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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 the Review is the result of statistical data analysis, modelling and expert assessment. The Review is prepared by the Bank of Lithuania.

During the preparation of the Lithuanian Economic Review, the data of the Bank of Lithuania, Statistics Lithuania, the European Central Bank, Eurostat, the International Monetary Fund, *Bloomberg* and other data published up to 20 November 2014 were used.

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Abbreviations

%	per cent
CIS	Commonwealth of Independent States
ECB	European Central Bank
EU	European Union
Eurostat	statistical office of the European Union
GDP	gross domestic product
HICP	harmonised index of consumer prices
IMF	International Monetary Fund
LTL	Lithuanian Litas
MFI	monetary financial institutions
p.p.	percentage point
rh scale	right-hand scale
US	United States of America
VAT	value added tax

ECONOMIC OUTLOOK

Lithuania's economy continues to grow at a healthy pace supported by domestic demand and, in particular, by the growth of private consumption. The latter, in its turn, is fuelled by continued improvements in the labour market (growth of employment, coupled with a decline in unemployment) and the growth of real wages, which has accelerated since a substantial fall in inflation in the middle of 2013. Real wage growth is driven, inter alia, by a decline in unemployment, which paves the way for salaries to keep going up rather substantially even after the effect from the increase of the minimum monthly wage has faded out. An incentive to consume is also provided by low interest rates. Investment, another key component of domestic demand, is supported by high capacity utilization, which well exceeds its long-term average level and keeps growing, as well as by ongoing infrastructure projects. Growing investment in infrastructure and other construction projects spurs construction activity; its value added has been growing rapidly for more than a year. Positive effects from the growth of domestic demand spill over into other economic activities as well. However, the growth of certain activities was driven by exceptional factors. For example, the growth of value added in the agricultural sector was noticeably increased by this year's abundant harvest.

Nonetheless, the growth of domestic demand is gradually losing steam. However, the deceleration was expected, due to deterioration in both household and business expectations, which has been observed for a while. Concerned about geopolitical uncertainty, households tend to be more cautious about spending and businesses more wary about investing. The latest data shows that the developments of domestic demand are getting closer to their long-term trends. In the first half of this year, the growth of this demand exceeded the pace of GDP growth way more than usual. By now, however, this gap has narrowed and is expected to remain at this lower level as the domestic demand will grow broadly in line with GDP and its ratio to GDP will essentially stabilise after the recent steady rise.

Export developments have not been worse than expected thus far. As expected, import restrictions imposed by Russia on certain categories of foods (milk, meat, fruit, vegetables, etc.) in August dealt a heavy blow to the exports of food from Lithuania to Russia, which fell by half in two months from the introduction of these sanctions. However, this adverse effect was partly offset by a sudden pickup in Russia-bound exports of certain non-food products early in summer. Still, there are substantial risks that this sudden spike may be short-lived and the exports of these goods may fall back to their previous level wiping out any gains. The risks of slower than currently expected growth of exports also relate to the economic outlook in the euro area, which tops the list of Lithuania's foreign trade partners. The forecasts of economic growth in the euro area have already been trimmed down from what was previously anticipated, which is expected to add to the dampening effect on the prospects of Lithuania's exports in 2015.

GDP is expected to continue growing steadily. The economy is projected to grow by 2.9 per cent in 2014 and by a further 3.1 per cent in 2015. Despite an expected deceleration from this year's pace, domestic demand will remain a major driving force of economic growth next year. Demand will be driven by improvements in the labour market, low inflation and ongoing investment needs. Net exports will have a minor effect on the growth of GDP over the entire forecast period.

Inflation has been very low and stable for a while now, mostly as a result of consumer-friendly developments in the prices for commodities in the global market and low inflation environment in the euro area. The current and the anticipated levels of global commodity prices are way lower than previously expected. For example, the price of crude has plunged by one-fifth from its year-earlier level in recent months. The estimates for inflation in the euro area in 2014 and 2015 have also been revised down. Such revisions to the projections relating to external factors suggest that inflation in Lithuania may be lower than previously forecasted and, therefore, the inflation is expected to be 0.3 per cent this year and 0.9 per cent next year. Russia's restrictions on the imports of food have not yet triggered any need for the inflation forecasts to be revised down substantially. Although these sanctions have caused a fall in the purchase prices for farm commodities, they have not yet produced any major effect on consumer prices in Lithuania. Domestic factors, such as growing labour costs, do not create stronger pressure on core inflation, i.e. a component of inflation that is more dependent on domestic demand, and are not expected to do so in the near future.

	December 2014 projection			September 2014 projection		
	2013	2014 ^a	2015 ^a	2013	2014 ^a	2015 ^a
Price and cost developments (annual percentage changes)						
Average annual inflation, as measured by the HICP	1.2	0.3	0.9	1.2	0.4	1.2
GDP deflator	2.1 ^b	0.9 ^b	1.5 ^b	1.7	0.6	1.3
Wages	5.1 ^c	4.5 ^c	5.1 ^c	5.0 ^d	4.2 ^d	4.3 ^d
Import deflator	-1.2 ^b	-2.5 ^b	-0.3 ^b	-1.5	-2.2	0.5
Export deflator	0.0 ^b	-3.6 ^b	-0.6 ^b	-1.4	-2.0	0.5
Economic activity (constant prices; annual percentage changes)						
Gross domestic product	3.2 ^b	2.9 ^b	3.1 ^b	3.3	2.9	3.3
Private consumption expenditure	5.3 ^b	4.7 ^b	3.6 ^b	4.7	4.7	3.6
General government consumption expenditure	1.7 ^b	1.2 ^b	1.5 ^b	1.9	1.9	1.7
Gross fixed capital formation	6.3 ^b	8.4 ^b	3.1 ^b	12.8	8.4	4.9
Exports of goods and services	9.4 ^b	3.4 ^b	4.4 ^b	10.3	0.2	5.3
Imports of goods and services	10.8 ^b	3.7 ^b	4.4 ^b	10.3	2.1	6.4
Labour market						
Unemployment rate (annual average as a percentage of labour force)	11.8	10.6	9.7	11.8	11.2	9.9
Employment (annual percentage change)	1.3 ^e	1.9 ^e	0.6 ^e	1.3	1.2	1.0
External sector (as a percentage of GDP)						
Balance of goods and services	1.2	0.0	-0.2	1.0	-0.4	-1.3
Current account balance	1.6	0.7	0.2	1.5	1.2	-0.3
Current and capital account balance	4.6	3.7	3.0	3.7	3.4	1.9

^a Projection

^b Adjusted for seasonal and workday effects

^c Average wages

^d Compensation per head

^e National accounts data; employment in domestic concept

I. INTERNATIONAL ENVIRONMENT

The global economy grew at an uneven pace in the first half of 2014 and the forecasts of its further development continue to be trimmed down. The IMF now expects the world's economic growth this year to be 0.3 p. p. lower than anticipated in the forecasts issued last spring. The developed countries are making an increasing contribution to the growth of global GDP despite the worsening performance of the economy in the euro area or slower-than-expected expansion of Japan's economy in the first half of this year after the consumption tax¹ increase. The growth of the emerging market economies, in particular Russia and Brazil, is being dampened by the weakening of their economic growth potential. The Chinese economy is slowing down, which acts as a drag on the global economic growth. The continued decline in global commodity prices will undermine growth prospects for commodity exporting countries.

The world's main central banks continue to keep their key interest rates at extra low levels; however, their monetary policy trajectories are drifting further apart. The ECB and the Bank of Japan intend to step up monetary stimulus whereas the Federal Reserve has taken the opposite stance. Inspired by improvements in labour market indicators and the growth of domestic demand, the Federal Reserve was scaling back its quantitative easing in steps until the programme was ended altogether in October. Meanwhile, the ECB has twice cut its key interest rate – to 0.15 per cent and 0.05 per cent, respectively – this year as it seeks to anchor the medium-to-long term inflation expectations in line with its aim of maintaining inflation rates below, but close to, 2 per cent. The key interest rates are now at their lowest level in the history of the euro area's single currency. The ECB has also taken additional stimulus measures, such as the targeted longer-term refinancing operations (TLTROs), covered bonds and asset-backed securities purchase programmes, in order to stimulate bank lending to households and non-financial corporations.

The US economy is healthy. Hit by a small contraction in the first quarter, the US economy has since then recovered thanks to strong domestic demand. In particular, the US GDP grew by an annual 2.6 per cent in the second quarter and by another 2.3 per cent in the third quarter. High confidence indicators signal bright prospects ahead for the economy. The trends observed in the country's labour market appear favourable, job creation is moving at a fast pace and the unemployment rate has fallen to post-crisis lows. Inflation in the US has increased slightly since the beginning of the year. The US economy is expected to keep growing in the final quarter of 2014, mainly due to increasing domestic demand and favourable financing conditions.

Economic growth in the euro area has been weaker than expected in recent quarters as a result of slow recovery in the labour market and geopolitical tensions. A decline in food and energy prices has kept the euro area's inflation at low levels. The recently growing divergence between the monetary policy trajectories pursued by the Fed and the ECB and the weakening euro should boost inflation in the euro area. A breakdown by countries shows that the economic growth in the euro area has come slower than expected mainly due to the performance of France and Italy. Struggling under a higher tax burden and high unemployment, the French economy has been stagnant since the beginning of this year. Meanwhile, Italy's economy has slipped into its

Global economic growth will be slower than expected in 2014. It is uneven and increasingly dependent on individual countries.

Table 1. GDP and inflation developments in selected advanced and emerging market economies

	2013	2014*	2015*
Real GDP change, per cent			
Advanced economies	1.4	1.8	2.3
US	2.2	2.2	3.1
Euro area	-0.4	0.8	1.3
Emerging market and developing economies	4.7	4.4	5.0
China	7.7	7.4	7.1
Russia	1.3	0.2	0.5
Inflation, per cent			
Advanced economies	1.4	1.6	1.8
US	1.5	2.0	2.1
Euro area	1.3	0.5	0.9
Emerging market and developing economies	5.9	5.5	5.6
China	2.6	2.3	2.5
Russia	6.8	7.4	7.3

Source: IMF.

* Forecasts.

Labour markets in the euro area and the US follow different paths: the unemployment rate in the euro area remains high whereas the US unemployment rate has fallen to post-crisis lows.

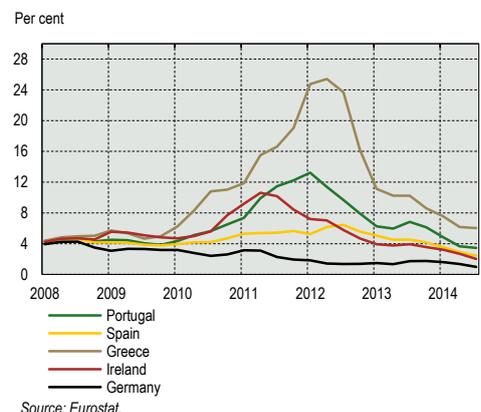
Chart 1. Unemployment rates in the euro area and US



Sources: U.S. Bureau of Labour statistics and Eurostat.

Financial markets are regaining confidence in the countries hardest hit by the debt crisis.

Chart 2. Ten-year government bond yields for bailed-out countries vs German

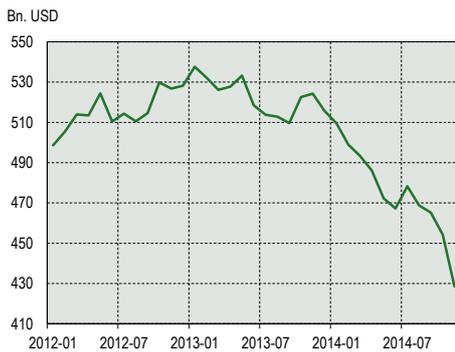


Source: Eurostat.

¹ An indirect tax in Japan (basically a form of a VAT), which was increased to 8 per cent, from 5 per cent, in April.

Russia's foreign reserves have been falling recently.

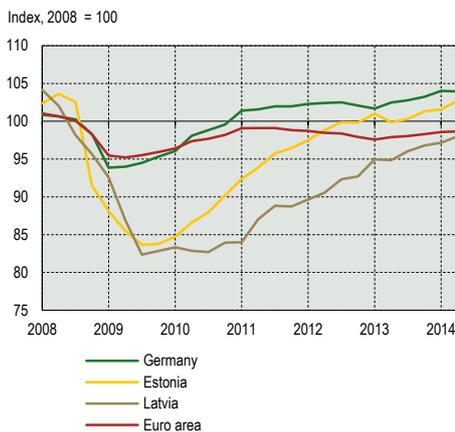
Chart 3. Russia's foreign reserves



Source: Central Bank of Russia.

The trends of economic development in the euro area, Latvia, Estonia and Germany have followed different paths.

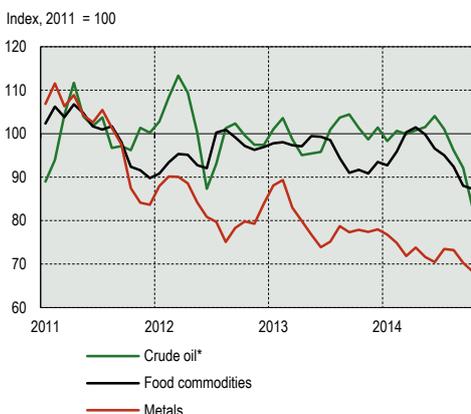
Chart 4. The level of real GDP of Lithuania's important export partners, including the euro area, Latvia, Estonia and Germany



Source: Eurostat and Bank of Lithuania calculations.

Global commodity prices are heading lower.

Chart 5. Commodity price indices



Sources: IMF and the Bank of Lithuania calculations.
* Average oil prices of Brent, WTI ir Dubai Fateh

third recession in the last seven years. To some extent, economic difficulties in Italy stem from structural problems, such as insufficient flexibility of the labour market contributing to high unemployment and problems with governance of the country's public authorities. Germany's economy failed to avoid a temporary slump in the second quarter of 2014. This stumble, however, was basically caused by one-off factors and the country dodged a technical recession in the third quarter. Deteriorating expectations in the manufacturing sector, the continued geopolitical tensions in the eastern part of Europe and the global economic slowdown will weigh on the growth of Germany's economy. The situation in the euro area countries that have received financial assistance from the IMF and the EU appears slightly better. In particular, they have seen a decrease in their default risks, a moderate recovery in domestic demand and improvements in confidence indicators.

The EU institutions continued making important political decisions on the road towards the Banking Union. On May 21, 26 EU Member States (with the exception of the UK and Sweden) signed an Intergovernmental Agreement on the Single Resolution Fund. The Fund, which has a target level of EUR 55 billion, will be built up over eight years through levies on banks. Member States would start making contributions to this Fund from 2016. The Single Supervisory Mechanism, under which the ECB took over supervisory responsibility for major banks in the euro area in November 2014, should also add credibility to the financial system of the single currency bloc. Right before starting off as a supervisor for the euro area's biggest banks, the ECB published the final results of the asset quality review and stress tests of the bloc's largest lenders in late October 2014. This should prop up confidence in the banking sector.

Russia's economic outlook continues to deteriorate. The latest forecasts show that Russia's economy will barely manage a marginal growth in 2014. Household consumption continues to decelerate under the chilling effect of year-on-year growth in consumer price index, which has reached its three year highs. The purchasing power of Russian households was further eroded by Russia's yearlong ban, imposed on 7 August 2014, barring the imports of beef, pork, poultry, fish and dairy products as well as fruit and vegetables from the EU, the US, Canada, Australia and Norway. In the fourth such decision this year, the Russian central bank has recently hiked its key rate to 9.5 per cent in a bid to rein in the flight of private capital and high inflation. Since the beginning of this year, the Central Bank of Russia has been tapping into its foreign reserves to prop up the sagging rouble. As a result, these reserves fell to USD 429 billion in late October, from USD 510 billion early in 2014. Recently, however, the Russian central bank has reduced its FX interventions as it is shifting towards a free floating currency regime.

The trends of economic development in Poland, Estonia and Latvia remain favourable and the European Commission expects these economies to expand by 3.0, 1.9 and 2.6 per cent, respectively, in 2014. Economic growth in these countries will continue to be mainly driven by domestic demand. The growth of Poland's economy should also benefit from a cut in the reference rate enacted by the central bank. As shown by the revised national accounts data, Estonia's economy dodged recession early this year and the composite leading indicators (CLIs) published for that economy by the Organisation for Economic Cooperation and Development (OECD) signal a pick-up in growth momentum. Nevertheless, slower-than-expected economic recovery in the euro area and geopolitical uncertainty will act as a drag on economic growth in Poland and the Baltic countries.

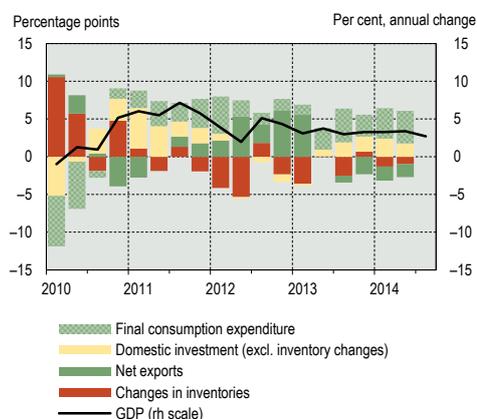
The economies of the Scandinavian countries, which are relevant for the Lithuanian financial system, have followed different development paths this year. Economic growth in Denmark, Sweden and Norway accelerated in year-on-year terms in the first half of 2014, whereas the Finnish economy remained weak. The growth of Danish and

Swedish economies was mainly driven by strong domestic demand, rising real wages and accommodative monetary policy. Sweden's central bank (Riksbank) slashed its repo rate to 0 per cent on 28 October 2014 in a bid to fuel inflation, which remains well below its target of below, but close to, 2 per cent. In Norway, the acceleration of economic development reflected the growth of private consumption, good labour market conditions and the pickup of external demand. On the other hand, the Finnish economy is not improving in recent quarters. The economy was weighed down by a number of structural and cyclical problems, growing unemployment and falling domestic investment. Russia's food import restrictions and economic complications in that country will further aggravate the state of the economy in Finland. The Finnish economy is not expected to return to a growth path before 2015.

The global commodity prices have been falling of lately. Since hitting their 2014 peak in June, crude oil prices have fallen more than 20 per cent, mostly as a result of growth in oil production in the US and in countries that are members of the Organization of Petroleum Exporting Countries (OPEC), as well as due to weakening expectations for global economic growth. The decline in crude oil prices is biting hard on the economies that are reliant on oil exports. Prices for many food commodities are heading down against the backdrop of favourable weather conditions and abundant harvest. Prices for metal commodities are set for a fourth year of decline amid slowdown in emerging market economies.

The growth of the economy is mostly fuelled by the recovery of domestic demand.

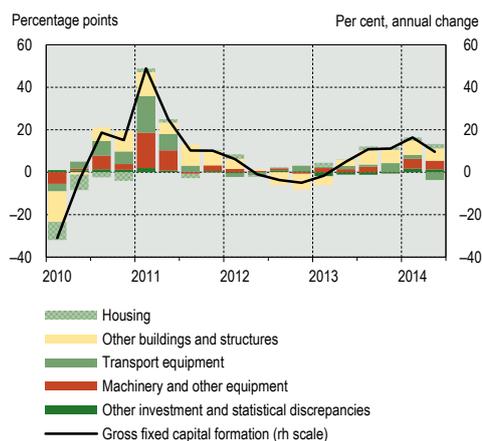
Chart 6. Contributions to the development of real GDP by expenditure approach



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Fast growth of domestic investment is driven by both the reasons arising from the economic conjuncture and one-off factors.

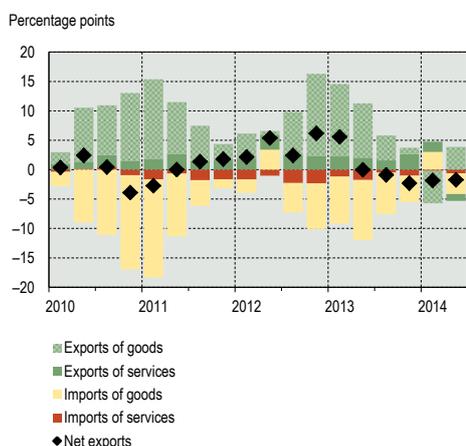
Chart 7. Contributions to the development of domestic investment (at constant prices)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The conjuncture of strong domestic demand and struggling exports leads to negative contribution of net exports to the growth of GDP.

Chart 8. Contribution of real net exports of goods and services to annual GDP growth



Sources: Eurostat and Bank of Lithuania calculations.

II. REAL SECTOR

Lithuania's economy has been growing at a stable rate for a while. For more than a year, economic development has mainly been driven by the recovery of domestic demand, which offsets the dampening effect of net exports on the growth of GDP. Such economic conjuncture is conducive to the continued reduction of the negative output gap, which built up during the downturn.

Household consumption has been growing at a very fast pace in recent quarters. An important factor behind this development is improvements in the labor market. Employment and wage growth paves the way for a rapid increase in payroll fund – the key component of household disposable income. The growth of households' disposable income is also reinforced by income from net current transfers, in particular from abroad, and by property income, as corporations earn profit. Relatively faster growth of household disposable income contributes to improvements in the financial situation of households, which, accordingly, promote spending on many categories of consumer goods and real estate. The recovery of the residential property market is another factor stimulating household consumption growth: after buying a dwelling households spend money on other consumer goods to furnish it. In addition to these factors, important contributors to the intensive growth of household consumption include ultra-low inflation, which has only a marginal corrosive effect on household purchasing power in 2014, and ultra-low interest rates, which drive up the incentives for households to consume. The development of household consumption is expected to remain dynamic in the short term. However, the growth of consumption expenditure will slow down as the ongoing geopolitical tensions are weighing on consumers' future expectations for both personal financial situation and the national economy.

Economic activity is also fuelled by the growth of domestic investment, which is driven by both the reasons arising from the economic conjuncture and one-off factors. Productive investment, i.e. investment in machinery and equipment, non-residential buildings, infrastructure facilities, is growing at a fast pace, which is highly encouraging. Businesses' willingness to bolster their productive investment was mainly driven by a relatively high level of capacity utilisation and attractive terms of leveraged financing for investment projects, among other things. It should be noted, that favourable weather conditions early this year propped up construction activity as businesses invested in buildings and structures. Yet another contribution to the growth of investment comes from the recovery of the residential property market. The growing appetite for real estate amongst households has paved the way for residential property developers to invest in new projects. Investment in vehicles is the only major category of investment to show a decline, which, however, has been expected. This type of investment surged in 2013 in anticipation of a more stringent new auto pollution standard, known as Euro 6, which came into force from the beginning of this year. The outlook for investment is clouded by extremely high uncertainty. Despite the demand for more investment, which continues to be observed in some economic activities, the ongoing geopolitical tensions may have an adverse impact on corporate investment decisions.

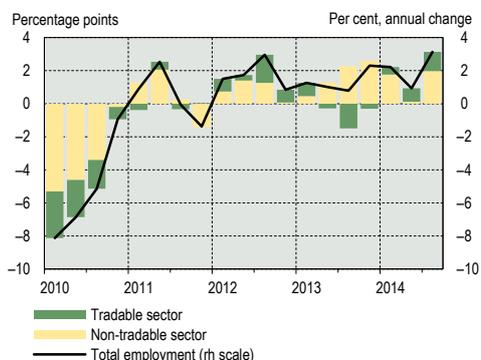
The conjuncture of strong domestic demand and struggling exports leads to negative contribution of net exports to the growth of GDP. The effect of domestic demand growth on net exports is manifested through the growth of imports since the evolution of household consumption and corporate investment has a direct impact on the imports of final consumption and capital goods. Hurdles for the growth of exports have until now been mainly related with the exports of refined petroleum

products and the exports of transport and storage services. The trends observed in the exports of other goods and services have been much more favourable, to some extent due to a gradual pickup in external demand. The positive effect of external demand on exports should continue to gain momentum gradually.

III. LABOUR MARKET

The non-tradable sector of the economy served as the main engine of employment growth for about a year. Recently, however, the growth of employment in this sector has decelerated.

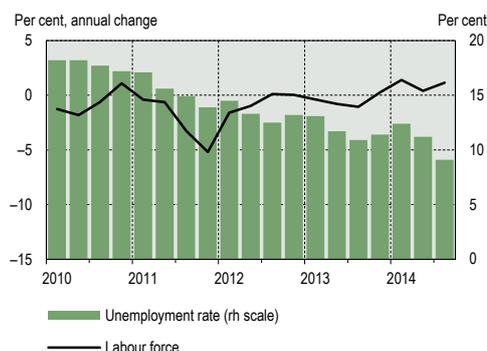
Chart 9. Employment in the tradable and non-tradable sectors



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The labour force is growing amid improvements in activity rates.

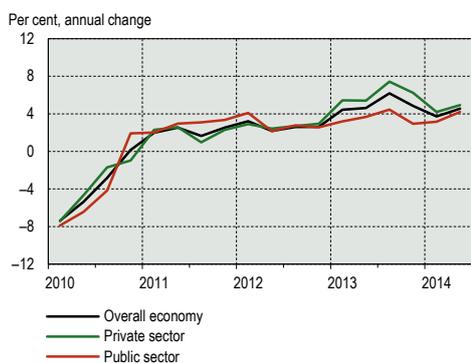
Chart 10. Main employment indicators



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The direct effect from the raising of the minimum wage has faded away and therefore, the pace of wage growth has slowed down.

Chart 11. Wage developments in the private and the public sectors



Source: Statistics Lithuania.

The non-tradable sector of the economy served as the main engine of employment growth for about a year. Recently, however, the growth of employment in this sector has decelerated. This slowdown reflects the stagnation of employment growth in construction. Employment in construction grew only at the onset of recovery in this sector, i.e. in the middle of last year. Later, however, the construction workforce began to diminish gradually². Employment in the services sector has been growing at a slightly faster pace. As Lithuania presided over the EU Council, the growth of employment in the services sector, which was rather swift, was noticeably fuelled by the public sector. Recently, however, it has been driven by the ever increasing employment in the private sector. The decline of employees in the largest activity of the tradable sector – manufacturing – continued to ease and in the third quarter the number of employees exceeded the level of preceding year. The development may be explained by the recovery of activities other than oil refining in the first half of the year. Recently, a rather fast growth of employment has been observed in agriculture, another activity of the tradable sector.

The decline of unemployment rate was considerably slower in the first half of the year. The unemployment rate was 11.8 per cent during this period and was down by 0.6 p. p. in year-on-year terms, which is less than the 1.6 p. p. annual decrease recorded in 2013. The pace of decline has eased both for long-term and youth unemployment. In the third quarter, however, the unemployment rate dropped by a rather substantial margin, although it still remains to be seen whether or not it was a one-off. The current unemployment rate is quite close to its estimated natural level, which suggests a slowdown in both unemployment decline and employment growth in the future. However, an increase in the population's activity rate may affect the dynamics of both unemployment and employment. Currently the activity rates among youth and older people have been rising. As far as older people are concerned, the growth of the activity rate has in part been driven by the gradual increasing of retirement age introduced in 2012. These developments mitigate the negative effects of migration on the labour force and, as a result, the active population in Lithuania rose by 1.0 per cent in the first three quarters of this year compared to the same period last year.

The direct effect from the raising of the minimum wage has faded away and therefore, the pace of wage growth has slowed down. This deceleration comes from the private sector, which experienced a stronger effect on the growth of the average wage³ from that minimum wage hike. As far as the public sector is concerned, the pace of wage growth remains broadly unchanged from 2013. The slowdown in the growth of wages in the private sector has been rather pronounced, composing 1.5 p. p. (to 4.6 per cent). Nevertheless, as compared to 2012, when the effect from the minimum wage increase was marginal, the growth of wages in the private sector has been 1.9 p. p. faster. The pace of growth versus 2012 has picked up in more than half of economic activities. The strongest acceleration has been recorded in real estate and construction – the two sectors, which are showing quite a marked activity growth.

² Seasonally adjusted data.

³ The raising of the minimum wage to LTL 1 000 might also have had indirect implications for the growth of wages. Before the minimum wage hike, the share of full-time workers earning LTL 1 000 or less was 18 per cent. It fell to 11 per cent at the end of 2013, which means that many of them have seen their wages rise above the LTL 1 000 mark. Moreover, the share of workers earning between LTL 1 200 and 1 500 has also increased by a noticeable margin (to 16 per cent, from 12 per cent). The raising of wages for a substantial share of workers who used to earn more than LTL 1 000 might possibly be attributed not only to increased economic activity and a shortage of labour but also to the aim to adjust the distribution of employees by compensation in the aftermath of the minimum wage hike.

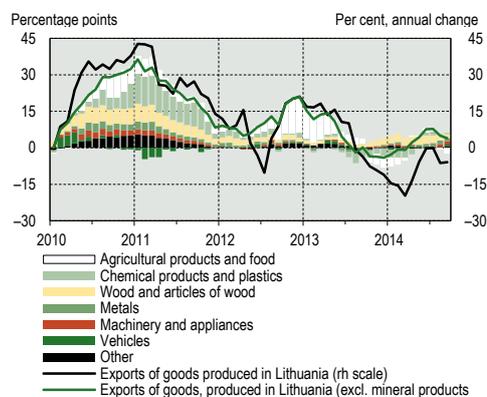
Heightened uncertainty from geopolitical tensions may have an adverse effect on the future development of the labour market.

Households' confidence about the outlook for their personal financial situation and the overall economy has been on decline since the beginning of the year. Business activity expectations also trended down for some time. Some of the changes in the labour market have however been positive. In the first half of the year, the number of job vacancies jumped by 35 per cent from a year ago. The job vacancy rate showing the ratio between the number of job vacancies and the number of occupied posts climbed to 1.2 per cent in the second quarter reaching its peak level since the onset of economic recovery. Nevertheless, these developments should be interpreted with caution as business surveys do not signal that the pace of hiring may be stepped up.

IV. EXTERNAL SECTOR⁴

The growth of exports of goods of Lithuanian origin was fuelled by improving fertilizer export performance and robust exports of wood articles.

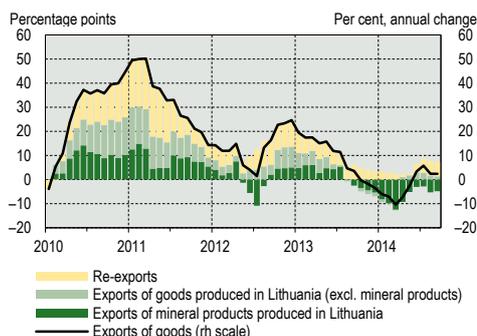
Chart 12. Contributions to the exports of goods of Lithuanian origin (three-month moving sum)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Exports of mineral products have decreased whereas re-exports exhibited rather strong growth.

Chart 13. Exports of goods produced in Lithuania and re-exports (3-month moving sums)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Russia's import restrictions cut down the flow of food exports to Russia.

Chart 14. Food and non-food exports to Russia (seasonally adjusted data)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

A fall by nearly one-tenth in the exports of goods of Lithuanian origin was mainly triggered by a substantial decrease in the exports of mineral products. Faced with a squeeze on refining margins, *AB ORLEN Lietuva* cut the volume of its output reducing its capacity utilization to approximately 60 per cent in the first quarter. The exports of petroleum products in that period fell by half year-on-year. Nonetheless, export performance showed some improvements in the second and the third quarters and the slump in petroleum product exports, net of one-off factors, narrowed to around one-fourth. Unfavourable dynamics of fertilizer prices, coupled with relatively high commodity prices, led to a substantial fall in the exports of chemical products in the second half of 2013. This trend continued into early 2014. Fertilizer manufacturers scored better in the second quarter and the exports of fertilizers exceeded the level of preceding year. A rather strong growth was observed in the exports of wood and articles of wood. This growth momentum was fuelled by healthy external demand for such products, which prompted the manufacturers of furniture and other wood-based products to invest into enlargement of production capacity. Since the beginning of the year, the exports of wood and articles of wood have increased by 13.3 per cent.

Re-exports have followed a much more positive, albeit uneven, development path. The growth of re-exports has mostly been driven by re-exports of machinery and appliances, which have increased by more than one-third this year. The largest dampening effect on the growth of re-exports has been produced by vehicles. In the first three quarters of this year, vehicle re-exports fell by one-fifth, presumably, due to depreciation of currencies of Lithuania's main re-export partners (Russia, Belarus and Kazakhstan) and economic slowdown in those markets.

Restrictions implemented by Russia had a negative effect on the exports of foods. On 7 August, Russia imposed an embargo on food imports from Lithuania and other countries, which will have repercussions for the Lithuanian economy (see Box 1). Foreign trade data for August–September show a decrease in exports of dairy and meat products of Lithuanian origin as a result of Russia's import restrictions. Exports of dairy products alone fell by nearly 29 per cent. The contraction resulted from almost completely closed Russian market and decline of exports to the EU countries by one-fifth. Despite the restrictions, exports of meat products shrank by meagre 0.5 per cent, to some extent, due to an increase in exports of these products to Belarus. In other words, while meat exports to Russia fell by two-thirds, exports of meat to Belarus increased 2.5 times. Trade restrictions announced by Russia disrupted the growth of re-exports. In particular, re-exports of vegetables plummeted by two-thirds in the analysed period while re-exports of fruit and nuts – by almost 40 per cent.

Complicated geopolitical environment, slower-than-expected economic growth in the EU and dim business outlook for *AB ORLEN Lietuva* remain the main sources of risk, which may have an adverse effect on Lithuania's exports. Future export development will depend on the ability of sanction-hit producers to find new export markets. The sharp depreciation of the rouble will also contribute to the slowdown in the growth of exports to Russia. Moreover, exports to that country may be further impeded by additional sanctions. Such restrictions would have both direct and indirect negative implications for the development of Lithuania's economy. With the EU countries being Lithuania's main trading partners, a decrease in demand for Lithuania-origin goods in these markets would undermine the dynamics of the country's exports.

⁴ This section reviews nominal data of foreign trade in goods.

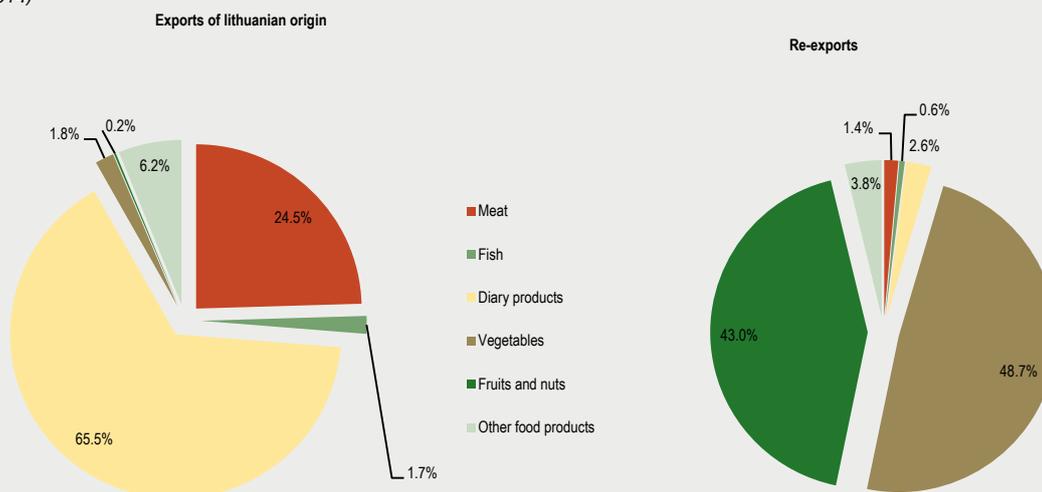
The outlook for exports of petroleum products is rather uncertain: in the short term, such exports may pick up on the back of one-off factors. However, there appears to be no obvious reasons that may suggest a recovery in the fuel market in the medium term. The outlook for fertilizer exports seems much brighter. In particular, AB Achema announced a return to full capacity in October amid improvements in fertilizer prices in export markets. Therefore, fertilizer export performance is likely to improve in the second half of this year.

Box 1. Impact of Russia's import restrictions on Lithuania's economy

On 7 August 2014, Russia announced import restrictions on food products supplied from the EU and other countries. With Russia being an important export partner for Lithuania, these trade sanctions will affect the country's economic development. Russia-bound exports of products, which are currently subject to restrictions, amounted to LTL 3.1 billion in the period under review,¹ which accounted for 3.8 per cent of Lithuania's total exports of goods and 18.7 per cent of the country's exports of goods to Russia.² The sharp decline of exports should directly hit the country's industry, agriculture as well as transport and warehousing. Domestic demand will be affected as well. As compared to the baseline macroeconomic scenario, this shock may shave up to 0.4 p. p. off the growth rate of Lithuania's real GDP in 2014.

The heaviest blow from this fall in Russia-bound exports of goods of Lithuanian origin, which has been triggered by Russian sanctions, will be dealt to the dairy and meat product sectors. A structural analysis shows that 90 per cent of restricted exports of Lithuania-origin goods to Russia represent just two categories of goods. In particular, dairy products account for two-thirds and meat products for a quarter of that volume (see left side of Chart A). The analysis in terms of total output in these sectors reveals that meat products designated for Russia's market account for one-tenth of the total Lithuanian meat production whereas a respective share for dairy products is slightly higher, at approximately 15 per cent. On average, exports to Russia account for approximately one-fourth of the total merchandise exported by companies in these industries, while the rest mainly goes to the EU Member States. Nearly half of the total exports of Lithuania-origin meat and meat products are sent to other Baltic countries, the Netherlands and Italy and nearly half of dairy products of Lithuanian origin are exported to the United Kingdom, the Netherlands, Sweden and Poland. This shows that, as far as the dairy and meat producers are concerned, the Western markets are more significant. However, they have also been targeted by the abovementioned Russia's sanctions, which means that Lithuania's producers of dairy and meat products may find it difficult to boost the volumes of their exports to the Western countries.

Chart A. Restricted exports of goods broken down by product categories (Q2 2013–Q1 2014)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The decline in the exports of Lithuania-origin goods and in re-exports, which has been triggered by these restrictions, will have an adverse impact on the exports of transportation and storage services to Russia. The trade embargo affects one-sixth of Russia-bound Lithuanian re-exports, which mainly consist of vegetables, fruit and nuts (see right side of Chart A). However, this fall in re-exports will have a larger impact on the producer countries of these goods. As regards the effect on the Lithuanian economy, this fall in re-exports will hit the Lithuanian providers of transportation and storage services the hardest. The revenue lost in the transport and storage sectors as a result of trade restrictions may comprise approximately 2.5 per cent of their total revenue.

Trade restrictions introduced by Russia will have a substantial effect on Lithuania's exports of goods and services, which will weigh on the country's macroeconomic indicators. In 2014, the restrictions will affect the performance of foreign trade in the final five months of the year. If an adverse assumption that the exporters will not be able to find new trade partners this year were to materialise, this may knock around 1.5 per cent off the growth rate of the country's total exports in 2014. This shock will also cause negative repercussions on the country's imports – due to a prospective decrease in both re-exports and demand for imports for intermediate and final consumption. However, the decline in imports should be less pronounced as compared to exports hence the contribution of net exports to the growth of real GDP should be negative. Real GDP growth should also be dampened by more subdued development of private consumption and investment. These factors may shave up to about 0.4 p. p. off the growth of Lithuania's real GDP in 2014, as compared to

the growth rate projected in the baseline macroeconomic scenario (see Table A).

Table A. Impact of restrictions in trade with Russia on the growth of Lithuania's key macroeconomic indicators in 2014 (in p. p.)

Indicator	Impact
GDP	-0.38
Private consumption	-0.22
Investment	-0.46
Exports	-1.50
Imports	-1.22
HICP inflation*	0.00
Unemployment rate*	0.08

Source: Bank of Lithuania calculations.

*Impact on the level of the indicator concerned.

In response to trade restrictions, the Lithuanian Ministry of Economy came up with an action plan, which aims to support businesses in search for new markets and to facilitate access to the sources of financing. On 18 August 2014, the Ministry of Economy presented the 2014–2015 Action Plan of the Government of the Republic of Lithuania (hereinafter referred to as the “Action Plan”),³ which outlines measures to diversify Lithuania’s exports and reduce the losses suffered by Lithuania’s undertakings as a result of Russia’s restrictions. The Action Plan, as approved by the government, has the following three main objectives:

- 1) to support businesses in search for new markets and business partners;
- 2) to facilitate access to the sources of financing;
- 3) to enhance economic representation abroad.

To achieve these goals, the Ministry of Economy disbursed LTL 26.77 million in EU structural assistance money, available under the measure “New Opportunities”, to encourage search for new export markets. Moreover, the parliament passed amendments to the Law of the Republic of Lithuania on Welfare and Protection of Animals legalising ritual slaughter of livestock, which should help the producers of meat products find new export markets in other countries.

¹ Unless otherwise specified, the period analysed herein is the period from the second quarter of 2013 through the first quarter of 2014.

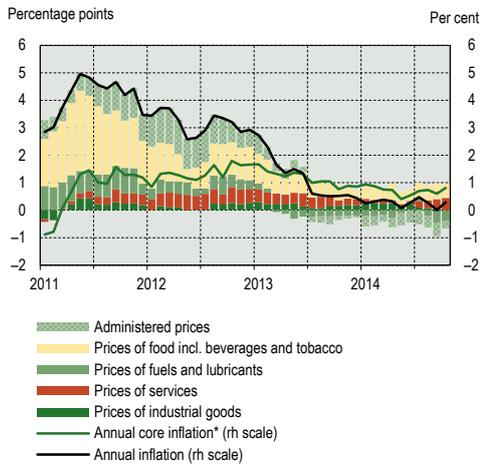
² Goods of Lithuanian origin comprised one-fourth of the total exports that came under the restrictions.

³ Available online at: http://www.lrv.lt/Posed_medz/2014/140820/Veiksmu%20planas.pdf.

V. PRICES AND COSTS

Both headline and core inflation have been low and stable for a while.

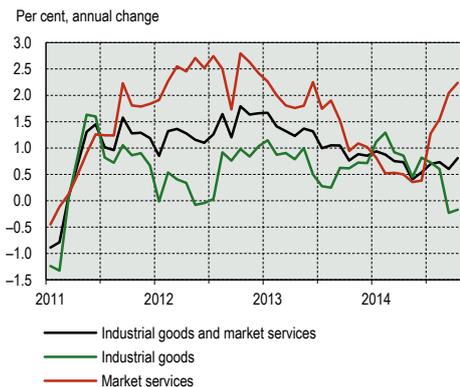
Chart 15. Contributions to annual HICP inflation



Sources: Statistics Lithuania and Bank of Lithuania calculations.
* Change in HICP excl. food, fuels and lubricants, and administered prices.

Prices in different categories, which are included in the core inflation basket, show mixed trends.

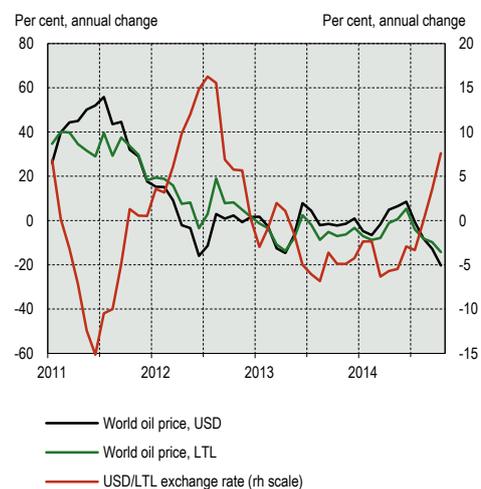
Chart 16. Developments in prices for industrial goods and market services



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The US dollar has been gaining ground versus the litas in recent months. However, only in September it exceeded its year-earlier level.

Chart 17. Global price of crude oil and the US dollar rate



Sources: Bloomberg and Bank of Lithuania calculations.

Annual inflation, as measured by the HICP, has been low and stable for quite a while. Between January and October 2014, the average inflation rate was a meagre 0.3 per cent and the actual monthly rate never deviated much from that average value in that period. More specifically, the monthly rate ranged from the low of 0.0 per cent (in September) to the high of 0.5 per cent (in July). The same can be said of the annual core inflation, which excludes food, energy and administered prices, i.e. the prices which are more vulnerable to external factors. In January through October, the average core inflation rate was also low (of 0.7%) and showed minor fluctuations (from the low of 0.4% to the high of 0.9%). In general, both the headline and core inflation have not changed much since as far back as the middle of 2013.

Annual core inflation was one of the two factors (the other one was the higher than a year before prices for foods), which kept the headline inflation in the positive territory. Other consumer prices (administered prices as well as prices for fuels) recorded a year-on-year decrease. However, the October data signals a deceleration in the pace of decline in administered prices. In particular, the price of heat energy showed a substantial increase (of 8.2%) in October, reversing its previous fall. This rise was mainly triggered by an increase in demand for heat energy at the onset of the heating season, which dampened competition between independent heat producers and triggered a rise in consumption of natural gas (which is more expensive than biofuel) for heat generation. The data made available by the National Commission for Energy Control and Prices has shown a huge increase in the prices of heat in the country's largest cities in October. In particular, the price of heat soared by 26 per cent in Kaunas, by 21 per cent in Klaipėda and by 12 per cent in Vilnius.

Although, as mentioned above, the core inflation has remained stable for a while, the analysis of individual categories, which are included in the core inflation basket, i.e. industrial goods and market services, highlights the differences in price developments. Prices for services kept losing steam for an entire year from the middle of 2013. This, however, was followed by a reversal in mid-2014 and, in just four months, the prices bounced back to the levels last seen in June 2013. This trend was basically caused by several categories of services. The deceleration in the growth of prices and, next, its acceleration was driven by developments in the prices for telephony and catering services. Year-on-year changes in prices for those services were extremely volatile, which can be attributed to both technical factors (base effect) and the actual rise in prices in the final months of the period under review. As compared to services, prices for industrial goods showed a more stable year-on-year growth from the middle of 2013. However, this growth decelerated sharply in mid-2014, in particular due to clothing and solid fuel: the annual inflation rate for clothing turned negative, while the respective rate for solid fuel decelerated sharply (due to a substantial decrease in prices in this category in several recent months).

Low inflation this year has been helped along by consumer-friendly factors both inside and outside of the domestic economy, such as a slump in world commodity prices, the prevalence of low inflation in the euro area (which works its way into prices in Lithuania through imports), and the developments in labour costs in Lithuania, which generated no pressures to core inflation. As far as commodities are concerned, crude oil is worth special mention due to a steep fall in its price in a short period of time. Brent crude traded at around 97 US dollars per barrel in September, which was the first month since June 2012 that the Brent's price stayed below the 100 US dollar mark. In October, the

price fell further to just 87 US dollars, which was one-fifth below its year-earlier level. The current low prices are attributed to a confluence of several factors, including weak demand (in China, Europe, Japan, etc.), abundant supply and the strengthening of the US dollar versus the euro.

It appears that the restrictions introduced by Russia on the imports of foods in August have not had a major effect on the general level of prices in Lithuania. The sanctions were initially expected to augment the supply of respective goods in the Lithuanian market and, accordingly, to drive down their prices. However, the inflation data does not point to a larger impact on consumer prices. Between August and October, prices for products, which were made subject to Russia's import restrictions, followed the usual pattern in Lithuania, i.e. prices for seasonal products (fruit, vegetables) moved broadly in line with the trends observed in respective months of several previous years, while the dynamics of prices for non-seasonal products (meat and dairy products) was broadly unchanged from the previous months of 2014, i.e. before the introduction of restrictions.

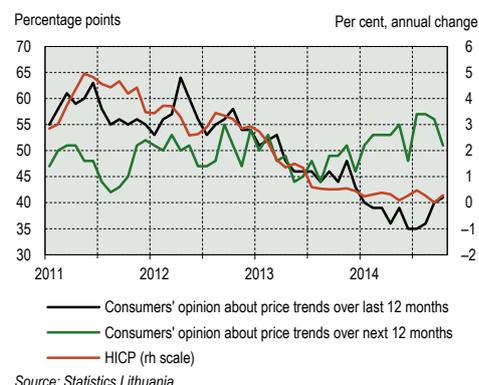
Forecasts of global commodity prices published by international institutions expect those prices to decline. For example, the Economist Intelligence Unit estimated in November that the prices of food, feed and beverages will fall by 5.4 per cent and 6.8 per cent in 2014 and 2015, respectively, and that the price of Brent will decline by 7.1 per cent in 2014 and by a further 13.0 per cent in 2015. Although the oil producing countries continue to be exposed to political risks, which, if materialised, could lead to spikes in prices, the price of crude oil is not expected to stage a swift recovery from its current several years' lows or exceed the 110 US dollar per barrel mark in the middle term. Media reports say that the oil producing countries, such as OPEC members Saudi Arabia and Kuwait, are reluctant to act on the recent slump in prices (e.g. to cut the output), which may be aimed at slowing the expansion of rival producers. It also needs to be kept in mind when interpreting the forecasts of commodity prices that they are denominated in US dollars hence the forecasts that should be considered when measuring their effect (for example, on prices in the euro area and Lithuania) should also include the exchange rate movements.

The US dollar has recently been rallying strongly against the euro, which partly offsets the fall in commodity prices expressed in US dollar terms and makes this decline less pronounced when measured in euros. The depreciation of the euro may contribute to higher inflation both in the euro area and Lithuania. In March 2014, the ECB quantified the impact of the euro's exchange rate on the region's inflation as follows: each 10 per cent permanent effective exchange rate appreciation lowers inflation by between 0.4 and 0.5 p. p.⁵ The euro was gaining ground vis-à-vis the US dollar at that time, therefore, the Bank spoke about the slowdown in consumer price growth. Recently, however, the single currency has been losing value against the US dollar, which means that the inflation would increase. Although the US dollar has been strengthening since spring, it was not until September that its year-on-year gains turned positive. Until then, the US dollar remained weaker than last year; hence the annual changes in commodity prices in litas terms were more favourable for consumers than those in US dollar terms.

In addition to consumer-friendly trends in commodity prices, expectations of continued low inflation in Lithuania are also underpinned by the forecasts of weak growth of consumer prices in the euro area. The inflation forecast for the euro area has been repeatedly revised lower, each time ever downward as the time goes by and more

Although inflation is very low now, something that is perceived by consumers, their expectations index is moving higher.

Chart 18. Results of consumer sentiment surveys



⁵ Introductory Statement to the Press Conference (with Q&A); available online at: <https://www.ecb.europa.eu/press/pressconf/2014/html/is140306.en.html#qa>.

inflation data becomes available. The ECB's surveys of professional forecasters show that, way back in early 2013, inflation in the euro area was expected to be close to 2 per cent in both 2014 and 2015. Meanwhile, the latest forecasts, which were collected from forecasters in the fourth quarter of 2014, suggest that inflation may grow by meagre 0.5 per cent in 2014 before picking up to 1.0 per cent in 2015.

Domestic factors, such as the growth of unit labour costs, are not expected to generate inflationary pressures, either. In line with the current trend, wages will keep rising in the next quarters. This, however, will be accompanied by an increase in productivity, which should keep the growth of unit labour costs on a rather moderate path. Moreover, this growth should slow down from its 2013 pace, which was driven by a substantial hike of minimum wage.

With the changeover to the euro drawing nearer, the index of consumer price expectations has been increasingly pointing upwards. The results of Eurobarometer and other surveys show that, as far as the adoption of the euro is concerned, households predominantly fear price increases. This fear has also been reflected in the recent expectation scores derived from the results of consumer sentiment surveys. Although inflation is very subdued now and its rate, as perceived by households (the gauge reflecting household assessment of consumer price developments in the past 12 months) has been going down as well, the index of expectations (the index reflecting household expectations regarding consumer prices in the next 12 months) has been growing steadily.

Still, the changeover to the euro is expected to have a minor effect on prices. In November, Eurostat published its assessment of the impact of the euro changeover on inflation in Latvia, the newest member of the euro area. It showed that the impact on prices in Latvia was in line with what was observed in countries that adopted the single currency in earlier years and ranged between 0.1 and 0.2 p.p. (the month-on-month rate of price change would have likely been smaller by such a margin had the euro changeover not taken place). The assessment pointed out to an increase in prices for services (such as the repair of household appliances, dental, catering, hairdressing services, etc.) as a result of euro introduction.

Provision of information about consumer prices has been stepped up in order to ensure the monitoring of prices and the protection of consumers in the course of euro changeover. In June 2014, Statistics Lithuania started publishing statistical information about the average retail prices for the main homogeneous consumer goods and services. It will be issued regularly (once a month) until December 2015. The ongoing dual display of prices in both litas and euro will continue in the first half of 2015 and will be followed by a shift towards the display of prices in the single currency in the second half of 2015. Although information has been made available for quite a while, it can hardly be used to draw any conclusions about the potential impact of the euro, in particular due to strong seasonal effects on changes in prices for goods and services (end-of-season sales, new fashion collections which include clothes and footwear, etc.).

VI. CREDIT AND DEPOSITS⁶

The portfolio of loans issued by the MFIs showed a decline in the first three quarters of 2014. In September, it was 1.2 per cent smaller than in the previous year. This decrease in loan portfolio was mostly driven by the repayment of loans granted by banks to the general government sector and non-financial corporations. The business loan portfolio displayed stronger volatility in the middle of 2014 and at the end of the third quarter. Its slight increase in individual months resulted from one-off deals. At the same time, the housing loan portfolio experienced steady growth.

The financial health of the banks' top borrowers – businesses and households – showed improvements, consumption and investment increased. Despite that, the demand for loans from banks remained subdued. As the year reached its halfway stage, the annual sales revenues of non-financial corporations hit their highest point since the beginning of data collection while the profit earned reached the highest level since the economic downturn of 2009. Although two thirds of non-financial corporations operated profitably in that period, their future expectations took a big turn for the worse (the economic sentiment indicator turned negative) in the third quarter of 2014, weighed down by increased geopolitical tensions between Russia and Ukraine and continued uncertainty about demand. As a result, corporates remain cautious in their investment and investment financing decision-making and tend to use in-house resources or the alternatives to bank credit (e.g. loans from other companies, EU assistance, overdue payments, etc.). Moreover, MFIs take a mixed approach towards lending to different economic activities. For example, lending to energy and transport sectors has recently picked up, whereas lending to construction and real estate activities continued to decrease. Consumer confidence worsened as well in the third quarter of 2014, although households were in a better financial situation than before. Improvements in households' financial health were fuelled by the employment and wage growth. The proportion of households, which intend to purchase a durable item (e.g. a house or a car) within the next year, increased in the first half of 2014. The sources used to finance such purchases may include borrowings, which would fuel growth in the portfolio of MFIs' housing loans to households as well as in the portfolio of loans extended by leasing companies to private persons.

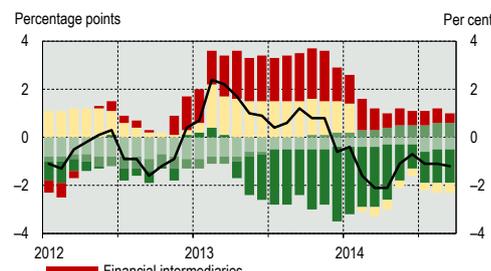
The recovery of loan portfolio may be expected to pick up in the future if geopolitical tensions in the Eastern Europe do not flare up and the economy develops in line with forecasts. This assumption builds upon improvements in the financial situation of the private sector, growing needs to upgrade or replace worn-out equipment, households' plans to purchase durable consumer goods. Some of these spending requirements may be financed with borrowings, in particular as the non-price credit conditions applied by banks are getting more attractive and the interest rates remain low (3.1% in September 2014). The commercial banks surveyed by the Bank of Lithuania also expect an increase in demand for credit. However, the risks that such expectations may not materialize remain in place.

Deposits with the MFIs kept growing in the third quarter of 2014.

The largest annual increase was recorded in deposits of the private sector, including households and non-financial corporations, which,

The loan portfolio of MFIs showed a decline in the first three quarters of 2014.

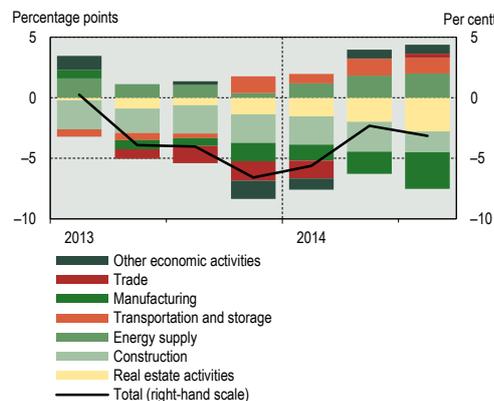
Chart 19. Contributions to annual changes in MFIs' loan portfolio



Source: Bank of Lithuania calculations.

MFIs take a mixed approach towards lending to different economic activities.

Chart 20. Contributions to annual changes in MFIs' portfolio of loans to non-financial corporations

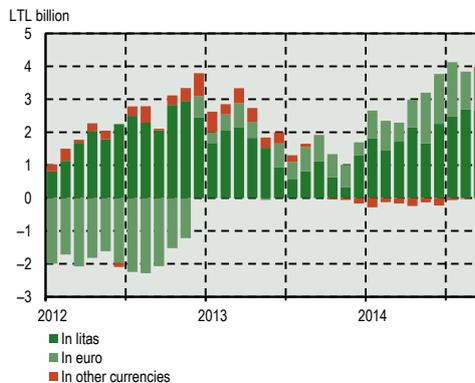


Source: Bank of Lithuania calculations.

Note: Names of certain economic activities are abbreviated.

Residents' deposits with the MFIs showed rapid growth, the share of euro-denominated deposits increased.

Chart 21. Changes in deposits with the MFIs broken down by currency (annual change)



Source: Bank of Lithuania calculations.

⁶ In this section, the data used for the evaluation of loans and deposits includes the data for the MFIs, as provided by the Statistics Department of the Economics and Financial Stability Service of the Bank of Lithuania and adjusted to take account of recent bankruptcies and mergers in the sector concerned. It may differ from the data collected from banks for supervisory purposes.

resulted from the growth in borrowing by the general government sector and in income from abroad (net exports, income and capital transfers). That growth, however, was partly offset by the continuing decrease in net financial liabilities. The structure of bank deposits underwent certain changes, namely, an increase in overnight and euro-denominated deposits.

VII. GENERAL GOVERNMENT FINANCE

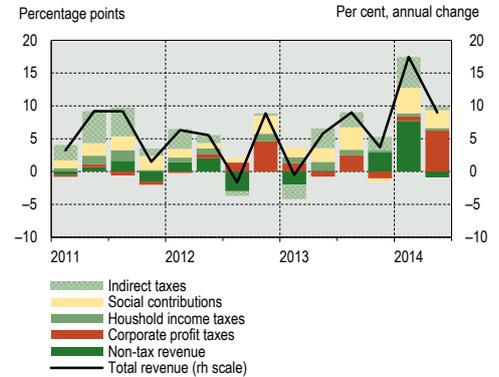
The financial condition of the general government continued to improve in the first half of 2014. In the second quarter of 2014, the ratio of four-quarter general government deficit to GDP came in at 1.1 per cent, which is less than a half of the rate recorded in the same period of 2013. Improvements in the general government balance mainly resulted from a decrease in central government budget deficit, whereas contributions from the extra-budgetary funds and local government balances, which showed more modest improvements, were less substantial. The decrease in central government budget deficit was mainly due to the annual increase of more than one-tenth in this budget's revenue from taxes, in particular value added tax and corporate income tax. The deficit of local governments narrowed as a result of improved revenue, which exceeded the target against the backdrop of improvements in the labour market and administrative changes (an increase in the proportion of revenue from personal income tax earmarked to municipalities). Social security funds were the only general government subsector to show a year-on-year increase in deficit in the first half of this year. This rise was triggered by an increase in expenditure as a result of appropriations to compensate reduced retirement and work incapacity pensions several years ago.

In the first half of the year, changes in methodology and tax administration dampened the impact of economic growth on the general government revenue. The ratio of general government revenue to GDP increased to 34.2 per cent in January through June 2014, from 32.6 per cent in the same period last year, mainly as a result of larger capital transfers received as well as bigger tax revenue and social contributions. The rise in capital transfers was triggered by an increase in asset sale proceeds following the integration of the deposit and investment insurance company *VĮ Indėlių ir Investicijų Draudimas* into the general government sector. The revenue from corporate income tax grew at a faster pace than its tax base (gross operating surplus), which is proved by their effective ratio that increased by an annual 1.2 p. p. in the first half of 2014, mostly due to an earlier annual corporate income tax payment deadline, as compared to last year. The growth of revenue from corporate income tax was also fuelled by an increase in taxable profit and improvements in corporate profitability expectations. The growth of payroll fund, which continued for several consecutive quarters, provided grounds for the growth of social contributions. However, the collection of such contributions was also influenced by other factors in the first half of the year, which can be seen from the analysis of the effective ratio between social contributions and wages. This ratio improved by 0.6 p. p. in the first half of the year from a year earlier, mainly due to revisions of calculation methodology. The increase in payroll fund also had a positive effect on other macroeconomic indicators. In particular, the growth in household consumption expenditure and retail sales led to an increase in indirect taxation revenue. The year-on-year increase in VAT revenue in the first half of 2014 actually matched the growth of tax base.

The growth of general government expenditure in the first half of the year was mainly driven by the decision to compensate for cuts in pensions. Still, the ratio of general government expenditure to GDP declined to 35.3 per cent in the first half of 2014, from 36.5 per cent in the same period a year ago. Nominal expenditure rose by approximately 3 per cent year-on-year, mainly due to spending on intermediate consumption goods and services, an increase in expenditure on compensation of employees and capital transfers as well as a rise in investment. The growth of compensation of employees was mainly triggered by an increase in average wages in the general government sector in the first

In the first half of the year, the growth of general government revenue was mostly driven by larger social contributions and corporate income tax revenue, increased transfers of EU funds as well as asset sale proceeds.

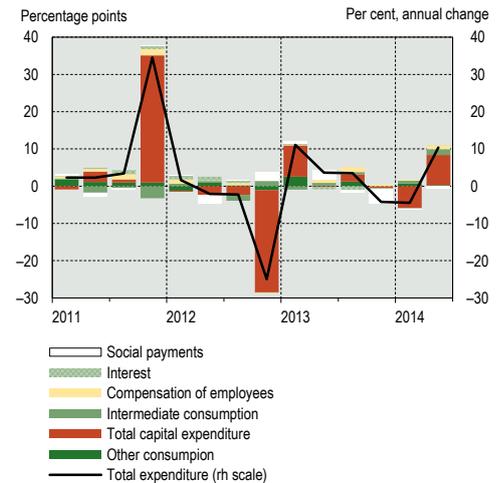
Chart 22. Contributions to the development of general government revenue



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The growth of general government expenditure in the first half of the year was mainly driven by the decision to compensate for cuts in pensions.

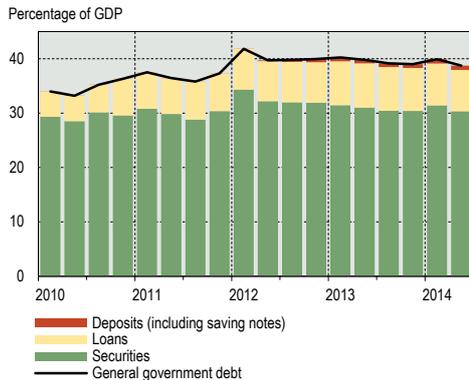
Chart 23. Contributions to the development of general government expenditure



Sources: Statistics Lithuania and Bank of Lithuania calculations.

The ratio of general government debt to GDP continued to decrease in the first half of 2014 amid favourable macroeconomic context⁷.

Chart 24. General government debt



Sources: Ministry of Finance and Bank of Lithuania calculations.

half of 2014 as a result of the Constitutional Court's ruling, which restored the positional salary coefficients of public officers as well as their qualification bonuses back to the level of 2009, effective from October 2013. The increase in investment spending mainly reflected a rise in allocations of EU and co-financing funds for the decommissioning of Ignalina Nuclear Power Plant. Appropriations for the compensation of pension cuts made the biggest contribution to the growth of capital transfers in the first half of 2014. It should be noted that the general government accounts of the first half of 2014 include the whole amount of compensations, which is necessary to fully implement the ruling of the Constitutional Court, although the government agreed in May 2014 to limit compensations to retirement and work incapacity pensions. Integration of *VĮ Indėlių ir Investicijų Draudimas* into the general government sector provided additional impetus for the growth of capital transfers in the first half of 2014. On a side note, this integration of the deposit and investment insurance company led to substantial revisions of the general government expenditure data for previous years and was the main cause of upward revisions to previously reported fiscal deficits.

General government debt, as measured in the national currency, increased by LTL 0.8 billion in the first half of 2014 in year-on-year terms. However, its ratio to the aggregate amount of four-quarter GDP decreased to 38.8 per cent as a result of fast growth in gross domestic product. In nominal terms, the debt showed an increase, which was mainly triggered by growth in long-term government securities portfolio and the number of saving notes issued in the domestic market. The decrease in debt-to-GDP ratio was driven by a substantial decline in the general government primary deficit in the first half of 2014 as well as by a favourable difference between the average interest rate paid for the debt and the pace of economic growth. A breakdown by institutional sectors shows the biggest increase in debt for the central government and social security funds in the first half of the year as a result of government securities issued on international markets and loans obtained from domestic commercial banks. The debt of local governments showed a minor year-on-year increase in the first half of the year. However, this increase calls in question the ability of the local government sector to reduce, by the end of 2014, its existing overdue debts by at least 10 per cent from the level recorded on 1 January 2014, as established in the law of the Republic of Lithuania on the Approval of Financial Indicators of the State Budget and Municipal Budgets of 2014. The fiscal discipline of both municipal and public finances as a whole may improve in the course of next year as a result of the Constitutional Law of the Republic of Lithuania Implementing the Fiscal Compact, which was adopted by the Seimas of the Republic of Lithuania on 6 November 2014. This legislative act will tighten fiscal discipline for two key reasons. Firstly, it provides for the management of the entire general government balance in structural terms, instead of nominal. Secondly, compliance with the provisions of this law will be monitored by an independent Budget Policy Control Institution. The functions of this supervisory authority have been assigned to the National Audit Office.

⁷ This means that the "snowball" effect, which indicates the effect from the interest rate paid for the debt and the growth of economic output to the government debt to GDP ratio, was favourable. The law of motion of the debt-to-GDP ratio is usually defined as follows: $d_t = (1 + r) / (1 + g) d_{t-1} - p_t + a_t$, where: d is the debt-to-GDP ratio, p is the general government primary deficit to GDP ratio, a is the general government balance and debt change difference (also called debt change adjustment) to GDP ratio. $(1 + r) / (1 + g)$ shows the "snowball", where r is the interest rate paid for debt and g is the growth of economic output.

ANNEXES

ANNEX 1. Household⁸ disposable income: structure, evolution and relationship with household consumption

Household consumption expenditure accounts for the highest share of GDP. The development of household consumption is influenced by a number of factors, the main of which, as identified in the economic theory, is the household disposable income. In simplest terms, household disposable income can be defined as the sum of households' income, which they can use freely after paying all their mandatory liabilities. Although this definition captures the essence of household disposable income, it does not show the types of activities such income is accrued from. Meanwhile, there are many sources of household disposable income. The same is true about mandatory liabilities. An understanding of the structure of such income is necessary in order to perceive and thoroughly analyse its evolution and to identify the factors, which have the biggest impact on the development of household disposable income in a given period. The main purpose of this Annex to the Lithuanian Economic Review is to show the structure of household disposable income and its evolution to the reader. As a first step, the Annex describes the principles applied to compile household disposable income and the main sources of household income, which is followed by the analysis of household disposable income evolution between 1996 and 2012.

The easiest way to find out the structure of household disposable income is to analyse the double-entry accounts (see Table A). Such accounts fully and clearly define the income received by households (which is called "resources" in economic statistics) as well as their expenditure (the so-called "uses"). The difference between certain income received by households and their expenditure is called the "balancing item" and household disposable income is one of such items. Table A shows that household disposable income is calculated in four stages, which are divided into separate accounts, i.e. production, generation of income, allocation of primary income and secondary distribution of income. The production account measures the *value added* generated by households, which is distributed between the production factors and general government in the generation of income account. This enables to determine *mixed* of households, i.e. the income derived by households through their production factors (e.g. real estate or farm equipment). *Mixed income* is one of the types of household *primary income*, which the households generate through direct involvement in the production process. *Primary income* is assessed in the allocation of primary income account. In addition to *mixed income*, *primary income* also includes the income generated by households from employment or from putting of their financial assets at others' disposal (e.g. dividend, interest on deposits). The last account – of secondary distribution of income – measures the monetary flows that are not related to production activities. Redistribution of income, which is undertaken by the government, accounts for the bulk of these flows. The adjustment of household primary income for the abovementioned flows yields household *disposable income*, which, once established, opens up an easy way to measure household *saving*, which is calculated as a difference between household disposable income and final consumption expenditure.

Table A shows a comprehensive structure of household disposable income and saving, which encompasses all sources of income related to disposable income as well as expenditure. This division, however, is not convenient for analysing the evolution and structural changes of household disposable income and saving. A clearer picture of developments in the structure of household disposable income and saving can be obtained from net flows, i.e. the difference between income and expenditure. As part of this transformation, it would be the most appropriate to divide household disposable income into the following 8 categories:

Table A. Household disposable income and saving in 2012 (LTL millions, at current prices)

Uses	Transactions	Resources
Production account		
	Output	21,042
9,106	Intermediate consumption	
11,936	Value added	
Generation of income account		
	Value added	11,936
1,621	Compensation of employees	
84	Taxes on production	
	Subsidies on production	121
10,352	Mixed income	
Allocation of primary income account		
	Mixed income	10,352
	Compensation of employees	44,702
598	Interest	560
	Distributed income of corporations	18,328
	Property income attributed to insurance policy holders	112
103	Rent	41
73,393	Primary income	
Secondary distribution of income account		
	Primary income	73,393
4,068	Current taxes on income, wealth, etc.	
13,664	Social contributions	3
3	Social benefits	14,390
339	Net non-life insurance premiums	
	Non-life insurance claims	268
107	Miscellaneous current transfers	2,493
72,364	Disposable income	
Use of disposable income account		
	Disposable income	72,364
	Adjustments for the change in net equity of households in pension funds reserves	256
71,979	Final consumption expenditure	
642	Saving	

Source: Eurostat.

⁸ The term "households", as used in this Annex, denotes two institutional sectors, i.e. households (S.14) and non-profit institutions serving households (S.15).

- *Value added.* It is generated by sole proprietorships without legal status (e.g. farmers, traders, taxi drivers, hair-dressers) and households as producers of goods and services for own final consumption (e.g. agricultural products retained by farmers or imputed rent).
- *Compensation of employees.* Total remuneration received by households in cash or in kind, which is paid by employers to employees in return for hired labour. This category of disposable income also includes social contributions paid by employers.
- *Taxes on production.* These taxes are paid by sole proprietorships engaged in the production of goods or provision of services. These taxes are payable independent of the quantity or value of the goods and services produced or sold. They include, for example, taxes paid for business and professional licences if these licences are granted automatically on payment of the amounts due. It should be noted that taxes on production, as part of disposable income structure, have a negative value since this indicator always has a reducing effect on household disposable income.
- *Subsidies on production.* These may be received by sole proprietorships engaged in production, e.g. grants for interest relief. It should be noted that subsidies on production exclude the much more prevalent subsidies on products, which are payable per unit of a good or service produced or imported.
- *Property income.* This income accrues when households, as the owners of financial assets, put them at the disposal of other economic entities. Property income includes distributed income of corporations⁹, interest, property income attributed to insurance policy holders and rent. Distributed income of corporations usually comprises the bulk of property income. It includes dividends paid to households by corporations and the amounts, which households withdraw for their own use from the profits earned by the quasi-corporations¹⁰ which belong to them. Household interest income is derived from holdings of deposits and securities, such as treasury bills or bonds. This income needs to be adjusted for interest paid by households for mortgage and consumer loans. Household property income attributed to insurance policy holders is received from the investment of technical reserves, which are built by insurance corporations or pension funds from household contributions. The contribution of this income to household income is rather theoretical since its availability to households remains restricted until the expiry of a respective insurance contract. Household income from rent includes the amounts received by households for the rent of land and exploration or extraction of deposits of minerals or fossil fuels. It should be noted that such rent does not include the rentals of buildings or dwellings, which are recorded as household value added.
- *Current taxes on income, wealth, etc.* These include a personal income tax, a tax on land, a real estate tax, taxes on holding gains, on winnings from lotteries or gambling and other similar charges. Same as taxes on production, these taxes, as part of disposable income structure, have a negative value since this indicator always has a reducing effect on household disposable income.
- *Net social benefits.* These are derived as a difference between social benefits received by households and the social contributions payable. Contributions to the state insurance fund account for the bulk of social contributions. These are paid by employers, employees, self-employed and unemployed persons. Payment of social contributions secures households' entitlement to social benefits, which cover a range of insured risks, such as old age (pensions), sickness, maternity, occupational accidents or unemployment. Moreover, social benefits include payments to families entitled to social income support. Net social benefits act as an automatic stabiliser hence the value of this indicator may be either negative or positive.
- *Current transfers.* These transfers cover miscellaneous monetary flows unrelated to production activities. For example, remittances received by households from abroad comprise the bulk of such flows in Lithuania. Current transfers also include non-life insurance claims, which are paid in compensation for damage resulting from an insured event, as well as many other monetary flows.¹¹ The latter, however, account for a marginal share of current transfers received by households.

The breakdown of household disposable income, as described above, is shown in Table B.

⁹ The European national accounts define corporations as institutional units whose economic and financial activities are different from those of their owners. Corporations are divided into financial corporations and non-financial corporations. Financial corporations are engaged in financial intermediation and auxiliary financial activities. Meanwhile, non-financial corporations are involved in the production of market goods and non-financial services.

¹⁰ Quasi-corporations are entities which keep a complete set of accounts but have no legal status. They have an economic and financial behaviour that is different from that of their owners and similar to that of corporations. They are therefore deemed to have autonomy of decision and are considered as distinct institutional units.

¹¹ As far as the ESA95, the European System of National and Regional Accounts, is concerned, miscellaneous current transfers are taken to include current transfers to non-profit institutions serving households (which includes all voluntary contributions, membership subscriptions and financial assistance, which such institutions receive from households), current transfers between households (all transfers in cash or in kind made, or received, by resident households to, or from, other resident or non-resident households), fines and penalties (fines and penalties imposed on households by courts of law or quasi-judicial bodies), lotteries and gambling, payments of compensation (payments to households in compensation for injury to persons or damage to property inflicted by other institutional sectors, not including payments of non-life insurance claims. This includes payments in compensation for injuries or damage caused by natural disasters, not including capital transfers).

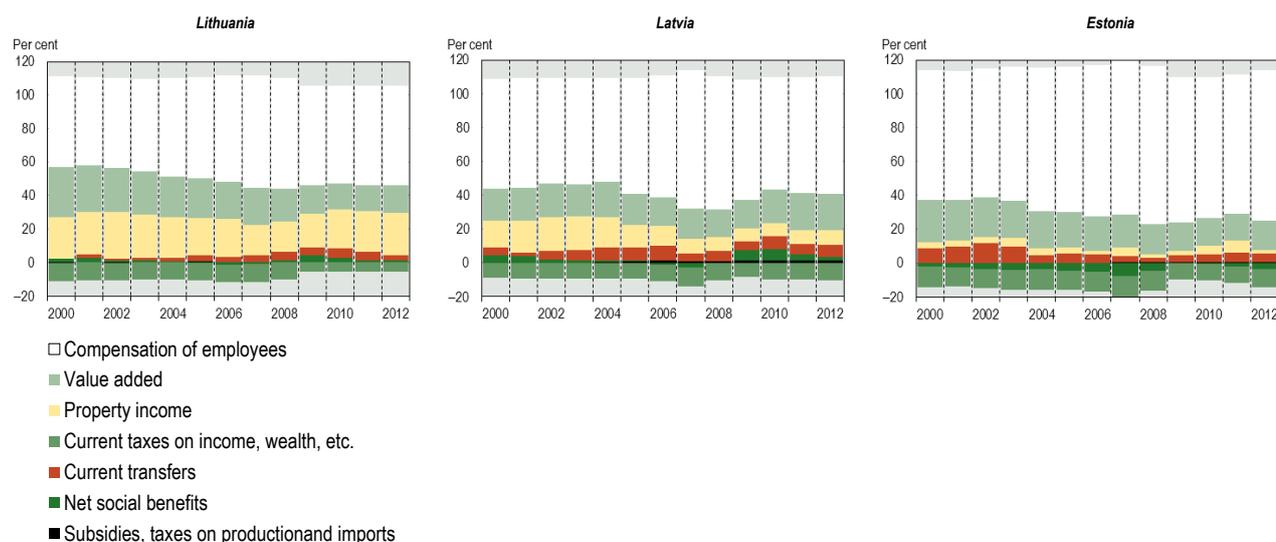
Table B. Household disposable income and saving
(LTL millions, at current prices)

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Value added	10,083	11,096	11,857	13,205	14,089	11,249	10,418	10,976	11,936
Compensation of employees	24,388	28,507	34,319	40,585	47,329	39,524	38,690	41,356	43,081
Taxes on production	-69	-78	-73	-85	-100	-76	-102	-82	-84
Subsidies on production	123	321	218	247	128	218	77	110	121
Property income	10,108	10,514	12,402	11,221	12,922	13,362	15,405	16,921	18,339
Current taxes on income, wealth, etc.	-4,283	-4,978	-5,648	-6,556	-7,381	-3,819	-3,590	-3,878	-4,068
Net social benefits	128	-97	-646	-520	888	2,553	1,920	869	725
Current transfers	974	1,828	1,604	2,280	3,639	3,143	3,868	3,469	2,314
Household disposable income	41,452	47,115	54,035	60,377	71,514	66,155	66,687	69,740	72,364
Saving	335	452	476	-2,542	-791	3,580	5,494	2,923	642
Saving rate, per cent	0.80	0.95	0.87	-4.15	-1.09	5.38	8.20	4.17	0.88

Source: Eurostat.

Chart A and Table B show that compensation of employees accounts for the largest share of household disposable income in Lithuania. In 2012, it comprised nearly 60 per cent of the total household disposable income. Another substantial source was property income, which accounted for one-fourth of the total household disposable income. A substantial contribution to household disposable income also comes from value added, which accounted for 16 per cent of the total household disposable income in 2012. Contributions to disposable income coming from current transfers (3%) and net social benefits (1%) are much smaller. The share of subsidies on production was negligible. As regards the abovementioned taxes on production and current taxes on income, wealth, etc., a substantial impact on household disposable income was only made by the latter category, which amounted to nearly 6 per cent of the total household disposable income in 2012. Table B also shows the evolution of household saving rate. According to the data available for 1995–2012, Lithuania's households saved 2.5 per cent of disposable income on average. Although the saving rate of Lithuania's households is substantially lower than the respective EU average (12.5%), it does not differ much from the trends observed in other Baltic countries. The household saving rate in Estonia is 2.9 per cent and in Latvia – 1.3 per cent.

Chart A. Structure of household disposable income in the Baltic countries, at current prices



Sources: Eurostat and Bank of Lithuania calculations.

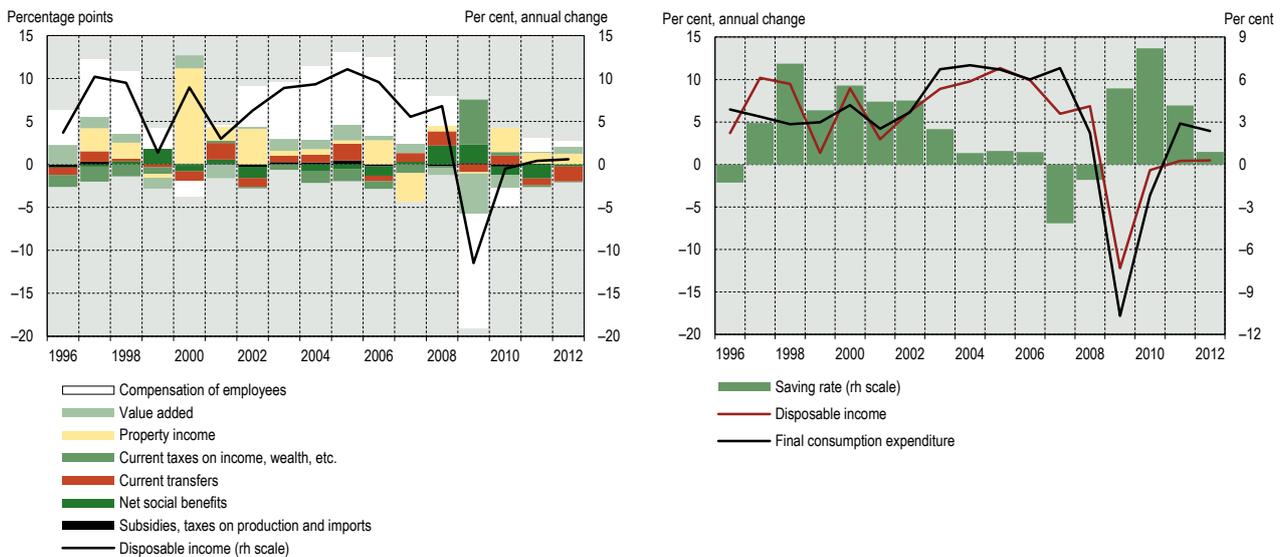
Although the saving rates in the Baltic countries are broadly similar, Lithuania's household disposable income differs substantially in structure from such income in other Baltic countries (see Chart A). In Latvia and Estonia, the share of household income from compensation of employees is way more substantial as compared to Lithuania. In 2012, such income comprised nearly 70 per cent of the total household disposable income in Latvia and close to 90 per cent in Estonia. The shares of household disposable income from property differ as well. In Lithuania, such income accounts for nearly one-fourth of the total household disposable income, whereas in Latvia and Estonia, the respective shares are substantially smaller, of 9 per cent and 2 per cent, respectively. Yet another significant difference concerns the shares of current taxes on income, wealth, etc. in the structure of disposable income in Lithuania and other Baltic countries. The share of such taxes is less than 6 per cent in Lithuania, whereas in Latvia and Estonia, the respective shares exceed 10 per cent. Differences can also be seen in the shares of income accrued from the value added generated by households. Such shares range from 16 per cent in Lithuania to 17 per cent in Estonia and 21 per cent in Latvia.

The structure of Lithuania's household disposable income, as described above, has not always been the same. In fact, it underwent many changes over the period covered by this analysis. One of the key changes concerns the decrease in the share of household income from value added, which is mainly related to a decrease in self-employment in agriculture. Increase in the share of property income was driven, *inter alia*, by the growth of Lithuania's economy and, apparently, by the favourable taxation system. Some of the substantial changes in the structure of household disposable income were triggered by the global recession. A tax reform, which was implemented in Lithuania at the end of 2008 against the

backdrop of economic deterioration, nearly halved the ratio of current taxes on income, wealth, etc. to household disposable income from 2009. Economic downturn also affected the flows of current transfers. Unhealthy economic situation in Lithuania fuelled emigration as well as the inflows of current transfers to Lithuania. Current transfers as a share of household disposable income soared more than twofold and stayed broadly unchanged until 2102. The evolution of other components of household disposable income, such as net social benefits and compensation of employees, is closely linked to the economic cycle.

Up until now, household disposable income has been analysed in nominal terms, i.e. at current prices. The analysis of nominal values helps assess the evolution of disposable household income in terms of structure. However, it does not provide evidence of an increase, if any, in household purchasing power, which can be determined through the analysis of real household disposable income, with the addition of the private consumption deflator (see Chart B). Chart B shows the growth in the real household disposable income in the period analysed. However, that growth was uneven. Taking into account the dynamics of economic indicators, the evolution of household disposable income may be divided into 6 periods: of fast growth (in 1996–1998 and 2002–2008), downturns (1999 and 2009) and recovery (2000–2001 and 2010–2012).

Chart B. Contributions to changes in household disposable income and evolution of saving rate, at constant prices



Sources: Eurostat and Bank of Lithuania calculations.

Between 1996 and 1998, i.e. from the beginning of data publication until the financial crisis in Russia, households increased their disposable income from all key sources. This growth in household income might be attributed to improvements in the shape of the economy and solid economic growth (in 1996, the country's GDP rose by 5.2%, in 1997 – by 8.1%, and in 1998 – by 7.6%). Although employment remained virtually unchanged in that period, domestic investment surged by one-fifth each year, which drove business productivity gains and paved the way for growth in wages. Successful performance of Lithuania's businesses also contributed to the growth in household income from asset holdings. Household income from value added grew at the slowest pace in that period, which is mainly explained by less favourable developments in the agricultural sector. Strong economic growth also provided an opportunity for households to save. Fast growth in household income, coupled with limited consumption, led to an increase in household saving rate, which reached one of its highest levels in the history of published data in 1998.

In 1999, the Russian financial crisis thwarted the fast growth of Lithuania's economy and, simultaneously, of household disposable income. Lithuania's exports of goods to Russia, which accounted for more than one-third of the country's total exports in 1998, plummeted by more than 60 per cent in 1999. Such a sharp fall in export volumes sent shock waves across the small and open Lithuanian economy dampening activity in many economic sectors. Weakening activity led to a decrease in household income derived from property and value added. The decrease in these incomes was offset by an increase in net social benefits triggered by a rise in unemployment rate, which reached its historic highs at that time. In fact, household income from labour relations grew as well, driven by developments in wages, which still continued growing at a fast pace. Positive effects from the latter two factors proved to be sufficient to generate a 1.5 per cent increase in real household disposable income in 1999. It should be noted, however, that a substantial deceleration in the growth of disposable income at that time did not lead to a substantial slowdown in the growth of household consumption.

The downturn of Lithuania's economy triggered by the Russian financial crisis was short-lived. The economy recovered as early as in 2000 generating a 3.6 per cent increase in activity. In 2001, the growth accelerated to nearly 7 per cent. The economic recovery was mostly driven by the redirection of Lithuania's exports from eastern to western markets. Such redirection fuelled the growth of corporate sales and profits both in the tradable sector and the non-tradable sector serving the former sector's industries. This supported household income generated from property, which was virtually the only type of income to drive the growth of household disposable income between 2000 and 2001. Strong corporate performance at

that time was also underpinned by the labour market trends, in particular by extremely high unemployment due to which businesses felt no pressure to increase wages. As a result of this situation in the labour market, real household income derived as compensation of employees showed a decline in 2000 and 2001. Household disposable income was also constrained by net social benefits as a result of a hike in social contributions in 2000. Despite the economic recovery, challenges in the labour market at that time suppressed household appetite for spending hence the household saving rate did not decrease.

It did not take long for the Lithuanian labour market to overcome this stagnation. Brisk growth of the economy and investment made by businesses to upgrade their equipment fuelled labour productivity gains, which paved the way for wages to achieve sustainable growth as early as in 2002. However, the period when the growth of wages was broadly aligned with productivity gains did not last long. It ended in 2004 with the acceleration of wage growth. This period marked the beginning of fast growth of household disposable income, which only ended in 2009. It was fuelled by the explosive growth of payroll fund, which, in its turn, was driven by swift economic development and labour shortfall. Although the quantitative and qualitative labour mismatch remained a perennial problem throughout the period covered by this analysis, it became ever more pressing after Lithuania's accession to the EU in 2004, which led to a surge in emigration to some EU Member States, which opened up their labour markets, and exacerbated the shortage of labour. Improvements in household and business expectations gave rise to a real estate bubble, which was further fuelled by extensive lending provided by monetary financial institutions for property development projects on very easy terms. Fast growth in construction, accompanied by growth in the output and services produced by the activities serving the building industry, fuelled the demand for labour, which, given the short supply of skilled labour, led to a fast rise in wages. Soaring wages and employment fostered the growth of household disposable income, which further added to positive household sentiment about the economy and encouraged households to spend more and save less (in 2007–2008, the household saving rate even turned negative). These mutually supportive factors reached the peak in 2007, when real wages surged by more than 16 per cent year-on-year and the unemployment rate fell to nearly 4 per cent. This explosive growth of wages and favourable employment developments turned household income from labour relations into the main driver of growth of household disposable income between 2002 and 2008. Also worth the mention is the very fast growth of household income from current transfers, which was fuelled in that period by intensified emigration from Lithuania. However, their impact on the total household disposable income was relatively small. As far as other sources of income are concerned, their impact on household disposable income in that period was rather weak. This highly benign environment in the market for hired labour triggered a decline in self-employment, which, in its turn, led to a sluggish growth of income from the value added created by households. The growth of household property income was subdued as well.

The global economic crisis dented the explosive growth of household disposable income. In view of disruptions of liquidity in global interbank markets and the growth of interest rates, monetary financial institutions adopted a more cautious approach towards credit risks and tightened their borrowing requirements. As new credit flows dried up and, due to the weakening of external demand, businesses started to cut wages and scrap jobs, domestic demand slumped and real estate prices declined. Economic conjuncture of these events led to a fall of more than 14 per cent in economic activity in 2009. Against such economic backdrop, household disposable income also showed a substantial decrease, in particular due to falls in compensation of employees, in value added created by households and in current transfers. In 2009, the decrease in the abovementioned sources of income was somewhat offset by net social benefits, which were driven by the principle of automatic stabiliser. However, their effect in 2010 and 2011 was negative as a result of legislative amendments. The economic downturn again forced the Lithuanian households to take a more cautious approach towards future outlook and prompted them to increase saving. As a result, the household saving rate showed a substantial increase.

The latter downturn, same as in 1999, was short-lived and the Lithuanian economy returned to the growth path in 2010. Similar to the previous post-crisis period, the way for economic recovery was paved by successful activity of the tradable sector's operators, coupled with businesses from the non-tradable sector serving the tradable sector of the economy. This led to improvements in corporate financial performance and, given the absence of need to finance of investment projects, to an increase in household property income. In 2010, as the situation in the labour market continued to deteriorate, the growth of household income was driven by current transfers from residents working abroad. In 2011, however, the situation changed: the role of the "engine" driving the growth of household disposable income was taken over by compensation of employees while the inflows of current transfers started to decrease. Still, the growth of household income from compensation of employees was sluggish during this recovery period since the businesses felt no pressure to increase wages as unemployment remained very high. Consequently, the real household disposable income grew at an average annual rate of meagre 0.2 per cent between 2010 and 2012. Economic recovery had no immediate reducing effect on households' incentives to save hence the household saving rate soared to 8.2 per cent, its highest level in the history of this published data, at the onset of the recovery (in 2010). Later, however, the saving rate started to decrease alongside improvements in the labour market.

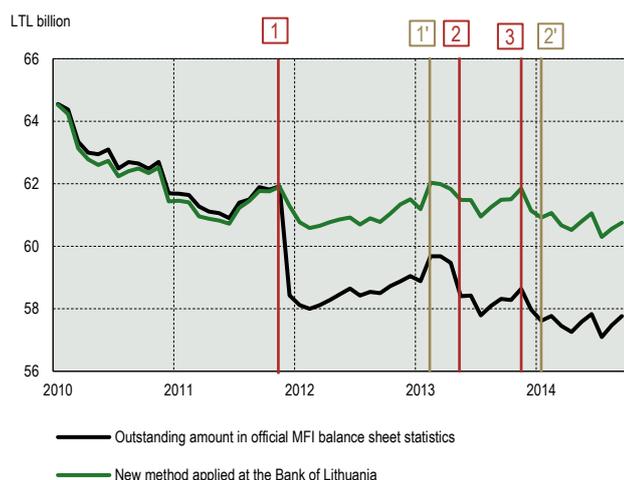
The analysis of evolution of the Lithuanian household disposable income highlights the role of compensation of employees among the sources that had the largest impact on the developments of this income. That compensation accounted for more than half of household disposable income throughout the period analysed and had by far the biggest impact on its developments. Although the impact from other sources of income is less significant, their evolution cannot be left out from the analysis. Developments in compensation of employees and other sources of income often follow different

paths hence the trends observed in household disposable income and in compensation of employees received by households may also differ substantially. Unfortunately, the data currently made available by Statistics Lithuania is only sufficient to study the developments in household disposable income up till 2012. Household disposable income data is provided at annual frequency and with a substantial delay, which limits its use for economic monitoring of the current period. This prompts the analysts to calculate the estimates of household disposable income on a quarterly basis.

ANNEX 2. MFI loan portfolio adjustment for technical factors

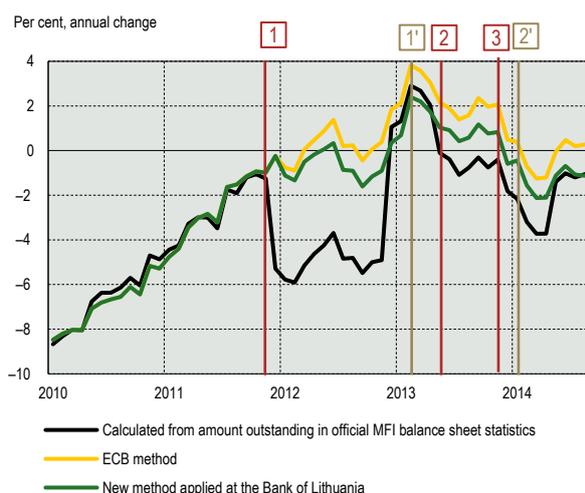
This annex describes the methodology of data correction, which aims to provide an estimate of loan portfolio of monetary financial institutions (MFI), cleared of the factors unrelated to economic transactions. This is all the more important for the period between November 2011 and April 2014, during which several banks and credit unions were stripped of their business licences or discontinued operations in Lithuania (see Charts A and B). In line with the methodology applied by the Bank of Lithuania and the ECB for the compilation of MFI balance sheet statistics, which is used for monetary policy analysis, the MFI balance sheet and monetary statistics exclude the balance sheet data of such institutions, which has led to structural breaks in the reported data of MFI loan portfolio outstanding amounts. In order to make such data suitable for macroeconomic analysis, MFI loan portfolio developments can be measured on the basis of transaction data, which is part of MFI balance sheet statistics and which eliminates the effects of some technical factors, such as reclassification, write-downs and write-offs, exchange rate movements. However, such data does not show the changes related to loans, which have been securitised or transferred, or the amortisation of the loan book of the institutions eliminated from the MFI list, therefore, the measurements of portfolio developments may lack precision. Due to these reasons, the Bank of Lithuania produces a loan portfolio estimate, which also excludes additional technical factors and is used for economic analysis and modeling. Charts A and B show differences in loan portfolio developments, which become apparent when using the standards of financial transaction accounting (hereinafter referred to as the “ECB method”) and the methods applied by the Bank of Lithuania (hereinafter referred to as the “Old method” (which uses the official outstanding amount data) and the “New method”).

Chart A. MFI loan portfolio
(January 2010–September 2014)



Source: Bank of Lithuania calculations.

Chart B. Annual development of MFI loan portfolio
(January 2010–September 2014)



Source: Bank of Lithuania calculations.

Notes: (i) the outstanding amount in official MFI balance sheet data shows the outstanding amount of the loan portfolio of existing MFIs, while the ECB method and the New method applied at the Bank of Lithuania shows the outstanding amount of loans originated by MFIs; (ii) highlighted events: 1. Reclassification of portfolio of AB Bankas SNORAS (December 2011); 2. Reclassification of portfolio of UAB Ūkio Bankas, transfer of portfolio of the Lithuanian branch of AS UniCredit Bank, elimination of data of the credit union Laikinosios Sostinės Kreditas from statistics (May 2013); 3. Takeover of portfolio of the leasing subsidiary of AB SEB Bankas (November 2013); 1'. Elimination of data of the credit union Nacionalinė Kredito Unija from statistics (February 2013); 2'. Elimination of data of the credit union Vilniaus Taupomų Kasa from statistics (January 2014).

Standards of financial transaction accounting in accordance with the ECB's methodology

Loans and deposits are recorded in the MFI statistics at nominal value, net of accrued interest. The data shows both outstanding amounts and transactions during a reference period. Such transactions are derived indirectly, i.e. by subtracting other adjustments, unrelated to transactions between MFIs and other institutional sectors (i.e. non-financial corporations, households, general government or financial intermediaries) from the difference in outstanding amounts:

$$F_t = (L_t - L_{t-1}) - C_t - E_t - V_t$$

where: F_t is the monthly transaction flow, L_t is the outstanding amount at the end of the month, L_{t-1} is the amount outstanding at the end of the previous month, C_t is the change due to reclassification or other adjustment, E_t is the change due to exchange rate adjustment, and V_t is the adjustment for write-downs or write-offs.

In other words, transactions F_t is the net flow of lending in a reference period, i.e. the loans provided (or acquired, or purchased) by other MFIs to other institutional sectors in the reference period less the loans paid back to other MFIs (or transferred, or sold by other MFIs) during the same period, not including the interest payable. The monthly growth rate a_t^M at the end of the month is calculated from the transaction data or on the basis of notional stock indexes:

$$a_t^M = \left(\frac{F_t}{L_{t-1}} \right) \times 100$$

or

$$a_t^M = \left(\frac{I_t}{I_{t-1}} - 1 \right) \times 100$$

where $I_t = I_{t-1} \times \left(1 + \frac{F_t}{L_{t-1}} \right)$ is the index of notional stocks.

The annual growth rate is derived by multiplying the monthly growth rates:

$$a_t = \left[\prod_{j=0}^{11} \left(1 + \frac{F_{t-j}}{L_{t-1-j}} \right) - 1 \right] \times 100$$

or from the index of adjusted notional stocks:

$$a_t = \left(\frac{I_t}{I_{t-12}} - 1 \right) \times 100$$

When compiling the MFI balance sheet statistics, such adjustments to MFI balance sheet items are usually calculated (e.g. by the ECB¹², the Czech National Bank¹³ or the Bank of Lithuania¹⁴) with the aim to eliminate the adjustments that are directly unrelated to economic transactions.

New method applied by the Bank of Lithuania

In most cases, the basic method is only used to calculate changes in portfolio. The results of such calculations reflect the economic transactions. However, the adjusted outstanding amount of MFI loan portfolio is not calculated, to some extent due to the fact that such a value of portfolio will be inaccurate if there are any substantial reclassification adjustments. For example, the methodology used to compile the MFI balance sheet statistics stipulates that a MFI, which discontinues its operations shall be removed from the statistical MFI list and its data shall be excluded from the statistics, starting from the period, during which it is eliminated from the list. The resulting adjustment to the MFI portfolio in the period concerned is recorded as reclassification (i.e. the MFI is reclassified as a non-financial corporation). Calculations of the chain index I_t in subsequent periods take into account the full scale of such reclassification, despite the probable gradual decrease in the loan portfolio of the institution removed from the statistics, alongside the repayment of liabilities by the institution's debtors. Moreover, if the abovementioned reclassification adjustment is included in subsequent periods in its full scale and the institution's borrowers individually refinance their loans in active MFIs, the same loans may be added to the portfolio repeatedly.

The new method provides for the addition of loan portfolios held by institutions, removed from the statistical list, to the reported official loan portfolio series so as to restore the data series of MFI loan portfolio in as precise form as possible, starting from the end of 2011. In later periods, precise data showing changes in the loan portfolio of the institutions removed from the statistics is not available. Hence the calculations are made under the assumption of amortization in that portfolio. The amended outstanding amount of MFI loans, thus is calculated using this formula:

$$L_t^* = L_t + X_t$$

where L_t^* is the amended outstanding amount at the end of the month, L_t is the amount outstanding at the end of the month in accordance with official data, X_t is the loan portfolio of institutions removed from statistics from 2011 (with loan amortisation included):

$$X_t = \sum_{i=1}^{N_t} (X_{i,t-1} - A_{i,t})$$

$$X_{i,t} = 0 \text{ and } A_{i,t} = 0, \text{ when } t < T_i$$

¹² See, e.g., European Central Bank, *Handbook for the Compilation of Flow Statistics on the MFI Balance Sheet*, February 2006.

¹³ See, e.g., http://www.cnb.cz/en/statistics/money_and_banking_stat/stat_mb_met/stat_mb_harm_growthrates.html.

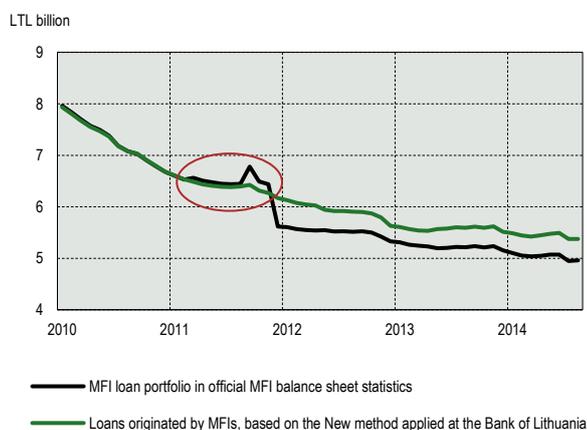
¹⁴ Tables 2.4.1, 2.4.2 and 2.4.3 of Monetary Statistics are available online at http://www.lb.lt/stat_pub/statbrowser.aspx?group=7273&lang=en.

$$X_{i,t} \geq 0 \text{ and } A_{i,t} \geq 0, \text{ when } t \geq T_i$$

where i is the index of the institution removed from the MFI list in period t_i , N_t is the number of such institutions at the end of period t , $X_{i,t-1}$ is the loan portfolio of the institution i , which has been removed from the MFI list, at the end of period $t-1$, $A_{i,t}$ is the unobserved change as a result of amortisation, in period t , of loan portfolio of the institutions that have been removed from the MFI list. If amortisation data is not available, it is calculated using the

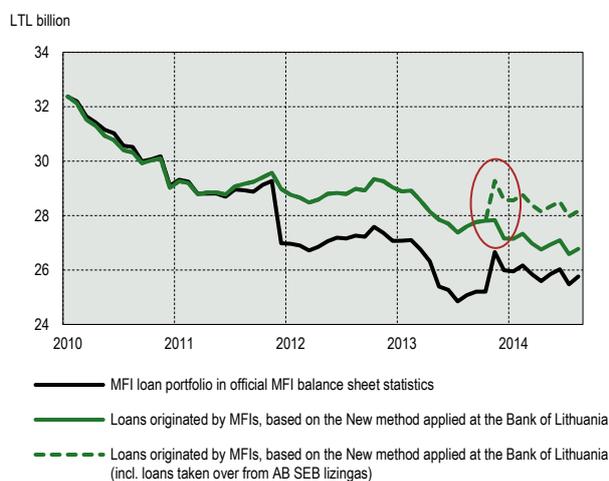
equation $A_{i,t} = \sum_{s=1}^S \frac{L_{i,s,T_i}}{\tau_{i,s,T_i}}$ under the assumption that loans are being repaid in equal principal payments, i.e. the principal is being paid back in equal instalments. In this formula, s is the sector's index, S is the number of sectors, which the portfolio can be broken down into, T_i is the last month before the removal of the institution i from the statistics, where the size of that institution's portfolio and its breakdown between sectors are known, L_{i,s,T_i} is the amount of the portfolio of loans issued by the institution i to the sector s as of the end of period T_i , and τ_{i,s,T_i} is the weighted average remaining maturity of the portfolio of loans issued by the institution i to the sector s at the end of period T_i (calculations are based on the data stored in the Loan Risk Database of the Bank of Lithuania).

Chart C. Outstanding amount of consumer and other loans to households calculated by different methods (January 2010–September 2014)



Source: Bank of Lithuania calculations.
Note: several transfers and takeovers of loans of banks and their subsidiaries took place between June and October 2011.

Chart D. Outstanding amount of loans to non-financial corporations calculated by different methods (January 2010–September 2014)



Source: Bank of Lithuania calculations.

It should be noted that the reported transactions F_t are not corrected for adjustments related to loans that have been securitised or transferred¹⁵, although the Bank of Lithuania has been collecting such data since 2010. Such adjustments reflect the specific features of bank accounting, rather than the actual change in financing of the economy, hence they should be taken into account. For example, the period between June and October 2011 saw several transfers and takeovers of loans of banks and their subsidiaries, which can be seen from the data related to the portfolio of consumer and other loans to households (see Chart C). A substantial change in the portfolio of loans to non-financial corporations was recorded in November 2013 as AB SEB Bankas integrated its leasing subsidiary and took over its loans. Still, the actual financing of the economy remained unaffected save that the loans issued by a former subsidiary were transferred to another economic entity. Data comparison (see Chart D) shows differences in loans to non-financial corporations, as well as loans to other financial intermediaries and in their developments between November 2013 and September 2014 (with loans taken over by AB SEB Bankas included).

Taking into consideration the additional factors – securitisation of loans and amortisation of the removed portfolio – transactions are recalculated using the following formula:

$$F_t^* = F_t - D_t - A_t$$

where F_t^* is the monthly transaction flow after additional adjustments, D_t is the adjustment for securitisation or transfer of loans, $A_t = \sum_{i=1}^{N_t} A_{i,t}$ is the amortisation of loan portfolio of the institutions, removed from the MFI list, in period t .

¹⁵ Since 2011, such transactions have been recorded in statistics several times. In most cases, they involve a MFI and its subsidiary hence they do not have much of an effect on the total loan portfolio data. However, they can clearly be seen from the portfolios of loans to households, loans to non-financial corporations and loans to financial intermediaries.

The adjusted monthly growth rate $a_t^{M^*}$ is calculated on the basis of indexes of notional stocks:

$$a_t^{M^*} = \left(\frac{I_t^*}{I_{t-1}^*} - 1 \right) \times 100$$

where $I_t^* = I_{t-1}^* \times \left(1 + \frac{F_t^*}{I_{t-1}^*} \right)$ is the index of notional stocks.

Adjusted outstanding amounts at the end of the month are calculated using this equation:

$$L_t^{**} = L_{2007M06}^* \times I_t^*$$

where L_t^{**} is the adjusted outstanding amount of loans and $L_{2007M06}^*$ is the unadjusted value of the amended outstanding amount of loans in the base period. The choice of the base period does not affect the calculations of growth rates; however, it does affect the values of adjusted outstanding amounts. June 2007 has been set as the base for the new method applied at the Bank of Lithuania in order to make sure that the portfolio values comply with the classification that has recently been in use and, at the same time, to prevent the reduction of portfolio value as a result of portfolio write-downs and write-offs implemented after the crisis.

To sum up, this methodology enables to produce an estimate of MFI loan portfolio cleared of the factors unrelated to economic transactions, such as exchange rate adjustments, write-down/write-off adjustments, reclassification or other adjustments, adjustments owing to unobserved amortisation of loan portfolio of the institutions that have been removed from the MFI list, or adjustments related to loans that have been securitised or transferred and taken over.