



LIETUVOS BANKAS
EUROSISTEMA

COUNTERCYCLICAL CAPITAL BUFFER

BACKGROUND MATERIAL FOR
DECISION

2 0 1 6

September

Abbreviations

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

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 August 2016 was used. For the banking sector analysis, 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 29 September 2016, the Bank of Lithuania took the decisionⁱ 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 the analysis of the lending and real estate markets.

Real estate market activity, as well as corporate and household lending increased in the second quarter of 2016; however, real estate market and credit development remains sustainable. Credit to the private non-financial sector is currently characterised by strong yet sustainable growth, and this growth has been replacing the period of a decline in the loan portfolio which had lasted for over 5 years. The strengthening financial standing of enterprises and residents, rising employment, and low interest rates have been contributing to that. Leading indicators which are used for the calculation of the CCB referenceⁱⁱ rate show no credit market imbalances currently. Strong credit and real estate market growth during a protracted period could increase systemic risk; however, given the deceleration in the country's economic development and the remaining rather strict credit standards, the probability of credit market overheating in the near future is to be considered as low. The gap between the credit-to-GDP ratio (61.8%) and its long-term trend narrowed in this quarter the most since this indicator was first calculated (in 2001), but was still negative and, subject to the evaluation method, accounted for -4.4 p. p. and -16.4 p. p. Banks' and credit unions' portfolio of loans to the private non-financial sector expanded by 5.0 per cent over the first six months of 2016 and was by 6.5 per cent larger in June than a year ago. Annual portfolio growth at an accelerating rate has been recorded for 12 consecutive months. In June this year, the household loan portfolio was by 6.8 per cent, the corporate portfolio — by 6.3 per cent larger year on year. The ratio of household and corporate loan portfolio to annual GDP was almost 43 per cent at the end of the second quarter, a 1.6 per cent increase year on year.

In the second quarter of 2016, real estate market activity remained high, slightly higher quarter on quarter. Growth in housing prices on the country scale is moderate. Growth in residents' income outpacing growth in housing prices also contributes to higher housing market activity; this entails higher housing affordability (in the first quarter, housing prices were by 3.4% , wages and salaries — by 6.9% higher year on year). Housing supply is sufficient and does not provide upward pressures on prices.

Additional indicators for setting the CCB, which include external (foreign) factors of the credit market, do not indicate unsustainable development of lending either. Both the deficit on Lithuania's current account (which stood at -0.8% in the first quarter of 2016) and the deficit projections for 2016 (-0.1%) decreased. At the end of the second quarter of 2016, the MFI loan-to-deposit ratio increased somewhat (to 108.0%), but was below its long-term average (119.0 %). Various early warning indicators confirm that the probability of a systemic banking crisis is low.

ⁱ Resolution No 03-132 of the Board of the Bank of Lithuania of 29 September 2016 on the application of the countercyclical capital buffer.

ⁱⁱ 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".

Credit growth is robust, but its dynamics does not create imbalances

The negative gap between the credit-to-GDP ratio and its long-term trend has narrowed, credit volume continued to increase (see Chart Chart 1.). The credit-to GDP ratio gap has been narrowing since early 2015¹ yet remains negative, while the CCB reference rate, calculated by the Bank of Lithuania based both on the Basel method and the method augmented by a forecast², is 0 per cent. In the first quarter of 2016, the difference between the credit-to-nominal GDP ratio and its long-term equilibrium value, subject to the evaluation method³, was -4.4 p. p. and -16.4 p. p. With credit growth outpacing GDP growth, the gap narrowed quite substantially quarter on quarter — by 2.6 p. p. and 3.6 p. p., subject to the evaluation method (3.0 p. p. and 5.8 p. p. year on year). Such narrowing over the quarter is so far the fastest since the indicator was first calculated, i.e. since 2001. Credit to the private non-financial sector is currently characterised by robust⁴ yet sustainable growth,

¹ Excluding the fourth quarter of 2015, when the gap widened somewhat.

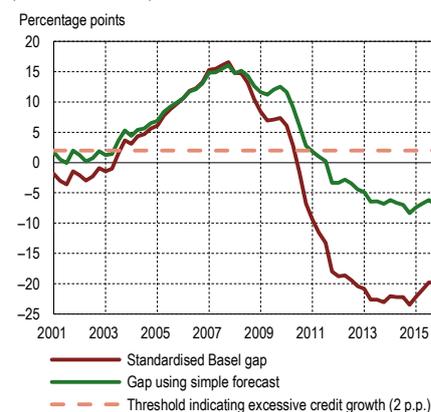
² See "Application of the Countercyclical Capital Buffer in Lithuania", Occasional Paper Series No 5, Bank of Lithuania (https://www.lb.lt/anticiklinio_kapitalo_rezervo_taikymas_lietuvoje).

³ 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 that 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, Bank of Lithuania. (http://www.lb.lt/leading_indicators_for_the_countercyclical_capital_buffer_in_lithuania_1).

⁴ In the IMF working paper "Evaluating the Net Benefits of Macroprudential Policy: A Cookbook", credit development is defined as strong growth, when the credit-to-GDP ratio picks up by 3 p. p. or more per year (<http://www.imf.org/external/pubs/ft/wp/2013/wp13167.pdf>). In Lithuania, at the end of the first quarter of 2016, this ratio was higher by 3.4 p. p. than a year ago.

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

(Q1 2001–Q1 2016)



Sources: Statistics Lithuania and Bank of Lithuania calculations.

Chart 2. Development of the portfolio of MFI loans to households and non-financial undertakings

(Q1 2001–Q2 2016)

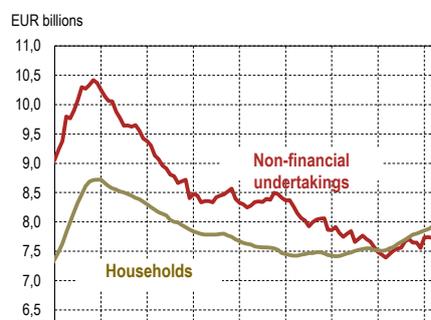
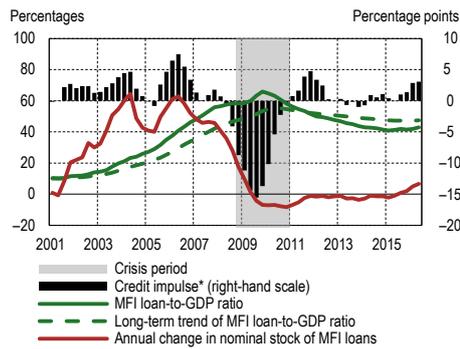


Chart 3. Development of loans to the private non-financial sector

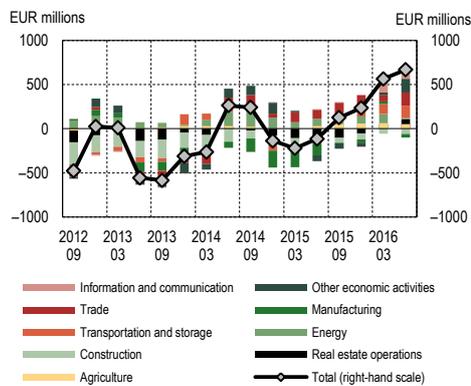
(Q1 2001–Q2 2016)



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

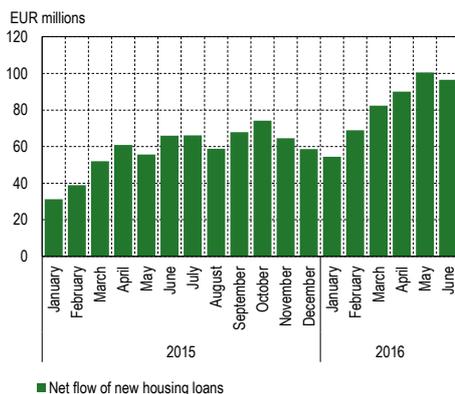
(Q3 2012–Q2 2016)



Source: Bank of Lithuania calculations.
Note: Names of some economic activities are abbreviated.

Chart 5. Net flow of new housing loans

(January 2015–June 2016)



Sources: ECB and Bank of Lithuania calculations.

and such growth has been replacing the decline in the loan portfolio which had lasted for more than 5 years. Strong credit growth during a protracted period could increase systemic risk; however, given the deceleration in the country's economic development and the fact that bank credit standards are currently tight enough, the probability of a sharp build-up of credit-related imbalances in the near future is to be considered as low.

The growth rate of the portfolio of loans⁵ granted to the private non-financial sector accelerated; credit growth outpaced GDP growth for the second consecutive quarter. Over the second quarter of 2016, the loan portfolio grew by 3.3 per cent quarter on quarter, while the four-quarter nominal GDP picked up by 0.7 per cent; as a result, the ratio between the portfolio of loans to the private non-financial sector and GDP increased by 1.1 p. p. over the quarter, to 43.0 per cent; thus, the gap from the ratio's long-term trend narrowed as well (see Chart Chart 3.). The accelerating credit impulse (acceleration of the change in the portfolio of loans to the private sector) indicates an increasingly robust annual credit growth rate.

Annual growth of the loan portfolio has been accelerating for the twelfth consecutive month. At the end of the second quarter of 2016, the non-financial sector's loan portfolio was by a 6.5 per cent larger year on year — the strongest annual growth since the first quarter of 2009. Both loans to non-financial undertakings and households have been contributing to the portfolio growth. While the portfolio of loans to non-financial undertakings expanded by EUR 289.1 million over the second quarter of 2016 and was by 6.3 per cent larger than in June last year (picking up by 3.7% over the quarter), the contribution to stronger annual growth stems from some large loans to telecommunication and energy corporations granted at the beginning of the year. With this contribution eliminated, the annual growth of non-financial undertakings would be 3.4 per cent. The portfolio of household loans increased in the second quarter of the year as well — by EUR 223.0 million, or 6.8 per cent per year (quarterly growth was 2.8%). With regard to the private sector, the volume of new loan agreements (excluding renegotiations of previously granted loans) amounted to EUR 1.2 billion in the second quarter of 2016, slightly more than a one-third increase year on year. More than half of the increase in this flow was due to household loans.

A great contribution to credit growth stemmed from growth in the leasing portfolio. Over the second quarter of 2016 alone, this portfolio grew by 10.7 per cent and exceeded the EUR 2 billion limit. Over the year, the leasing portfolio grew by EUR 437 million, i.e. 27.8 per cent. Acquisitions of trucks and motor vehicles had the greatest influence on this growth. This can be related to not only greater optimism within the household sector, when residents dare buying major items (e.g. a car), but also such factors as e.g. higher investment by transport companies in expanding or renewing their stock of motor vehicles.

In the second quarter of 2016, lending to distribution businesses recorded the strongest growth; while lending to manufacturing companies contracted the most (see Chart 4). The portfolio of loans to wholesalers and retailers increased by EUR 115.6 million over the second quarter of 2016 (7.2% over the quarter and 9.7% over the year). Usually, the activity of distribution businesses is not significantly related to fixed asset investment; hence, it is likely that intensified borrowing in working capital contributed to the portfolio growth. Nevertheless, it is quite possible that distribution businesses expand, renew their old premises, etc. as consumption increases. The manufacturing and energy sectors were the only ones whose obligations to credit institutions contracted in the second quarter (by EUR 36.0 million and EUR 11.6

⁵ Since, in the second quarter of 2016, more than 80.0 per cent of the credit portfolio, i.e. total loans granted to the private sector and securities issued by non-financial undertakings, was comprised of loans of other MFIs (banks and credit unions) to the private non-financial sector, the credit market analysis below is based on the latest data on other MFI loans. Moreover, MFI balance sheet statistical data, adjusted for the elimination of MFIs facing bankruptcy from the statistics and other technical factors, is used. 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).

million, or 3.1% and 1.5% respectively). Fast amortisation of loans granted contributed to that as well. In the opinion of commercial banks surveyed by the Bank of Lithuania, the demand for loans to non-financial undertakings increases, mainly — due to increased borrowing by small and medium-sized businesses. Higher reserve and working capital financing requirement was reported by banks as the major factors to have determined growth in loan demand. Rising profits and liquidity enhancement increase businesses' borrowing possibilities. Bank credit standards applied to businesses remained basically unchanged; however, banks are going to tighten them somewhat in the future. It is planned to more thoroughly assess the risks for large-sized businesses and those linked to the United Kingdom through business relations.

Growth in the portfolio of MFI loans for house purchase continued to accelerate. Over the second quarter of 2016, this portfolio grew by EUR 111.1 million, or 1.8 per cent (its annual growth was 6.5%). The net flow of new housing loans⁶ amounted to EUR 286.9 million, a year-on-year increase of 57.2 per cent (see Chart Chart 5.). House purchases are boosted by growing household income. In recent years it rose faster than real estate prices, thereby improving housing affordability. Record-low interest rates contribute to more active borrowing for house purchase as well. In addition, the interest rates on new housing loans were about 2.0 per cent in June 2016 — twice as low as the net profitability on flat rental in cities. This profitability fluctuates at about 4.5–5.4 per cent; therefore, a house is also purchased as an investment, i.e. in order to let it. Commercial banks' funding plans⁷ show that in 2016 and 2017 annual growth in the portfolio of housing loans is expected to be 10.9 per cent and 5.4 per cent respectively. The recently observed portfolio development is compatible with the Bank of Lithuania's projected growth of average salary that in 2016 and 2017 should be 5.3 per cent. The size of the portfolio of loans for house purchase already exceeds its pre-crisis level. Nevertheless, assessment of the current growth trends in this portfolio should take into account that it was shrinking for more than 5 years after the crisis. Moreover, housing loans are long-term and therefore a decline in the flow of new loans after the crisis entailed a smaller contraction of this portfolio than e.g. the portfolio of consumer loans.

Households borrowed for consumption more actively than for house purchase, this was driven by improving future expectations. The portfolio of consumer loans granted by MFIs expanded by EUR 114.1 million (6.9%) over the second quarter of 2016, while its annual growth rate was 8.1 per cent. It was the strongest annual increase since early 2009. The low interest rates environment, falling unemployment, rising income and the residents' improving economic growth-driven approach to future prospects have been contributing to intensified borrowing for consumption purposes. According to Statistics Lithuania, at the end of the first quarter of 2016, residents' average wages and salaries were by 6.9 per cent higher year on year, while the employment rate rose by 2.5 per cent over the same period.

In the second quarter of 2016, the MFI loan-to-deposit ratio improved somewhat. At the end of the quarter, it was 108.0 per cent (a quarter-on-quarter increase of 0.5 per cent⁸). The major contribution to the increase in this ratio stems from stronger loan portfolio growth. On the other hand, this indicator still was below its long-term average (119%), indicating that almost all loans granted to the private sector are comparable to private sector deposits.

In the first quarter of 2016, Lithuania's current account deficit was small, and narrowed even more. Current account deficit stood at 0.8 per cent of annual GDP (see Chart Chart 6.). In the period under review, dividends paid by credit institutions, transferred to their parent banks abroad, contributed to the current account deficit the most. Judging by the Bank of Lithuania's mac-

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

(Q1 2001–Q1 2016)

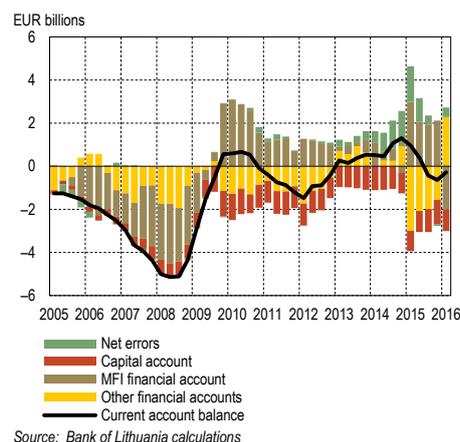


Chart 7. Composite early warning indicators of crises for Lithuania

(Q1 2001–Q2 2016)

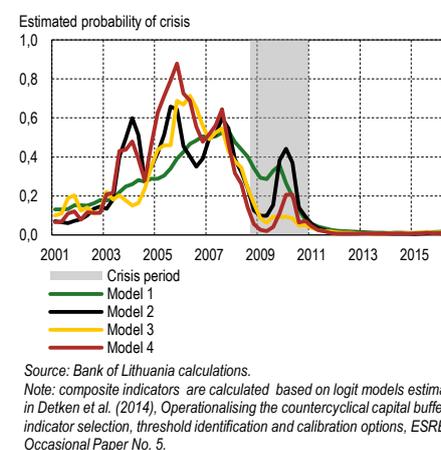
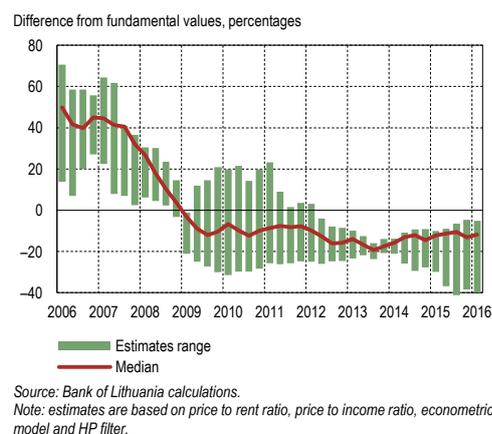


Chart 8. Gap between housing prices and the long-term average

(Q1 2006–Q1 2016)



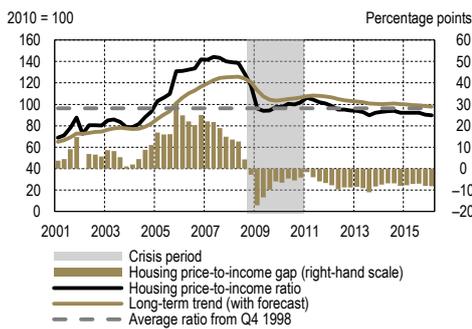
⁶ Difference between new agreements on loans and loans that were renegotiated.

⁷ For more information on banks' funding plans, see Box 2 of the Financial Stability Review published by the Bank of Lithuania in 2016 (http://www.lb.lt/finansinio_stabilumo_apzvalga_2016_m#page=13).

⁸ After eliminating seasonal effects (see Chart F of the Annex).

Chart 9. The housing price-to-income ratio gap (calculated using the forecast-augmented method)

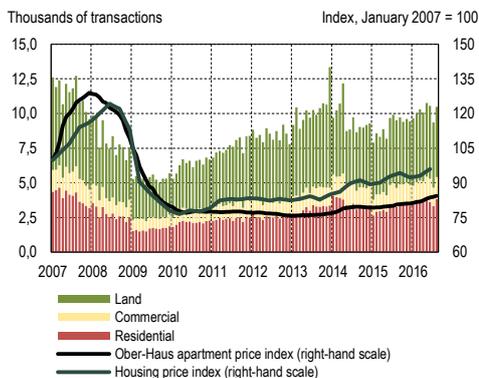
(Q1 2001–Q1 2016)



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 (after eliminating seasonal effects) and price indexes

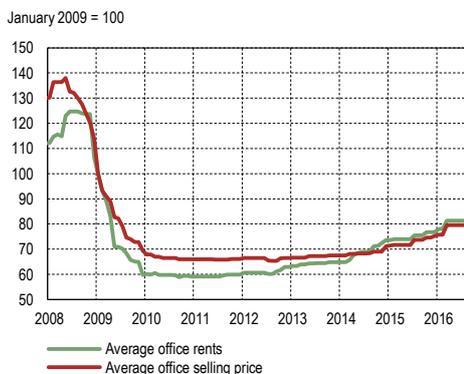
(January 2015–August 2016)



Sources: State enterprise Registrų centras, Statistics Lithuania, UAB „Ober-Haus“ and Bank of Lithuania calculations.

Chart 11. Average rental and selling prices of commercial real estate

(January 2015–August 2016)



Sources: UAB Ober-Haus and Bank of Lithuania calculations.

roeconomic projections published in June 2016, the current account is likely to remain slightly in deficit in 2016 (–0.1% of GDP); however, compared to the projections from March (–1.9%), the expectations for the current account balance have improved.

At the end of the first quarter of 2016, the composite early warning indicators of crises showed 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.⁹ As, since 2012, these estimates have been close to 0, the probability of a severe financial crisis in the next five years is low.

The real estate market is active yet shows no signs of overheating

In the second quarter of 2016, housing prices in Lithuania were on average higher by 4.1 per cent¹⁰ year on year. In the first quarter, both the data from Statistics Lithuania and real estate market participants showed weaker annual price growth — of 3.4 per cent and 2.9 per cent respectively. In Vilnius, the annual increase in house prices was higher, 5.3 per cent. With house prices increasing, their gap from the long-term equilibrium values has narrowed yet remains negative (see Chart 8). The gap between the ratio of housing prices to household income and its long-term trend (using the forecast-augmented method), in the first quarter of 2016, was also negative (–8.2%) and its changes were marginal both quarter on quarter and year on year (the gap widened by 0.2 p. p. and 0.4 p. p. respectively; see Chart 9). In general, growth in residents' income has recently been outpacing growth in house prices, which leads to the non-narrowing of the gap between the ratio of housing prices to household income and its equilibrium value.

In the second quarter of 2016, real estate market activity increased slightly quarter on quarter (see Chart 10). The greatest contribution to that stemmed from intensified trade in residential structures. After eliminating seasonal effects, the number of houses assigned hiked by 2.5 per cent, that of commercial objects sold — by 1.5 per cent and 0.9 per cent respectively. Year on year the total number of real estate objects increased by 17.0 per cent; a large share of this increase is, however, related to a low base effect, which was due to a significant fall in market activity following the adoption of the euro in the first half of 2015. In addition, the number of flat, land plot and private house purchase transactions concluded in the first half of 2016 was by some 17 per cent smaller compared to the same period in 2007, when real estate market activity was probably the highest since 2004 and by some 4 per cent lower than in the second half of 2015.

Participation of credit institutions in the financing of house purchases intensified in the second quarter of 2016. In the second quarter of 2016, the average share of housing purchased at least in part with borrowed funds, by number of transactions, was 42.8 per cent, a year-on-year increase of 5.5 p.p.¹¹ When assessing this ratio by value of housing deals being concluded, it can be seen that loans for house purchase granted by credit institutions accounted for 71.5 per cent of the total value of the acquisitions of flats and houses in the reference period. This share boosted by 13.2 p. p. over the year. House purchases of a higher value contribute to such an increase; e.g. in Vilnius, the average price of a house deal has been on the rise since 2014, while in the first quarter of 2016 it was EUR 77.2 thousand, a year-on-year increase of 15.0 per cent.

⁹ 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) The indicators are developed based on econometric models, which allow assessing various combinations of the following indicators: banks' loan-to-GDP gap, annual change in the house price-to-income ratio, debt-to-income ratio, 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.

¹⁰ According to the data of UAB Ober-Haus.

¹¹ Lithuania's housing market is characterised by seasonality, which is most prominent in the first quarter of the year. Due to a rather small data sample, application of seasonal comparison methods would be ineffective; thus, in this Survey, the share of house purchases with loans is only compared with the same indicator from the respective period of the previous year.

Housing supply is sufficient and does not create upward pressures on prices. In the second quarter of 2016, the same number of flats as was offered by real estate developers was purchased; thus, the number of unsold flats remained almost unchanged — 3,350. Spare flats in the capital dropped by about 18.0 per cent in number over the year. Real estate developers are not expecting significant changes in the primary housing market in the second half of this year. It should be noted that the number of building permits issued in the country over the last four years was on the rise, while at the end of 2015 it was by only 18.6 per cent higher than a year ago, and by nearly two-thirds higher than five years ago. A similar trend prevailed in Vilnius. This shows that housing supply is not likely to subside in the next few years.

Price growth within the commercial real estate market outpaced that within the residential real estate market (see Chart 11). Average selling prices for commercial objects rose by 10.9 per cent, while rental prices — by 6.7 per cent over the year. Over the quarter, average selling and rental prices hiked by 3.3 per cent and 1.5 per cent respectively, while the average profitability of office rentals decreased somewhat (by 0.2 p. p.) over the second quarter, to 9.6 per cent (decreasing by 0.4 p. p. over the year), and was well above the profitability of house rentals.

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

Leading indicators:

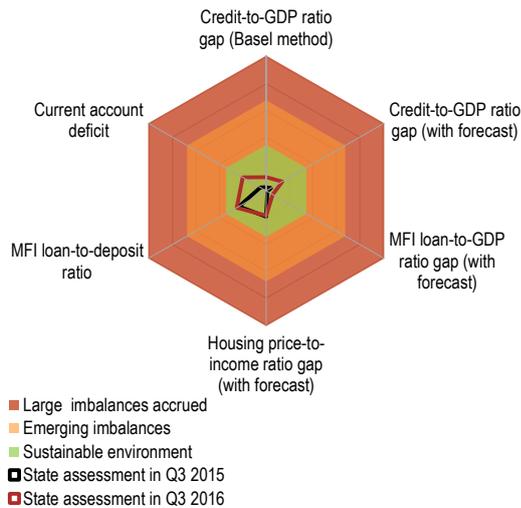
1. Credit to the private non-financial sector-to-GDP ratio gap (calculated using the standardised Basel method)
2. Credit to the private non-financial sector-to-GDP ratio gap (calculated using the forecast-augmented method)

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 conducted in Q3 2016)

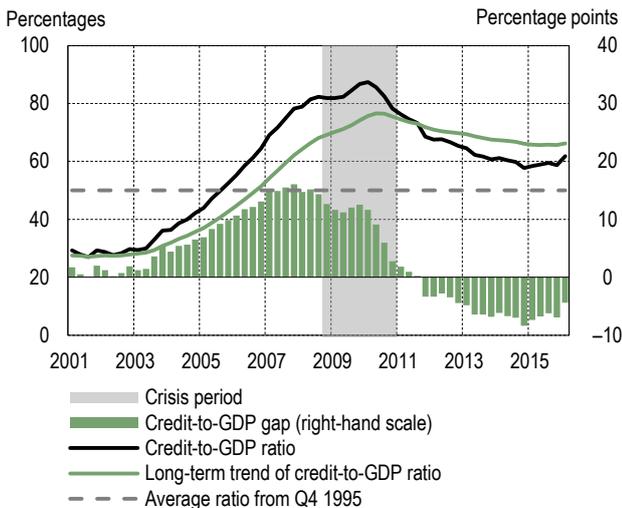


Sources: Statistics Lithuania and Bank of Lithuania calculations.

Note: axes are scaled according to the range of a particular indicator: from its minimal value up to the maximal value.

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

(Q1 2001–Q1 2016)

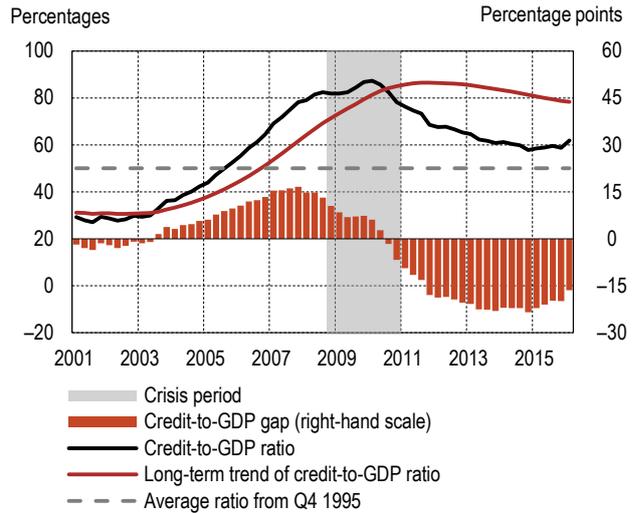


Sources: Statistics Lithuania and Bank of Lithuania calculations.

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

(Q1 2001–Q1 2016)

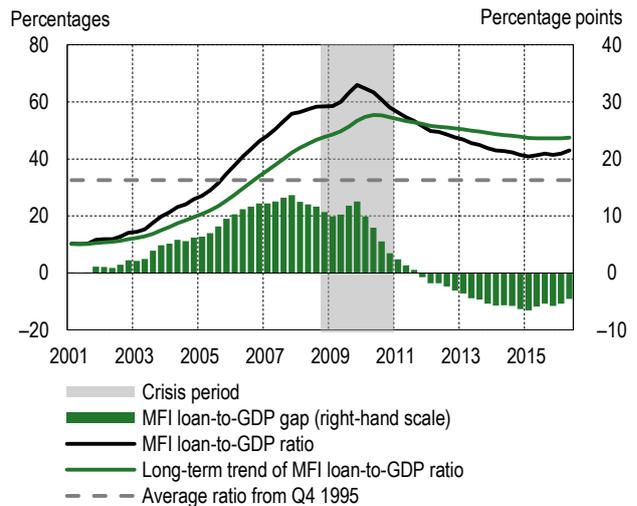


Sources: Statistics Lithuania and Bank of Lithuania calculations.

Note: long-term trend is computed using a one-sided HP filter with a smoothing parameter of 400,000.

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

(Q1 2001–Q2 2016)

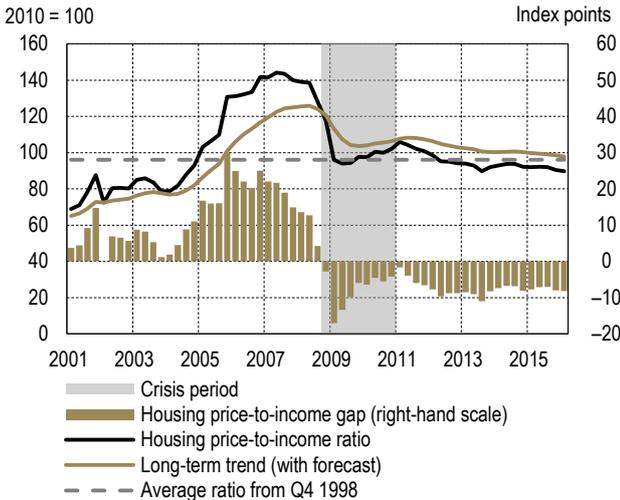


Sources: Statistics Lithuania and Bank of Lithuania calculations.

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.

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

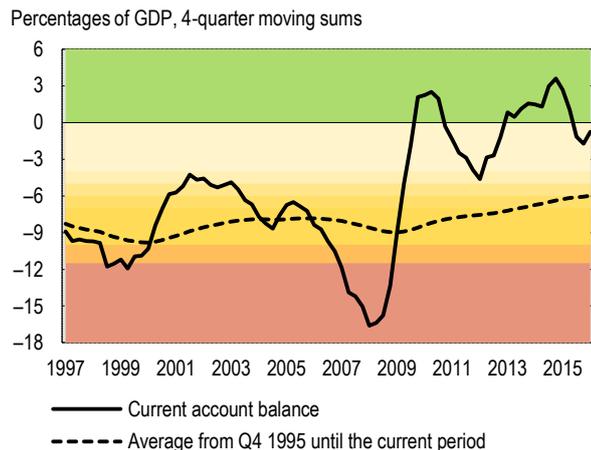
(Q1 2001–Q1 2016)



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

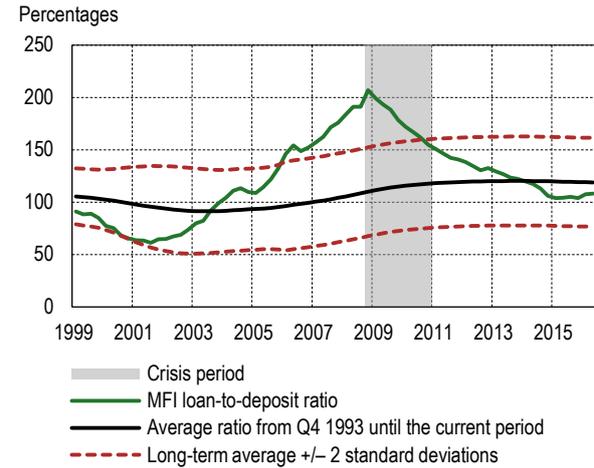
(Q1 2001–Q1 2016)



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

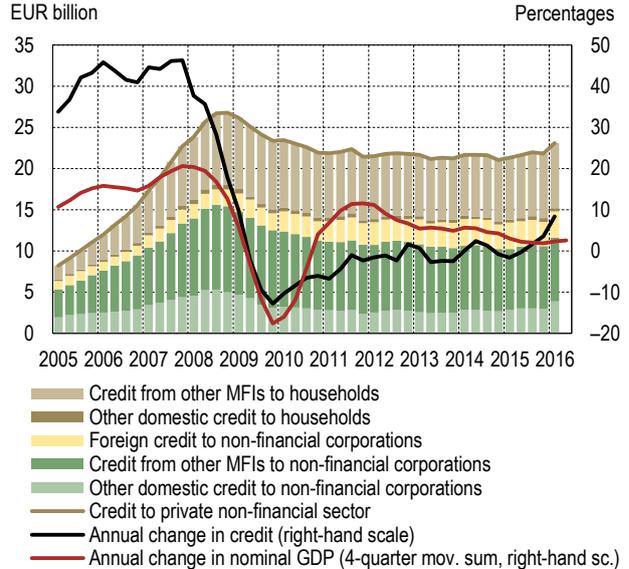
(Q1 2001–Q2 2016)



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 H. Credit and nominal GDP dynamics

(Q1 2005–Q1 2015; nominal GDP dynamics — until Q2 2016)



Sources: Statistics Lithuania and Bank of Lithuania calculations.