

RISKS TO FINANCIAL STABILITY
AND THEIR INDICATORS – JANUARY 2018

2018

The publication "Risks to financial stability and their indicators – January 2018" is based on the "Non-disclosed update of the Financial Stability Report 2016/2017" discussed by the CNB Bank Board at its regular meeting on financial stability issues on 6 December 2017. Except for a few exceptions, it contains information available as of 30 September 2017. It is available in electronic form on the CNB [website](#), where the underlying data for the tables and charts used in this publication are also published. A list of [abbreviations](#) can also be found there.



Dear Readers,

Our main publication in the area of financial stability and macroprudential policy is the *Financial Stability Report*, which we have published every June since 2005. It is the key document for the regular spring Bank Board meeting on financial stability issues. For the regular autumn meeting, our experts draw up an update of the *Financial Stability Report*. This update has not previously been published. Given the increasing public interest in our macroprudential policy decisions, we have decided to publish the document ***Risks to financial stability and their indicators***, which is based on this update, on the CNB website every year, usually in January. The pilot version of this document – the **January 2018** edition – is now at your disposal. I am sure you will welcome the opportunity to get hold of detailed information about this currently very important area of supervision and regulation twice a year.

According to the Act on the CNB, maintaining financial stability is one of our key objectives. In accordance with the Act, the CNB sets macroprudential policy by identifying, monitoring and assessing risks jeopardising the stability of the financial

system and, in order to prevent or mitigate these risks, contributes by means of its powers to the resilience of the financial system and the maintenance of financial stability.

The CNB defines financial stability as a situation where the financial system operates with no serious failures or undesirable impacts on the present and future development of the economy as a whole, while showing a high degree of resilience to shocks. The CNB's definition is based on the fact that financial stability may be disturbed both by processes inside the financial sector that lead to the emergence of weak spots, and by strong shocks, which may arise from the external environment, domestic macroeconomic developments, large debtors and creditors, economic policies or changes in the institutional environment. Any interaction between weak spots and shocks can result in the collapse of systemically important financial institutions and in disruption of the financial intermediation and payment functions of the financial system.

The CNB's aim with regard to financial stability is above all to ensure a degree of resilience of the system that minimises the risk of financial instability. To fulfil this aim, the CNB as an integrated supervisory and monetary authority uses the instruments made available to it by the Act on the CNB, the Act on Banks and other applicable laws. Cooperation with other national and international authorities is also very important in this area. In order to maintain financial stability, the CNB focuses on prevention and broad communication with the public regarding the potential risks and factors posing a threat to financial stability.

The CNB regularly monitors and closely analyses developments in all areas relevant to financial stability. The members of the CNB Bank Board meet with experts from key sections at regular meetings on financial stability issues. A wide range of information on developments of risks in the domestic financial system and abroad is presented at these meetings and the position of the Czech economy in the financial cycle is assessed. If any risks to financial stability are identified, discussions are held regarding the possible use of regulatory, supervisory and other economic policy tools to suppress such risks or their potential effects.

The CNB is a member of the joint EU institution for the identification of systemic risks and macroprudential policy – the European Systemic Risk Board (ESRB). Together with three pan-European sectoral supervisory authorities (EBA, ESMA and EIOPA), the ESRB makes up the European System of Financial Supervision (ESFS). CNB representatives are involved directly in the ESRB's work; the CNB Governor and another board member are members of the General Board of the ESRB, and CNB experts participate in its working groups. In line with an ESRB recommendation, macroprudential policy focuses on the fulfilment of several intermediate objectives. These objectives include (a) to mitigate and prevent excessive credit growth and leverage; (b) to mitigate and prevent excessive maturity

mismatch and market illiquidity; (c) to limit direct and indirect exposure concentrations; (d) to limit the systemic impact of misaligned incentives with a view to reducing moral hazard; and (e) to strengthen the resilience of financial infrastructures. According to an ESRB assessment, the CNB is one of the most active authorities in the EU countries as regards the use of macroprudential policy at the national level.

The macroprudential policy instruments we use include above all a set of prescribed capital buffers for credit institutions. We set a countercyclical capital buffer and a systemic risk buffer for systemically important banks at regular intervals. In recent years, we have dealt intensively with risks associated with property market developments and mortgage lending. To mitigate these risks, we use a set of recommendations regarding the provision of mortgage loans. We are also pushing for a legislative change in this area, aimed at effective prevention of the relevant risks.

The publication is divided into four sections. Following the opening *Summary*, the section titled *The real economy and financial markets* focuses on risks connected with the macroeconomic environment, developments in the sectors of non-financial corporations and households, and financial market trends. The section called *The financial sector* assesses developments in the banking sector and, where relevant, in the non-banking institutions sector. The closing section, *Risks to financial stability and macroprudential policy*, contains information on macroprudential instruments for mitigating risks identified. This section focuses mainly on the setting of the countercyclical capital buffer and the assessment of risks associated with mortgage lending.

On behalf of the Czech National Bank



Jiří Rusnok
Governor

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1 SUMMARY

The domestic financial sector remains highly resilient to adverse shocks, but its resilience is no longer increasing

The favourable evolution of the domestic economy is having a positive effect on the activity and financial results of domestic financial institutions. Macro stress test results confirm that the banking sector, which accounts for 80% of the assets of the domestic financial sector, is stable as a whole. However, its resilience has stopped strengthening due to stagnation of total bank capitalisation and a rise in market risks. Some sources of structural risk persist. These include concentration of banks' exposures to the property market, increasing investment in foreign assets by financial institutions and a rise in the share of foreign currency assets on financial institutions' balance sheets. The favourable factors for the domestic economy include indebtedness of private sector, which remains relatively low by international comparison.

A sudden repricing of risk premia remains a significant risk to financial stability

The prices of some financial assets on global markets have now exceeded levels consistent with the improved economic growth. Risky bonds have recorded a further decline in risk premia, stock prices are high relative to expected corporate earnings and observed stock price volatility has reached a historical low. Owing to a rising share of non-residents in domestic asset holdings, the risk of a sudden repricing of investment assets in the domestic financial system is growing as well. The CNB assessed the relevance of this risk using a simple simulation of a drop in prices of marketable investment assets and repricing of the market premium to long-term equilibrium levels. In relative terms, the simulated shocks had the biggest impact on investment funds. The fall in the value of other institutions' investment portfolios would be smaller, because marketable assets are of less significance in their balance sheets.

A potential increase in Czech government bond yields does not pose a risk to financial stability

Czech government bond yields have increased at all maturities. This rise has been driven mainly by optimistic expectations regarding future economic growth and a gradual increase in the CNB's monetary policy rates. Non-residents, who hold a large part of these bonds, may react to negative economic or other factors more sensitively than domestic investors. The potential risk of volatility in Czech government bond prices therefore remains elevated, but is not an immediate and significant source of systemic risk.

Credit risk in the banking sector has probably bottomed out

Non-financial corporations have recorded a drop in profitability amid rising output. Credit risk as measured by the forward-looking 12-month default rate has decreased further, but the risk level of new or recently provided loans has risen slightly compared to previous years. The credit risk of households as measured by the 12-month default rate has also fallen. However, in addition to a drop in the risk level itself, the decline in the indicator is due to a large inflow of new loans. The observed tendencies must therefore be assessed with caution.

As regards households, the strong growth in loans for house purchase has continued

Despite having dropped slightly in recent months, the amount of new loans for house purchase remains close to a historical high and is having the biggest impact on overall credit growth in the household sector. The high growth in bank loans has also been reflected in a further rise in total household indebtedness, although this increase has been only moderate thanks to accelerating income growth.

The banking sector's profitability may fall significantly if loan portfolio quality deteriorates

The situation in the banking sector remained favourable in the first three quarters of 2017. The structure of non-performing loans improved further, as the share of substandard loans increased at the expense of the two categories with a higher degree of credit risk. The sector's profitability remained sufficient, being favourably affected above all by a marked decrease in impairment losses. The unfavourable effect of falling interest margins weakened. A potential

deterioration in loan portfolio quality is again becoming the main risk to the sector's profitability. Materialisation of this risk could, in the future, limit the sector's ability to strengthen its capital using retained earnings. Continued rapid growth in loan portfolios may exert downward pressure on capital ratios, especially in systemically important banks.

Risk perceptions and risk pricing by banks may be overly optimistic

Banks' cost of risk has reached an exceptionally low level, one which may not be sustainable in the long run. The low cost of risk is enabling banks to report higher profitability in the current interest rate environment, but at the cost of rising vulnerability. The risk mark-ups in interest rate margins are still very low as well. A decline in risk weights and a falling ratio of banks' equity to private exposures are also fostering greater vulnerability. In the longer run, therefore, the necessary level of capital may be underestimated and the banking sector's currently high resilience may fall.

Consistent with the upward shift of the domestic economy in a growth phase of the financial cycle is an increase in the countercyclical capital buffer rate

The rise in the aggregate financial cycle indicator has been driven mainly by strong credit growth in the household sector accompanied by fast growth in residential property prices. The observed growth in loans to the private sector has been high both in terms of historical averages and in comparison with the situation in other European countries. In view of these developments and the banking sector vulnerability indicators, the CNB Bank Board decided to raise the countercyclical capital buffer rate to 1.25% with effect from 1 January 2019. The CNB stands ready to increase this rate further in the event of continued rapid credit growth, increasing risks connected with property purchase financing, a strengthening of other cyclical sources of systemic risk and a rise in the vulnerability of the banking sector. On the other hand, the CNB is ready to lower the rate immediately if the financial cycle enters a downward phase and risks associated with excessive credit growth decrease.

Conditions for the development of a spiral between property prices and property purchase loans persist

Transaction prices of residential property rose by 13% year on year in 2017 Q2. The Czech Republic reported the highest growth in residential property prices in the EU in this period. The CNB's model-based approach indicates that housing prices were overvalued by around 10% in mid-2017. Data for June–September 2017 indicate a halt or slightly negative year-on-year growth in new mortgage loans. However, this result is partly due to base effects, and the effect of frontloading before stricter recommended LTV limits take effect may also be playing a role. In absolute terms, the amount of new mortgage loans was very high.

Many institutions were non-compliant with the stricter aggregate LTV limit in 2017 Q2

A further tightening of the recommended LTV limits, announced in June 2016, took effect in 2017 Q2. The maximum recommended LTV was newly set at 90% (individual limit) and the recommended amount of new loans with LTVs of 80%–90% was capped at 15% (aggregate limit). The share of loans with LTVs of 80%–90% stood at 28% in 2017 Q2, exceeding the recommended share at the aggregate level by 13 pp. Almost 3% of the loans provided had LTVs of over 90%. Due to policy tightening the compliance with the Recommendation as regards the aggregate limit for loans with LTVs of 80%–90% worsened substantially compared to 2017 Q1, while the share of loans with LTVs above the upper limit of 90% remains low in most institutions. Institutions started to get close to being compliant with the recommendation at the aggregate level only in June 2017, despite having known about the change nine months in advance. The CNB also observes that the share of loans with LTVs just below the recommended level has increased further and there are signs of "improvement" in LTVs in loan applications via favourable valuations, with a tendency for collateral to be valued on the basis of purchase prices.

The DSTI and LTI ratios for new loans did not change materially

In addition to LTV, the CNB monitors the DSTI and LTI ratios for newly provided loans. According to a CNB recommendation, providers should monitor these indicators, set internal limits for them and prudently assess loan applications on their basis. In FSR 2016/2017, the CNB identified loans with a DSTI ratio of over 40% and an LTI ratio

of over 8 as highly risky, although it also stated that these levels represented no indication of what the upper limits on these indicators would be if it were to be granted a statutory mandate to set them. In the first half of 2017, loans with such risky DSTI or LTI ratios most often accounted for less than 20% of individual institutions' lending. The shares of loans with higher LTI and DSTI ratios, for which households would not be able to withstand an increased burden in the form of a future decline in income and rise in interest rates, did not decrease in year-on-year terms.

The CNB will continue to take an active approach to the management of risks associated with mortgage loans

Despite institutions' delayed compliance with the stricter recommended LTV limits, the CNB considers the effect of its measures targeted at the risk of a spiral between housing prices and property purchase loans to have been positive. The stricter LTV limits have led to a halt in year-on-year growth in new mortgage loans and to a rise in the price of loans with high LTVs. In November 2017, the CNB published a *Supervisory benchmark on the provision of loans to households by credit institutions* (a summary of principles describing from the prudential perspective how banks should proceed when lending). The CNB reacts – and remains ready to react – to risks associated with insufficient compliance with CNB recommendations and prudential rules using the additional capital requirement under SREP. In the first half of 2018, the CNB will also focus on identifying banks' DTI and DSTI monitoring practices. The CNB's other steps will again include advocating for a legislative change giving it the power to set binding upper limits on selected credit indicators.

2 THE REAL ECONOMY AND FINANCIAL MARKETS

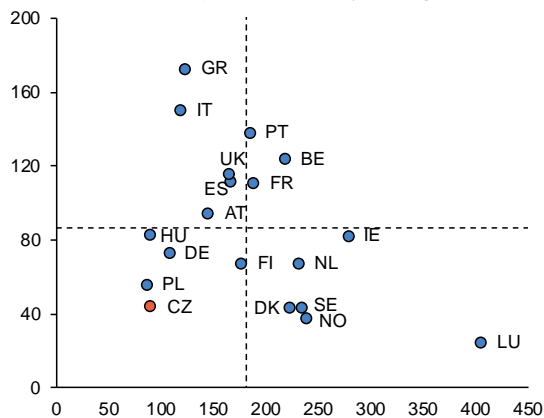
2.1 THE MACROECONOMIC AND FINANCIAL ENVIRONMENT

The debt ratio in the Czech Republic remains low by international comparison

The debt ratio in the Czech Republic remains well below the EU average thanks to favourable wage growth (see Chart II.1). The same goes for the current Czech debt level relative to selected euro area countries when they were at a similar level of economic development to that of the Czech Republic in 2016 (see Chart II.2). Compared to numerous other developed countries, the Czech Republic has long had a primary income deficit vis-à-vis non-residents (see Chart II.3). Its debt-to-GNI ratio is thus higher than its debt-to-GDP ratio (see Chart II.4), although the gap has not been widening in recent years.

Chart II.1
Private sector and government debt in selected European countries in 2017 Q4

(% of GDP; x-axis: private sector; y-axis: government)

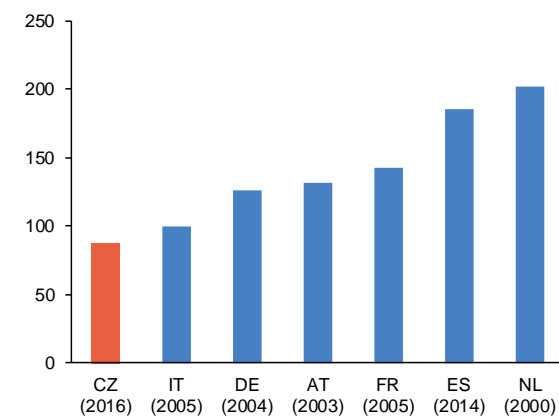


Source: BIS

Note: Debt is the sum of all credit provided by domestic banks, non-bank institutions and non-residents. The private sector comprises non-financial corporations, households and non-profit institutions serving households. The BIS method for calculating debt may differ from those of other institutions. The dashed lines indicate the average for the given year.

Chart II.2
Private sector debt-to-GDP ratios for similar levels of economic development

(%)



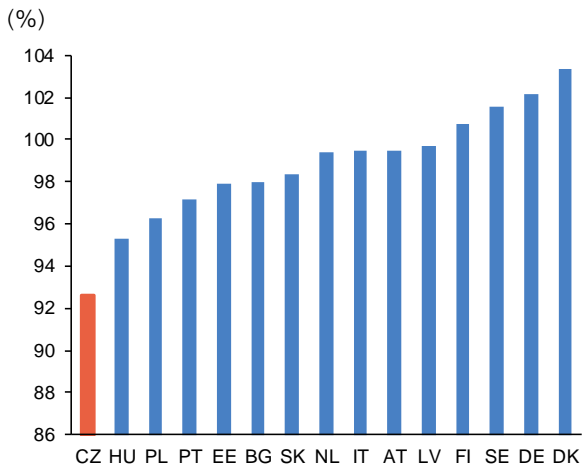
Source: IMF IFS, BIS, CNB calculation

Note: The chart shows the private sector debt ratio in the year when the given country first attained the same GDP per capita level as the Czech Republic in 2016 (USD 33,230 in PPS). The year in which that level was reached is given in brackets.

The monetary policy tightening by the CNB is only partly reflected in client rates

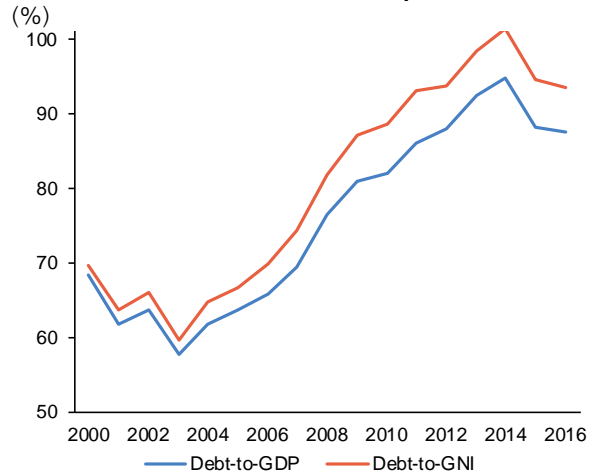
The CNB started to gradually increase its key monetary policy rate in 2017 (see Chart II.5). The expected monetary policy tightening by the CNB has been reflected in growth in five-year interest rate swaps since July 2016. The pass-through to client rates, however, has been only partial (see Chart II.6). The credit risk premium, as measured by the difference between rates on client loans and swap rates, has been falling sharply since then. The premium on long-term loans to households is lower than the euro area average.

Chart II.3
GNI-to-GDP ratios in selected European countries in 2015



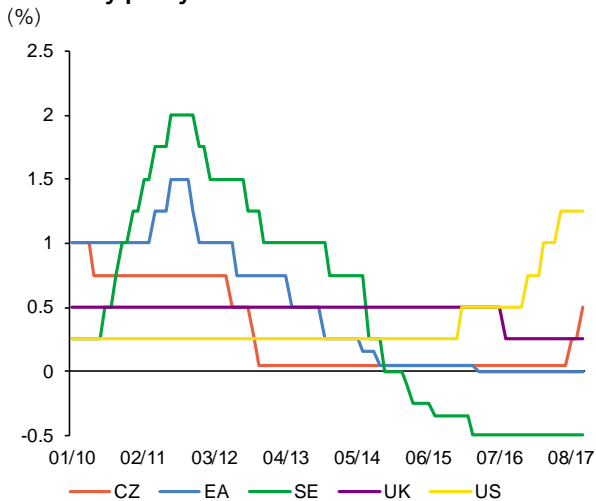
Source: Eurostat, CNB calculation
 Note: GNI = gross national income.

Chart II.4
Private sector debt in the Czech Republic



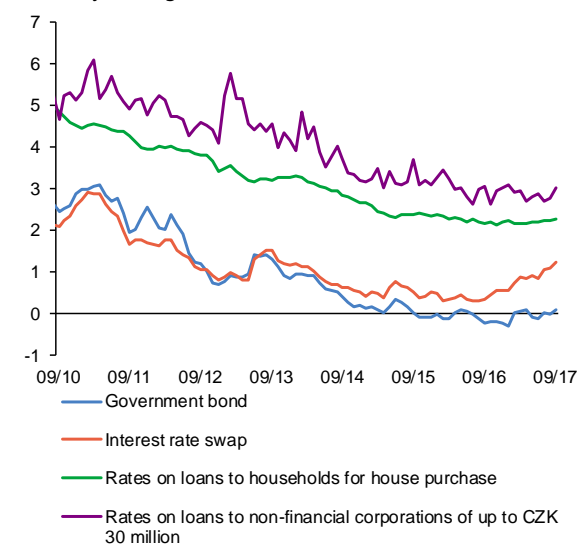
Source: BIS, CZSO, CNB calculation
 Note: The private sector comprises households, non-financial corporations and non-profit institutions serving households. GNI = gross national income.

Chart II.5
Monetary policy rates of selected central banks



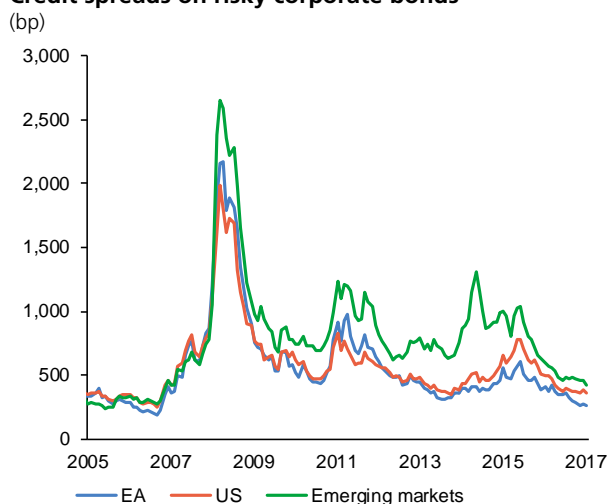
Source: Reuters

Chart II.6
Five-year interest rates in the Czech Republic
 (monthly averages in %)



Source: Bloomberg, CNB
 Note: Loan rates are average rates on loans provided in the given month with a fixation period of 1–5 years inclusive.

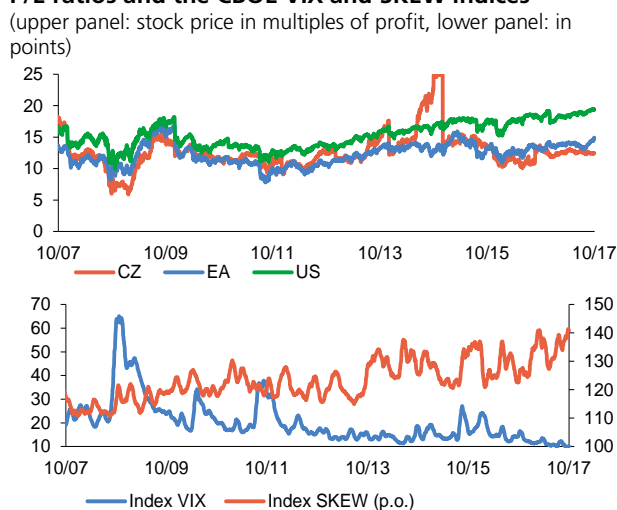
Chart II.7
Credit spreads on risky corporate bonds



Source: Bank of America Merrill Lynch

Note: The credit spread is the yield spread vis-à-vis yields on government bonds adjusted for any embedded options (the option-adjusted spread). Higher values imply a higher risk premium. A risky bond is a speculative-grade bond (rated BB+ or lower).

Chart II.8
P/E ratios and the CBOE VIX and SKEW indices



Source: Bloomberg

Note: P/E is the ratio of market prices to estimated annual earnings. The S&P500 is used for the US, the DAX30 for the euro area and the PX for the Czech Republic. Higher P/E values imply higher potential stock price overvaluation, higher VIX values higher expected volatility and higher SKEW values a higher risk of exceptionally adverse events. The VIX and SKEW indices are smoothed by the 20-day moving average.

The risk of a sudden drop in financial asset prices on international markets remains high

A sudden and disorderly fall in financial asset prices is considered to be one of the main risks to financial stability in the EU.¹ This concern is related to the fact that asset prices in many countries have now exceeded levels consistent with their improved economic growth. Risky bonds have recorded a further decline in risk premia (see Chart II.7), stock prices are high not only in historical comparison, but also relative to expected corporate earnings, and expected stock price volatility has reached a historical low (see Chart II.8). Fast growing prices and falling risk premia may be an accompanying sign of transition to a new financial market equilibrium where yields will be permanently lower than they were before the crisis. However, the SKEW index, which reflects hedging of portfolios against exceptionally adverse events, is at an all-time high (see Chart II.8).² Such investor behaviour may conversely indicate growing market concerns of a sharp adjustment of market prices.

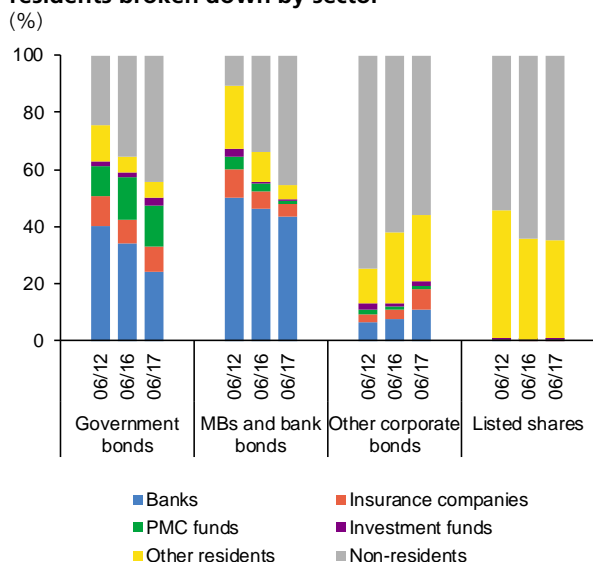
A sensitivity scenario was used to assess the risk of a drop in asset prices

Owing to a rising share of non-residents in domestic asset holdings, the risk of a sudden repricing of investment assets in the domestic financial system is growing as well (see Chart II.9). Using a simple simulation, the CNB analysed the potential effects of a drop in prices of marketable investment assets and repricing of the risk premium. The following shocks to such asset prices were considered: (1) an upward shift of the Czech and foreign government bond yield curves of 86 bp for the one-year bond and 159 bp for the 15-year bond, (2) a 25.8% drop in stock prices and a 15% fall in property prices, and (3) growth in the credit risk spread for investment-grade corporate bonds of 67 bp on average. For the sake of simplicity, the CNB did not consider any change in the exchange rate, the effect of hedging, the asset's credit rating, the various asset accounting classifications and adjustments to insurance companies' technical provisions.

¹ For example, ESRB risk dashboard: an overview, Issue 2, December 2017.

² The SKEW index is calculated from prices of S&P500 options with an exercise value well below the current value. SKEW typically ranges from 100 to 150, with a higher value indicating a higher probability that the stock market will fall sharply and such options will be exercised.

Chart II.9
Structure of holders of financial assets issued by residents broken down by sector

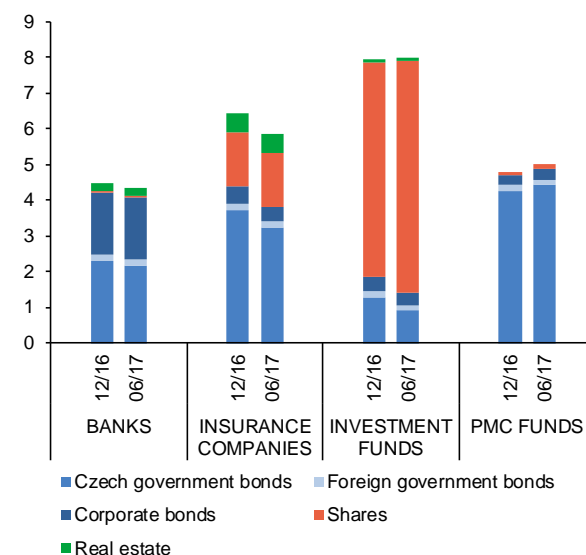


Source: CNB

Note: MB = mortgage bonds.

Chart II.10
Comparison of the relative impact of the repricing of marketable assets

(absolute value of negative impact expressed as % of total investment assets of individual segments)



Source: CNB

Note: The chart compares the effect of repricing as if it occurred on 31 December 2016 and 30 June 2017. Shares include shares in investment funds.

Investment funds were hit the hardest by the shocks considered

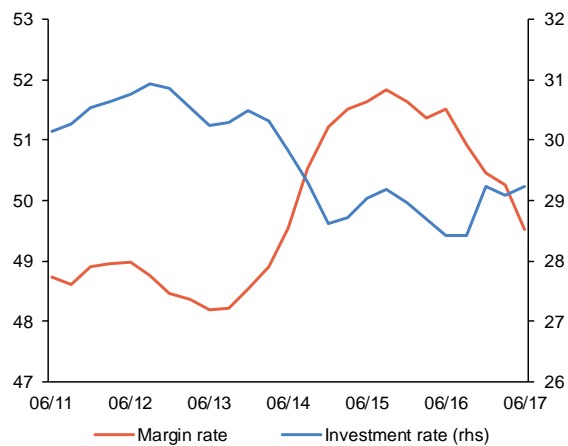
The impact of the above shocks on the value of domestic financial institutions' investment assets ranged from CZK 17 billion to CZK 48 billion across the segments of the financial market. Relative to the value of total investment assets, investment funds were hit the hardest by the simulated shocks (see Chart II.10). The value of investment funds' assets would decrease by 8% in the simulated scenario. The falls in the value of other institutions' investment portfolios were smaller. This is because marketable assets are of less significance in their balance sheets. Banks recorded a drop of 4.4%, insurance companies a decrease of 5.9% and pension management company funds a fall of 5%.

2.2 NON-FINANCIAL CORPORATIONS

Non-financial corporations recorded a drop in profitability amid rising output

The output of non-financial corporations increased by 7% year on year in 2017 Q2. Despite the rising production, however, the sector's aggregate profitability is continuing to fall (see Chart II.11). This is due mainly to faster growth in firms' personnel costs in 2017 Q2.

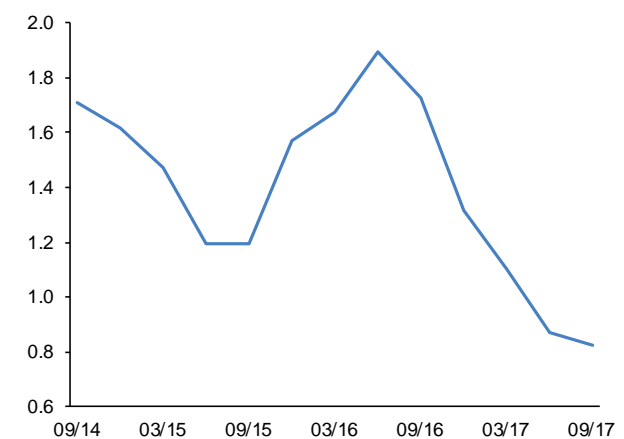
Chart II.11
Margin rate and investment rate (%)



Source: CZSO

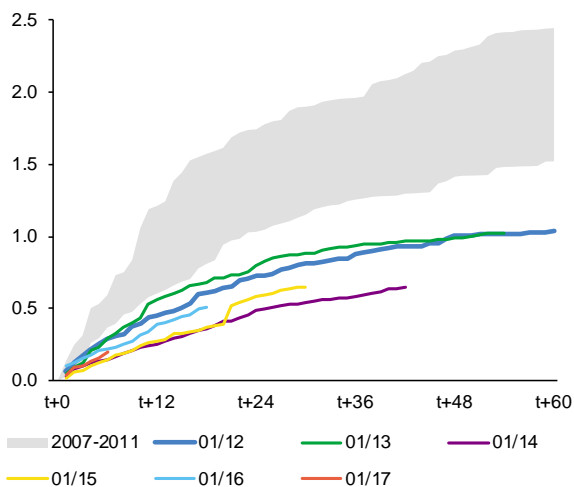
Note: Margin rate = gross operating surplus/gross value added of sector. Investment rate = gross fixed capital formation/gross value added of sector. Calculated from annual moving totals.

Chart II.12
12M default rate on bank loans to non-financial corporations (%)



Source: CNB

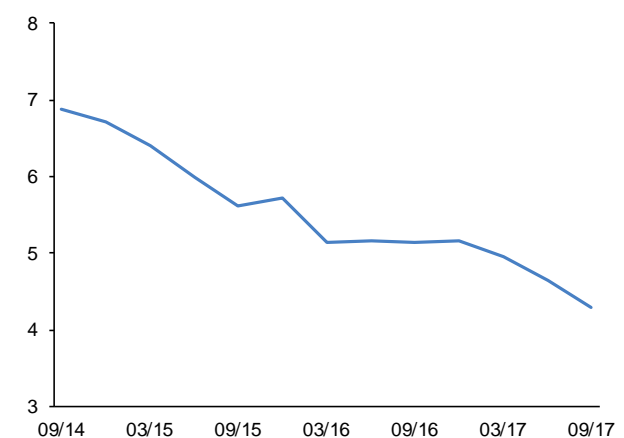
Chart II.13
Riskiness of loans to non-financial corporations by date of provision (cumulative default rate in %)



Source: CNB

Note: The initial slope of the curve provides a relatively good signal about the subsequent evolution of the riskiness of loans provided in the given period.

Chart II.14
NPL ratio: non-financial corporations (%)

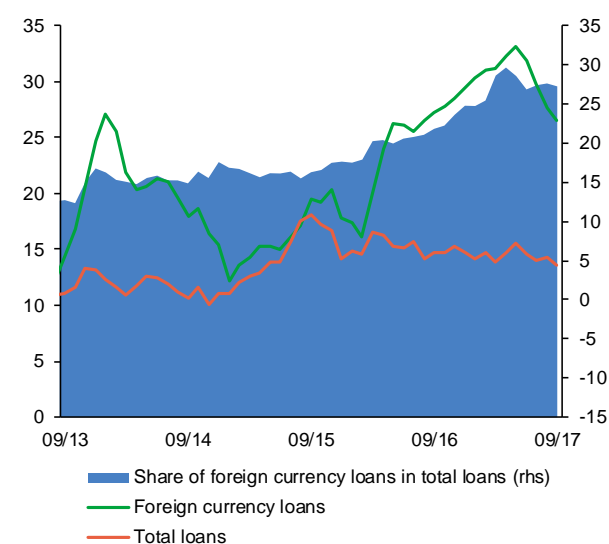


Source: CNB

Credit risk has decreased slightly and has now probably bottomed out

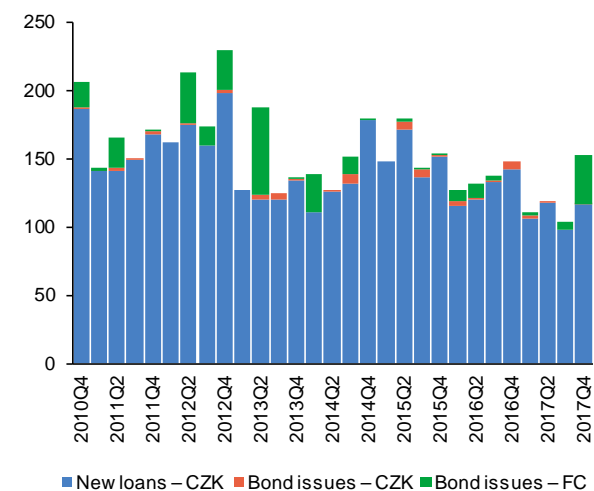
Credit risk as measured by the 12-month default rate has decreased to 0.8% (see Chart II.12). Although it has dropped in recent quarters relative to the levels observed in 2016, the risk level of new or recently provided loans has risen slightly compared to previous years (see Chart II.13). However, risk levels are still markedly lower than they were in 2007–2011. The indicator of credit risk materialisation in the form of the NPL ratio declined, reaching 4.4% in 2017 Q3 (see Chart II.14). However, the resulting values of this indicator are being affected, in addition to the favourable phase of the business cycle, by rapid growth in loans (see below), which enter the denominator of the ratio. Therefore, the observed developments must be assessed with caution. As regards sectors, construction and energy remain the riskiest.

Chart II.15
Year-on-year growth in bank loans to non-financial corporations
 (%)



Source: CNB
 Note: Foreign currency loans are smoothed by the 3-month moving average.

Chart II.16
New loans and bond issues in the non-financial corporations sector
 (quarterly totals in CZK billions)



Source: CNB, Bloomberg, CNB calculation
 Note: Data as of 26 October 2017. The issuance activity for the whole of 2017 Q4 will therefore probably be higher.

Growth in bank loans is still strong, while foreign currency borrowing remains elevated.

Year-on-year growth in bank loans to non-financial corporations was flat in 2017 and stood at 4.4% in 2017 Q3. The ratio of foreign currency bank loans to total bank loans to non-financial corporations dropped slightly to 29.6% in Q3 (see Chart II.15). Despite this modest decrease, it is close to a historical high. Year-on-year growth in foreign currency loans (22.9% in Q3) is well above that of koruna loans. This is especially true for exporters, who traditionally use foreign currency loans as a means of hedging against exchange rate risk. The amount of new koruna loans was almost flat in 2017, remaining close to a historical low (see Chart II.16).

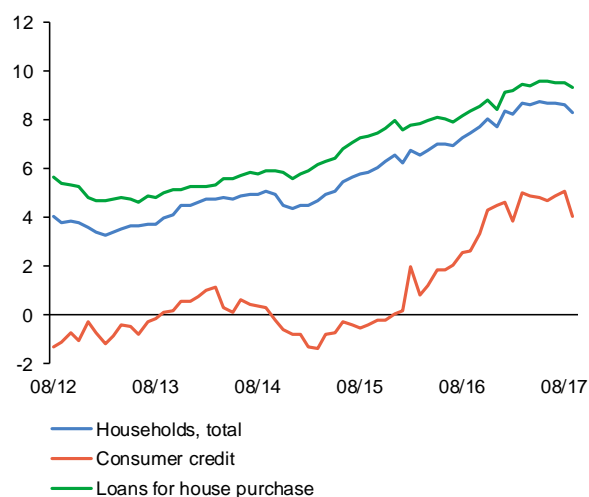
As for other funding sources, the largest year-on-year increases in Q2 were recorded for loans provided by non-bank financial corporations engaged in lending (12.1%) and intercompany loans (4.4%). Developers were the largest bond issuers in 2017.

2.3 HOUSEHOLDS

Credit growth remains strong, driven mainly by loans for house purchase

From households' point of view, the labour market situation has improved further since FSR 2016/2017 was released. Consumer optimism, fuelled by both wage growth and the environment of low interest rates, is being reflected in growth in consumer credit (4.0% year on year in September) and, together with rising residential property prices, is fostering strong growth in loans for house purchase (9.3% year on year; see Chart II.17). Despite having dropped slightly in recent months, the amount of new loans for house purchase remains close to a historical high (see Chart II.18) and is having the biggest impact on overall credit growth in the sector. The high growth in bank loans has also been reflected in a further rise in total household indebtedness, although this increase has been only moderate thanks to accelerating income growth (see Chart II.19). In addition to optimistic expectations, the rapid rise in household debt is being driven by still low interest rates (see Chart II.20), which, however, are rising at a very modest and gradual pace.

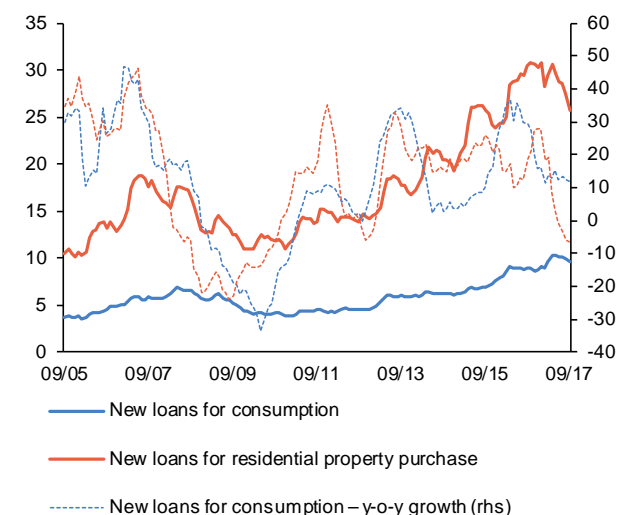
Chart II.17
Year-on-year growth in bank loans to households (%)



Source: CNB

Note: Data adjusted for the conversion of an NFCEL providing loans to households into a branch of a foreign bank.

Chart II.18
New koruna bank loans to households
(CZK billions per month; right-hand scale: year-on-year growth in %)



Source: CNB

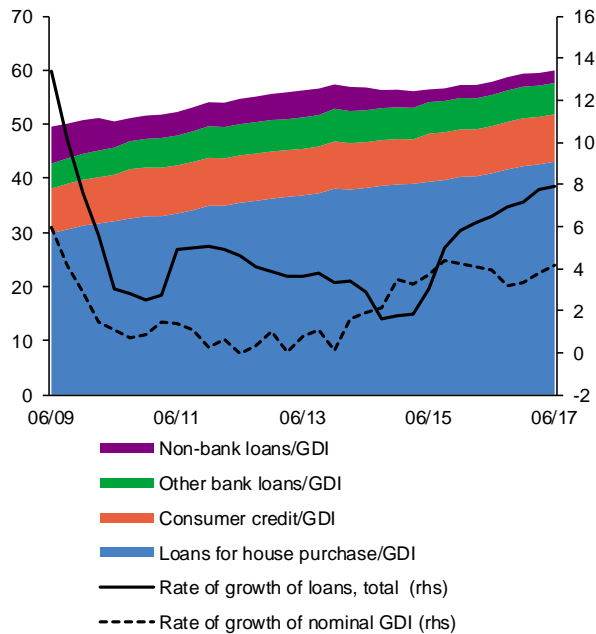
Note: Five-month moving averages.

Credit risk decreased further, but rapid credit growth may increase the risk in the future

Credit risk as measured by the 12-month default rate has fallen slightly in the case of both bank loans for house purchase and consumer credit in 2017 Q2 (to 1.38% and 4.25% respectively; see Chart II.21). However, in addition to a drop in the risk level itself, the decline is due to a large inflow of new loans.³ The observed tendencies must therefore be assessed with caution. Credit risk materialisation as expressed by the NPL ratio is also showing a downward tendency across all loan categories, the drop being particularly significant for consumer credit (see Chart II.22). Compared to the figures presented in FSR 2016/2017, the NPL ratio has fallen by 2.5 pp for consumer credit and by about 0.25 pp for house purchase loans. The current ratios of NPLs to total loans are among the lowest in the period under review, although here, too, the outcome is being affected by rapid growth in the stock of loans.

³ It is reasonable to assume that default does not occur immediately after a loan is provided. In the first phase, therefore, new loans only influence the denominator of the default rate and optically reduce the risk level.

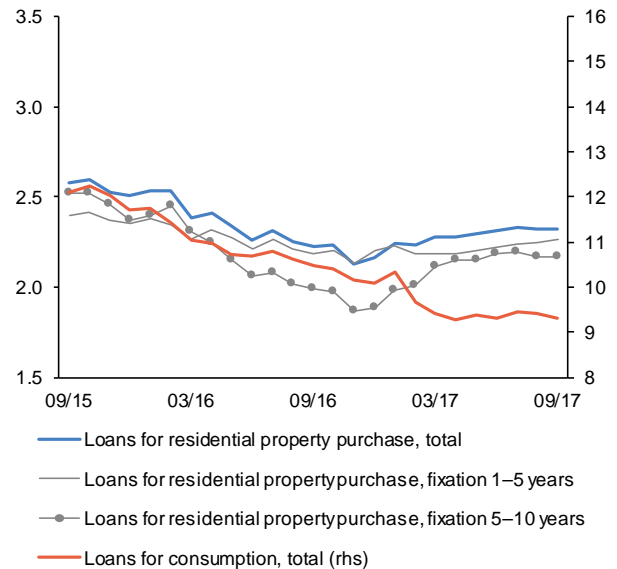
Chart II.19
Household indebtedness and income indicators
 (ratios in %; right-hand scale: year-on-year growth in %)



Source: CNB, CZSO

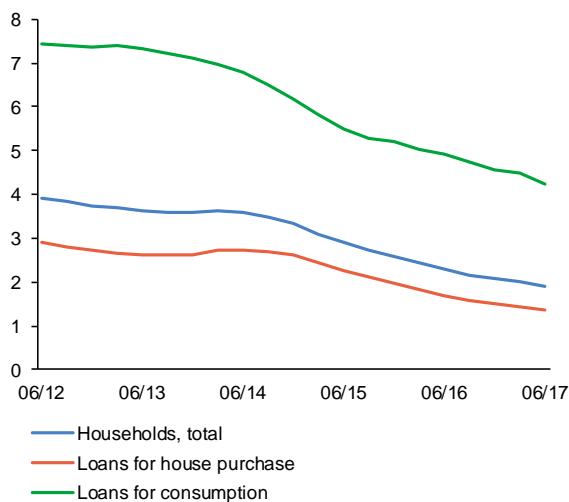
Note: Non-bank loans are loans provided to non-bank financial institutions. GDI = Gross disposable income of households. Households include non-profit institutions serving households.

Chart II.20
Interest rates on new koruna bank loans
 (%)



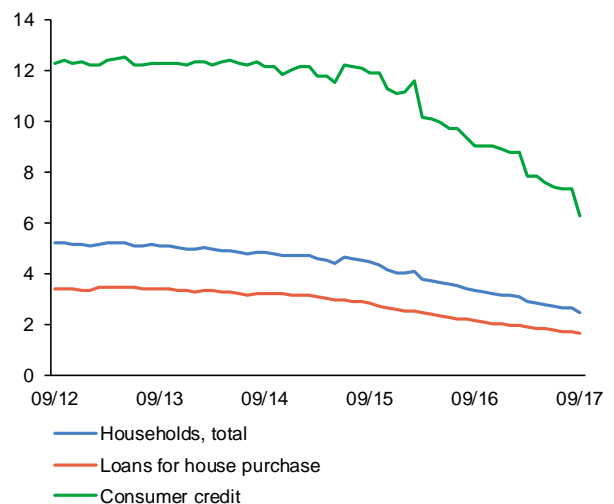
Source: CNB

Chart II.21
12M bank loan default rates – household sector
 (%)



Source: BRCI, CNB

Chart II.22
NPL ratios – households
 (% of total loans in given category)



Source: CNB

3 THE FINANCIAL SECTOR

3.1 DEVELOPMENTS IN THE FINANCIAL SECTOR

The financial sector's assets continue to rise apace

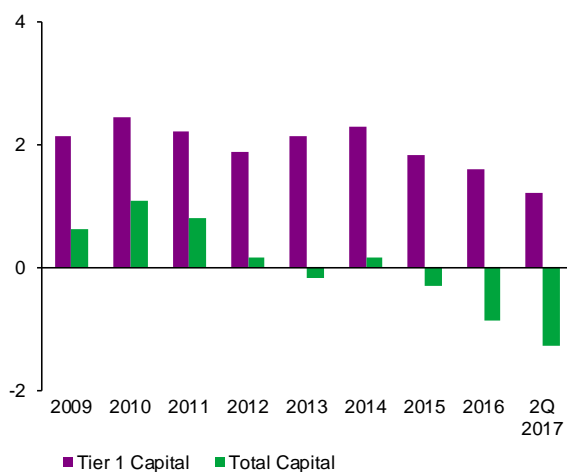
All segments of the financial sector except credit unions saw year-on-year growth in total assets in 2017 Q2. For the third consecutive year, investment funds recorded the fastest growth in total assets (of CZK 83 billion, or 22.8%). This meant they reached the same asset size as pension management company funds, whose assets also rose at a high rate (of CZK 57 billion, or 14.8%). The banking sector recorded the biggest increase in total assets in absolute terms as well as a very high rate of growth (of CZK 1,194 billion, or 20.4%). This was due mainly to a rise in non-residents' koruna deposits at domestic banks related to the expected appreciation of the koruna following the exit from the exchange rate commitment and the subsequent depositing of those funds at the CNB. The banking sector accounts for 80% of the financial sector's assets, so in the text below we will focus on assessing its stability and resilience.

3.2 THE BANKING SECTOR

Banks' capital ratio is unchanged and continues to enable their credit portfolios to grow

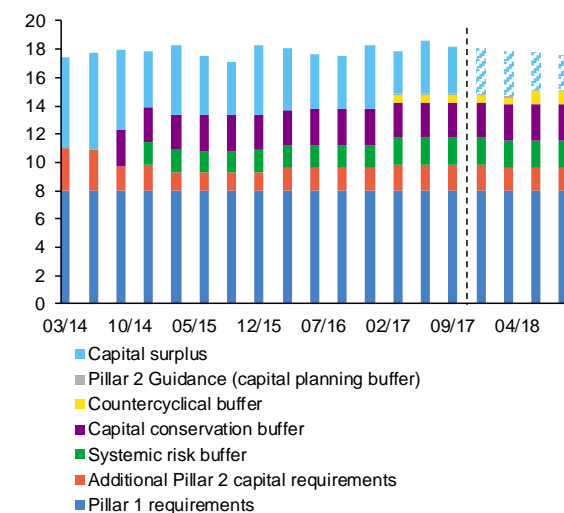
The total regulatory capital in the Czech banking sector rose by CZK 21.6 billion in the first three quarters of 2017, reaching CZK 452 billion. The overall capital ratio was flat at 18.3% and is below the EU average, which was 18.9% as of 2017 Q2 (see Chart III.1). Most banks meet the overall capital requirement by a sufficient margin. However, domestic banks' capital surpluses may gradually decrease due to growth in credit portfolios and payments of dividends.

Chart III.1
Difference in capital ratios between the Czech banking sector and the euro area average (%)



Source: IMF FSI

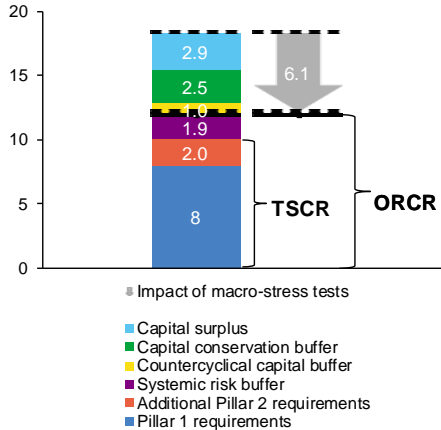
Chart III.2
Structure of capital requirements in the Czech banking sector (%)



Source: CNB

Note: Due to partial overlap of the capital conservation buffer requirements with the Pillar 2 requirement, the Pillar 2 requirements have since July 2014 been adjusted for the requirements arising from the stress tests conducted for supervisory purposes. The capital surplus prediction (patterned fill) assumes constant capital and risk weights. Risky exposures are calculated on the basis of banks' assumptions about future loans, which banks report in the statement "Bank financing plans" (FPSIFE10).

Chart III.3
Structure of bank capital requirements in the Czech Republic and impact of macro stress tests
 (average for sector as of 2020 Q3)



Source: CNB

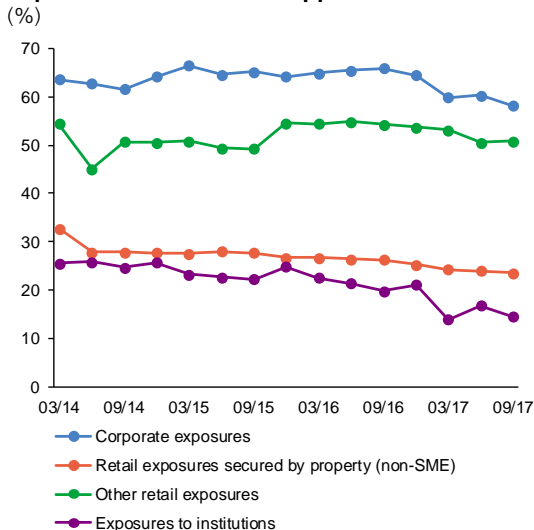
The banking sector as a whole remains stable even in the adverse stress test scenario

Stress test results confirm that the banking sector as a whole remains stable. The aggregate impact of the adverse scenario on the capital of the banking sector is 6.1 pp and the ORCR (the sum of the total capital requirement and the systemic risk buffer) is not thus breached. The capital surplus, the capital conservation buffer and the countercyclical capital buffer are therefore sufficient to cover the impact of the tests on the banking sector as a whole (see Chart III.3).

The average risk weights for banks using the IRB approach decreased in all the main categories of exposures

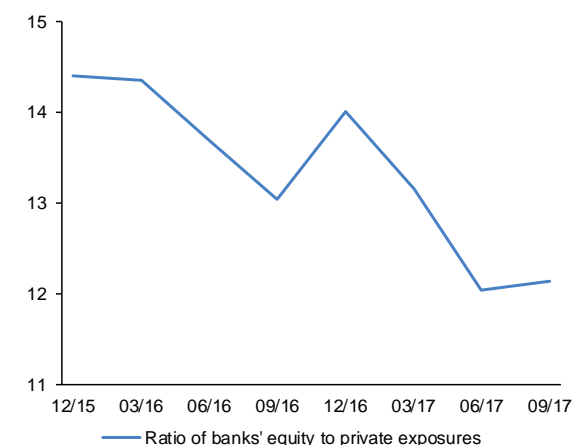
The risk weights in banks using the IRB approach⁴ are decreasing for corporate exposures and for retail exposures secured by property (see Chart III.4). These tendencies are also evidenced by a falling ratio of banks' equity to private exposures (see Chart III.5). In the longer run, therefore, the necessary level of capital may be underestimated and the banking sector's vulnerability may grow.

Chart III.4
Average risk weights of the main categories of exposures under the IRB approach
 (%)



Source: CNB

Chart III.5
Ratio of banks' equity to private exposures
 (%)



Source: CNB

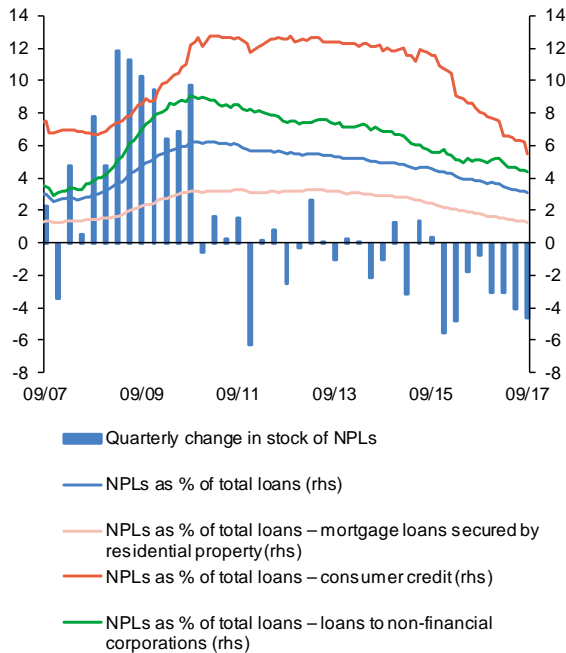
Note: The total exposures of banks (excluding CEB and CMGDB) are adjusted for exposures to central banks, general government and financial institutions.

⁴ IRB approach forms 72,6% of the risk exposure of the Czech banking sector.

Chart III.6

NPLs in the Czech banking sector

(client loans; CZK billions; right-hand scale: %)

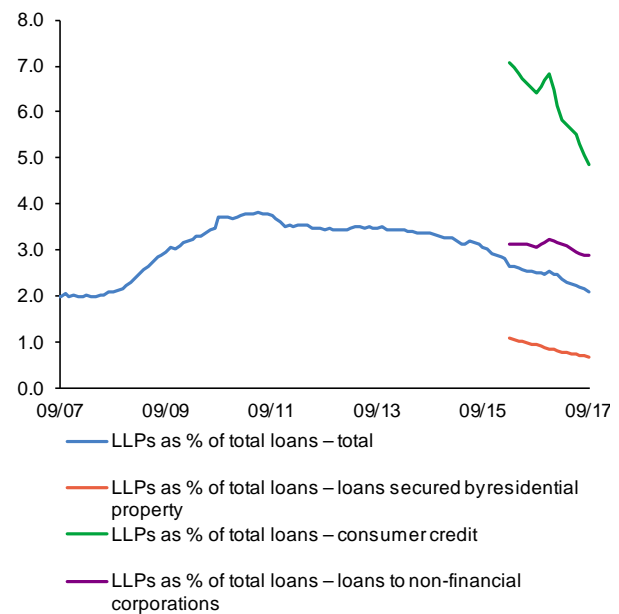


Source: CNB

Chart III.7

Ratio of loan loss provisions to total loans

(%)



Source: CNB

Note: For the sector breakdown of the ratio of LLPs to gross loans, data are only available from 2016 Q1 onwards.

The NPL ratio has dropped to historical lows...

The ratio of NPLs to total loans has dropped to 3.1% (see Chart III.6) and is nearing the historical low recorded in 2007 (2.6%). The forward-looking credit risk indicator – the 12-month default rate – was 1.5% in Q3. However, the risk level of new or recently provided loans to non-financial corporations is edging up compared to previous years (see Chart II.13).

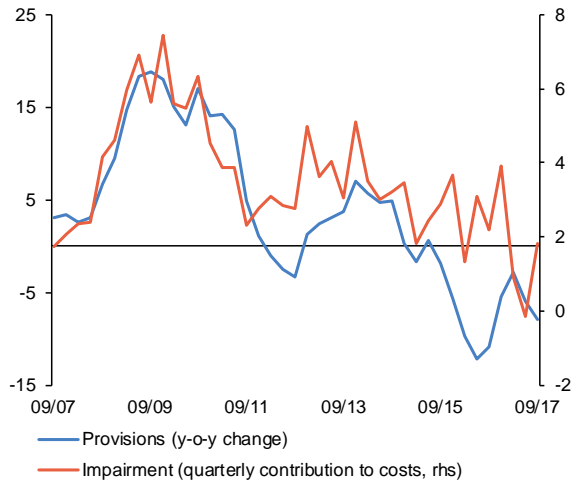
...and the cost of credit risk is also exceptionally low

In addition to affecting risk weights, the falling ratio of NPLs to total loans is influencing provisions. Those are stable relative to NPLs (the coverage of NPLs by provisions was 55% in September 2017), but are continuing to fall as a percentage of total loans (see Chart III.7). The favourable economic conditions manifest themselves in the long run in very low loan impairment losses (see Chart III.8) and a low cost of risk for banks (see Chart III.9). However, such low levels may be out of line with the real long-term risks. A change in the phase of the business and financial cycle may lead to growth in impairment losses and hence also in the cost of risk, as occurred in the period after 2008. Impairment losses represented just 5bp of the banking sector's assets in 2017 Q3. In the same period of 2009, this item stood at 63bp of assets (see Chart III.9).

The banking sector's profitability remains high, but a change in the phase of the cycle represents a risk

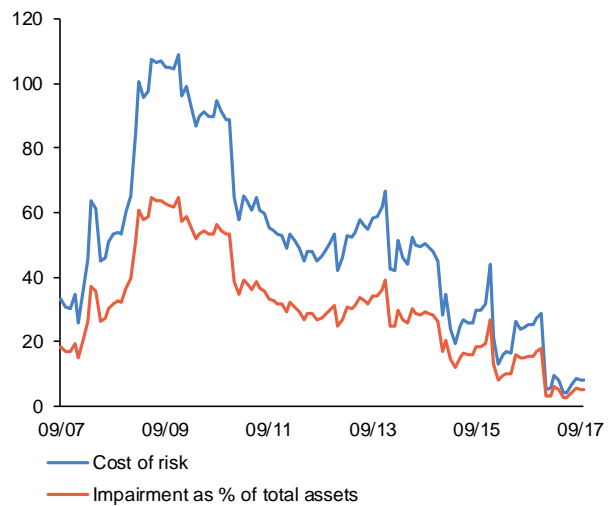
Banks are maintaining relatively high profitability thanks mainly to very low risk costs. RoA stands at 1.1% (as against 0.5% in the EU). If impairment losses were to increase to their highest level in the period under review, recorded in 2009 Q3, RoA would drop from 1.1% to 0.5% (see Chart III.10).

Chart III.8
Provisions and impairment losses
 (CZK billions)



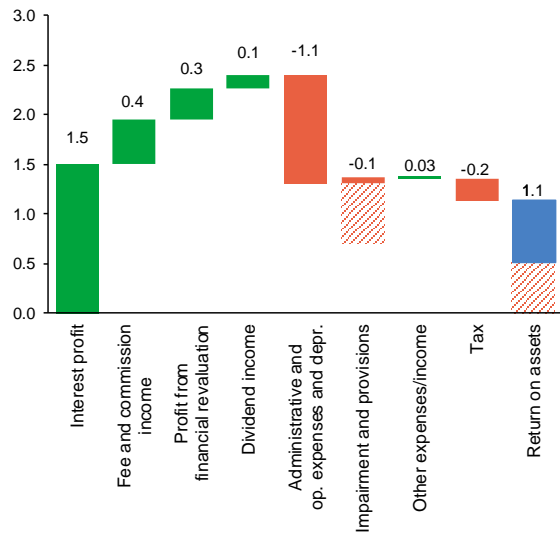
Source: CNB
 Note: The data are adjusted for the Czech Export Bank (CEB) and the Czech-Moravian Guarantee and Development Bank (CMGDB).

Chart III.9
Cost of risk
 (bp)



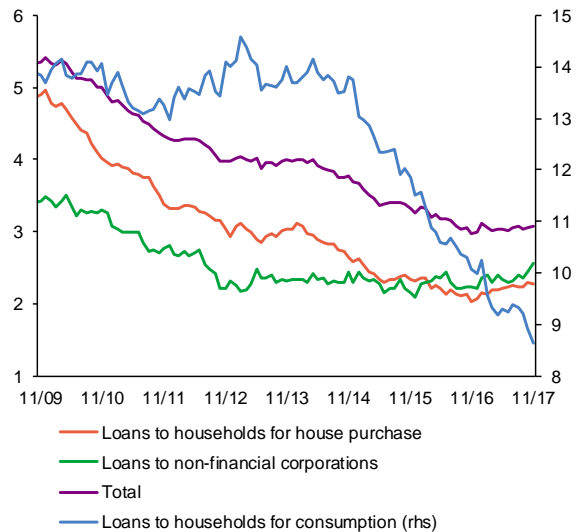
Source: CNB

Chart III.10
Decomposition of return on assets
 (%; as of 2017 Q3)



Source: CNB
 Note: The given value represents the ratio of the given type of income/expense to the level of assets. The red patterned fill represents the level of impairment as of 2019 Q3 and its potential impact on return on assets in 2017 Q3.

Chart III.11
Interest margins on new bank loans in the Czech Republic

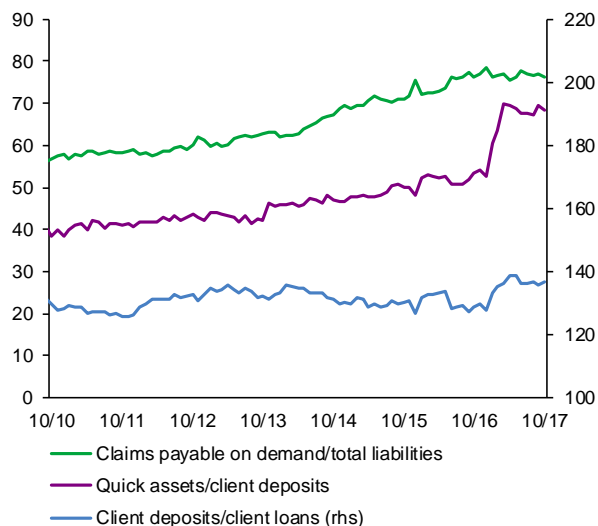


Source: ARAD, CNB calculations
 Note: Margins are calculated as loan rates for the given sector minus the average deposit rate. The non-financial corporations item does not include revolving loans and credit cards.

With the exception of consumer credit, the decline in interest margins halted

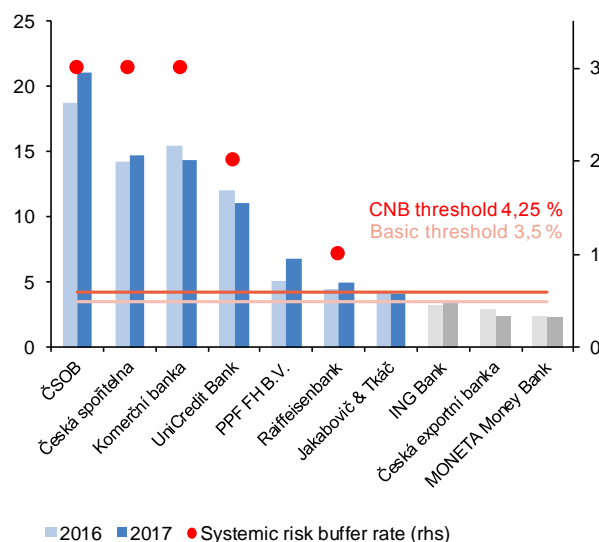
Falling interest margins have exerted pressure on banks' interest profit in recent years. Only consumer credit recorded a decrease in interest margins in 2017 – of 1.2 year on year. (see Chart III.11) By contrast, margins on new mortgage loans and loans to non-financial corporations rose by 0.1 pp year on year.

Chart III.12
Liquidity ratios in the banking sector
 (%; as of 2017 Q2)



Source: CNB

Chart III.13
Comparison of O-SIIs' scores as of mid-2016 and mid-2017 and SRB rates
 (%)



Source: CNB

Note: The blue columns denote institutions included in the list of O-SIIs for 2018. Institutions with a red dot are considered to be banks with a high degree of domestic systemic importance and are required to maintain a systemic risk buffer.

The liquidity position of banks has improved further

The liquidity position of the banking sector has improved further (see Chart III.12), due mainly to increasing exposures to the CNB related to the exchange rate commitment. Domestic banks have deposited non-residents' koruna deposits with the CNB and exposures to the central bank have thus increased substantially. The good liquidity position is also illustrated by the liquidity coverage ratio (LCR). It dropped only slightly year on year in Q3 – by 0.8 pp to 183.9% – and is thus well above the regulatory requirement of 80%.

3.3 OTHER SYSTEMICALLY IMPORTANT INSTITUTIONS

The list of other systemically important institutions is unchanged

According to the CNB's evaluation, there are still seven [other systemically important institutions \(O-SIIs\)](#) in the domestic financial sector and the list of O-SIIs for 2018 is unchanged (see Chart V.13). The CNB does not currently consider it necessary to set an additional capital requirement for banks that are members of the relevant regulatory consolidated groups due to their designation as O-SIIs. Five banks with a high level of domestic systemic importance⁵ are required to maintain a [systemic risk buffer \(SRB\)](#), with rates ranging between 1% and 3% (see Chart V.13). The list of systemically important institutions required to maintain an SRB will be reviewed during 2018, as will the SRB rates for individual banks.

⁵ The main methodological difference (in addition to slightly different thresholds) is that the EBA methodology for O-SIIs works with data for consolidated groups containing banks and (selected) non-bank entities, including foreign subsidiaries, whereas the CNB methodology for setting the systemic risk buffer rate uses data for individual banks on an individual basis.

4 RISKS TO FINANCIAL STABILITY AND MACROPRUDENTIAL POLICY

The CNB sets its macroprudential policy instruments (see Table IV.1) on the basis of an assessment of the intensity of systemic risks. In conformity with an ESRB recommendation, it focuses on the fulfilment of intermediate objectives reflecting the existence of several sources of systemic risk and their own transmission mechanisms.

Table IV.1
Summary of intermediate objectives and macroprudential instruments and evolution of specific risks

Intermediate objectives	Key instruments	Specific risk	Existence of specific risk in CZ	Applied in CZ	Detailed information
Mitigate excessive credit growth and leverage	Countercyclical capital buffer	Strong credit recovery accompanied by easing of lending standards	Yes	Yes, 0.5% since 2017; 1% from 1 July 2018; 1.25% from 2019	Details here
	Macroprudential leverage ratio	Rising leverage, low aggregate risk weights, rising off-balance sheet risk	Potential	Microprudential component to be introduced in 2018	-
	Sectoral capital requirements (in particular real estate exposure)	Elevated growth of loans and risks in specific sector	Potential	Not as yet	-
	LTV caps	Risk of spiral between property prices and property financing loans	Yes	Yes, since 2015, tightened in 2016 and 2017	Details here
	LTI, DTI, DSTI caps	Risk of excessive household indebtedness and debt service	Yes	LTI/ DSTI yes, since 2017	Details here
Mitigate excessive maturity mismatch and illiquidity	Macroprudential NSFR	Long-term liquidity risk	Potential	Microprudential component to be introduced in 2018	-
	Macroprudential LCR	Short-term liquidity risk	No	Microprudential component introduced in 2015	-
Limit exposure concentrations	Systemic risk buffer	Property exposure concentration	Potential	Not as yet, CNB reacts to property exposure risks with other instruments	-
	Public finance stress test	Sovereign exposure concentration	Yes	Yes, option of additional capital requirements in event of elevated sovereign risk, since 2015	Details here
Limit misaligned incentives	SIFI capital surcharges (G-SII and O-SII buffer)	Potential impacts of problems in SIFIs on financial market stability and real economy	Yes	No, O-SIIs identified, different instrument applied	Details here
	Systemic risk buffer		Yes	Yes, since 2014 for four banks, since 2017 for five banks	Details here
Strengthen resilience of financial infrastructures	Margin and haircut requirements on CCP clearing	Counterparty default risk, interconnectedness of financial infrastructures	No	No	-
	Increased disclosure			No	-
	Systemic risk buffer			No	-

Source: CNB

Note: The classification of intermediate objectives and instruments is based on Recommendation of the ESRB of 4 April 2013 on intermediate objectives and instruments of macro-prudential policy (ESRB/2013/1).

4.1 THE SETTING OF THE COUNTERCYCLICAL CAPITAL BUFFER

In its decision-making on the countercyclical capital buffer (CCyB), the CNB mainly assesses information about credit growth and the movement of the economy in the financial cycle. This information was used as a basis for the CNB Bank Board's decision to raise the CCyB rate with effect from 1 January 2019 (see Chart IV.1).

The additional gap indicates an increase in cyclical risks

In line with an ESRB recommendation,⁶ the CNB regularly publishes the credit-to-GDP ratio and its deviation from the long-term trend. In 2017 Q2, the ratio was 89.2% and the corresponding gap -0.4 pp. However, this approach does not provide a reliable guide for determining the position of the Czech economy in the financial cycle. The additional gap (the expansionary credit gap), which partially eliminates the problems associated with the recommended methodology, was 3.3 pp, indicating an increase in cyclical risks (see Chart IV.2).⁷

Chart IV.1
Current and announced CCyB rate in the Czech Republic

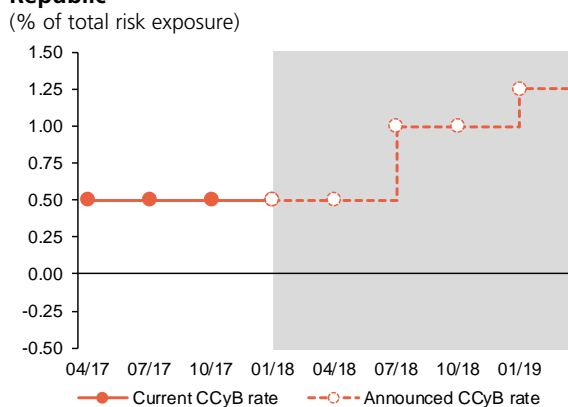
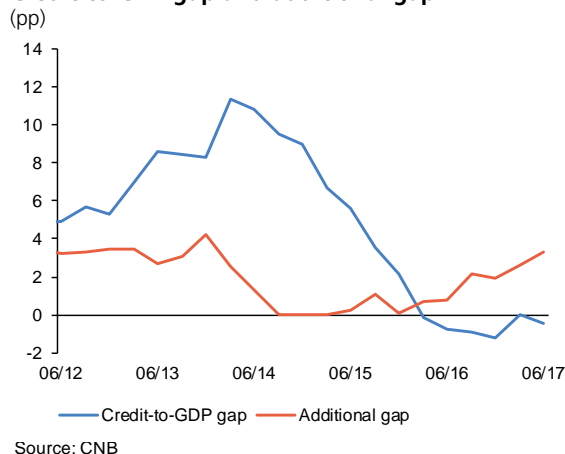


Chart IV.2
Credit-to-GDP gap and additional gap



The aggregate financial cycle indicator has increased further since the publication of the FSR

The aggregate financial cycle indicator (FCI) has continued to grow (see Chart IV.3). This rise has been driven mainly by strong credit growth in the household sector accompanied by fast growth in residential property prices. In 2017 Q2, the year-on-year rates of growth of apartment prices reached roughly 18%, about three times the ten-year average.

Growth in total loans is being affected by faster growth in bank loans...

Year-on-year growth in total loans to the private sector accelerated to 5.9%, the largest rise since 2014. The year-on-year growth rate of bank loans, which account for more than half of all loans to the sector, reached 7.3% in 2017 Q2 (see Chart IV.4). Despite a slight slowdown, bank loans to households for house purchase are showing the fastest growth. Consumer credit and loans to non-financial corporations are also displaying year-on-year growth. The observed credit growth remains high both in terms of historical averages (see Chart IV.5) and in comparison with the situation in other European countries.⁸ As regards other major sources of funding, intercompany loans recorded growth.

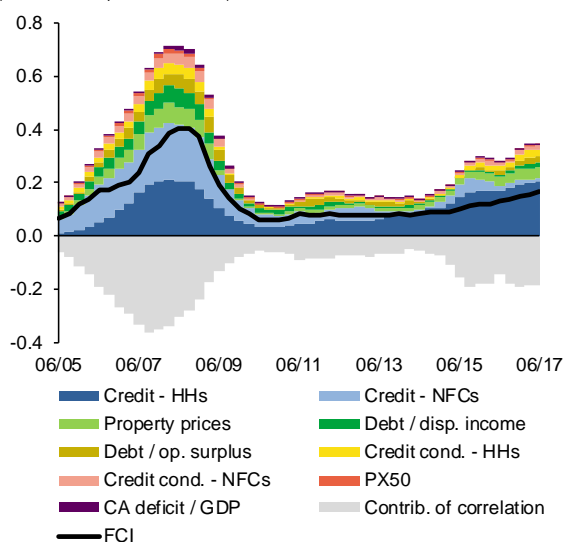
⁶ European Systemic Risk Board: Recommendation (ESRB/2014/1) on guidance to EU Member States for setting countercyclical capital buffer rates, January 2014.

⁷ More detailed methodological information about the additional gap can be found in the thematic article The Countercyclical Capital Buffer in the Czech Republic published in FSR 2016/2017.

⁸ Higher annual growth rates of loans to households and non-financial corporations (as measured by the three-year average) are currently being reported only by Slovakia and Malta. See the European Systemic Risk Dashboard, September 2017.

Chart IV.3
Decomposition of the financial cycle indicator (FCI)

(0 minimum, 1 maximum)

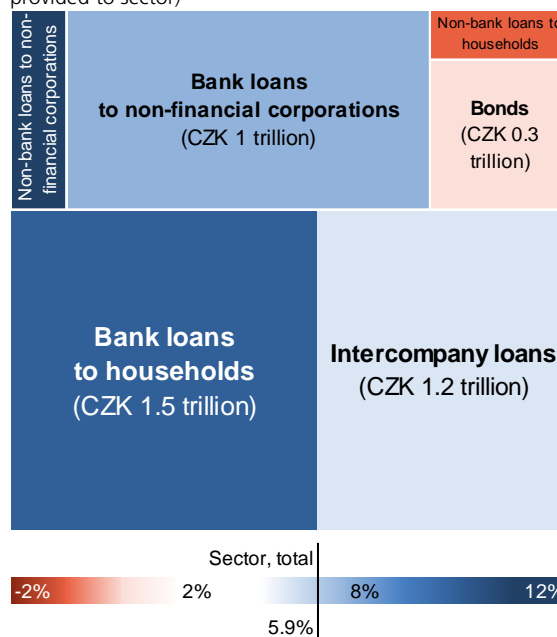


Source: CNB, CZSO

Note: The negative contribution of the cross-correlation structure to the FCI value (the loss due to imperfect correlation of the subindicators) is due to the difference between the current FCI value and the (potential) upper bound which assumes perfect correlation between all indicators. Weak correlation between the subindicators is reflected in growth in the negative contribution to the overall FCI value.

Chart IV.4
Year-on-year growth in total external funds provided to the private sector

(in %; size of area corresponds to share of funds in total funds provided to sector)



Source: CNB

Note: Data for 2017 Q2. Households include non-profit institutions serving households.

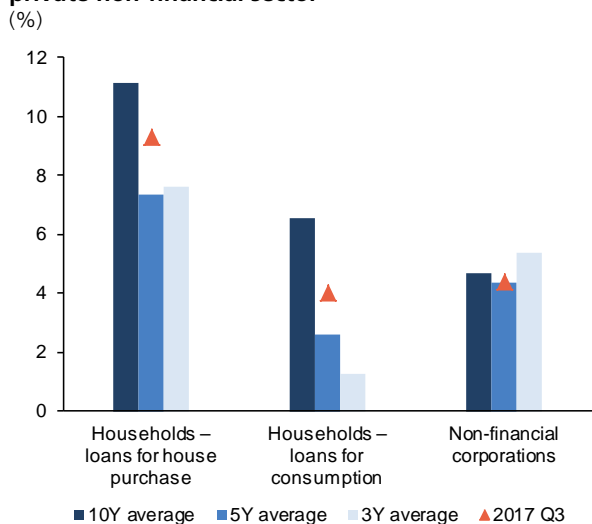
The amount of new loans to the private sector adjusted for refinanced and refixed loans was flat

Starting in 2017 Q1, new koruna borrowing by households and non-financial corporations initially rose and then returned to the previous level (see Chart IV.6). In particular, the total volumes of new loans provided to households remain very high (see section 2.3).

The Czech economy is gradually moving further into a growth phase of the financial cycle...

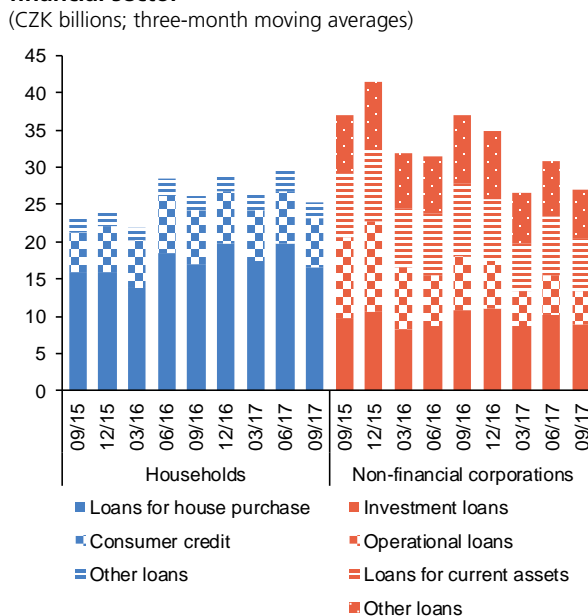
The upward movement of the domestic economy in the growth phase of the financial cycle has slowed somewhat, but the economy is still moving upwards. Rapid growth in loans can still be observed in a number of credit segments. Real interest rates on new loans for house purchase (accounting for wage inflation) are significantly more negative. This is being reflected in household optimism about how easy these loans will be to repay and is contributing to growth in residential property prices above levels consistent with fundamentals. The growth rate of loans to non-financial corporations has fallen slightly, but expected growth in corporate investment activity will contribute to an increase rather than a further decrease in their rate of growth. Strong credit growth persists in certain sectors, including firms in the property segment. In view of the high concentration of loans in this segment, debt financing of property purchases is a source of increasing systemic risks.

Chart IV.5
Average and current growth in bank loans to the private non-financial sector (%)



Source: CNB

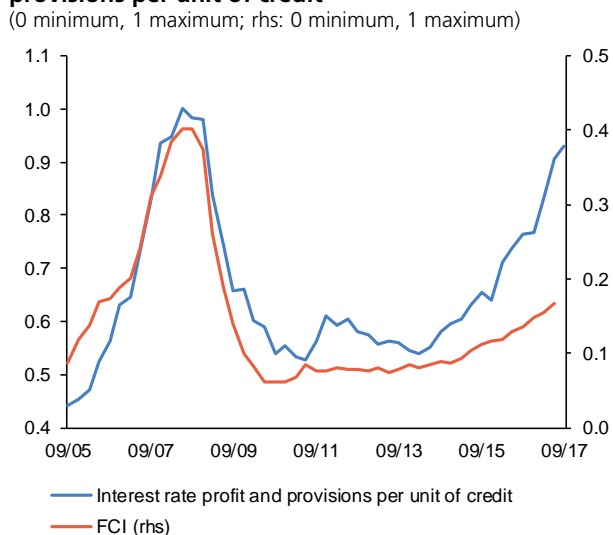
Chart IV.6
Amounts of genuinely new loans to the private non-financial sector (CZK billions; three-month moving averages)



Source: CRC, CNB

Note: Genuinely new loans also include increases in existing loans.

Chart IV.7
The FCI and the ratio of interest rate profit to provisions per unit of credit (0 minimum, 1 maximum; rhs: 0 minimum, 1 maximum)



Source: CNB

Note: Interest rate profit and provisions per unit of credit is normalised to the range [0,1].

Table IV.2
The implied CCyB rate based on various approaches (% of risk-weighted assets)

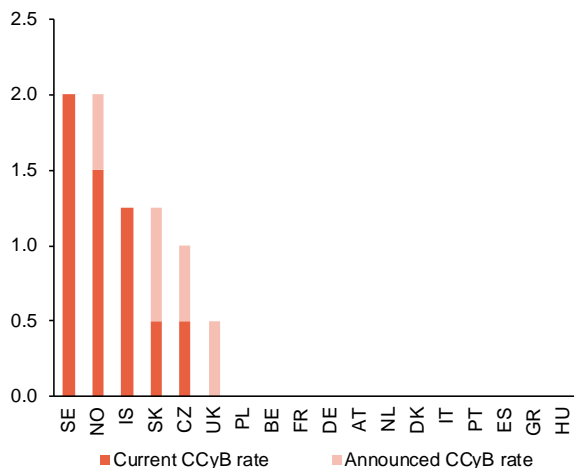
Approach	Implied CCyB rate
Mapping based on FCI values	1.00%
Conditional distribution of future credit losses	0.75%
Duration of expansionary phase of cycle	1.50%

Source: CNB

...consistent with which was the decision to increase the CCyB rate in December 2017

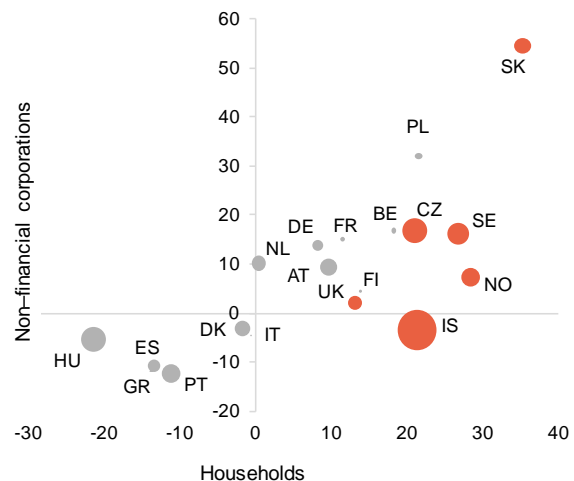
The cost of risk is currently at a very low level and the risk mark-ups in interest rate margins, and also provisioning, are very low relative to the interest income generated by the banking sector (see Chart IV.7). The observed decline in risk weights is also fostering greater vulnerability. These developments imply a need to create a countercyclical capital buffer for exposures located in the Czech Republic (see Table IV.2) and, in accordance with the purpose of the legislation governing this buffer, required a reaction in the form of an increase in the buffer rate in December 2017. In line with this, the CNB Bank Board decided to set the countercyclical buffer rate at 1.25% with effect from 1 January 2019. The CNB stands ready to increase the CCyB rate further in the event of continued rapid credit growth, increasing risks connected with property purchase financing, a strengthening of other cyclical sources of systemic risk and a rise in the vulnerability of the banking sector. On the other hand, the CNB is ready to lower the CCyB rate immediately if the financial cycle enters a downward phase and the risk of excessive credit growth decreases.

Chart IV.8
CCyB rates in selected European countries
 (% of total risk exposure)



Source: ESRB
 Note: The UK increased its CCyB rate to 0.5% in March 2016 (with effect from March 2017). In July 2016, however, the BoE decided to lower the CCyB rate to zero due to risks associated with the outcome of the Brexit referendum. Information as of November 2017.

Chart IV.9
Cyclical risks in Europe
 (three-year growth in stock of loans in %; size of bubble: deviation of property prices from three-year average)



Source: BIS, Eurostat, NBS, NBI
 Note: Countries with a non-zero announced CCyB rate are marked in red. With the exception of Greece (BIS), the source of the property price indices is Eurostat.

In the European context, the CNB is not overly strict when setting the CCyB rate

An international comparison reveals that the currently announced rate on exposures in the Czech Republic is not overly strict given the observed evolution of credit growth and residential property prices (see Charts IV.8 and IV.9). On the contrary, if the practices applied by other national authorities were taken into account, continued rapid credit growth and property market developments would imply an increase in the CCyB rate.

4.2 RISKS ASSOCIATED WITH PROPERTY MARKETS

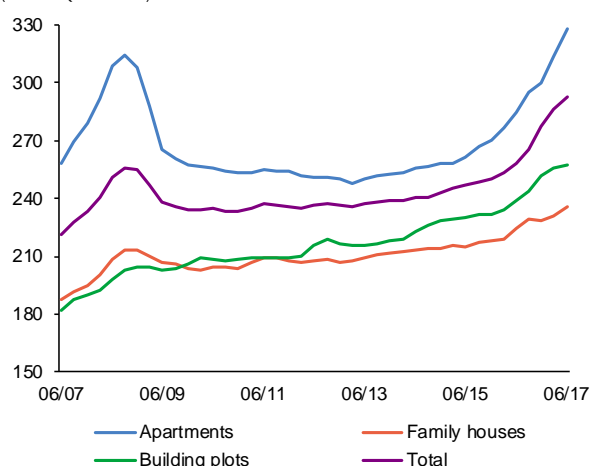
4.2.1 RISKS ASSOCIATED WITH RESIDENTIAL PROPERTY MARKETS

Residential property prices have increased further in the Czech Republic...

The environment of low returns on financial assets and easy financial conditions is also affecting prices of Czech property. Transaction prices of residential property rose by 13% year on year in 2017 Q2. Apartment prices recorded the fastest growth (see Chart IV.10), ranging between 18% and 19% in both Prague and the rest of the Czech Republic. The Czech Republic reported the highest growth in residential property prices in the EU in this period (see Chart IV.11).

Chart IV.10
Transaction prices of residential property in the Czech Republic

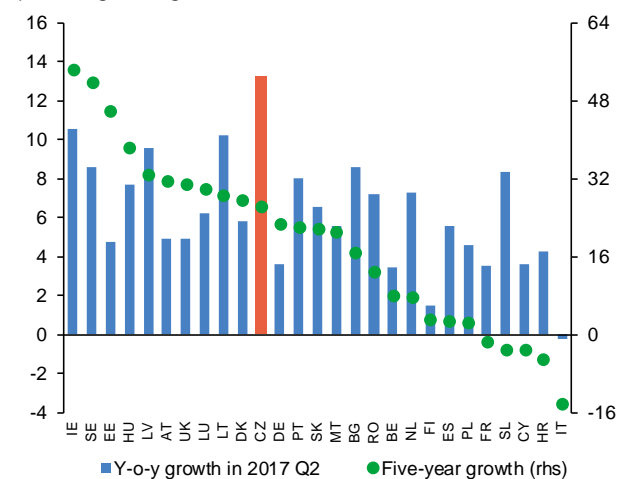
(1999 Q1 = 100)



Source: CZSO, HB index, CNB calculation

Note: The data for 2017 (and for 2016 H1 in the case of prices of building plots and property as a whole) are calculated from alternative sources of data on transaction prices (apartment transaction prices from a CZSO survey, the HB index and the CZSO House Price Index).

Chart IV.11
Transaction prices of residential property in the EU (percentage changes)



Source: Eurostat

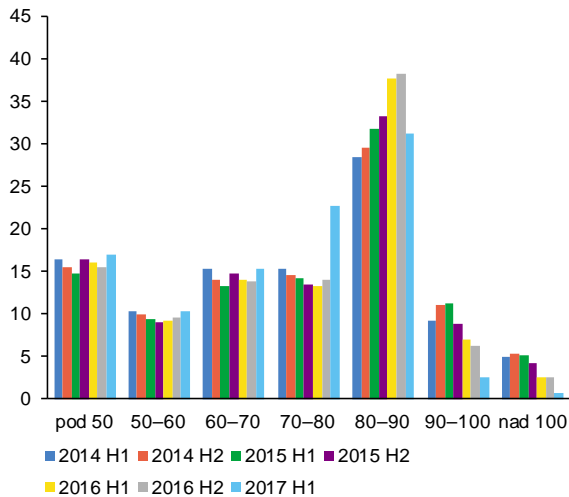
Note: Residential property price index under Eurostat methodology.

...and the spiral between property prices and house purchase loans continued

In FSR 2016/2017, published in June 2017, the CNB identified a continued spiral between property prices and property purchase loans as the most significant risk to financial stability. The conditions for the materialisation of this risk still exist. A new model-based estimate indicates that apartment prices were overvalued by around 10% as of 2017 Q2. The rate of growth of loans provided remains high, especially in the case of housing loans (which recorded year-on-year growth of 9.3% in September). Data for June–September indicate a halt or slight decline in year-on-year growth in new mortgage loans. However, this result is partly due to base effects, and the effect of frontloading before stricter recommended LTV limits take effect may also be playing a role. In absolute terms, the amount of new mortgage loans remains very high (see Chart II.18).

Chart IV.12
LTV distribution of new loans

(x-axis: LTV in %, y-axis: share of loans in %)



Source: CNB

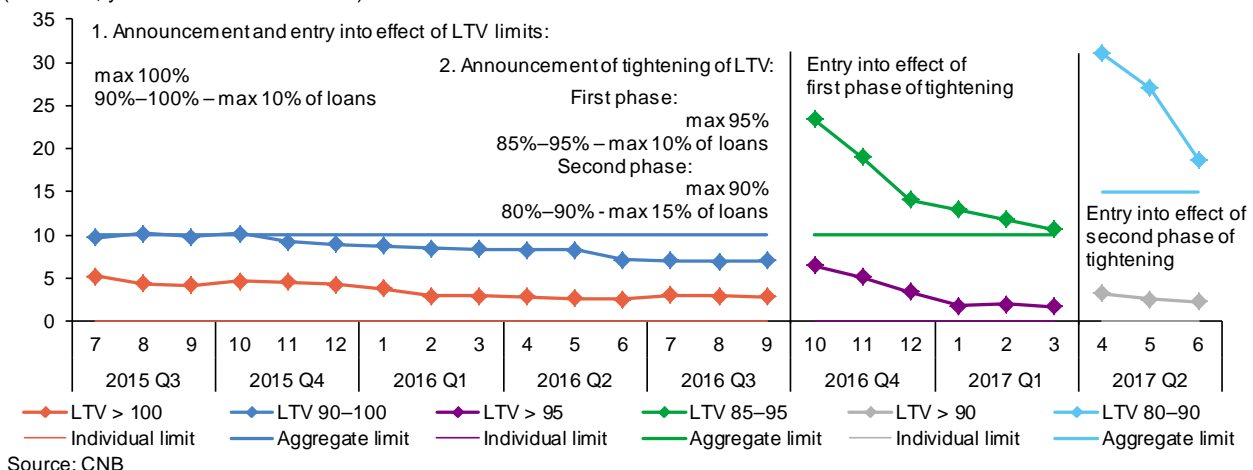
Many institutions were non-compliant with the stricter aggregate LTV limit in 2017 H1

According to data obtained from a survey of individual new loans secured by residential property, the share of new loans with LTVs of 70%–80% rose significantly in 2017 H1 at the expense of loans with higher ratios (see Chart IV.12). This was probably mainly due to the tightening of the recommended LTV limits in 2017 Q2 to a maximum LTV of 90% (individual limit; reduced from 95%) and the capping of the recommended amount of new loans with LTVs of 80%–90% at 15% (aggregate limit; changed from a maximum of 10% of the amount of loans with LTVs of 85%–95%).⁹ The share of loans with LTVs of 80%–90% stood at 28% in 2017 Q2, exceeding the current recommended share at the aggregate level by 13 pp. Less than 3% of the loans provided had LTVs of over 90% (see Chart IV.13). Due to policy tightening the compliance with the Recommendation as regards the aggregate limit for loans with LTVs of 80%–90% worsened substantially compared to 2017 Q1, while the

share of loans with LTVs above the upper limit of 90% remains satisfactory in most institutions (see Chart IV.13). As in the case of the previous tightening of LTV limits, institutions started to reduce the amount of loans in each LTV category only after the tightening took effect. Institutions were close to compliance with the Recommendation at the aggregate level at the end of the first quarter after the tighter limits took effect (see Chart IV.13), although the two tightening phases were announced already in June 2016.

Chart IV.13
Share of loans with LTVs as set in the Recommendation

(LTV in %, y-axis: share of loans in %)



Source: CNB

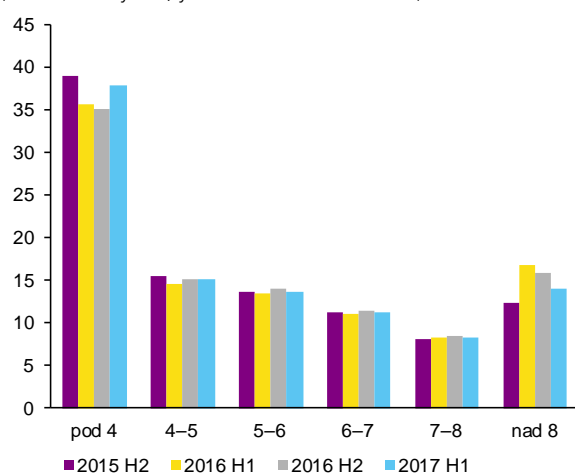
⁹ Recommendation on the management of risks associated with the provision of retail loans secured by residential property.

The DSTI and LTI ratios for new loans are little changed

In addition to LTV, the CNB monitors the DSTI and LTI ratios for newly provided loans. According to a CNB recommendation, providers should monitor these indicators, set internal limits for them and prudently assess loan applications on their basis. In FSR 2016/2017, the CNB identified loans with a DSTI ratio of over 40% and an LTI ratio of over 8 as highly risky, although it also stated that these levels represented no indication of what the upper limits on these indicators would be if it were to be granted a statutory mandate to set them. In the first half of 2017, loans with such risky DSTI or LTI ratios most often accounted for less than 20% of individual institutions' lending. The shares of loans with risky DSTI and LTI ratios and their distributions by LTV are almost constant over time (see Charts IV.14 and IV.15).

Chart IV.14
LTI distribution of new loans

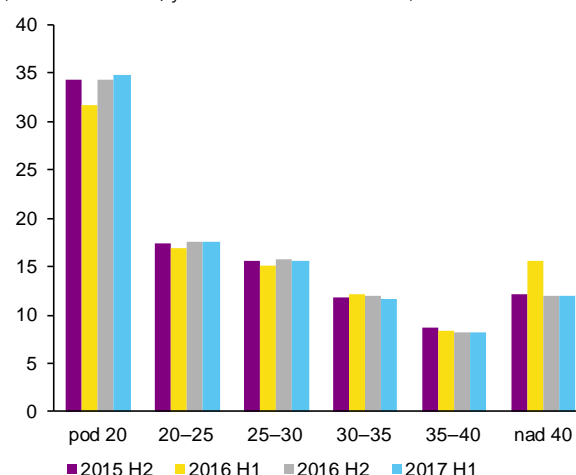
(x-axis: LTI in years, y-axis: share of loans in %)



Source: CNB

Chart IV.15
DSTI distribution of new loans

(x-axis: DSTI in %, y-axis: share of loans in %)



Source: CNB

The CNB will continue to take an active approach to the management of risks associated with mortgage loans

Despite institutions' delayed compliance with the stricter recommended LTV limits, the CNB considers the effect of its measures targeted at the risk of a spiral between housing prices and property purchase loans to have been positive. The stricter LTV limits have led to a halt in year-on-year growth in new mortgage loans and to a rise in the price of loans with high LTVs. On 28 November 2017, the CNB published a *Supervisory benchmark on the provision of loans to households by credit institutions* (a summary of principles describing from the prudential perspective how banks should proceed when lending). The CNB reacts – and remains ready to react – to risks associated with insufficient compliance with CNB recommendations and prudential rules using the additional capital requirement under SREP (Pillar 2). In the first half of 2018, the CNB will also focus on identifying banks' DTI and DSTI monitoring practices. The CNB's other steps will again include advocating for a legislative change giving it the power to set binding upper limits on selected credit indicators.

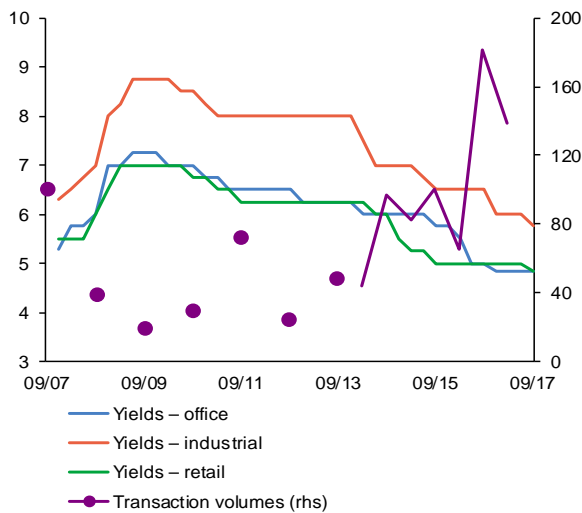
4.2.2 RISKS ASSOCIATED WITH COMMERCIAL PROPERTY MARKETS

Optimistic expectations prevail on the commercial property market

Prime yields on all types of commercial property remained at record lows in 2017 H1 (see Chart IV.16). This means that investors are willing to purchase property at record-high prices. In 2017 H1, transaction volumes were down on the record high seen at the end of 2016, but well above the previous maximum recorded in 2007 (see Chart IV.16).

Chart IV.16
Yields and volumes of commercial property transactions

(%; right-hand scale: 2007 = 100)



Source: Jones Lang LaSalle

Note: Prime yields. The transaction volume data are half-yearly as from 2014 H1 and yearly for the previous period. Half-yearly averages are therefore shown until 2014 H1.

The Czech Republic mostly exports risks associated with commercial property markets

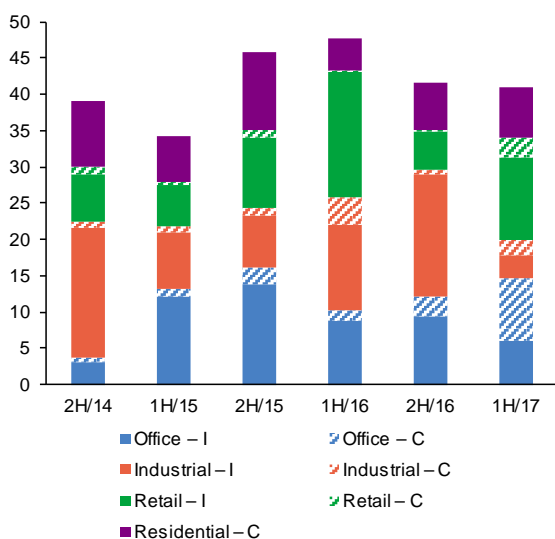
Domestic banks' exposures to this market segment remain relatively low. In 2017 H1, loans secured by commercial property provided by banks in the Czech Republic¹⁰ amounted to around CZK 40 billion (about one-third of new mortgage loans provided to households in the same period) and thus remained at the levels observed in 2016 H2 (see Chart IV.17). The bulk of commercial property financing in the Czech Republic is still provided from abroad.

The riskiness of loans secured by commercial property requires increased monitoring

As regards credit standards, the riskiness of new loans rose slightly in 2017 H1. There was an increase in the share of loans with LTVs of above 70% and debt service coverage ratios (DSCR) of below 1.2 (see Chart IV.18). The CNB will therefore closely monitor the risks associated with banks' exposures to commercial property and play an active part in the ongoing assessment of these risks at EU level in the ESRB.

Chart IV.17
Amount of new loans secured by commercial property

(CZK billions)

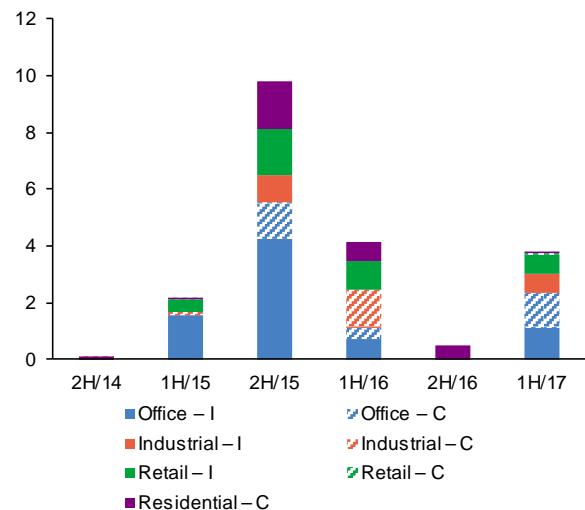


Source: CNB

Note: I: investment in commercial property, C: construction of commercial property.

Chart IV.18
Amount of new loans with an LTV of more than 70% and a DSCR of less than 1.2

(CZK billions)



Source: CNB

Note: I: investment in commercial property, C: construction of commercial property.

¹⁰ According to data from a regular survey of eight banks, covering around 70% of the market as of 30 June 2015.

TABLE OF INDICATORS

TABLE OF INDICATORS – PART 1

	2011	2012	2013	2014	2015	2016	2017 Q3
Macroeconomic environment							
ME.1 Real GDP growth (year on year, %)	2.0	-0.7	-0.5	2.7	4.6	2.3	5.0
ME.2 Consumer price inflation (average annual index growth, %)	1.9	3.3	1.4	0.4	0.3	0.7	2.6
ME.3 Public finance deficit / surplus / GDP (%)	-2.7	-3.9	-1.2	-1.9	-0.6	0.1	2.7
ME.4 Public debt / GDP (%)	39.8	44.5	44.9	42.2	40.3	37.6	35.1
ME.5 Trade balance / GDP (%)	1.9	3.0	4.1	5.1	4.1	5.3	3.3
ME.6 External debt in % of banking sector external assets	165.8	162.6	149.4	152.7	137.0	121.3	115.4
ME.7 Balance of payments current account / GDP (%)	-2.1	-1.6	-0.5	0.2	0.2	1.1	-3.1
ME.8 Monetary policy 2W repo rate (end of period, %)	0.75	0.05	0.05	0.05	0.05	0.05	0.25
Non-financial corporations*							
NC.1 Return on equity (%)	7.9	7.0	6.9	9.2	10.8	10.4	
NC.2 Debt (% of total liabilities)	54.7	55.0	56.7	56.9	56.2	56.7	56.3
NC.3 Credit indebtedness (% of GDP)	50.4	50.1	51.8	53.9	50.4	52.1	50.5
NC.4 – loans from Czech banks (% of GDP)	20.5	20.6	21.2	20.3	20.2	20.7	21.1
NC.5 – loans from Czech non-bank financial corporations (% of GDP)	4.4	4.2	4.0	4.0	4.2	4.5	4.5
NC.6 – other (including financing from abroad, % of GDP)	25.4	25.3	26.7	29.7	26.0	26.4	26.1
NC.7 Interest coverage (pre-tax profit + interest paid/interest paid, %)	9.1	8.4	9.5	10.8	13.5	13.5	
NC.8 12M default rate (%)	1.9	1.7	1.4	1.5	1.4	1.0	0.7
Households (including sole traders)							
H.1 Debt / gross disposable income (%)	54.2	55.7	57.7	56.6	57.5	59.6	60.5
H.2 Debt / financial assets (%)	30.5	29.7	29.4	28.1	27.8	28.3	28.8
H.3 Net financial assets (total financial assets – total liabilities, % of GDP)	64.2	69.2	72.1	74.3	75.4	75.9	75.5
H.4 Debt / GDP (%)	29.7	30.6	31.5	30.4	30.2	31.1	31.6
H.5 – loans from Czech banks to households (% of GDP)	25.0	25.7	26.7	26.5	26.9	27.9	28.4
H.6 – loans from Czech non-bank fin. corporations to households (% of GDP)	1.7	1.7	1.6	1.6	1.1	1.1	1.1
H.7 – loans from Czech banks to sole traders (% of GDP)	0.9	0.9	0.9	0.8	0.8	0.8	0.8
H.8 – loans from Czech non-bank fin. corporations to sole traders (% of GDP)	0.3	0.3	0.2	0.2	0.2	0.2	0.2
H.9 – other (including financing from abroad, % of GDP)	1.7	2.1	2.1	1.3	1.3	1.2	1.2
H.10 Net interest expenses / gross disposable income (%)	1.9	1.9	1.9	1.7	1.9	1.9	1.8
H.11 12M default rate (% excluding sole traders)	5.0	4.8	4.6	4.3	3.5	2.8	2.3
Financial markets							
FM.1 3M PRIBOR (average for period, %)	1.2	1.0	0.5	0.4	0.3	0.3	0.3
FM.2 1Y PRIBOR (average for period, %)	1.8	1.5	0.7	0.5	0.5	0.5	0.5
FM.3 10Y government bond yield (average for period, %)	3.7	2.8	2.1	1.6	0.6	0.4	0.8
FM.4 CZK / EUR exchange rate (average for period, %)	24.6	25.1	26.0	27.5	27.3	27.0	26.6
FM.5 Change in PX stock index (% year on year, end of period)	-25.6	14.0	-4.8	-4.3	1.0	-3.6	13.4
Property market							
PM.1 Total change in residential property prices (transaction prices, % year on year)	0.9	0.4	1.1	1.5	2.8	8.7	10,3*
PM.2 Change in apartment prices (asking prices according to CZSO, % year on year)	0.2	-1.4	0.8	2.1	4.3	15.4	15,6**
PM.3 Apartment price / average annual wage	4.0	3.8	3.9	3.9	3.9	4.5	4.9
PM.4 Apartment price / annual rent (according to IRI)	21.7	21.3	21.6	20.7	21.5	21.4	21.1

* Estimate based on CZSO transaction prices and house price index.

** Estimate based on CZSO transaction prices.

Note: Owing to data revisions, some historical values of the indicators may not be comparable to those published in previous FSRs.

Also, owing to data revisions and the later date of table update, the values of the indicators may not be the same as those referred in the text of this document. The missing values were not available at the date of table update.

TABLE OF INDICATORS – PART 2

	2011	2012	2013	2014	2015	2016	2017 Q3
Financial sector							
FS.1 Financial sector assets / GDP (%)	142.3	148.0	160.5	160.0	158.0	163.3	182.0
FS.2 Shares of individual segments in financial sector assets (%)							
FS.3 banks	78.1	77.2	78.1	77.8	77.4	77.4	79.4
FS.4 credit unions	0.5	0.7	0.5	0.5	0.5	0.4	0.2
FS.5 insurance companies	7.6	7.8	7.3	7.1	6.8	6.4	5.6
FS.6 pension management companies and funds	4.3	4.6	4.7	4.9	5.3	5.2	4.9
FS.7 investment funds*	2.9	3.6	3.8	4.3	4.8	5.2	5.2
FS.8 non-bank financial corporations engaged in lending	6.2	5.8	5.3	5.2	5.0	5.0	4.3
FS.9 investment firms	0.5	0.4	0.4	0.3	0.3	0.3	0.3
Banking sector							
BS.1 Bank assets / GDP (%)	111.3	114.6	126.1	124.6	122.3	126.4	146.9
BS.2 Assets structure (% end of period)							
BS.3 loans to central bank	8.7	8.3	12.9	8.8	11.6	12.5	10.5
BS.4 interbank loans	9.8	9.6	9.1	6.4	4.5	3.8	4.0
BS.5 client loans	51.1	50.5	50.0	50.7	51.8	50.8	44.5
BS.6 bond holdings	22.2	24.1	21.7	22.8	21.0	18.2	13.6
BS.7 – government bonds	16.5	18.3	15.8	16.3	14.1	11.4	7.6
BS.8 – Czech government bonds	15.3	16.9	14.6	14.8	12.5	10.0	6.7
BS.9 other	8.3	7.5	6.3	11.3	11.1	14.8	27.3
BS.10 Liabilities structure (% end of period)							
BS.11 liabilities to central bank	0.1	0.2	0.0	0.1	0.2	0.2	0.3
BS.12 interbank deposits	11.0	8.9	11.3	10.5	7.6	10.2	18.1
BS.13 client deposits	67.1	69.1	67.8	66.9	66.4	65.3	60.4
BS.14 bonds issued	8.5	8.1	8.3	8.6	11.9	11.5	10.6
BS.15 other	13.3	13.7	12.5	13.9	13.8	12.9	10.6
BS.16 Client loans / client deposits (%)	76.2	73.1	73.8	75.8	78.0	77.8	73.7
BS.17 Sectoral breakdown of total loans (%)							
BS.18 non-financial corporations	35.9	35.4	34.5	33.2	33.1	33.1	33.1
BS.19 households	43.8	44.3	43.4	43.3	44.4	45.1	44.8
BS.20 sole traders	1.7	1.5	1.5	1.3	1.3	1.2	1.2
BS.21 others (including non-residents)	18.6	18.8	20.6	22.1	21.2	20.6	20.9
BS.22 Growth in loans (% end of period, year on year):							
BS.23 total	6.0	2.4	6.5	4.8	5.6	6.0	6.8
BS.24 non-financial corporations	6.1	0.9	3.8	0.9	5.3	6.0	4.4
BS.25 – real estate activity (NACE L)	11.5	0.7	6.3	3.6	5.6	12.1	4.6
BS.26 households	5.0	3.6	4.5	4.5	8.2	7.7	8.3
BS.27 – loans for house purchase	6.1	4.8	5.2	5.6	8.0	8.4	9.3
BS.28 – consumer credit	-1.6	-0.7	0.4	-0.6	8.9	4.5	4.0
BS.29 sole traders	-5.5	-5.0	1.0	-4.0	0.0	4.4	8.7
BS.30 Non-performing loans / total loans (%):							
BS.31 total	6.0	6.0	5.9	6.1	5.8	4.8	4.0
BS.32 non-financial corporations	8.2	7.4	7.2	6.7	5.7	5.1	4.4
BS.33 households	4.9	5.1	5.0	4.7	4.0	3.2	2.4
BS.34 – loans for house purchase	3.2	3.4	3.3	3.1	2.6	2.0	1.7
BS.35 – consumer credit	11.3	12.3	12.2	12.0	11.1	8.9	6.3
BS.36 sole traders	12.4	13.7	13.0	12.6	11.0	8.6	6.9
BS.37 Coverage of non-performing loans by provisions (%)**	51.5	53.8	55.0	55.6	54.6	56.3	55.1
BS.38 Aggregate LTV for housing mortgages	57.0	58.7	59.4	54.6	55.8	55.8	55.3
BS.39 Capital ratio (%)	15.3	16.4	17.1	18.0	18.4	18.4	18.4
BS.40 Tier 1 capital ratio (%)	13.9	15.7	16.5	17.5	17.9	17.9	18.0
BS.41 Leverage (assets as a multiple of Tier 1)	14.3	13.7	13.1	12.4	12.1	12.6	14.7
BS.42 Leverage ratio (approximation of Basel III definition, Tier 1 / exposures)	n.a.	n.a.	n.a.	7.2	7.6	7.2	6.3
BS.43 Return on assets (%)	1.2	1.4	1.3	1.2	1.2	1.3	1.2
BS.44 Return on Tier 1 (%)	19.8	21.8	18.6	16.8	16.7	17.9	18.1
BS.45 Quick assets / total assets (%)	26.9	29.1	30.6	31.0	32.0	34.4	42.0
BS.46 Quick assets / client deposits (%)	40.8	42.5	45.6	46.4	48.3	52.8	69.6
BS.47 Net external position of banking sector (% of GDP)	3.9	6.1	3.1	1.6	-1.0	-7.5	-23.7
BS.48 Banking sector external debt / banking sector total assets (%)	12.1	10.1	12.2	13.9	15.3	18.7	26.3

* Investment funds comprise collective investment funds and funds for qualified investors.

** The calculation does not include CEB and CMGDB loans.

Note: Owing to data revisions, some historical values of the indicators may not be comparable to those published in previous FSRs.

Also, owing to data revisions and the later date of table update, the values of the indicators may not be the same as those referred in the text of this document. The missing values were not available at the date of table update.

TABLE OF INDICATORS – PART 3

	2011	2012	2013	2014	2015	2016	2017 Q3
Non-bank financial corporations							
NI.1 Share in financial sector assets (%)	21.1	21.7	21.0	21.5	21.9	21.8	20.1
Insurance companies*							
NI.2 Premiums written / GDP (%)	3.8	3.8	3.8	3.7	3.4	3.2	3.1
NI.3 Equity / Technical provisions (%)	28.3	30.8	30.3	28.8	29.4	30.4	30.5
NI.4 Change in financial investment of insurance companies (% , year on year)	1.2	4.8	0.7	2.6	-2.8	-0.2	5.7
NI.5 Return on equity of insurance companies (%)	12.4	14.7	13.0	7.6	9.3	13.1	16,5**
NI.6 Claim settlement costs / net technical provisions (life, %)	16.0	16.4	17.7	20.0	17.8	15.1	14,9**
NI.7 Claim settlement costs / net technical provisions (non-life, %)	61.7	60.8	67.9	64.1	66.2	72.1	77,5**
Pension management companies (PMCs) and PMC funds							
NI.8 Change in assets of funds managed by PMCs (%)	6.5	10.4	8.4	14.1	10.0	7.8	11.9
NI.9 Nominal change in value of assets of PMC funds***	0.8	7.0	-0.1	3.3	1.0	0.3	6.7
Investment funds							
NI.10 Growth in net assets (= equity; year on year, %)	-3.1	17.1	19.4	19.0	17.8	17.4	20.7
Non-bank financial corporations engaged in lending							
NI.11 Growth in loans from non-bank financial corporations engaged in lending (%).****							
NI.12 total	1.5	-3.6	-4.1	3.3	0.8	8.9	7.2
NI.13 households	6.5	-2.5	-2.3	5.0	-26.4	7.0	-3.5
NI.14 non-financial corporations	0.5	-3.1	-4.4	3.7	11.4	10.1	10.2

* The indicators cover domestic insurance companies only.

** The values in nominator of this indicator are calculated as the sum of the values for the last four quarters.

*** Change in the assets of funds managed by PMCs adjusted for contributions and benefits. Funds accepted do not include returns credited to clients.

**** The change in the amount of loans provided to households by non-bank financial corporations engaged in lending in 2015 was due to the conversion of one of these lenders into a foreign bank branch.

Note: Owing to data revisions, some historical values of the indicators may not be comparable to those published in previous FSRs.

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