



LIETUVOS BANKAS
EUROSISTEMA

COUNTERCYCLICAL CAPITAL BUFFER

BACKGROUND MATERIAL FOR DECISION

2 0 1 6

December

Abbreviations

CCB	countercyclical capital buffer
GDP	gross domestic product
ECB	European Central Bank
ESRB	European Systemic Risk Board
RE	real estate
MFI	monetary financial institution (banks and credit unions)
IMF	International Monetary Fund

The publication has been prepared by the Economics and Financial Stability Service of the Bank of Lithuania. It is available in PDF format on the Bank of Lithuania website www.lb.lt.

Unless otherwise specified, data up to 1 November 2016 was used. For the banking sector analysis, the consolidated data provided by banks operating in Lithuania, including foreign bank branches, was used unless otherwise specified.

Periods indicated in chart subtitles also include end-of-period (year, quarter, etc.) data.

Decision basis for setting the countercyclical capital buffer rate

On 22 December 2016, the Board of the Bank of Lithuania took the decision to set the CCB rate at 0 per cent. The decision was based on leading and additional indicators for setting the CCB, as well as analysis of the lending and real estate (RE) markets.

With RE market prices rising and activity increasing, and crediting remaining among the fastest-growing in Europe, it is essential to closely monitor further lending and RE market developments, as strong growth for a lengthy period may increase systemic risk. The strengthening financial standing of enterprises and residents, rising employment, and low interest rates continue to contribute to lending growth. Lending volumes have been growing fast; however, there could be fewer and fewer possibilities to maintain the current strong rate of growth, while the moderated economic growth and tight lending standards have been reducing the probability of credit overheating. Key indicators which serve as the basis in calculating the reference** rate of the CCB do not show any credit market imbalances either. The gap between the credit-to-GDP ratio and its long-term trend continued to narrow in the second quarter, but was still negative, and, subject to the evaluation method, stood at -4.0 p.p. and -15.3 p.p. The portfolio of bank and credit union loans to the private non-financial private sector was by 7.3 per cent larger in September year on year. The portfolio of loans to households expanded by 7.6 per cent, to enterprises – by 7.1 per cent. Nevertheless, the indebtedness of the private non-financial sector to banks and credit unions continued to be relatively low: the ratio between the household and enterprise loan portfolio and annual GDP accounted for 43.5 per cent at the end of the third quarter, a year-on-year increase of 1.7 p.p.

In the third quarter of 2016, RE market activity grew moderately further and was high enough. Importantly, crediting plays an increasingly significant role in the active housing market. The latest data from market participants show that housing prices have been increasingly fast on the rise, but, on the country scale, to a lesser extent than residents' income. While housing supply is currently sufficient and makes no pressure on unsustainable price rise, it has fallen since the beginning of the year. If house builders were to reduce investment, with low activity in this market, the fallen demand could lead to a sharp build-up of RE market imbalances.

Additional indicators for setting the CCB, comprising the external (foreign) factors of the credit market, do not suggest the lending development being currently unsustainable either. Lithuania's current account deficit was insignificant in the second quarter of 2016 (-0.8%), whereas its forecast for 2017 is still lower. At the end of the second quarter of 2016, the MFI loan-to-deposit ratio remained almost unchanged (decreasing from 108.0% to 107.6%) and continued to be below its long-term average (119.0%). Various early warning indicators also show a low probability of a systemic crisis of banks.

* Resolution No 03-210 of the Board of the Bank of Lithuania of 22 September 2016 on the application of the countercyclical capital buffer.

** The calculation of this rate is based on deviations of the credit-to-GDP ratio from its long-term trend, taking into account, *inter alia*, credit growth in the country and the ESRB recommendations currently in effect. For more information, see the Bank of Lithuania Occasional Paper No 5, 'Application of the Countercyclical Capital Buffer in Lithuania'.

With slow economic growth, strong credit growth for a lengthy period could build systemic risk

The gap between the credit-to-GDP ratio and its long-term trend remains negative; however, it continued to narrow quite fast. In the second quarter of 2016, the gap between the credit-to-nominal GDP ratio and its long-term, subject to the evaluation method¹, was -4.0 p.p. and -15.3 p.p. respectively (see Chart 1). Quarter on quarter the gap narrowed by 0.8 p.p. and 1.8 p.p. respectively.² As previously, such developments were mainly driven by credit growth outpacing the growth of the domestic economy several times. However, both in surveys and their funding plans, banks forecast weaker growth of credit levels for the next year, while the probability of excess debt in the near future is not high on account of weaker development of the domestic economy, limited credit demand within the corporate segment, and tight lending standards.

Growth in the portfolio of loans granted to the private non-financial sector³ outpaced that in the domestic economy for the third consecutive quarter. In the third quarter of 2016, the loan portfolio expanded by 2.6 per

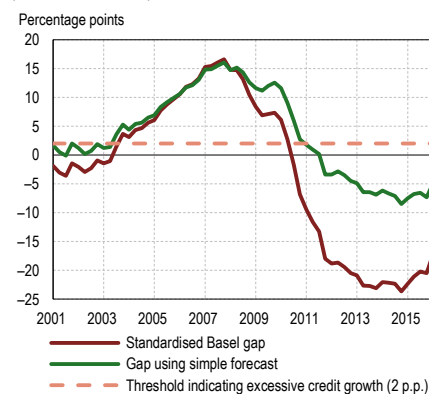
¹ According to the ESRB recommendation (ESRB/2014/1), the Bank of Lithuania calculates the gap using two methods: the standardised Basel method, defined in the first part of the Annex to this recommendation, and by applying the credit-to-GDP forecast which is a more suitable method for the data on Lithuania. The latter differs from the standardised Basel method in that the long-term trend is calculated by extending the ratio forward using a 4-quarter weighted average. For more information, see N. Valinskytė and G. Rupeika, 'Leading Indicators for the Countercyclical Capital Buffer in Lithuania', Occasional Paper Series, available on the Bank of Lithuania website (http://www.lb.lt/leading_indicators_for_the_countercyclical_capital_buffer_in_lithuania_1).

² The annual change was -2.8 p.p. and -5.8 p.p. respectively.

³ Statistical data from the MFI balance sheet is adjusted for the elimination of MFIs that went bankrupt from statistics and other technical factors. For more information, see Annex 2 'MFI loan portfolio adjustment for technical factors' of the December 2014 Lithuanian Economic Review (http://www.lb.lt/lithuanian_economic_review_december_2014).

Chart 1. Gap between the credit-to-GDP ratio and its long-term trend

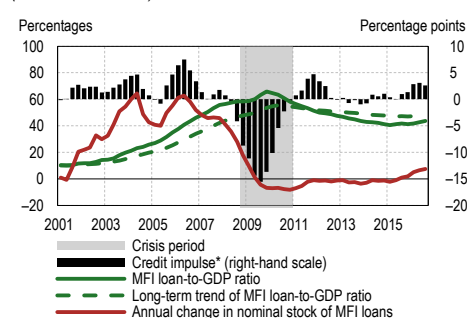
(Q1 2001–Q2 2016)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Chart 2. Development of loans to the private non-financial sector

(Q1 2001–Q3 2016)



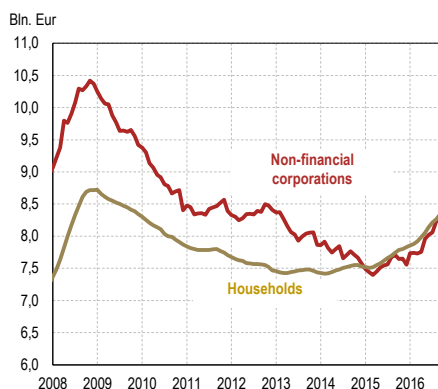
Sources: Statistics Lithuania and Bank of Lithuania calculations.

Note: the long-term trend is estimated by applying a one-sided HP filter with the smoothing parameter 400,000; before applying the filter, the ratio is modelled for the next five-year window using a four-quarter weighted average.

* Annual difference of loan portfolio annual change as a percentage of GDP.

Chart 3. Development of the portfolio of MFI loans to households and non-financial undertakings

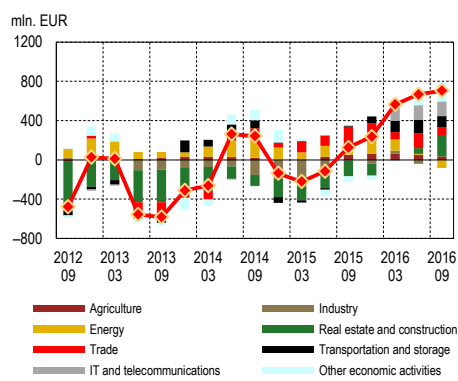
(Q1 2008–Q3 2016)



Source: Bank of Lithuania

Chart 4. Annual development of MFI loans to non-financial undertakings

(Q3 2012–Q3 2016)

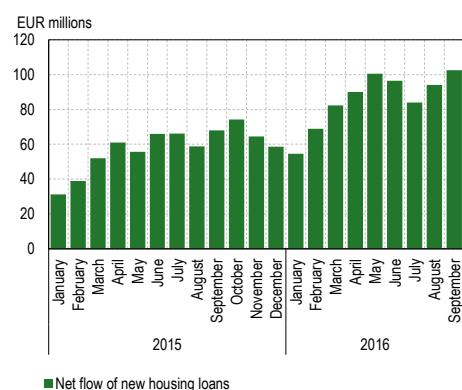


Šaltinis: Lietuvos banko skaičiavimai.

Pastaba: kai kurių ekonominių veiklų pavadinimai yra sutrumpinti.

Chart 5. Flow of new housing loans

(January 2015–September 2016)



Sources: ECB and Bank of Lithuania calculations.

cent, while the four-quarter nominal GDP – by 0.8 per cent. As a result, the ratio of loans to the private non-financial sector and GDP picked up by 0.8 p.p. over the quarter, to 43.5 per cent (see Chart 2.) The private sector debt has been increasing since early 2015, when it stood at 40.6 per cent.

Both the household loan and corporate loan portfolios posted stronger growth (see Chart 3). At the end of the third quarter of 2016, the non-financial sector's loan portfolio was by a 7.3 per cent larger year on year. Slightly more than half of this increase was due to loans to households, which rose by 7.6 per cent over the year (EUR 587.1 million). Loans to businesses picked up by 7.1 per cent (EUR 545.5 million). Nevertheless, over the third quarter the portfolio of loans to non-financial undertakings picked up more – by 2.9 per cent (EUR 232.5 million), while that of household loans – to 2.3 per cent (EUR 190.1 million). Corporate loans in the third quarter rose due to several large transactions.

In the third quarter of 2016, lending to businesses engaged in trade and the RE activity (including construction) recorded the strongest growth (see Chart 4). The portfolio of loans to wholesalers and retailers increased by 6.7 per cent over the third quarter of 2016 (EUR 115.6 million). Increased demand for working capital, determined by an increase in demand due to improving expectations, rising wages and salaries, and declining unemployment, encouraged businesses engaged in this activity to borrow the most (in the second quarter of 2016, annual growth in household domestic consumption was 6.5%). With the rising income of trade companies, increasing profitability and debt remaining at lows levels, banks did not restrict lending to those businesses. Growth in the portfolio of loans to RE businesses (including construction businesses) was 4.0 per cent in the third quarter (annual growth – 8.6%). This has been the largest quarterly change since 2013. On the other hand, more than half of this increase was comprised of two large loans. As in the previous quarter, the energy sector was one of those where liabilities to credit institutions contracted the most (by 7.6% over the quarter and 9.8% over the year). Particularly fast amortisation of loans granted contributed to that as well.

The portfolio of loans for house purchase expanded further, but its annual growth rate has stabilised. In the third quarter of 2016, the annual growth rate of loans for house purchase was 6.7 per cent (in Q2 – 6.5%). The flow of new housing loans⁴ amounted to EUR 280.8 million, a year-on-year increase of 45.7 per cent (see Chart 5). A number of factors continued to encourage acquisition of housing: further strong growth in household income (stronger than in housing prices) and declining unemployment, lesser attractiveness of rent as a result of rent price increases during several years, an increased share of young residents and an increase in the number of young families in Vilnius. Importantly, crediting is becoming a more and more significant factor encouraging RE market activity. Since housing supply is currently large enough, should housing crediting fall sharply, this could result in excessive supply and price adjustments in the RE market. The funding plans of commercial banks⁵ show that weaker growth in the portfolio of housing loans is projected for the next year.

Annual growth in household borrowing for consumption was the fastest since early 2009. The portfolio of loans for consumption and other needs granted by MFIs expanded by 3.1 per cent (EUR 62.1 million) over the third quarter of 2016, while its annual growth was 11.0 per cent. A significant contribution to this strong growth stemmed from financial lease. At the end of the first half of 2016, credit institutions providing this service to households had lent EUR 198.0 million, i.e. by a third more than a year ago. Borrowing from companies granting payday loans declined sharply: towards the end of the first half-year, the portfolio of such credits was by 8.3 smaller than at the beginning of the year, while the number of contracts concluded fell by nearly a

⁴ Difference between new agreements on loans and loans that were renegotiated.

⁵ For more information on banks' funding plans see Box 4 of the Financial Stability Review published by the Bank of Lithuania in 2016 (http://www.lb.lt/finansinio_stabilumo_apzvalga_2016_m?page=13).

fifth. Regulatory changes, which are aimed at ensuring more responsible lending by payday credit companies, contributed significantly to these developments. On the other hand, peer-to-peer lending platforms are becoming increasingly popular. The portfolio of such loans doubled over the first half of 2016, to EUR 4.6 million.

The loan portfolio continued to be financed mainly with domestic market deposits. After growing for the two consecutive quarters, the MFI loan-to-deposit ratio decreased moderately in the third quarter of 2016. At the end of the quarter, it was 107.6 per cent (a quarter-on-quarter decrease of 0.4 p.p. eliminating seasonal influence). The greatest contribution to the decrease in the ratio stemmed from strong growth in deposits. This indicator is still below its long-term average (119%), indicating that almost all of the loans granted to the private sector are comparable to deposits from the private sector.

In the second quarter of 2016, Lithuania's current account deficit was still small (see Chart 6). It accounted for 0.8 per cent of the nominal GDP for the last four quarters. Dividends paid out by credit institutions, transferred to their parent banks abroad, contributed to the build-up of the current account deficit the most. According to the Bank of Lithuania's macroeconomic projections published in June 2016, the current account will remain slightly in deficit in 2016 (-0.1% of GDP), whereas in 2017, a deficit of 0.6 per cent is projected.

At the end of the second quarter of 2016, the composite early warning indicators of crises suggested no build-up of imbalances within the financial sector (see Chart 7). The composite early warning indicators of crises, adapted for Lithuania, summarise the credit market situation, housing affordability, the ability of borrowers to meet financial liabilities and the equity market dynamics.⁶ As, since 2012, these estimates have been close to 0, the probability of a severe financial crisis in the next five years is low.

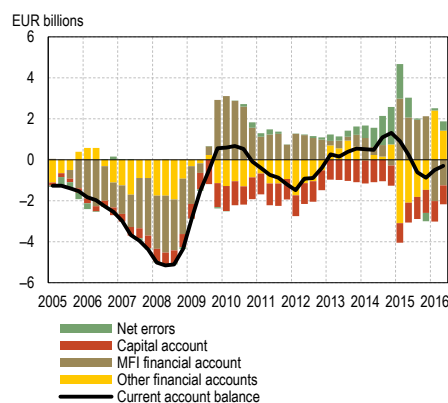
With Lithuania's RE market activity and prices continuing to rise, the situation in this market should be monitored more closely.

In the third quarter of 2016, housing prices in the country's major cities were on average higher by 4.8 per cent⁷ year on year. In the second quarter, both the data from Statistics Lithuania and real estate market participants suggested weaker average annual growth rate – of 3.4 per cent and 4.1 per cent respectively. Average annual increase in house prices in Vilnius was higher, at 6.0 per cent; however, housing became more expensive in other cities as well (in Kaunas, Klaipėda, Šiauliai and Panevėžys, house prices rose by 2.5–5.3%). With prices on the rise, their gap from the long-term equilibrium values narrowed by 0.1 p.p. over the second quarter, but remains negative (at -10.9%; see Chart 8). Developments in the gap between housing prices-to-household income ratio and the long-term trend since 2014 have been marginal; whereas in the second quarter of 2016 the gap was -8.3 per cent (see Chart 9).

Lithuania's RE market activity intensified moderately over the third quarter of 2016 year on year, but continued to be relatively high (see Chart 10). According to the data of the Centre of Registers, a total of 31.3 thousand real estate objects were transferred in the third quarter, a year-on-year increase of 4.4 per cent. In this quarter, a low comparable base, which built up on account of the slack in the RE market in the first half of 2015 following the adoption of the euro, no longer had any influence on the change in the number of annual transactions. The greatest contribution to the annual increase in the number of RE transactions stemmed from growth in the number of flat

Chart 6. Current account balance and its financing (4-quarter moving sum)

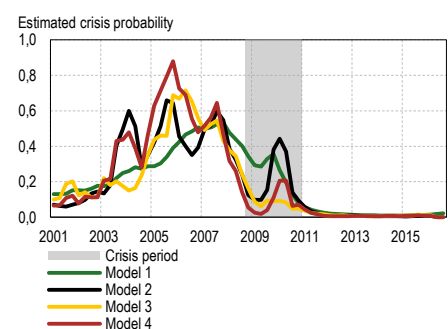
(Q1 2001–Q2 2016)



Source: Bank of Lithuania calculations

Chart 7. Composite early warning indicators of crises for Lithuania

(Q1 2001 – Q3 2016)

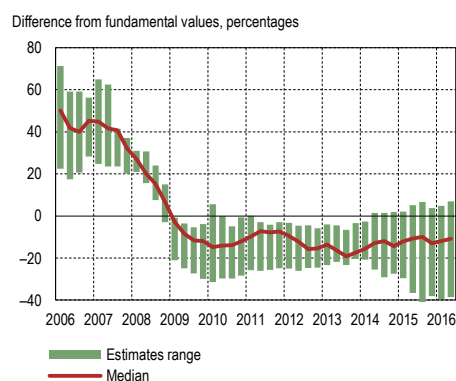


Source: Bank of Lithuania calculations.

Note: composite indicators are calculated based on logit models estimated in Detken et al. (2014), Operationalising the countercyclical capital buffer: indicator selection, threshold identification and calibration options, ESRB Occasional Paper No. 5.

Chart 8. Gap between housing prices and the long-term average

(Q1 2006 – Q2 2016)



Source: Bank of Lithuania calculations.

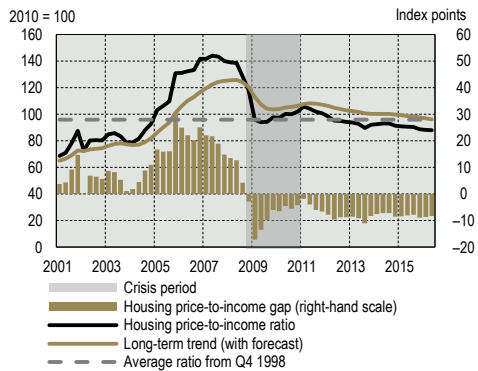
Note: estimates are based on price to rent ratio, price to income ratio, econometric model and HP filter.

⁶ For more information, see N. Valinskytė and G. Rupeika, 'Leading Indicators for the Countercyclical Capital Buffer in Lithuania', Occasional Paper Series, available on the Bank of Lithuania website (<http://www.lb.lt/leading-indicators-for-the-countercyclical-capital-buffer-in-lithuania-1>). Indicators are formed based on econometric models, which allow assessing various combinations of these measures: bank loans-to-GDP gap, the annual change of the housing prices-to-income ratio, debt payments-to-income ratio, the annual change in stock prices. Composite indicators show the estimate for the probability of a systemic financial crisis and, as early warning indicators, are likely to be more accurate than single variables.

⁷ According to the data of UAB Ober-Haus.

Chart 9. Housing prices-to-household income ratio gap (forecast-augmented)

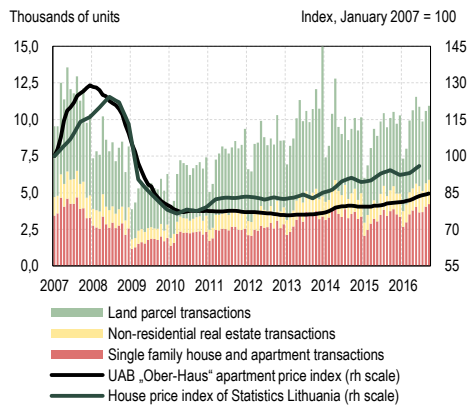
(Q1 2001–Q2 2016)



Sources: Statistics Lithuania and Bank of Lithuania calculations.
Notes: 1) income – household wages and salaries; 2) the long-term trend is estimated by applying a one-sided HP filter with the smoothing parameter 400,000; before applying the filter, the ratio is modelled for the next five-year window using a four-quarter weighted average.

Chart 10. Real estate market activity and price indexes

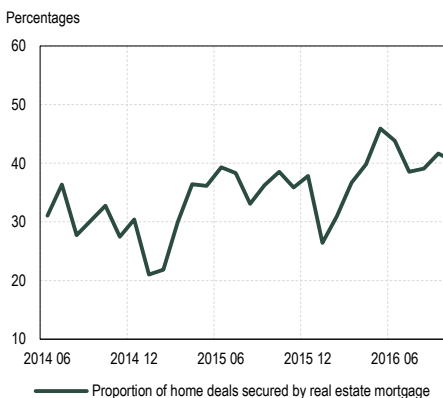
(January 2008–September 2016)



Sources: State Enterprise Centre of Registers, Statistics Lithuania, UAB „Ober-Haus“ and Bank of Lithuania calculations.

Chart 11. Share of housing deals using borrowed funds by number of deals

(June 2014–October 2016)



Sources: State Enterprise Centre of Registers, Central Mortgage Office and Bank of Lithuania calculations.

deals and non-residential property deals. 10.3 per cent and 18.5 per cent more of such objects respectively were sold during the period under review year on year.

The role of crediting in the housing market has been increasing (see Chart 11). According to the most recent data of the Centre of Registers, in the third quarter of 2016, the average share of housing purchased at least in part with borrowed funds, in terms of the number of transactions, was 40.7 per cent, a year-on-year increase of 4.8 p.p.⁸ When assessing this ratio in terms of the value of housing deals being concluded, loans for house purchase granted by credit institutions accounted for 67.6 per cent of the total value of the acquisitions of flats and houses in the third quarter. This share was boosted by 12.6 p.p. over the year. Purchases of the upscale housing contributed partially to such an increase: the average value of a housing deal in Lithuania amounted to EUR 49.0 thousand in the third quarter of 2016, a year-on-year increase of 9.0 per cent.

Housing supply declined in the third quarter; however, it is still sufficient and makes no pressure on unsustainable price increases. In the third quarter of 2016, buyers in Lithuania's major cities directly from developers (in the primary market) purchased 1.4 thousand of new flats, while the number of flats unsold in already built multi-family apartment houses grew somewhat over the quarter (by 4.5%), to 4.6 thousand at the end of the quarter.⁹ Given the prevailing housing market activity, flats offered currently for sale in Lithuania's primary market would be sold in approximately 10.2 months. This indicator is one of the lowest in the recent few years (for comparison, a year ago, it would have taken 15.1 months to sell all of the flats offered in the primary market); hence, should the residential property developers reduce housing construction volumes, the drop in the supply would increase the probability of an unsustainable and sharp rise in housing prices.

Office selling and rental prices within the commercial real estate market saw particular increases, while rising less strongly within the trade centre market. Annual growth in the selling prices of commercial objects that are traded most actively in Lithuania – offices and trade centres, furnished in modern business centres – was 11.0 per cent and 4.0 per cent respectively in the third quarter of 2016.¹⁰ Office rental prices rose noticeably over the same period (7.9%), while the rental prices for commercial premises offered in the main streets of major cities remained almost unchanged (increasing by 0.9%). Growth in the selling prices for commercial premises outpacing that in rental prices led to a fall in the likely return on rent in investment in modern offices and trade centres in Lithuania on average by 21 and 35 basis points respectively, to 7.6 per cent and 7.3 per cent. Once the construction of business centres currently carried out in Vilnius is completed, office supply will increase by a third: if the supply is insufficient, price adjustments are likely in the modern offices market that would also affect the constructors' financial situation, thereby negatively affecting the housing market.

⁸ Lithuania's housing market is characterised by seasonality, which is most prominent in the first quarter of the year. Due to a relatively small data sample, application of seasonal comparison methods would be ineffective; thus, in this Survey, the share of housing purchases with loans is only compared with the same indicator from the respective period of the previous year.

⁹ According to the data of UAB Eka.

¹⁰ According to the data of UAB Ober-Haus.

Annex. CCB reference rates and early warning indicators of the need to raise the CCB rate

Leading indicators:

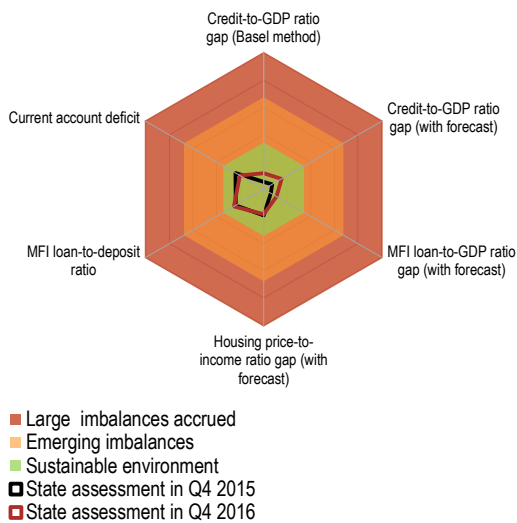
1. Credit to the private non-financial sector-to-GDP ratio gap (calculated using the standardised Basel method);
2. Credit to the private non-financial sector-to-GDP ratio gap (calculated using the forecast-augmented method).

Additional indicators:

1. MFI lending to the private non-financial sector-to-GDP ratio gap (calculated using the forecast-augmented method);;
2. The housing prices-to-household income ratio gap (calculated using the forecast-augmented method);
3. Ratio of MFI lending to the private sector and private sector deposits (after eliminating seasonal effects);
4. Current account balance (deficit)-to-GDP ratio.

Chart A. Evaluation of credit market imbalances based on leading and additional indicators

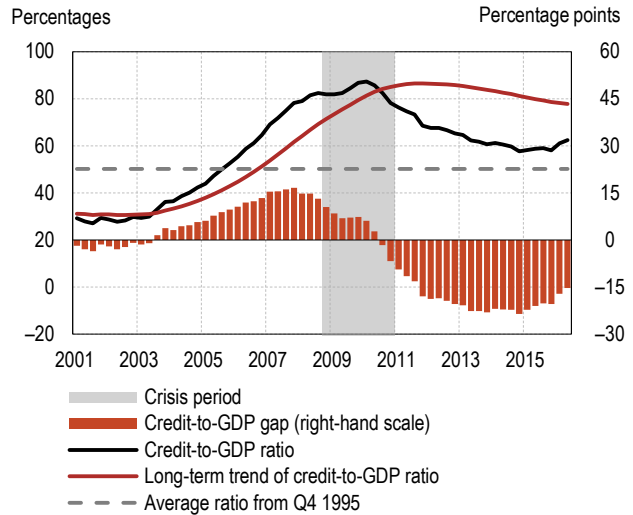
(evaluation is being conducted in Q4 2016)



Sources: Statistics Lithuania and Bank of Lithuania calculations.
Note: axes are scaled according to the range of a particular indicator: from its minimal value up to the maximal value.

Chart B Core indicator I: Credit to the private non-financial sector-to-GDP ratio gap (calculated using the standardised Basel method)

(Q1 2001–Q2 2016)



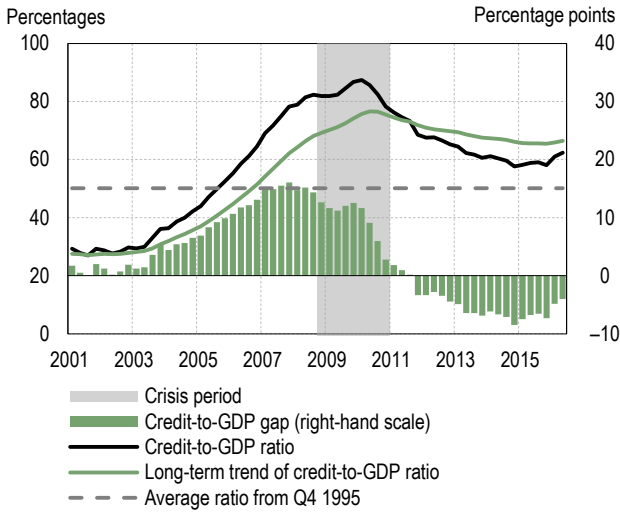
Sources: Statistics Lithuania and Bank of Lithuania calculations.
Note: long-term trend is computed using a one-sided HP filter with a smoothing parameter of 400,000.

Chart C. Leading indicator II: Credit to the private non-financial sector-to-GDP gap (based on the forecast-augmented method)

(Q1 2001–2 2016)

Chart D. Additional indicator I: MFI lending to the private non-financial sector-to-GDP ratio gap (calculated using the forecast-augmented method)

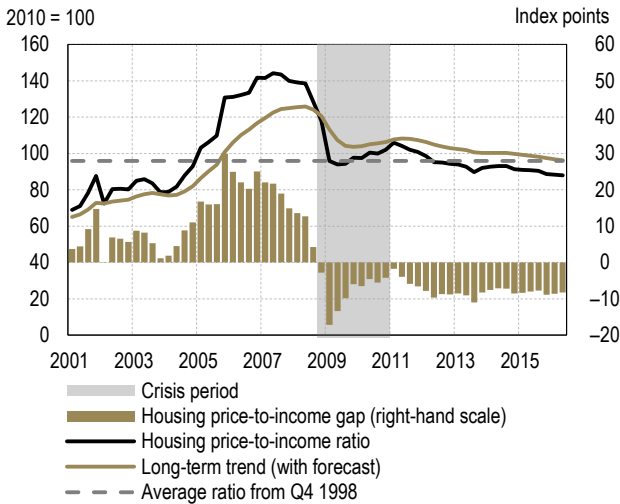
(Q1 2001–Q3 2016)



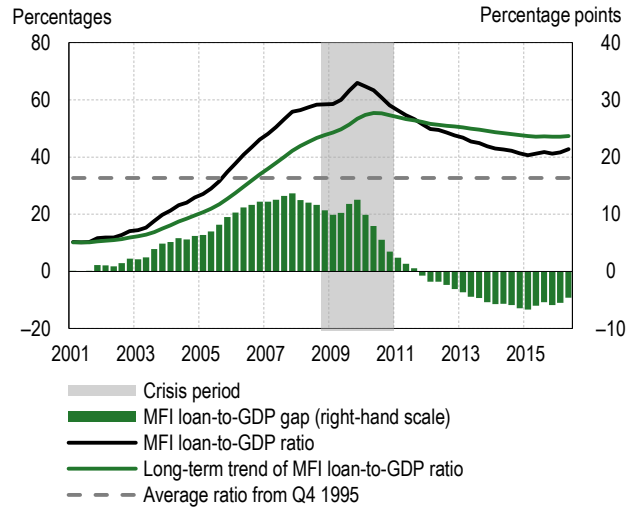
Sources: Statistics Lithuania and Bank of Lithuania calculations.
 Note: the long-term trend is computed by applying a one-sided HP filter with the smoothing parameter of 400,000; before applying the filter, the ratio is modelled for the next five-year window using a four-quarter weighted average.

Chart E: Additional indicator II: Housing prices-to-household income ratio gap (based on the forecast-augmented method)

(Q1 2001–Q2 2016)



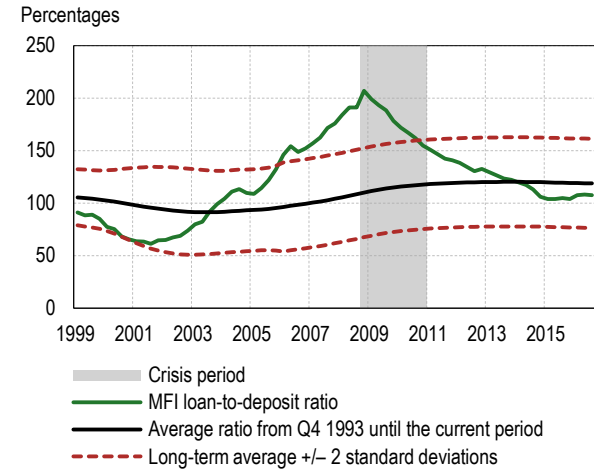
Sources: Statistics Lithuania and Bank of Lithuania calculations.
 Notes: 1) income – household wages and salaries; 2) the long-term trend is estimated by applying a one-sided HP filter with the smoothing parameter 400,000; before applying the filter, the ratio is modelled for the next five-year window using a four-quarter weighted average.



Sources: Statistics Lithuania and Bank of Lithuania calculations.
 Note: the long-term trend is estimated by applying a one-sided HP filter with the smoothing parameter 400,000; before applying the filter, the ratio is modelled for the next five-year window using a four-quarter weighted average.

Chart F: Additional indicator III: Ratio of MFI lending to the private sector and private sector deposits (after eliminating seasonal effects) Ratio of MFI lending to the private sector and private sector deposits (after eliminating seasonal effects)

(Q1 1999–Q3 2016)

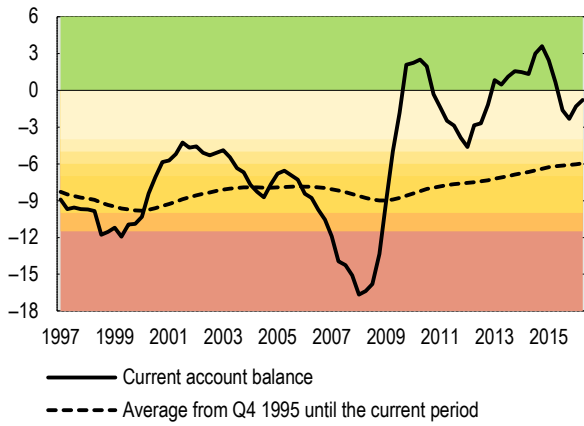


Source: Bank of Lithuania calculations.
 Note: the ratio develops in a balanced way if it does not deviate from its long-term average by more than two standard deviations. Standard deviation is computed on the basis of Q4 1993–Q1 2006 data covering the period of moderate changes in the ratio.

Chart G. Additional indicator IV: Current account balance (4-quarter moving sums)-to-GDP ratio

(Q1 1997–Q2 2016)

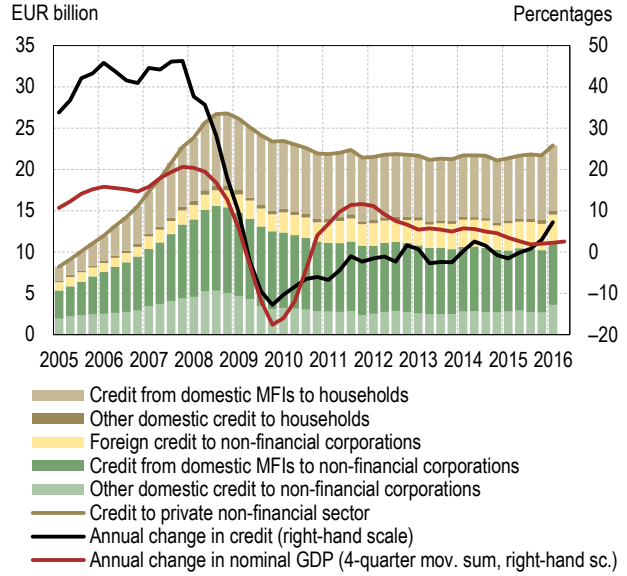
Percentages of GDP, 4-quarter moving sums



Sources: Statistics Lithuania and Bank of Lithuania calculations.
 Note: colours indicate different levels of risk which have been set based on Reinhart S. M. and V. R. Reinhart (2008): "Capital flow bonanzas: An encompassing of the past and present", NBER working paper, 14321.

Chart H. Credit and nominal GDP dynamics

(Q1 2005–Q2 2016; nominal GDP dynamics – until Q3 2016)



Sources: Statistics Lithuania and Bank of Lithuania calculations.