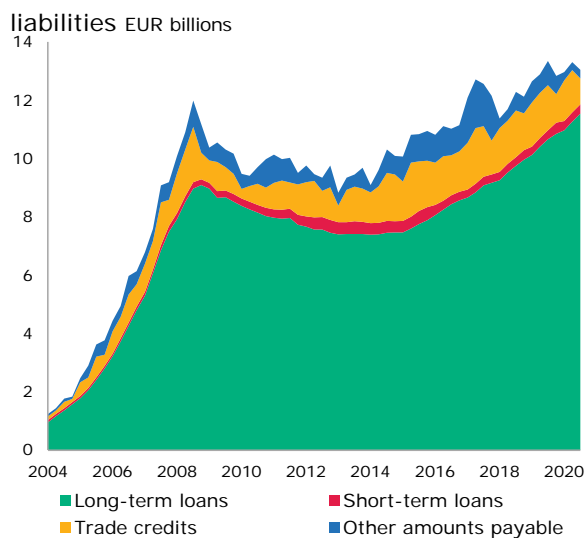
VII. FINANCING OF THE ECONOMY

Financial liabilities of households shrank in the third quarter of 2020, yet long-term lending to households increased. According to the latest Bank of Lithuania calculations, in the third quarter of 2020, household liabilities decreased by 2.0% – to €13 billion. The largest contributor to their decline was a significant drop in trade credits granted to residents mostly by NFCs – during the quarter, they dropped by 38.8%. The diminishing trade credits – debt for goods and services as well as utility and other taxes – showed the financial situation of households to be improving, which is further confirmed by increased household financing by financial institutions: in the third quarter of 2020, loans to households granted by financial institutions grew by 2.4%. This was mostly due to an increase in long-term loans.

Due to active lending for house purchases, the overall household financing by financial institutions also kept its pace in the fourth quarter of 2020. The household loan portfolio maintained its rapid growth due to lower loan amortisation in the moratorium period and increasing lending flows. In December 2020, the household loan portfolio saw a year-on-year increase of 6.5%. It was mostly influenced by housing loans – their portfolio's annual growth amounted to 9.4%. The flow of housing loans increased by 21.3% in the fourth quarter of 2020 and was 20.7% higher year on year. This increase was especially noticeable in case of smaller banks. The loan growth was largely influenced by favourable borrowing conditions, growing wages and housing affordability. The value of housing loan renegotiations (excluding renegotiations under the moratorium conditions) in December was similar to the levels observed in September, amounting to €15.4 million (0.2% of the total housing loan portfolio). In December, the portfolio of loans for consumption and other purposes was 5.8% smaller year on year, while the net flow of new consumption and other loans shrank as well (by 13.3%). The decrease in consumption loans was caused by growing unemployment rates, especially amongst younger people who tend to be the main users of consumption loans.

Financial liabilities of households shrank due to a drop in trade credits.

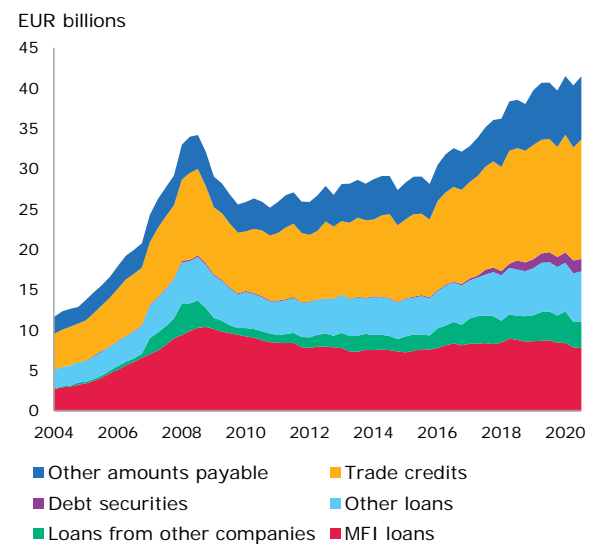
Chart 21. Structure of household



Source: Bank of Lithuania.

Financial liabilities of NFCs continued to grow despite banks reducing corporate financing.

Chart 22. Structure of NFC liabilities



Source: Bank of Lithuania.

In the third quarter of 2020, financial liabilities of NFCs increased due to a rise in short-term liabilities to other companies. In the third quarter of last year, financial liabilities of NFCs rose by 2.9% (to €41.5 billion) and were 1.9% higher year on year. In contrast to households, NFCs enhanced the size of trade credits and other amounts payable: trade credits granted to NFCs increased by 5.5% during the period under review and were 5.3% higher on a year-on-year basis. Other NFC amounts payable grew by 2.3% (a year-on-year rise of 12.1%). Loans held by NFCs (granted by other NFCs and MFIs) increased by 0.5% in the third quarter of 2020 – this was caused by a 3.2% rise in inter-NFC lending. In

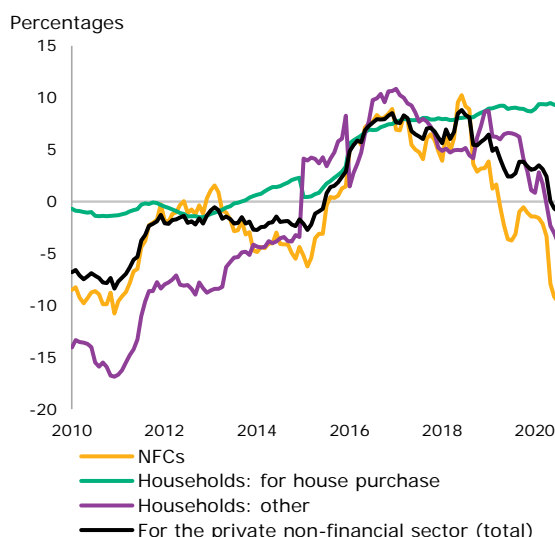
the third quarter of the year, MFI lending to NFCs decreased – the total value of their loans dropped by 0.5% quarter on quarter and was 10.7% lower than a year ago. It is quite likely that credit availability in Lithuania's financial institutions is now limited due to the deteriorated economic outlook, which is in turn encouraging NFCs to seek alternative funding sources. This would largely explain the increase in lending between companies by using intercompany loans or trade credits.

The latest MFI data shows that MFI lending to Lithuania's NFCs continued to decrease in the fourth quarter of 2020 but such trends were offset by state aid measures. In December 2020, the portfolio of loans to NFCs was 12.7% smaller year on year. Although the loan portfolio's amortisation was extended for some companies due to the announced moratorium, the total portfolio of loans to NFCs shrank on the back of a notably reduced flow of new loans. On a year-on-year basis, the fourth quarter of 2020 saw a decrease in financial corporation loans to companies engaged in professional and scientific, trade, transport as well as production activities. However, the decrease in the credit flow to companies was largely offset by state financial aid offered during the COVID-19 pandemic. The aid package prepared for 2021 is smaller, yet it is intended to be more targeted (see Chart 24). With the recovering economy and reduced financial aid, MFI lending to NFCs is likely to recover.

MFIs increased only the housing loan portfolio, while corporate financing was cut.

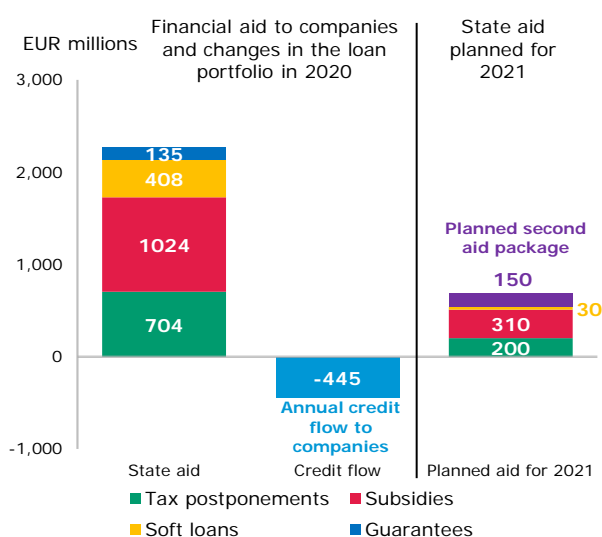
State-guaranteed financial instruments significantly increased the volume of lending to NFCs.

Chart 23. Annual change in the portfolio of MFI loans granted to NFCs and households



Source: Bank of Lithuania.

Chart 24. The scope of state financial aid to companies and changes in credit flows



Sources: Bank of Lithuania, koronastop.lrv.lt and INVEGA.

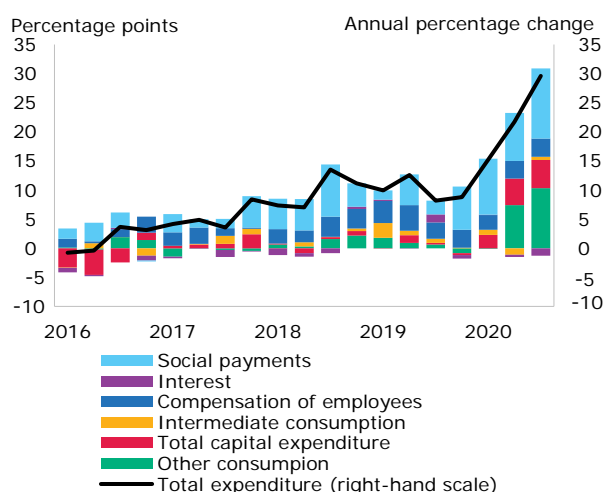
VIII. GENERAL GOVERNMENT FINANCE

Lithuania's general government deficit widened by more than 7 percentage points in 2020, mainly due to the deteriorating economic situation and fiscal measures put in place to mitigate the fallout from the pandemic and related restrictions on economic activities. The decline in economic activity, first and foremost, triggered automatic changes, such as an increase in unemployment and other social benefits as well as tax revenue losses. Decisions adopted in tandem with the 2020 budget bill, e.g. on child benefits or wage rises, as well as subsequent measures taken in response to the pandemic had an increasing effect on expenditure as well. Last year, the total amount earmarked for those measures exceeded €2 billion (excluding tax deferrals, investment and measures not affecting the general government balance, such as loans or guarantees). Moreover, general government increased its investment by approximately 30% in a bid to boost the economy. As a result of these decisions, expenditure grew by more than 20% year on year in the first three quarters of 2020, while the balance deteriorated by €2.2 billion during the same period. Deferrals of taxes and social contributions hampered revenue collection and led to an approximately €800 million rise in a tax revenue shortfall.

In 2021, the general government deficit will contract, yet should continue to linger at high levels due to the ongoing pandemic as well as containment measures that might further be extended. Compared to 2020, expenditure planned for containment measures this year was reduced by approximately €800 million. Early in 2021, the government opted against the extension of certain measures, such as post-downtime subsidies, one-off payments to pensioners or child benefits, which entailed significant spending in 2020. However, the government will continue to pay downtime subsidies, jobseekers' allowances, benefits for the self-employed, newly introduced subsidies for the undertakings affected by the pandemic, etc. Most of the measures will remain in effect until the end of the lockdown and the emergency situation, whereas tax deferral will be in force until the end of June 2021. Once these provisional measures are lifted, the balance will step into the improvement path. Moreover, even though the economic situation is expected to brighten this year (the economy is projected to grow, while consumption should also recover), some of the indicators that are important for the state of public finances will remain poor, e.g. the unemployment rate will still be significantly heightened, whereas growth of the wage bill is set to decelerate, which will stave off a more substantial decrease in deficit. General government investment is expected to continue growing this year, although this would have a lower impact on deficit, given that a certain share of this investment will be financed by means of grants from the Recovery and Resilience Facility being launched within the EU.

General government expenditure grew at a more rapid pace due to introduced fiscal measures.

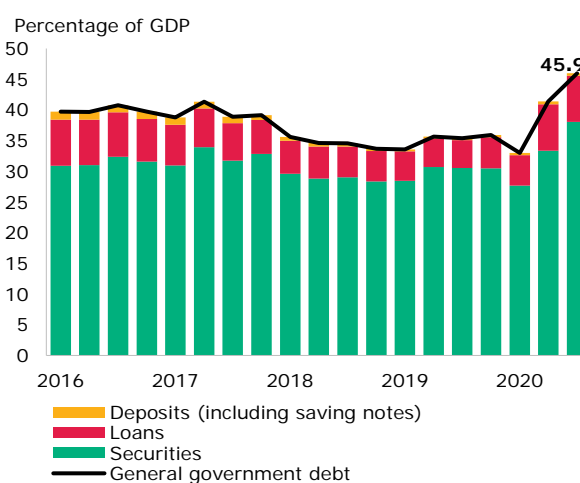
Chart 25. Dynamics of general government expenditure and contributions



Sources: Statistics Lithuania and Bank of Lithuania

General government debt increased by more than 10 percentage points in 2020.

Chart 26. General government debt



Sources: Ministry of Finance and Bank of Lithuania calculations.

General government debt expanded by more than 10 percentage points in 2020 and its ratio will exceed 50% of GDP this year. The increase of debt in 2020 was more substantial compared to the deficit, given that certain pandemic response measures only affect the debt, e.g. loans or tax deferrals (which only had a partial effect on the balance). This year, same as in 2022, the deficit should mostly be financed by borrowings, whereas government reserves have not substantially decreased. A higher debt level implies higher risks related to debt sustainability in the longer-term. The average interest rate charged on debt went down to 2% in 2020, which has lately eased the burden of deficit financing. In order to stabilise the debt-to-GDP ratio, it is important to make sure that borrowings are used in a responsible and rational manner (particularly in relation to the selection of investment directions and projects), allocated to the fiscal measures that would be the most effective in stabilising and boosting the economy, and could strengthen the economic foundations, since economic growth is one of the key debt stabilisers. With the economy getting back on the mend, it will be crucial to move back to fiscal discipline.

BOX 4. REASONS BEHIND INSUFFICIENT GENERAL GOVERNMENT TAX REVENUE

The tax revenue-to-GDP ratio in Lithuania is one of the lowest in the EU. Although the GDP share which gets redistributed in the general government budget during “normal” times mostly depends on public choices, when comparing different countries, there is a noticeable trend that the ratio of public spending (as well as of revenue, as it needs to be financed) and the GDP increases along with the country’s economic development. This trend, also known as Wagner’s law¹⁶, means that the elasticity of goods and services provided by the general government in terms of average personal income is high: with the growing development levels and living standards, demand for goods and services provided by the state (e.g. social security, education, culture, infrastructure) grows even faster, resulting in the rising share of general government expenditure relative to GDP. With improving living standards in Lithuania (with an increase in GDP per person), the tax revenue-to-GDP ratio remains one of the lowest in the EU (amounting to around 30% of GDP). Therefore, in case of relatively small tax revenue in the general government budget, as compared to GDP, there is a risk that an adequate financing of state services and, in turn, their quality will not be ensured. In addition, a small budget limits the possibilities for reducing income inequality and poverty, and makes it more difficult to tackle long-term problems, such as an ageing population or implications of climate change. Insufficient tax revenue in the public sector is caused by various reasons. Several of them are discussed below.

The low tax revenue-to-GDP ratio is mainly determined by significant tax disparities resulting from the shadow economy, tax evasion as well as various tax exemptions and reductions. Failure to collect VAT is particularly related to the large-scale shadow economy. According to the latest data, Lithuania’s VAT gap in 2018 amounted to around 30% of the total theoretical¹⁷ VAT receipts and was one of the largest in the EU. The total potential additional income from VAT amounts to around €2.1 billion or 4.6% of GDP. According to the EC calculations, the compliance gap comprised the largest share of the VAT gap (2.7% of GDP, or over €1.2 billion), resulting mainly from the vast shadow economy, VAT avoidance and evasion. The policy gap comprised another share of the VAT gap, out of which the gap due to reduced tariffs was rather small (€272 million, or 0.6% of GDP)¹⁸. The progress made in the reduction of the VAT gap has so far been rather limited. In 2010–2018, Lithuania managed to reduce the VAT compliance gap by around 2 percentage points, which is much less than in other new EU countries¹⁹.

Not all tax exemptions and reductions are appropriate. According to conducted research, support to lowest-income earners through a reduced VAT tariff is limited and a lower VAT tariff for separate sectors most often has only a temporary effect.²⁰ A reduced tax tariff which is applied to heating and hot water

¹⁶ Magazzino C., Giolli L., Mele M. (2015), “Wagner’s Law and Peacock and Wiseman’s Displacement Effect in European Union Countries: a Panel Data Study”, *International Journal of Economics and Financial Issues*.

¹⁷ The VAT gap shows the difference between the actual tax revenue from VAT and the “theoretical ideal” revenue from VAT which would be collected if the same tax tariff was applied to all goods and services and taxpayers perfectly complied with the law. Theoretical VAT revenue is calculated by multiplying the theoretical tax base by the tax tariff. For more on the VAT gap, see Annex 3 of the Lithuanian Economic Review, June 2018.

¹⁸ The exemptions gap makes up a major share of the policy gap. It appears due to the fact that certain services are VAT exempt, such as financial, insurance, gambling and other services as well as, in some cases, real estate sales and some services of public interest, e.g. healthcare, social, education, culture, sports and other services. The majority of VAT exemptions related to the policy gap are established in the EU VAT Directive (2006/112/EC), therefore, it may not be possible to eliminate or significantly decrease the gap related thereto.

¹⁹ Countries that joined the EU after 2004.

²⁰ See, for example, Benzarti Y., Carloni D. (2019), “Who Really Benefits from Consumption Tax Cuts? Evidence from a Large VAT Reform in France”, *American Economic Journal: Economic Policy* 11, 38–63.

in Lithuania can be given as an example, as both low-income and high-income households benefit from it, while the loss of state revenue is rather significant (around €38 million, or 0.1% of GDP). More effective support for lowest-income earners is targeted benefits and a progressive income tax. Certain reduced taxes not only result in lower budget revenue but also increase pollution, the costs of which are borne by society as a whole (e.g. tax exemptions on fossil fuel). According to the draft budget for 2021, a total of around 4.2% of GDP in tax revenue is not collected due to tax exemptions.

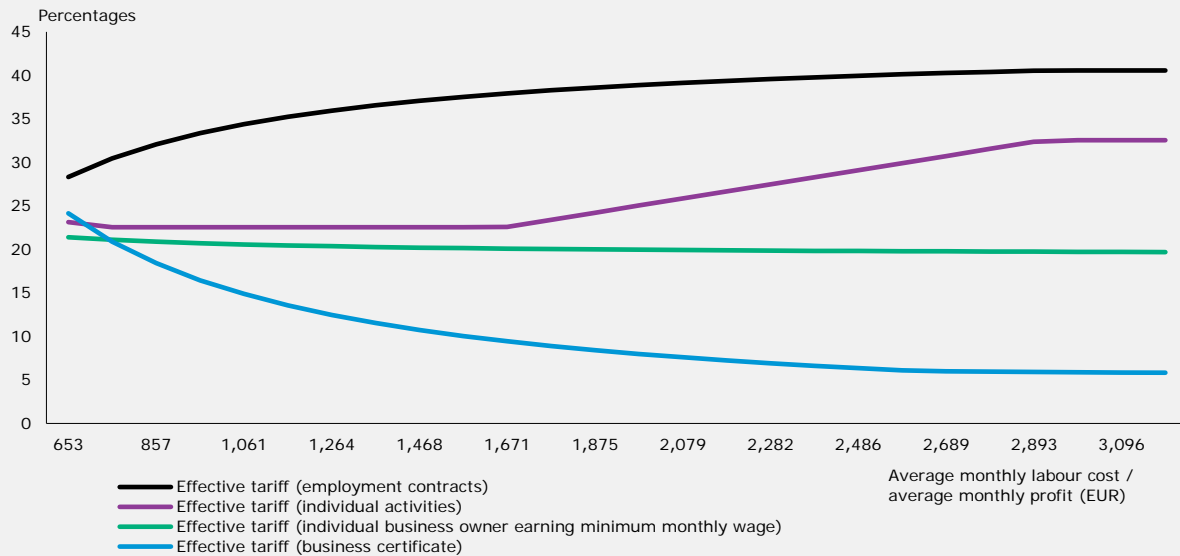
The major share of insufficient tax revenue results from excess diversity in business forms and uneven taxation on personal income according to activity type. The horizontal principle of equality states that persons in a similar socio-economic situation should be taxed in a similar way, as they have equal opportunities to assume tax obligations, thus the applicable tax tariff should not depend on the type of income received or the activity type. Effective taxes imposed on self-employed persons in Lithuania are significantly lower than those applicable to persons working under employment contracts, and the tax burden depends on the activity type (see Chart A). It is important that a lower effective tax tariff applicable to self-employed persons is also determined by lower social contributions. Such arrangement does not ensure adequate social guarantees and will result in lower economic welfare in old age or in case of a job loss. These differences in social insurance become particularly noticeable during recession when persons without social insurance are at a higher risk of losing a source of income or earning significantly less, and these flaws of the social system are then fixed with ad hoc measures. The need for such measures also arose during the COVID-19 pandemic, along with the introduction of the new type of benefits, e.g. persons not subject to regular unemployment insurance were paid a benefit during the job-search period. It is also possible that in the future pensions of those who paid lower social contributions will be increased due to political pressure, without taking into account the contributions that were previously paid, and this will further diminish justice between persons paying different contributions.

Previous studies²¹ show that income of self-employed persons (as their main activity) is of a similar level or even higher than that of those working under a contract, but self-employed persons pay relatively less taxes, as compared to those employed under a contract. Particular significant differences can be observed between those receiving the highest income, where the share of the self-employed is more concentrated and differences in effective tax tariffs are substantial. This creates legal and illegal incentives to choose such type of activity, the income of which would be subject to as low tax tariffs as possible and increase the possibilities for tax arbitration.

²¹ Černiauskas N., Jousten A. (2020), "Statutory, Effective and Optimal Net Tax Schedules in Lithuania" Bank of Lithuania, *Working Paper Series*, No 72.

Taxation on personal income is uneven.

Chart A. Effective taxation tariffs on different types of activity



Sources: State Tax Inspectorate, Sodra and Bank of Lithuania calculations.

The relatively low tax revenue-to-GDP ratio is also determined by rather low general government revenue from property and environmental taxes. Revenue from indirect taxes in Lithuania, i.e. from VAT and excise taxes, comprises a much larger share of tax revenue than the EU average. Tax revenue from VAT amounts to around 26% of total tax revenue and social contributions in Lithuania, whereas in the euro area it stands at 17%. VAT is generally considered a regressive tax, as lower-income households tend to spend more for consumption than higher-income households. Therefore, VAT, as a consumption tax, creates a bigger tax burden. In view of this, the share of direct taxes should increase in the tax revenue structure. For example, in Lithuania, as compared to other EU Member States, there is a narrow tax base and low general government revenue from property and environmental taxes. Only a small share of the country's housing stock is subject to the real estate tax, thus in order to achieve a more effective taxation on capital and higher budget revenue from this tax, it would be useful to improve the framework of real estate taxation and extend the taxable base. Revenue from environmental taxes also needs to be increased, as it would not only be an additional source of income, but could also fix some market flaws, for example, pollution.