



LIETUVOS BANKAS
EUROSISTEMA

Quarterly assessment of the financial cycle in Lithuania

**December
2023**

The review was prepared by the Financial Stability Department of the Bank of Lithuania.
Unless otherwise indicated, the cut-off date for data used in the publication was 17 November 2023.

Periods indicated in charts include data for the respective year, quarter, etc.
Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

© Lietuvos bankas
Gedimino pr. 6, LT-01103 Vilnius
www.lb.lt

Introduction

The quarterly assessment of the financial cycle in Lithuania (formerly – the Credit and Real Estate Market Review) is a quarterly publication issued by the Bank of Lithuania that assesses the state of the financial cycle in Lithuania and the level of cyclical systemic risk: the sustainability of trends in the credit and real estate markets, imbalances in the financial sector and the risk of their build-up or widening. The information provided in this review forms the basis for a regular assessment of the level of the rates of the financial stability instruments used, such as the counter-cyclical capital buffer and the sectoral systemic risk buffer for the housing loan portfolio.¹

Explanation of the key terms used in this publication:

Financial cycle. *The financial cycle refers to the development cycle of the financial system, comprising four phases: expansion (growth), deceleration, recession and recovery, defined by the overall evolution of the various indicators of the financial system (in particular, those reflecting trends in the credit and real estate markets), which are related, for example, to the perception of the value of financial assets and real estate, the perceived level of risk, the tightening or relaxation of lending standards and the resulting impact on the supply of credit, and the interplay between these phenomena. The literature generally considers that the financial cycle tends to last longer than the business cycle and can significantly amplify economic booms and deepen recessions. The application of the CCyB aims at increasing the resilience of the financial system and, to some extent, reducing its pro-cyclicality and, within the meaning of financial cycle, at reducing the size of fluctuations in the financial cycle, especially in the recession phase.*

Systemic risk. *Systemic risk is the risk of a disruption to the financial system or a part of the financial system, which could have significant negative consequences for the financial system and the economy. Two types of systemic risk are generally distinguished: cyclical and structural risks. Cyclical risk is related to the evolution of the financial cycle: it rises and falls as the financial cycle unfolds and is usually associated with changes in the supply of credit and in the risk assessment of financial system participants. Structural (systemic) risk arises from the structural features of the financial system, such as the interconnectedness of financial system participants, concentration and the specific nature of business models.*

Abbreviations

CCyB – counter-cyclical capital buffer

CRE – commercial real estate

EA – euro area

GDP – gross domestic product

HCPI – harmonised consumer price index

HH – household

HP – Hodrick-Prescott filter

MFI – monetary financial institutions (banks, credit unions)

NFC – non-financial corporation

RE – real estate

¹ <https://www.lb.lt/en/financial-stability-instruments-1>

Key messages

The financial cycle in Lithuania continued to decelerate in the third quarter of 2023, with the annual growth rates of the MFI loan portfolio and house prices slowing down steadily without any material downward impact on the real economy and the financial sector and has therefore so far been in line with the soft landing scenario. Due to the further decrease in lending, there was a more pronounced fall in the broad-based and, to a lesser extent, the MFI credit-based financial cycle index. Borrowing rates for both businesses and individuals continued to moderate, with nominal growth in broad credit slowing down to 9%, and in MFI credit to 5.5% (the latter returned to the level of moderate growth). Meanwhile, as a result of declining annual inflation, real growth rates are gradually moving towards a positive annual change. Despite a minor growth in the share of non-performing loans to businesses and individuals, banks' asset quality remains good. Annual growth in housing prices continues to decelerate, with further decline in overvaluation. Corporate and personal indebtedness remains low, the current account deficit is close to zero and the loan-to-deposit ratio of banks is still low (78%). Limited, yet declining imbalances in house prices have been observed. The results of the latest Bank Lending Survey conducted by the Bank of Lithuania² show that the demand for lending that had been declining over the past years is expected to stabilise in the next quarter.

The growth rate of corporate borrowing, both from credit institutions and other sources, decelerated markedly. The annual growth rate of the MFI corporate loan portfolio stood at 3.1% in the third quarter of 2023, while that of the broad credit was 9.4% in the second quarter (declined by 3.9 and 10.4 percentage points respectively). However, in September, the annual growth rate of the MFI corporate loan portfolio in Lithuania was the sixth highest across the EA, while in almost half of the EA countries the growth of the portfolio already turned negative (the total annual change in the EA was -0.9%). The curtailment of corporate credit at the beginning of 2023 was mainly due to weaker lending to real estate operations, and in the second half of 2023 – to companies in the trade sector. As shown by the survey of banks, the decline in credit was mainly due to a fall in demand from businesses, against the backdrop of the rise in interest rates. On the other hand, new lending to businesses was still active: in the third quarter of 2023, annual growth in flows totalled 39%.

CRE credit and market activity have become significantly weaker, and a price correction is expected in the coming quarters. With the volume of new loans to RE companies narrowing by a third and the volume of sales of commercial spaces falling by a quarter, the prices of such premises remained unchanged over the year compared to the peak almost two years ago. Expectations of banks for further price developments were more pessimistic than in the housing market (a tenth of the banks expect a correction by more than 10% in commercial space prices), and there was a slight increase in the number of banks that saw imbalances in the CRE market. Commercial premises and, in terms of geography, commercial premises in the city of Klaipėda, were the most vulnerable: in these market segments, real rental prices remain significantly decreased. The fall in risk premium (the yield differential between CRE and government securities is still 2 percentage points below the historical average) impeded the activity of investors: investment transactions with the value of €270 million were entered into in the first three quarters of 2023 on the market, as much as 40% less than in the same period a year ago. The slowdown in market activity suggests that a minor price correction could be expected in the coming quarters, especially in the segments where overvaluation is recorded (e.g. based on relative indicators, class A offices in Vilnius are overvalued by about 14%).

The growth rate of the household loan portfolio decelerated further, although

² For more information, see the [Review of the Bank Lending Survey](#).

remained among the strongest in the EA. The nominal annual growth of the housing loan portfolio remained moderate and fell to 5.9% in the third quarter of 2023 but was the second fastest across the EA where the average growth rate was 0.1%. The number and nominal value of new loans in September were more than a quarter lower than a year ago. As shown by the survey of banks, the slowdown in housing lending continues to be driven by a decline in demand for housing, with only a quarter of the banks surveyed reporting an increase in demand for consumer loans. In September, the annual growth of the portfolio of consumer loans from MFIs to Lithuanian residents (18%) was one of the strongest in the EA (where the average growth rate was 2.2%). New consumer loans were historically high: as the number of loans broadly unchanged over the year, the nominal flow of loans to Lithuanian residents in the third quarter of 2023 was one-sixth higher than a year ago. Regardless of this, there are no household credit imbalances, with the household credit-to-GDP gap remaining negative and broadly unchanged.

With housing market activity persistently subdued, the house price growth rate keeps decelerating. The number of houses sold in the third quarter of this year was similar to that observed in 2016, while the house price growth continues to be slower against the backdrop of decline in demand. Based on different measures,³ the annual growth rate of the prices ranged between 1.1% and 5.8% in October 2023. However, the housing market cycle in Lithuania is at a slightly higher point than the average in the EA where an annual contraction of 1.7% in housing prices was recorded in the second quarter of 2023. There are still some limited imbalances in the level of housing prices: based on the median of six different estimates, prices are overvalued by about 2.6% (3.7 percentage points less than in the second quarter of 2022). The indicator has remained broadly unchanged over the last three quarters. Expectations of banks for residential RE prices did not change significantly over the quarter: a relatively minor price decline of up to 10% is expected over the next year.

The CCyB rate of 1%, which had been set in September 2022, during the upswing of the financial cycle, has become applicable in Lithuania as of 1 October 2023. With the deceleration of the financial cycle and a drop in economic activity, a positive CCyB rate ensures that credit institutions have a capital buffer that may be released in the event of an economic shock or cyclical risks. For instance, a release of the CCyB rate could be considered in situations where economic challenges, financial market shocks or deteriorating credit quality would significantly affect the financial sector and could lead to an overall reduction in credit supplied to the economy. Currently, the financial cycle is decelerating slowly, mainly driven by the fall in demand, while credit quality of loans remains historically good; hence, there are no signs of bank lending possibilities being excessively constrained. At the moment, banks and central credit union groups have accumulated a capital stock of more than 1% of the CCyB requirement, and the projected high profitability of the banking sector, in the context of the rise in interest rates, should help to maintain and further strengthen this buffer.

³ The Bank of Lithuania's repeat sales housing price index and Ober-Haus housing price index.

Financial cycle assessment

The financial cycle kept decelerating markedly, in both broad credit and MFI credit growth rates. Only limited house price imbalances are observed.

Chart 1. Cyclical risk assessment matrix

Change in financial cycle indicators

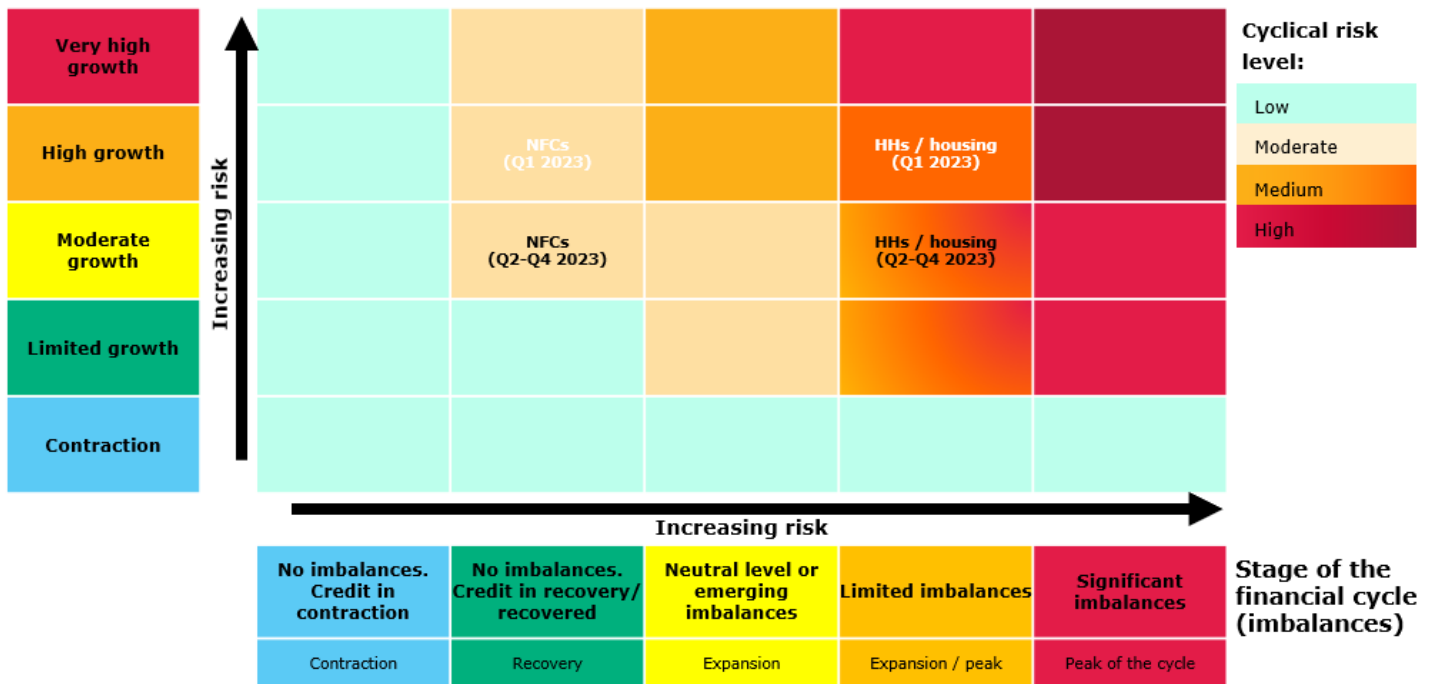


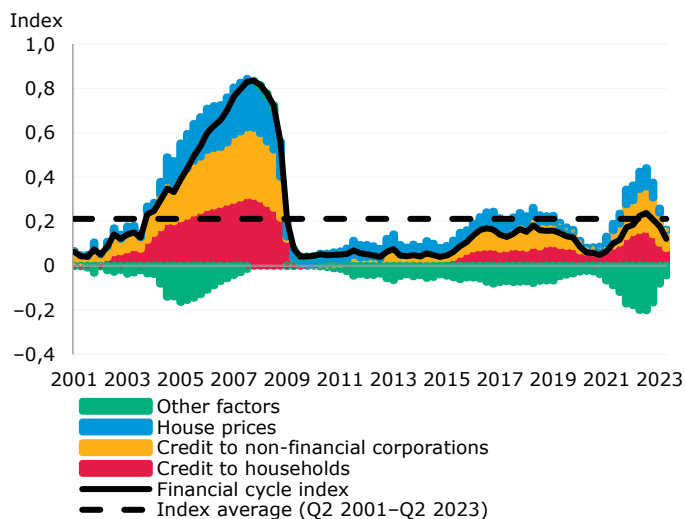
Chart 2. Heatmap of corporate and personal credit growth, credit imbalances and composite financial cycle indicators (Q1 2019–Q3 2023, the latest data are marked by the black dashed line on the right)

	2019				2020				2021				2022				2023			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	
Non-financial private sector																				
Growth indicators																				
Composite indicators																				
Domestic systemic risk indicator (d-SRI)	-0,14	-0,16	-0,20	-0,24	-0,30	-0,41	-0,42	-0,40	-0,33	-0,29	-0,19	-0,06	0,01	0,06	0,12	0,15	0,06	-0,01		
Financial cycle index (new MFI loans)	0,08	0,05	0,04	0,03	0,03	0,03	0,03	0,05	0,07	0,09	0,11	0,14	0,14	0,13	0,12	0,10	0,07	0,05		
Financial cycle index (broad credit)	0,16	0,15	0,13	0,13	0,09	0,06	0,06	0,05	0,06	0,10	0,12	0,17	0,18	0,23	0,24	0,21	0,18	0,12		
Band-pass filtered financial cycle indicator	-0,03	-0,03	-0,03	-0,03	-0,03	-0,04	-0,04	-0,04	-0,05	-0,05	-0,05	-0,05	-0,06	-0,06	-0,06	-0,06	-0,06	-0,05		
Nominal and real growth																				
1-year nominal growth of broad credit	9,4	8,4	7,2	6,7	3,5	-1,6	-1,2	-1,5	2,0	6,8	8,2	13,8	14,4	20,2	22,2	17,5	15,7	9,0		
1-year nominal MFI credit growth	5,3	2,5	3,9	3,2	3,2	-0,5	-1,2	-2,1	-1,4	3,1	5,8	10,7	13,3	14,0	16,0	14,2	10,1	8,1	5,5	
1-year real growth of broad credit	7,2	5,7	4,8	4,6	1,0	-2,2	-2,0	-1,8	1,3	3,5	2,9	4,0	0,4	1,4	0,6	-3,0	-1,1	-1,5		
1-year real MFI credit growth	3,1	0,0	1,6	1,2	0,7	-1,2	-2,1	-2,4	-2,1	0,0	0,6	1,2	-0,5	-3,8	-4,5	-5,8	-5,9	-2,4	-0,4	
1-year difference of the broad credit-to-GDP ratio	1,0	0,4	-0,6	-0,5	-2,1	-3,7	-2,9	-2,2	0,0	0,0	-0,7	0,3	-1,3	1,5	1,5	-1,0	-0,5	-2,7		
1-year difference of the MFI credit-to-GDP ratio	-1,0	-2,1	-1,7	-1,7	-1,4	-1,9	-1,8	-1,6	-1,3	-1,4	-1,3	-0,9	-1,1	-1,1	-1,1	-1,6	-2,1	-1,9	-1,1	
Other indicators																				
Relative credit flow indicator	0,04	0,05	0,04	0,04	0,03	0,01	0,01	0,01	0,01	0,00	0,00	0,01	0,01	0,02	0,01	0,00	0,00	0,00		
1-year difference of broad credit-to-GDP ratio	12,8	9,9	7,0	4,8	0,2	-6,0	-12,0	-17,0	-18,0	-13,9	-8,8	-0,3	6,0	12,8	19,6	20,8	21,3	14,1		
1-year difference of MFI credit-to-GDP ratio	1,5	-1,6	-2,7	-4,3	-5,5	-6,3	-8,6	-10,5	-12,4	-11,8	-9,6	-5,2	-0,4	2,8	5,5	6,2	4,7	2,4	-1,1	
Ratio of pure new loans (4 quarters sum) to GDP (4 quarters sum)	9,2	8,6	8,2	7,8	7,1	6,4	6,2	6,9	7,5	8,5	8,8	9,3	9,2	9,3	9,0	8,3	8,4	8,2	8,2	
Ratio of new loans with rollovers (4 quarters sum) to GDP (4 quarters sum)	13,9	12,9	12,3	11,6	11,2	11,6	11,3	12,3	12,4	12,6	13,2	13,7	13,8	13,6	13,1	12,6	12,8	13,2	13,2	
Non-financial private sector credit impulse (loan portfolio, first version)	-1,4	-4,5	2,2	-1,1	0,0	-6,0	-1,1	-1,3	1,0	6,7	3,5	6,5	3,0	0,6	2,2	-2,3	-4,9	-2,4	-3,2	
Non-financial private sector credit impulse (loan portfolio, second version)	-0,9	-6,4	-1,6	-2,9	-2,0	-3,1	-5,2	-5,3	-4,6	3,7	7,0	12,8	14,7	10,9	10,2	3,5	-3,3	-5,9	-10,6	
Non-financial private sector credit impulse (flow of new loans)	1,2	-4,2	-2,5	-2,6	-1,5	1,4	-1,0	4,1	0,5	0,6	2,5	1,5	0,7	-1,4	-1,3	-2,3	0,9	1,3	-0,1	
1-year difference of the non-financial private sector debt service to income ratio	0,6	-0,6	0,8	0,6	-1,0	-2,1	-1,9	-1,8	-0,8	-0,4	-0,3	0,6	0,2	1,6	1,5	0,6	0,4	-1,1		
Imbalance indicators																				
Gap between the broad credit-to-GDP ratio and its long-term trend (Basel method)	-9,7	-8,6	-9,0	-10,1	-10,8	-11,0	-10,4	-10,7	-9,3	-9,6	-9,6	-9,0	-9,1	-6,7	-6,9	-8,6	-8,3	-8,0		
Gap between the broad credit-to-GDP ratio and its long-term trend (LT method)	-3,4	-2,5	-3,1	-4,2	-4,8	-4,9	-4,3	-4,7	-3,6	-4,1	-4,3	-3,9	-4,2	-2,3	-2,9	-4,6	-4,2	-3,9		
Gap between the MFI credit-to-GDP ratio and its long-term trend (LT method)	-5,3	-5,1	-5,1	-5,6	-5,5	-5,6	-5,4	-5,7	-5,4	-5,6	-5,4	-5,3	-5,2	-5,4	-5,1	-5,5	-5,7	-5,6	-4,7	
Gap between the broad credit-to-GDP ratio and its long-term trend (State Space method)	0,0	0,3	-0,8	-2,9	-4,5	-5,8	-6,1	-7,5	-7,0	-8,3	-9,3	-9,6	-10,7	-9,2	-10,3	-13,0	-13,7	-14,4		
Other indicators																				
Capital adequacy ratio	19,7	19,6	19,0	23,7	23,1	23,1	22,5	24,0	24,5	23,1	22,6	23,5	22,7	21,3	19,9	20,4	20,4	19,9		
Leverage ratio of banks	7,6	7,6	7,4	8,3	8,2	7,8	7,3	7,4	7,4	6,9	6,8	8,6	6,5	6,0	5,9	5,9	6,4	6,1		
Loan-to-deposit ratio	96,0	95,7	94,1	92,6	88,1	80,6	76,4	71,1	68,5	68,3	69,7	73,9	77,9	79,9	81,3	79,9	79,1	79,2	78,4	
Current account balance-to-GDP ratio	1,3	1,7	2,4	3,5	4,8	6,2	7,3	7,3	6,6	4,7	3,0	1,1	-1,3	-2,8	-4,3	-5,0	-3,6	-2,0	-0,7	

Note: Values are rounded; stages of some indicators are evaluated based on the percentiles of their values, hence in some instances cells that have the same value may be coloured differently.

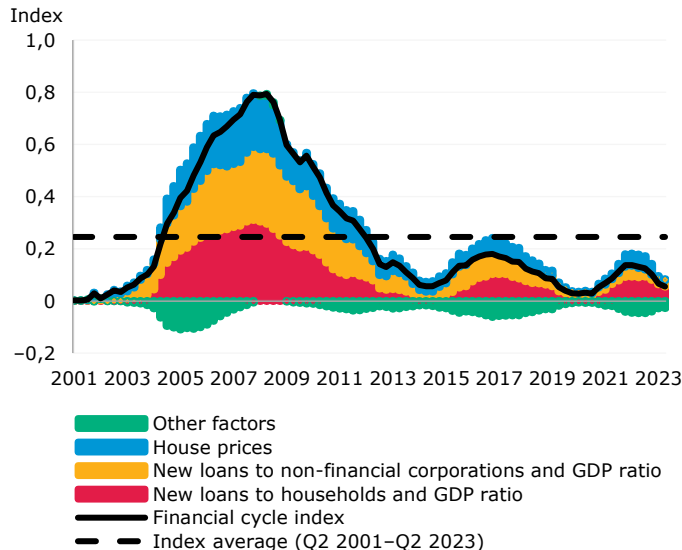
A further decline in corporate borrowing, both from credit institutions and other sources, as well as the persisting subsiding in the housing credit, led to a decline in the financial cycle indices.

Chart 3. Lithuania's financial cycle index and its drivers (total credit, Q1 2001–Q2 2023)



Sources: State Data Agency and Bank of Lithuania.
Note: The assessment uses a broader definition of credit to NFCs and HHs, regardless of the credit provider.

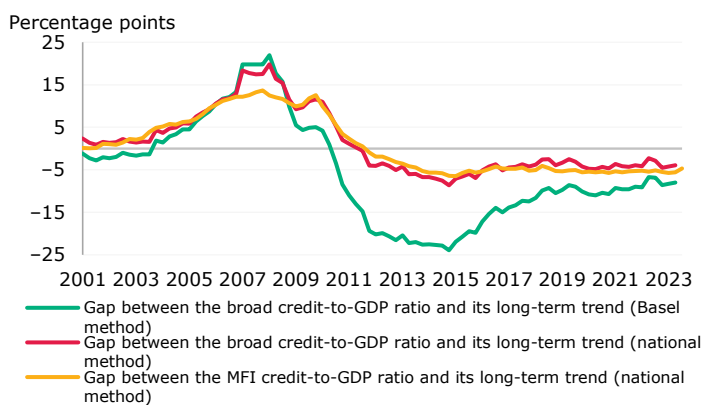
Chart 4. Lithuania's financial cycle index and its drivers (MFI loans, Q1 2001–Q2 2023)



Sources: State Data Agency and Bank of Lithuania.

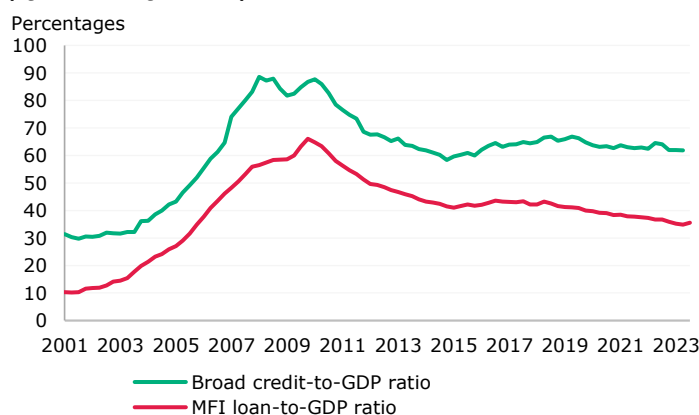
The indicator of the total credit (NFC and HH) to GDP gap widened slightly, mainly due to the slowdown in GDP growth in recent quarters, but no credit imbalances were observed.

Chart 5. Credit and MFI loans (NFC and HH) to GDP ratio gap (Q1 2001–Q3 2023)



Sources: State Data Agency and Bank of Lithuania.
Note: Long-term trend is computed using a one-sided HP filter with a smoothing parameter of 400,000; for the national method, before applying the filter, the ratio is modelled for the next 5-year window using a 4-quarter weighted average.

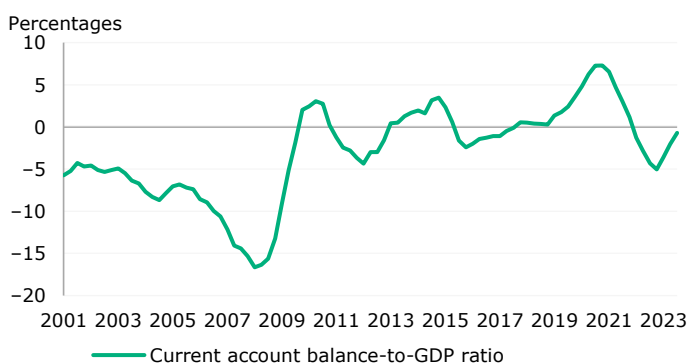
Chart 6. Credit and MFI loans (NFC and HH) to GDP ratios (Q1 2001–Q3 2023)



Sources: State Data Agency and Bank of Lithuania.

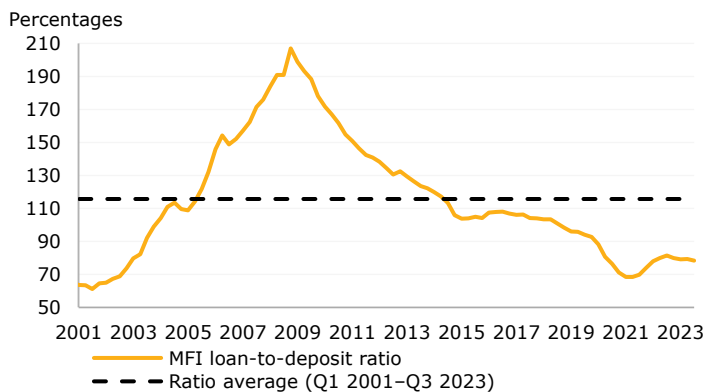
As the current account deficit continues to decrease, the borrowing requirement is also declining and the loan-to-deposit ratio remains low.

Chart 7. Current account-to-GDP ratio (Q1 2001–Q3 2023)



Sources: State Data Agency and Bank of Lithuania.
Note: Preliminary current account balance data for Q3 2023.

Chart 8. MFI loan (NFC and HH) to deposit ratio (Q1 2001–Q3 2023)



Sources: State Data Agency and Bank of Lithuania.

Non-financial corporation sector

The growth rate of total corporate borrowing (broad credit) decelerated markedly, while MFI credit returned to a low-growth phase for the first time in the last few years.

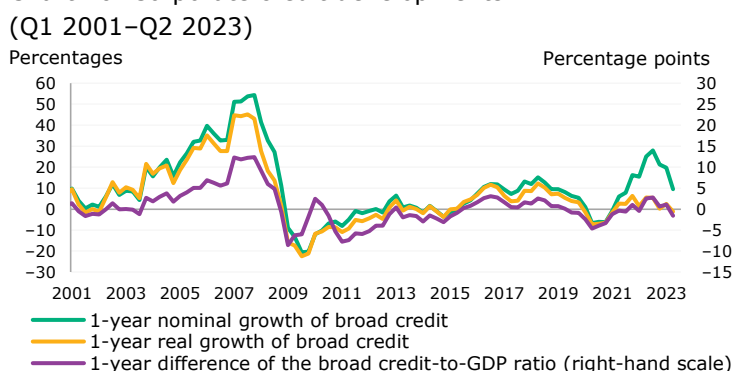
Chart 9. Map of growth and imbalance indicators in the corporate sector (Q1 2019–Q3 2023, the latest data are marked by the black dashed line on the right)

Non-financial corporations sector																			
Growth indicators																			
Credit to NFCs nominal and real growth																			
1-year nominal growth of broad credit	9,5	8,1	6,2	5,3	0,9	-6,7	-6,1	-6,3	-1,0	5,9	7,9	16,2	15,5	25,0	27,9	21,3	19,8	9,4	
1-year nominal growth of broad and trade credit	9,6	5,1	4,0	2,5	1,6	-4,5	-1,7	-0,4	5,5	13,1	13,6	21,9	16,7	19,9	21,1	23,1	22,9	18,4	
1-year nominal MFI credit growth	1,9	-3,5	-0,8	-1,2	-2,0	-9,0	-10,1	-12,5	-11,3	-3,8	1,2	10,6	16,2	17,5	21,3	18,3	10,0	7,0	3,1
1-year real growth of broad credit	7,3	5,4	3,8	3,3	-1,5	-7,3	-6,9	-6,5	-1,7	2,7	2,5	6,3	1,4	5,5	5,3	0,1	2,4	-1,2	
1-year real growth of broad and trade credit	7,4	2,5	1,6	0,5	-0,8	-5,1	-2,6	-0,7	4,7	9,7	8,0	11,5	2,4	1,1	-0,4	1,6	5,1	6,9	
1-year real MFI credit growth	-0,2	-5,9	-3,0	-3,2	-4,4	-9,6	-10,9	-12,7	-11,9	-6,7	-3,8	1,1	2,0	-0,9	-0,2	-2,3	-5,9	-3,3	-2,6
1-year difference of the broad credit-to-GDP ratio	0,7	0,1	-0,8	-0,9	-2,5	-4,6	-4,0	-3,4	-1,2	-0,4	-0,6	1,0	-0,4	2,6	2,8	0,6	1,1	-1,6	
1-year difference of the broad and trade credit-to-GDP ratio	1,2	-1,9	-3,0	-3,5	-3,7	-6,2	-3,5	-1,6	2,3	4,0	2,6	5,2	-0,1	1,6	1,0	2,3	3,9	2,9	
1-year difference of the MFI credit-to-GDP ratio	-1,1	-2,3	-1,7	-1,6	-1,6	-2,5	-2,5	-2,6	-2,3	-1,7	-1,3	-0,4	-0,1	0,0	0,2	-0,1	-0,9	-0,9	-0,8
CRE credit nominal growth																			
1-year nominal growth of CRE credit	-0,2	1,7	-0,5	-6,5	-2,7	-6,0	-7,2	-0,4	-0,8	0,7	7,0	8,0	10,7	9,8	9,2	12,2	5,3	6,3	
Other indicators																			
1-year difference of broad NFC credit-to-GDP ratio	10,4	7,3	4,2	2,0	-2,3	-8,7	-14,4	-19,1	-19,8	-15,0	-9,6	-1,1	4,6	11,1	17,7	19,1	20,6	14,3	
Ratio of pure new loans (4 quarters sum) to GDP (4 quarters sum)	5,2	4,8	4,5	4,1	3,3	2,9	2,6	3,1	3,6	4,1	4,4	4,8	4,7	4,8	4,4	3,9	4,1	4,0	4,3
Ratio of new loans (including rollovers) to GDP	9,3	8,5	7,9	7,4	6,9	7,4	7,1	8,0	7,9	7,7	8,2	8,6	8,7	8,4	7,9	7,5	7,9	8,3	8,5
NFC credit impulse (MFI loan portfolio)	-1,3	-4,4	2,2	-0,2	-0,6	-5,4	-0,9	-1,4	0,9	5,6	2,9	5,4	2,7	0,6	1,8	-1,4	-4,1	-1,5	-2,1
NFC credit impulse (flow of new MFI loans)	1,7	-3,2	-2,1	-2,2	-1,8	1,9	-1,1	3,4	0,0	-1,2	2,1	1,3	0,6	-1,1	-1,8	-1,8	1,3	1,8	0,6
1-year difference of NFC debt to income ratio	0,8	0,3	-1,4	-2,2	-3,2	-6,6	-4,7	-5,9	-3,9	-1,9	-1,5	-0,1	0,3	3,7	4,9	4,4	3,4	-0,2	
1-year difference of ratio of NFC liabilities to assets	-9,4	-7,7	-4,3	-5,2	0,0	-8,4	-10,2	-11,2	-12,3	-5,7	-2,0	2,7	2,9	14,9	17,9	11,6	12,6	2,5	
1-year difference of the NFC debt service to income (profit) ratio	1,5	-0,3	2,1	2,1	-0,7	-2,9	-2,9	-2,9	-1,4	-0,5	0,1	1,5	0,9	3,3	5,3	2,2	1,1	-0,8	
Imbalance indicators																			
Credit to NFCs																			
Gap between the broad credit to NFC-to-GDP ratio and its long-term trend (Basel method)	-3,4	-2,6	-3,2	-4,6	-5,3	-6,5	-6,2	-6,8	-5,3	-5,6	-5,6	-4,7	-4,7	-2,1	-2,0	-3,4	-3,0	-3,1	
Gap between the broad credit to NFC-to-GDP ratio and its long-term trend (LT method)	-1,2	-0,6	-1,2	-2,5	-2,9	-3,6	-3,2	-3,7	-2,4	-2,8	-2,9	-2,3	-2,4	-0,4	-0,7	-2,1	-1,8	-1,8	
Gap between the MFI credit to NFC-to-GDP ratio and its long-term trend (LT method)	-3,4	-3,3	-3,3	-3,8	-3,7	-4,3	-4,2	-4,6	-4,2	-4,3	-3,9	-3,7	-3,4	-3,5	-3,0	-3,2	-3,5	-3,5	-2,8
NFC short-term liabilities to short-term assets ratio	37,9	39,3	37,9	35,1	38,0	30,9	27,7	23,9	25,7	25,2	25,7	26,6	28,6	40,1	43,7	38,2	41,2	42,6	
CRE credit																			
Deviation between current and historical CRE yield and government bond spread	143,2	143,2	143,2	143,2	191,0	191,0	191,0	191,0	166,3	166,3	166,3	166,3	91,0	-31,8	-118,8	-245,5	-239,9	-199,0	-195,8

Note: Values are rounded; stages of some indicators are evaluated based on the percentiles of their values, hence in some instances cells that have the same value may be coloured differently.

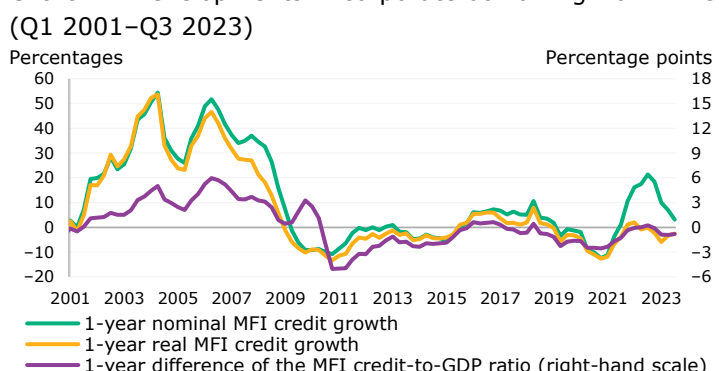
MFI lending to businesses did not change significantly and total indebtedness, in terms of real growth rate, turned negative for the first time since the beginning of 2021.

Chart 10. Corporate credit developments (Q1 2001–Q2 2023)



Sources: State Data Agency, Bank of Lithuania and Bank of Lithuania calculations.

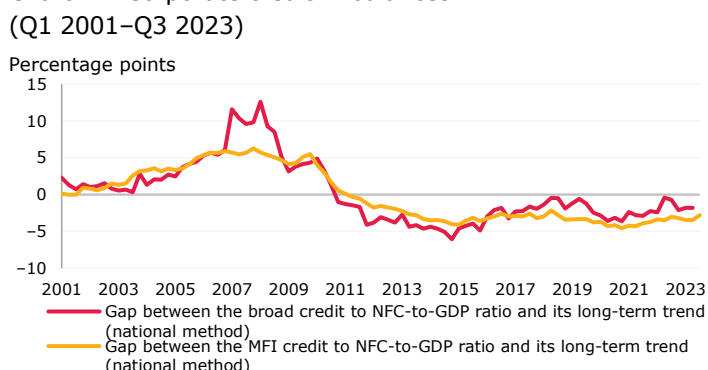
Chart 11. Developments in corporate borrowing from MFIs (Q1 2001–Q3 2023)



Sources: State Data Agency, Bank of Lithuania and Bank of Lithuania calculations.

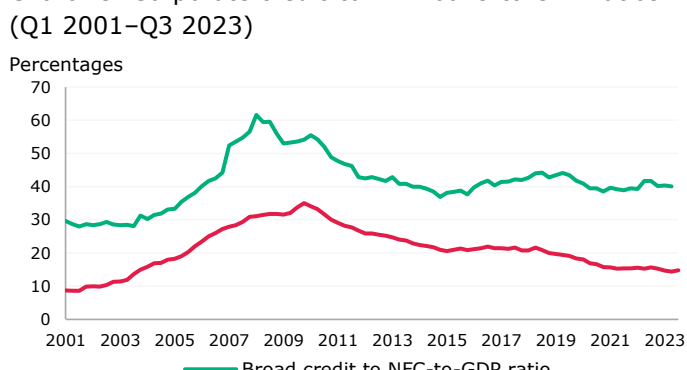
Corporate indebtedness remained broadly unchanged over the quarter.

Chart 12. Corporate credit imbalances (Q1 2001–Q3 2023)



Sources: State Data Agency and Bank of Lithuania. Notes: The long-term trend is computed by applying a one-sided HP filter with a smoothing parameter of 400,000; before applying the filter, the ratio is modelled for the next 5-year window using a 4-quarter weighted average.

Chart 13. Corporate credit-to-MFI loans-to GDP ratios (Q1 2001–Q3 2023)



Sources: State Data Agency and Bank of Lithuania.

Household/housing sector

Housing lending is resuming its moderate growth, with limited imbalances remaining only in the house price segment.

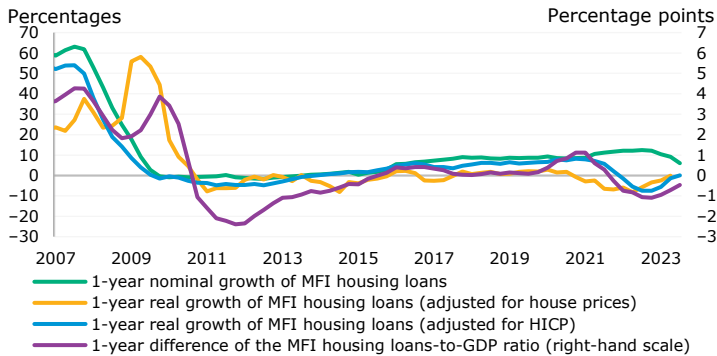
Chart 14. Map of household/housing sector growth and imbalance indicators (Q1 2019–Q3 2023, the latest data are marked by the black dashed line on the right)

Household / housing sector	2019				2020				2021				2022				2023		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	II	III	
Household / housing sector																			
Growth indicators																			
Housing credit nominal and real growth																			
1-year nominal growth of MFI housing loans	8,7	8,5	8,7	8,6	9,3	8,6	8,4	8,5	8,6	10,5	11,2	11,6	12,1	12,0	12,4	12,1	10,4	9,2	5,9
1-year real growth of MFI housing loans (adjusted for housing prices)	0,8	1,8	2,1	2,0	2,9	1,5	1,8	-0,8	-3,0	-2,5	-6,5	-6,9	-5,9	-8,2	-5,7	-3,4	-2,4	-0,2	
1-year real growth of MFI housing loans (adjusted for HICP)	6,5	5,8	6,2	6,5	6,7	7,9	7,4	8,2	7,8	7,1	5,7	2,0	-1,6	-5,5	-7,4	-7,5	-5,6	-1,4	0,1
1-year difference of the MFI housing loans-to-GDP ratio	0,1	0,1	0,1	0,2	0,4	0,7	0,8	1,1	1,1	0,6	0,3	-0,3	-0,7	-0,8	-1,1	-1,1	-1,0	-0,7	-0,5
Other indicators																			
Gap between the housing loan flow and its fundamentals (2-markets disequilibrium model)	-14,6	-16,1	-14,5	-16,7	-18,2	-15,9	-12,7	-5,2	3,8	9,3	16,6	19,6	23,0	24,9	19,0	12,8	6,1	1,1	0,6
1-year difference of the broad HH credit-to-GDP ratio	2,4	2,6	2,9	2,8	2,5	2,7	2,4	2,1	1,8	1,1	0,7	0,8	1,4	1,7	1,9	1,7	0,7	-0,2	
Ratio of new housing loans including rollovers (4 quarters sum) to GDP (4 quarters sum)	3,2	3,1	3,1	3,0	3,1	3,0	3,0	3,2	3,3	3,7	3,8	3,9	3,9	3,8	3,8	3,6	3,5	3,3	3,2
Housing credit impulse (loan portfolio)	0,3	-0,1	0,0	-0,1	0,5	0,1	0,0	0,3	0,1	0,7	0,4	0,1	0,2	-0,2	0,1	-0,3	-1,0	-0,7	-1,0
Housing credit impulse (new loans)	-0,1	-0,3	-0,1	-0,2	0,3	-0,4	0,0	0,7	0,6	1,6	0,4	0,2	-0,1	-0,5	0,1	-0,6	-0,6	-0,5	-0,8
House prices nominal and real growth																			
1-year nominal growth of house prices	7,9	6,6	6,4	6,5	6,2	7,0	6,4	9,4	12,0	13,3	18,9	19,8	19,2	22,1	19,3	16,0	13,3	9,4	
1-year real growth of house prices (adjusted for HICP)	5,7	3,9	4,0	4,4	4,7	6,3	5,5	9,1	11,1	9,8	13,0	9,5	4,6	3,0	-1,8	-4,2	-3,3	-1,2	
1-year difference of the house price-to-rent ratio	-0,5	1,0	-3,4	-3,0	-1,9	-2,0	3,1	2,0	3,1	5,5	4,7	7,7	3,4	-5,9	-4,1	-3,1	-1,7	-3,4	1,8
1-year difference of the house price-to-income ratio	-1,6	-3,1	-3,0	-3,4	-3,2	-0,8	0,1	3,0	5,5	3,5	5,2	4,8	2,3	-4,8	-3,5	1,1	-4,6	-10,9	
Imbalance indicators																			
Housing credit																			
Gap between the broad credit to HH-to-GDP ratio and its long-term trend (Basel method)	-6,3	-6,0	-5,7	-5,4	-5,5	-4,6	-4,2	-3,9	-4,0	-4,0	-4,0	-4,3	-4,4	-4,6	-4,8	-5,3	-5,3	-4,9	
Gap between the broad credit to HH-to-GDP ratio and its long-term trend (LT method)	-2,1	-2,0	-1,9	-1,7	-1,9	-1,3	-1,1	-1,0	-1,2	-1,3	-1,4	-1,6	-1,8	-1,9	-2,1	-2,5	-2,4	-2,1	
Gap between the MFI credit to HH-to-GDP ratio and its long-term trend (LT method)	-2,0	-1,8	-1,8	-1,9	-1,8	-1,3	-1,2	-1,2	-1,4	-1,5	-1,6	-1,9	-1,9	-2,1	-2,3	-2,3	-2,1	-1,8	
Gap between the MFI housing loans to HH-to-GDP ratio and its long-term trend (LT method)	-0,6	-0,6	-0,5	-0,5	-0,4	0,0	0,0	0,2	0,2	0,0	-0,1	-0,2	-0,4	-0,6	-0,8	-0,9	-0,9	-0,7	
House prices																			
Average of house price overvaluation indicators																			
Median of house price overvaluation indicators	-4,9	-5,3	-4,7	-4,8	-4,6	-2,0	-1,8	-0,2	1,9	3,6	6,7	9,2	9,1	11,1	10,4	8,5	8,1	7,6	
Gap between the nominal HPI and its long-term trend (HP filter)	-1,6	-1,9	-0,9	-0,9	-1,3	1,6	3,3	4,3	5,7	7,0	9,0	8,8	6,5	6,2	4,1	2,2	2,4	2,6	
Gap between the real HPI and its long-term trend (HP filter)	-1,7	-2,5	-0,9	-0,9	-0,2	1,5	2,6	5,3	7,5	7,6	10,5	9,7	7,6	6,4	4,2	1,9	1,8	2,0	
Gap between the house price-to-income ratio and its long-term trend	-14,3	-14,8	-14,8	-15,3	-16,6	-15,9	-17,3	-16,7	-14,8	-14,2	-10,2	-8,6	-8,8	-5,7	-3,8	-5,3	-6,1	-6,8	
Gap between house prices and their long-term trend (1-market disequilibrium model)	-14,5	-15,6	-15,3	-14,2	-12,9	-11,0	-10,2	-7,9	-3,8	-0,7	4,0	7,8	5,3	6,0	3,9	2,5	2,8	3,1	
House price panel model	-0,5	-0,9	-0,1	-0,9	-0,1	5,9	4,1	6,1	7,0	6,4	8,2	7,9	5,3	5,5	2,1	1,1	1,9	1,2	

Note: Values are rounded; stages of some indicators are evaluated based on the percentiles of their values, hence in some instances cells that have the same value may be coloured differently.

The real growth rate of housing lending accelerated but remained negative, with annual house price growth still stronger than the growth of housing credit; thus, no excess borrowing was observed.

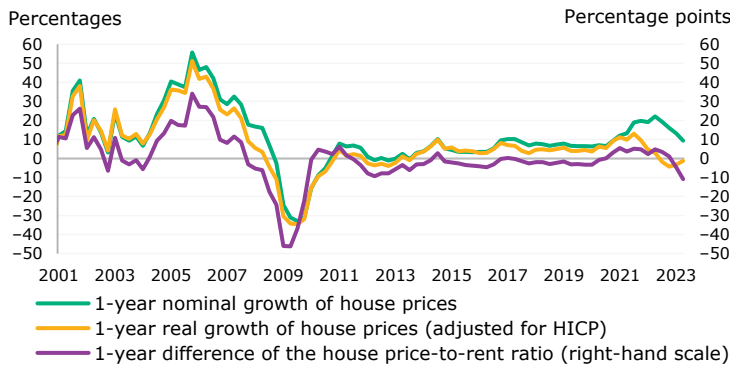
Chart 15. Housing credit developments (Q1 2007–Q3 2023)



Sources: State Data Agency, Bank of Lithuania and Bank of Lithuania calculations.

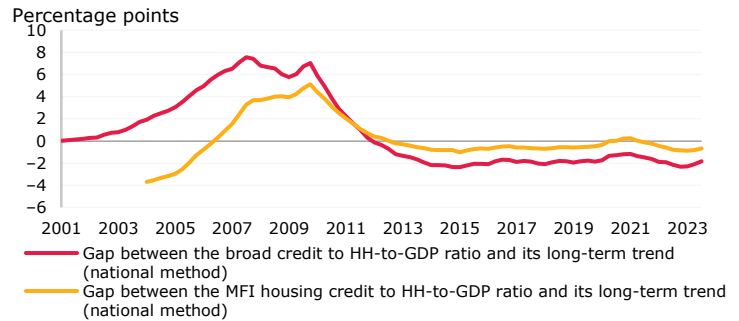
With the slowdown in house price growth and rapidly rising wages, housing affordability and overvaluation remained broadly unchanged and continue to fade.

Chart 17. House price developments (Q1 2001–Q2 2023)



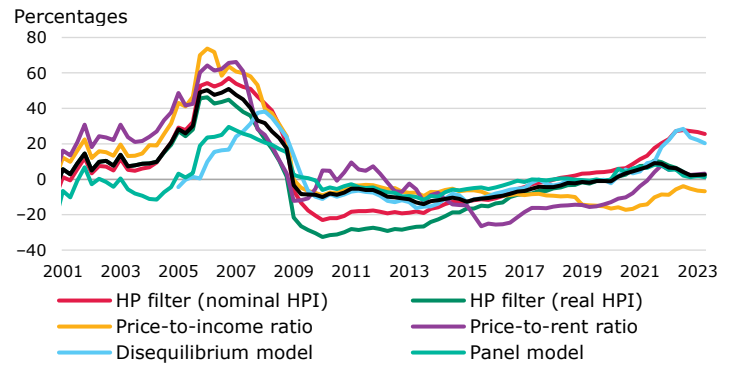
Sources: State Data Agency and Bank of Lithuania calculations.

Chart 16. Household credit imbalances (Q1 2001–Q3 2023)



Sources: State Data Agency and Bank of Lithuania. Notes: The long-term trend is computed by applying a one-sided HP filter with a smoothing parameter of 400,000; before applying the filter, the ratio is modelled for the next 5-year window using a 4-quarter weighted average.

Chart 18. Gap between actual house prices and their fundamental values (Q1 2001–Q2 2023)



Source: Bank of Lithuania calculations.