

5 MACROPRUDENTIAL POLICY

The aim of this section is to describe the main risks to financial stability and to provide information about risk mitigation instruments. To this end, the text evaluates the risks stemming from the external environment, the current position of the Czech economy in the financial cycle, the resilience of the Czech financial sector to the risks identified, and the tasks and recommendations arising from analyses for macroprudential policy, microprudential supervision and other areas of economic policy. The first part explains the main tasks of macroprudential policy, reflecting key risk sources. The second part describes the settings of the capital buffers used to enhance the resilience of the Czech banking sector. The third part provides detailed information about risks relating to property exposures and describes current and potentially applicable instruments for mitigating those risks. The final, fourth part describes developments of macroprudential policy in the EU and in the national and international regulatory environment.

5.1 SOURCES OF SYSTEMIC RISKS AND MACROPRUDENTIAL POLICY INSTRUMENTS

The macroprudential dashboard indicates persisting potential sources of systemic risks

The macroprudential dashboard provides an overview of systemic risk sources which, if they materialised, could jeopardise future financial stability and the current resilience of individual sectors of the financial system (see Table V.1).¹ Potential sources of risks to financial stability are linked with the environment of low interest rates, increased credit growth and rapid growth in property prices. Further growth in household indebtedness coupled with loan interest rates staying at very low levels fostered an increase in households' sensitivity to potential adverse economic developments. Significant sensitivity is recorded mainly by households with low income and mortgage loans (see sections 4.3 and 5.3). Many of them might not withstand possible future stress in the form of a decline in income and a jump in interest rates, for example due to an external shock. A decline in average loan interest rates and rising maturity transformation resulted in a further increase in interest rate risk in the banking sector. Market liquidity risk remains elevated due to a rising share of non-residents in holdings of government debt coupled with limited market liquidity of government bonds (see section 2.1).

The risks to financial stability are currently being kept low in particular by the banking sector's ability to absorb shocks.²

1 The methodology used to construct the macroprudential dashboard is described in Box 5 of FSR 2015/2016.

2 The macroprudential dashboard indicates a decline in the resilience of other non-banks, due mainly to a fall in the share of quick assets in funds' total assets and a rise in the leverage of non-bank financial corporations engaged in lending. Thanks to the small share of non-banks in financial sector assets, this poses no risk to financial stability.

The most significant risk to current developments is that of a continued spiral between property prices and property purchase loans

Apartment prices rose by 15% year on year as of the end of 2016. The amount of genuinely new mortgage loans increased by CZK 42 billion year on year in 2017 Q1 (see Chart V.1) and the year-on-year growth rate thus accelerated to almost 30%. The amount of new mortgage loans provided last year was almost three times the 2009 level. Such fast loan growth is not sustainable.

TABLE V.1

Macprudential dashboard

RESILIENCE OF THE FINANCIAL SECTOR



RISK SOURCES



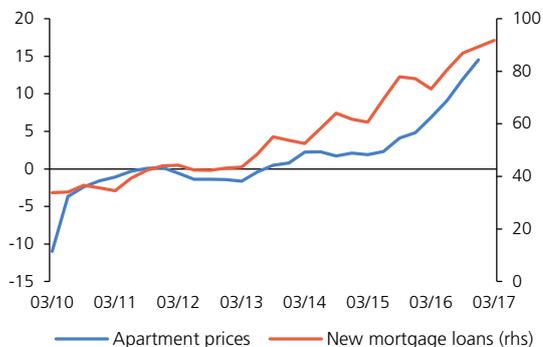
Source: CNB, CZSO

Note: The macroprudential dashboard is divided into two main areas describing the resilience of the financial sector and sources of risks to financial stability. The first area is backward-looking and assesses the change in the current resilience of the financial sector due to actual developments. The second area is forward-looking, as it assesses the strength of potential sources of risks to financial stability in the future. The indicators included in each category are given in an Appendix to this Report.

CHART V.1

Apartment prices and new mortgage loans

(year-on-year growth in %; right-hand scale: quarterly totals in CZK billions)



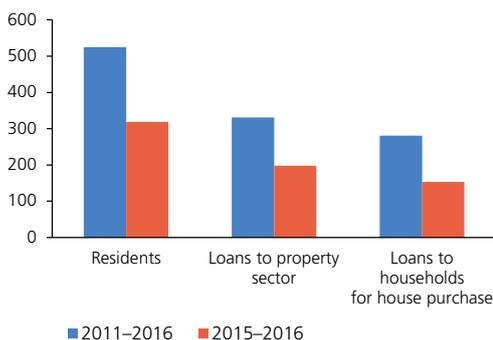
Source: CZSO, CNB, CNB calculation

Note: New mortgage loans comprise new loan agreements and increases in existing loans when refinancing.

CHART V.2

Absolute changes in bank loans in selected segments

(CZK billions)



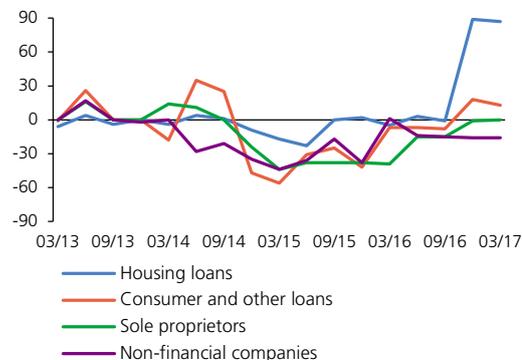
Source: CNB

Note: Loans to the property sector comprise loans to households for house purchase and loans to developers (NACE 411 and 68).

CHART V.3

General lending standards in the Czech Republic

(difference in market share of banks in pp)



Source: Bank Lending Survey, CNB

Note: The data represent the difference between the market share of banks that reported a tightening of lending standards and banks that reported an easing of lending standards in the past three months. More information on the indicator methodology can be found on the CNB website.

The tighter LTV ratio in the CNB's Recommendation as from April 2017 (an upper limit of 90% with an aggregate limit of 15% for loans with LTVs of 80%–90%) will foster a slowdown in credit growth and a decline in these risks later this year. The increasing concentration of banks' credit exposures in the financing of property purchases and construction is another source of systemic risks. The stock of bank loans to residents (see Chart V.2) has increased by CZK 316 billion over the last two years. The real estate segment accounted for CZK 197 billion (62%) of that total. House purchase loans, in turn, made up CZK 153 billion (48%) of bank loans to residents.

The setting of LTV limits has resulted in tightening the lending standards applying to house purchase loans...

In June 2015, the CNB responded to the rise in potential systemic risks by issuing a *Recommendation on the management of risks associated with the provision of retail loans secured by residential property* (the "Recommendation"). A June 2016 update of the Recommendation tightened the upper limit on the LTV ratio in order to gradually reduce the share of new loans with LTVs of over 80% (see section 5.3). In the Bank Lending Survey, banks indicated that they had significantly tightened the lending standards applying to house purchase loans in 2017 Q1 due mainly to the decreasing LTV limit (see Chart V.3).³ In the case of non-financial corporations, banks relaxed their credit terms and conditions in response to a favourable economic outlook, competitive pressure, low financing costs and a good liquidity position. Given the continuing shift of the economy into an expansionary phase of the financial cycle, the CNB will continue to carefully assess lending standards.

...given growing risks in the areas of debt and debt service, the CNB is extending the scope of application of the Recommendation to loans provided to consumers following the provision of a mortgage loan and to all credit providers

Property prices can be considered modestly overvalued in some regions. From the point of view of lenders, the mortgage loans currently being provided are riskier at a given LTV ratio than in previous years. The CNB responded to the expected increase in the riskiness of mortgage loans by tightening the LTV limits as of April 2017 (an upper limit of 90% with an aggregate limit of 15% for loans with LTVs of 80%–90%). The CNB will assess the compliance of providers with the tighter limit in December 2017 at the latest, and also the adequacy of the existing setting of its macroprudential instruments. In the current environment, characterised by optimistic expectations and low interest rates, compliance with all prudential standards and procedures in the provision of house purchase loans is crucial, especially the ones regarding the capacity of a debtor to repay the loan in less favourable economic environment. CNB analyses are indicating that a significant percentage of new mortgage loans have

³ CNB (2016): *Bank Lending Survey*, April. http://www.cnb.cz/miranda2/export/sites/www.cnb.cz/en/bank_lending_survey/download/2017_q1_BLS_en.pdf.

highly risky characteristics in terms of applicants' incomes, such as DSTI ratios in excess of 40% (see Chart V.4) and DTI ratios in excess of 8. The indebtedness of households is relatively low in the Czech Republic compared to the euro area average (see Chart V.5), but it is steadily rising (see Chart II.42). In view of the potential risks associated with households getting deeper into debt, the CNB is extending the scope of application of the Recommendation to all consumer credit providers and to other loans provided subsequently to consumers with a mortgage loan (see section 5.3).

The domestic economy is shifting visibly into a growth phase of the financial cycle, to which the CCyB rate is responding...

The shift into a growth phase of the financial cycle is associated with an increase in cyclical risks, mainly as a result of continued high growth in loans, rising property prices and a persisting environment of low interest rates and easy lending standards. The CNB reacted to the shift of the financial cycle to a phase of stronger recovery in December 2015 by setting the countercyclical buffer (CCyB) rate at 0.5% with effect from January 2017. It stated in March 2017 that it stood ready to further increase the CCyB rate should cyclical risks grow. Due to continued growth in cyclical risks, the CNB Bank Board decided to increase the CCyB rate to 1% with effect from 1 July 2018 (see section 5.2.2).

...some sources of structural risks are also intensifying and the CNB is considering which instruments to use to mitigate them

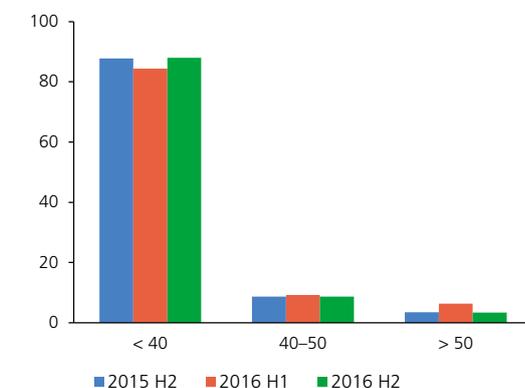
Concentration of property market-related loan exposures is rising further in the banking sector. This, coupled with growth in household debt and property prices and a decline in mortgage loan risk weights set using internal models, is increasing the banking sector's vulnerability in the event of shocks. The risks in this area may also be intensified by changes in building societies' business models indicating greater risk-taking (see section 3, Box 1). If these risks rise further, CNB will be prepared to apply Article 164 of the CRR, i.e. to increase the minimum LGD level for IRB banks and thereby boost their resilience to shocks, even though no agreement has been reached at EU level on relevant regulatory and technical standards. If necessary, the CNB can also apply Article 458 of the CRR, which enables it to respond to macroprudential or systemic risks of this type by, among other things, regulating risk weights. The sources of structural risks also include government debt refinancing risk, which has also increased, albeit only slightly (for details see section 2.1.1).

A high loss absorption capacity of banks remains the basis of financial stability in the Czech Republic

A sudden drop in economic activity leading to large credit losses is still a constant risk to the domestic financial sector. Robust capital adequacy and prudential liquidity management remain the basis for absorbing such shocks and maintaining high confidence in the stability of the Czech banking sector. The banking sector remains in good shape. This is confirmed by solvency and liquidity stress test results (see sections 4.1 and 4.2). However, significant differences persist across institutions. Pension management companies are increasingly exposed to interest rate risk. This is placing higher requirements on the management of this risk.

CHART V.4

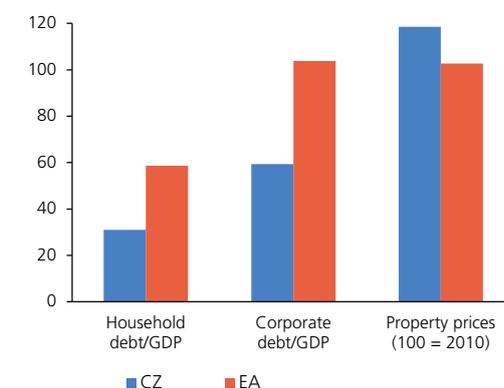
DSTI distribution of new loans
(x-axis: DSTI in %; y-axis: share of loans in %)



Source: CNB

CHART V.5

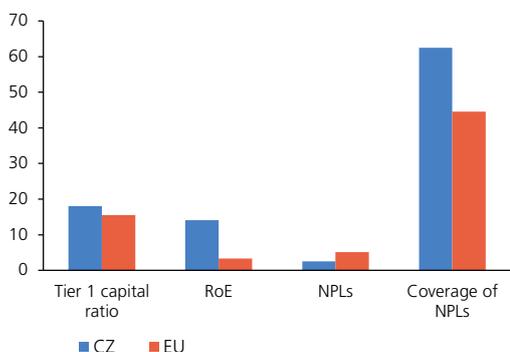
Comparison of non-financial private sector debt and property prices in the Czech Republic and the EMU
(%)



Source: BIS

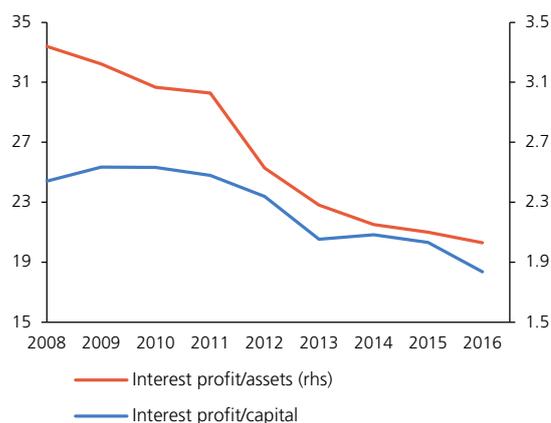
Note: Property prices as of 2016 Q4, other data as of 2016 Q3.

CHART V.6

Comparison of selected Czech and EU banking sector indicators
(%)


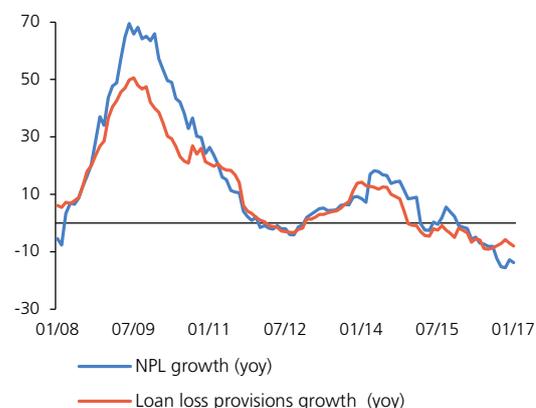
Source: EBA

CHART V.7

Ratios of interest profit to capital and assets
(%)


Source: CNB

CHART V.8

Dynamics of NPL and loan loss provisions
(year-on-year change in %)


Source: CNB

PMCs should prudently assess the size of the impact of the potential rise in interest rates and the ensuing decline in prices of their debt security holdings and further strengthen their capitalisation for the purposes of absorbing potential shocks.

Banks should take advantage of high profitability and a low level of credit risk to strengthen their capitalisation...

The positive economic developments in 2016 were reflected in sustained high profitability and a reduction in credit risk in the banking sector. The profitability of the domestic banking sector remains high by international comparison (see Chart V.6) even though the ratios of interest profit to capital and assets have been falling since 2008 (see Chart V.7). The fall in interest profit is due mainly to low interest rates, which, by contrast, are positively affecting credit risk (see Chart V.8). Even so, exposures to non-financial corporations are still showing increased riskiness in some branches of activity (energy and construction). The generally low NPL ratio is reducing impairment losses and thus increasing the profit of the banking sector. Banks can use the profit to meet the increasing capital requirement for the countercyclical buffer without having to reduce their financing of any segments of the real economy.

...as potential risks to financial stability originate in good economic times

One of the best documented principles regarding the financial sector is that the biggest risks to financial stability originate in good economic times. A long period of robust economic growth in an environment of low interest rates generates optimistic expectations, due to which banks and their clients are willing to take greater risks. In such periods, it is vital for banks to manage credit risk highly prudently, assess collateral quality conservatively and to set aside sufficient loan loss provisions. A lower default rate in good times and the currently low risk costs cannot be interpreted as evidence of a low systemic risk level and high robustness of the system.⁴ The CNB will continue to assess risks in the banking sector to ensure that the capital buffers are consistent with the level of systemic risk (for the settings of macroprudential instruments by risk type see Table V.2). Maintaining robust capital buffers is of particular importance for banks that are systemically important by dint of their position and character (see 5.2.3).

The CNB is paying a high degree of attention to changes in EU financial regulation and the banking union project

Within the European supervisory authorities, the CNB is actively involved in the preparation and implementation of the regulatory instruments and

4 When a spiral is developing in the housing market, a low mortgage default rate cannot be used as an argument against tightening macroprudential instruments. Take, for example, the Irish banking crisis in 2007–2010. Immediately before the crisis struck in early 2007, the NPL ratio was almost zero, but during the crisis it surged to 25% (17% for loans for owner-occupied housing and 36% for buy-to-let loans). Just before the crisis broke out, two-thirds of mortgages for owner-occupied housing had an LTV of between 90% and 100% and one-third of them had an LTV of more than 100%. Like now in the Czech Republic, it was argued that no action was necessary because borrowers were repaying without any problems. The Irish government subsequently provided banks with assistance amounting to 40% of Irish GDP in 2008–2010 to avert a systemic crisis.

measures required by the CRD IV framework. Within the Financial Stability Board (FSB) and the Basel Committee on Banking Supervision (BCBS) it participates in discussions on the development of standards for the banking sector. Within the European Systemic Risk Board (ESRB) it is involved in designing macroprudential policies. Stability of the regulatory framework remains the CNB's general priority. The CNB therefore responded actively to the Commission's November 2016 proposal containing legislative proposals for a change in the CRD IV/CRR legal framework and will continue to work closely with the Ministry of Finance in this matter. Of the regulatory changes under preparation, the CNB still views the minimum requirement for own funds and eligible liabilities (MREL) as crucial. Agreement has yet to be reached at EU level on the final version of the MREL rules. The CNB considers it vital for these rules to take conditions in national banking sectors and banks' individual business models and risk profiles into account.

TABLE V.2

Summary of intermediate objectives and macroprudential instruments and evolution of specific risks

| Intermediate objectives | Key instruments | Specific risk | Existence of specific risk in CZ | Y-o-y change in intensity of specific risk | 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% since 2018 | section 5.2.2 |
| | Macroprudential leverage ratio | Rising leverage, low aggregate risk weights, rising off-balance-sheet risk | Potential | | Microprudential component expected to be introduced in 2018 | section 3.1 |
| | Sectoral capital requirements (in particular real estate exposure) | Elevated growth of loans and risks in specific sector | Potential | | Not as yet | section 5.3 |
| | LTV caps | Risk of spiral between property prices and property financing loans | Yes | | Yes, since 2015, tightened in 2016 and 2017 | section 5.3 |
| | LTI, DTI, DSTI caps | Risk of excessive household indebtedness and debt service | Yes | | Not as yet | section 5.3 |
| Mitigate excessive maturity mismatch and illiquidity | Macroprudential NSFR | Long-term liquidity risk | Potential | | Microprudential component expected to be introduced in 2018 | section 4.2 |
| | Macroprudential LCR | Short-term liquidity risk | No | | Microprudential component introduced in 2015 | section 4.2 |
| Limit exposure concentrations | Systemic risk buffer | Property exposure concentration | Potential | | Not as yet, CNB reacts to property exposure risks with other instruments | sections 3.1 and 5.3 |
| | Public finance stress test | Sovereign exposure concentration | Yes | | Yes, option of additional capital requirements in event of elevated sovereign risk, since 2015 | section 4.4 |
| 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 | section 5.2.3 |
| | Systemic risk buffer | | Yes | | Yes, since 2014 for four banks, since 2017 for five banks | section 5.2.3 |
| Strengthen resilience of financial infrastructures | Margin and haircut requirements on CCP clearing | Counterparty default risk, interconnectedness of financial infrastructures | No | | No | - |
| | Increased disclosure | | No | | No | - |
| | Systemic risk buffer | | No | | 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). The macroprudential component of some instruments has not yet been incorporated into the legislation. The microprudential component of these instruments has been activated already (LCR) or is expected to be activated (leverage, NSFR).

TABLE V.3

Summary of capital buffers in the Czech Republic (%)

| Capital buffer | Rate | Year of effect |
|--|-------|----------------|
| Capital conservation buffer | 2.5 | 2014 |
| Countercyclical capital buffer | 1.0 | 2018 |
| Systemic risk buffer | 1 – 3 | 2014 |
| Buffer for other systemically important institutions | - | - |

Source: CNB

5.2 MACROPRUDENTIAL CAPITAL BUFFERS

5.2.1 OVERVIEW OF CAPITAL BUFFERS

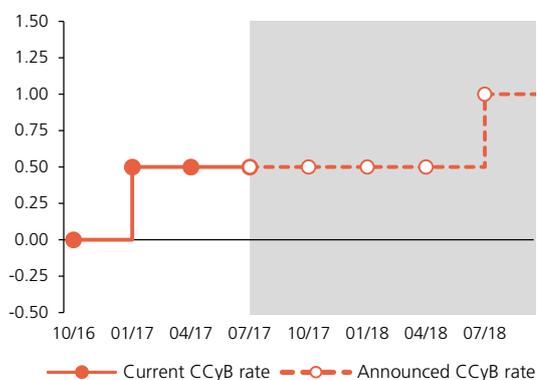
Capital buffers are an important part of the bank regulatory framework in CRD IV/CRR. These buffers are “stacked” on top of the required 8% capital minimum and the Pillar 2 requirements (see section 3.1). The CNB currently applies three of them (see Table V.3) to increase the resilience of individual banks and the banking sector as a whole to any adverse developments. The buffer rates⁵ reflect the cyclical and structural characteristics of the Czech banking sector.

The capital conservation buffer is used to absorb losses in adverse phases of the cycle. It has applied to all banks in the Czech Republic since 2014 at a rate of 2.5%.⁶ This rate will not change over time. The countercyclical buffer applies to the domestic exposures of all banks and is intended to reduce the risks associated with excessive credit growth and leverage.⁷ Information on the countercyclical buffer rate, along with an analysis of cyclical risks, is given in section 4.2.2. The systemic risk buffer can be used to suppress various sources of non-cyclical risks to banking sector stability. The CNB uses this buffer to mitigate the structural risks associated with the existence of systemically important banks. Information on the systemic risk buffer rate is given in section 5.2.3. The legislation also allows the CNB to apply a buffer for other systemically important institutions (O-SIIs). Information on O-SIIs is also given in section 5.2.3.

5.2.2 THE COUNTERCYCLICAL CAPITAL BUFFER

The countercyclical capital buffer (CCyB) is a pure macroprudential tool. It is designed to protect the banking sector against risks arising from its behaviour over the financial cycle, especially excessive growth in lending, which creates systemic risks and increases the potential for sharp swings in economic activity. The CCyB rate is set on a quarterly basis. It becomes legally binding on the institutions concerned upon the issuance of a provision of a general nature.⁸ Methodological information summing up the CNB’s approach to the setting of the buffer rate is presented in the thematic article *The Countercyclical Capital Buffer in the Czech Republic* published in this Report.

CHART V.9

Current and announced CCyB rate in the Czech Republic
 (% of total risk exposure)


Source: CNB

5 More detailed information about buffer rates and other macroprudential policy instruments in the Czech Republic can be found on the CNB website: http://www.cnb.cz/en/financial_stability/macroprudential_policy/index.html.

6 The buffer rate is expressed as the ratio of best-quality capital (Common Equity Tier 1) to the total risk exposure.

7 The principle of mandatory reciprocity of this buffer by EU banks having exposures in the Czech Republic applies within the EU.

8 Their texts are available on the CNB website: http://www.cnb.cz/en/financial_stability/macroprudential_policy/countercyclical_capital_buffer/index.html.

The CNB confirmed the buffer rate at 0.5% in March 2017

The CCyB rate for exposures located in the Czech Republic has been 0.5% since January 2007 (see Chart V.9). In March 2017, the CNB confirmed the buffer rate at this level (with effect from 1 April 2018). It stated that if credit growth remains high, lending standards ease and systemic risks grow, the CNB will stand ready to increase this buffer rate further. An assessment of the position of the economy in the financial cycle and systemic risk is conducted below using a set of simple and composite indicators, based on which the CNB Bank Board decided to increase the countercyclical buffer rate.

The deviation of the credit-to-GDP ratio from its trend remains an unreliable financial cycle indicator for the Czech Republic

According to an ESRB Recommendation⁹, the CNB is obliged to regularly publish the credit-to-GDP ratio and the corresponding deviation of this ratio from its long-term trend. In 2016 Q4, the ratio¹⁰ was 90.6% and the corresponding gap 1.4 pp. These values indicate that the economy is in a modest recovery phase of the financial cycle (see Chart V.10). An alternative gap – the expansionary credit gap – indicates gradual growth in cyclical risks in 2016. However, the picture given by the two types of gaps has been affected to a large extent by the faster growth in economic activity over the last two years and generally does not provide a reliable guide for determining the position of the Czech economy in the financial cycle.

The aggregate financial cycle indicator increased further in 2016, with faster dynamics in some components

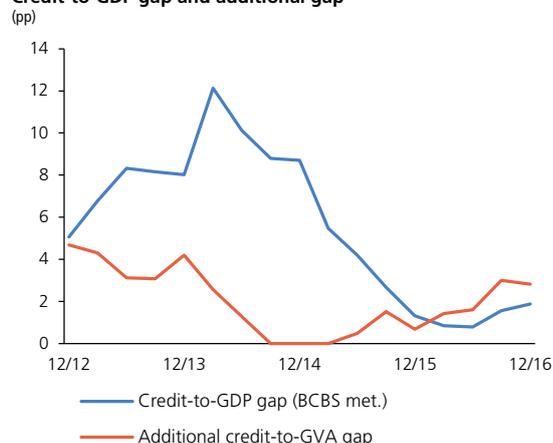
The aggregate financial cycle indicator (FCI), which combines signals of cyclical risks from various segments of the economy, showed a further increase in 2016 (see Chart V.11). Besides a recovery in segments previously characterised by subdued activity, the continued growth in the aggregate indicator was due to an increase in the correlation between components (e.g. loans to households and property prices). This points to rising interconnectedness of supply and demand factors and a possibility of increasing feedback between them. Cyclical risks are growing sharply in the household sector in particular. The contribution of new koruna loans to households to FCI growth was close to a historical high in 2016 Q4, and the speed of household borrowing relative to income has been increasing gradually since the end of 2014. Intensifying growth in cyclical risks is also being fostered by rapid growth in residential property prices. In 2016 Q4, the year-on-year rate of growth of apartment prices reached 14.5%, about three times the ten-year average. The speed of borrowing by non-financial corporations (relative to gross operating surplus) was twice the ten-year average in 2016 Q4 (1.2%). Banks

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

10 The original amount of total loans to the private sector increased by about CZK 500 billion owing to a switch to the ESA 2010 methodology and the new BPM6 balance of payments manual. The increase is due mainly to different reporting of cross-border loans (net vs gross reporting). The credit-to-GDP ratio rose by around 13 pp in 2016 Q4 as a result of the change in methodology. The methodological change affected the entire time series.

CHART V.10

Credit-to-GDP gap and additional gap

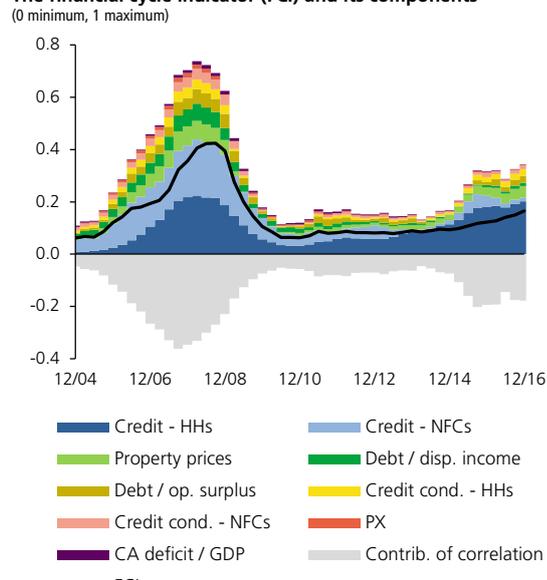


Source: CNB

Note: In the case of the standard deviation, the trend is estimated on the basis of the HP filter (lambda = 400,000) over the entire time series. The additional gap – the expansionary credit gap – is calculated as the difference between the ratio of bank loans to the gross value added (GVA) of the non-financial private sector and the moving minimum over the last eight quarters.

CHART V.11

The financial cycle indicator (FCI) and its components



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 V.12

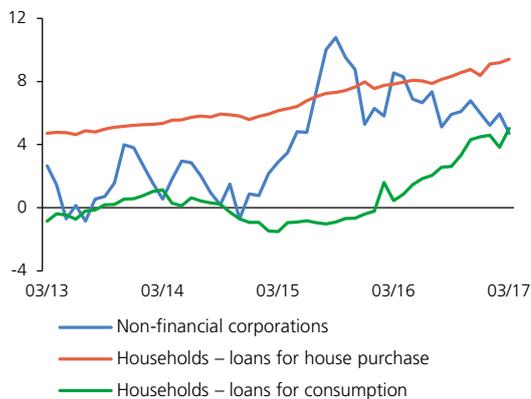
Absolute year-on-year change and growth in bank loans to the private non-financial sector
(CZK billions; right-hand scale: %)



Source: CNB

CHART V.13

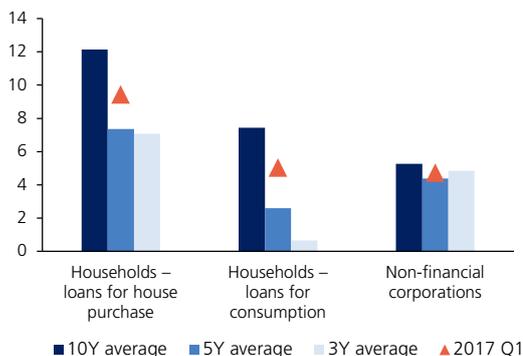
Year-on-year growth in bank loans to the private non-financial sector
(%)



Source: CNB

CHART V.14

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



Source: CNB

indicated in 2016 Q4 that lending standards for loans to households were – for the first time since 2014 – tightened across the board due to legislative and regulatory changes (see Chart V.3 in section 5.1). However, this indication is not fully in line with the data obtained by the CNB in the *Survey of new loans secured by residential property* (see section 5.3). Standards applied to loans to non-financial corporations eased further.

Growth in total loans was affected by faster growth in bank loans

Growth in total loans to the private sector (comprising all loans plus bonds issued) accelerated. Total loans went up by 5.4% in 2016 Q4, the largest rise since 2014. This was due mainly to faster year-on-year growth in bank loans. The year-on-year growth rate of these loans reached 6.7% in 2017 Q1, the highest absolute figure since 2009 Q2 (see Chart V.12). This growth was driven by the household sector (see Chart V.13): the biggest increases were recorded for loans to households for house purchase (9.4% in 2017 Q1). The growth rate of consumer credit has also been rising since 2016 Q1 (5.0% in 2017 Q1). Credit growth in non-financial corporations slowed slightly in 2016 and early 2017, but stayed at the historical averages and can be evaluated as above-average compared to the situation in other European countries (4.7% in 2017 Q1; see Chart V.14).¹¹

Growth in new bank loans is being driven by the household sector

Data on genuinely new koruna loans also confirm high lending activity (see Chart V.15). The highest increases are being recorded for loans to households for house purchase, where the year-on-year growth rate (as measured by the three-month moving average) was 29.0% in March 2017. Genuinely new loans to households for consumption rose by 5.6% year on year in March, while those to non-financial corporations fell by 17.3%. The sizeable decline recorded for non-financial corporations can be explained by a shift in part of the sector towards foreign currency loans, which are not included in the statistics on genuinely new loans. Previous quarters had seen a big surge in foreign currency loans, associated mainly with natural hedging against exchange rate risk (see section 2.3). As a result, short-term koruna loans (operating loans and loans for current assets) are recording a year-on-year decline, while long-term koruna investment loans are rising.

The domestic economy recorded a further shift into a growth phase of the financial cycle...

The above indicators can be interpreted overall as meaning that the Czech economy has shifted further into a growth phase of the financial cycle. This phase is characterised by rapid growth in loans in a number of credit segments. The faster growth in loans is also affecting property prices, which the CNB currently assesses as being modestly overvalued. Despite tighter macroprudential measures aimed at mitigating risks

¹¹ Higher annual growth rates of loans to non-financial corporations (as measured by the three-year average) are currently being reported only by Luxembourg (a specific case), Estonia and Poland. European Systemic Risk Board: *Risk Dashboard*, March 2017.

relating to the residential property market (see section 5.3), credit growth in this segment remains strong and conditions are in place for further development of the spiral between property prices and property purchase loans. Owing to higher growth in loans to non-financial corporations in the real estate segment (see section 2.3), the vulnerability of the entire sector to adverse developments in this market and to income and interest rate shocks is thus continuing to rise. This assessment implies a need to create a countercyclical capital buffer for exposures located in the Czech Republic.

...consistent with which is an increase in the countercyclical buffer rate

In several previous settings of the CCyB rate level, the CNB pointed out that it stood ready to increase the rate further if credit growth remained high, lending standards eased and systemic risks grew. Credit growth remains strong despite a partial tightening of credit conditions in the past two quarters. Given the risks to banks' future profitability identified (see section 3.1.1), banks can be expected to strive to maintain their current profitability levels by increasing the amount of new loans in the economy. This may be reflected in a further rise in property prices above levels consistent with fundamental factors. As a result, systemic risks and the potential for future sharp swings in economic activity are increasing. In the spirit of the existing regulatory framework, it is essential to respond to such developments by raising the countercyclical buffer rate.

The CNB's quantitative approaches confirm the need for an increase in the CCyB rate

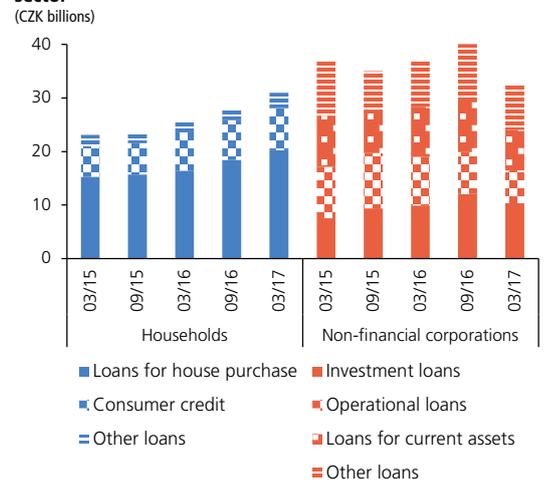
An indication of the desirable CCyB rate level is provided by a set of analytical approaches presented in greater detail in the above-mentioned thematic article of this Report. The first approach is based on the FCI, which exceeded 0.16 in 2016 Q4. According to the conversion applied by the CNB, this corresponds to a CCyB rate of 1.0% (see Chart V.16 and Table V.4). This rate is consistent with a rule of thumb which states that the CCyB rate should be increased by 0.5 pp in each year of the expansionary phase of the financial cycle. According to the CNB's analyses, the Czech economy is in the second year of the expansionary phase, so according to the above rule the CCyB rate should be 1.0%. An approach based on a macro stress test of banks which aligns modelled future credit losses with the capital buffer sufficient to cover them indicates a need for a CCyB rate of 0.75%. The final decision on the CCyB rate is not based on mechanical application of the said approaches and always takes into account the results of a comprehensive assessment of systemic risks.

The CNB decided to increase the countercyclical capital buffer rate to 1.0% with effect from July 2018

In line with the above assessment, the CNB Bank Board decided at its meeting on 25 May 2017 to increase the countercyclical buffer rate to 1.0% with effect from 1 July 2018. However, if credit growth remains

CHART V.15

Amounts of genuinely new loans to the private non-financial sector



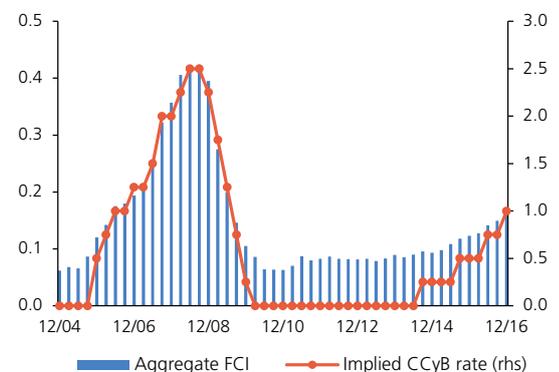
Source: CNB

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

CHART V.16

The FCI and the implied CCyB rate

(0 minimum, 1 maximum; rhs: % of total risk exposure)



Source: CNB

TABLE V.4

The implied CCyB rate based on various approaches

(% RWA)

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

Source: CNB

high, lending standards ease and systemic risks relating to the financing of property purchases grow, the CNB will stand ready to increase this buffer rate further.¹²

Other European countries also responded to the shifts in the cycle with changes in CCyB rates

A total of five European countries had set a non-zero CCyB rate at the end of March 2017 (see Table 2 in the said thematic article). In three of them (except CZ), macroprudential authorities have raised the rate further.¹³ In all cases, the increase in the CCyB rate was due to a shift of the economy further into an expansionary phase of the financial cycle characterised by growth in loans to households, high indebtedness of households and rising property prices.

Russia and Turkey were identified as material for the Czech Republic in relation to the recognition of CCyB rates in third countries; they will be monitored by the ESRB

In addition to automatic recognition of CCyB rates among EU Member States up to a level of 2.5%, the ESRB introduced a unified methodology for setting CCyB rates for exposures to third countries.¹⁴ Under this methodology, Member States should monitor in detail and assess cyclical risks in third countries to which the domestic banking sector has material exposures.¹⁵ If increased cyclical risks are identified in the countries monitored, Member States should set the CCyB rate for those exposures in accordance with the ESRB Decision. The Russian Federation and Turkey were identified as material for the Czech Republic. At the pan-European level, the ESRB applies a similar approach to countries which are material for the EU as a whole. The ESRB also issues recommendations in respect of such countries for EU Member States regarding the setting of the CCyB rate. Since the Russian Federation and Turkey are countries which are material for both the Czech Republic and the EU as a whole, the CNB exercises the option of not conducting its own monitoring for these countries and complies fully with the ESRB recommendation when setting the rate on relevant exposures.

12 The Czech economy entered the expansionary phase in 2015 Q4 (see *Provision of a general nature on setting the countercyclical capital buffer rate* No. IV/2015 of 3 December 2015). If credit growth remains high, the Czech economy will enter the third year of the expansionary phase in 2017. A CCyB rate of 1.5% would be consistent with this development.

13 Norway, Sweden and Iceland also increased their non-zero CCyB rates. Further information on CCyB rate levels in European countries is available at: https://www.esrb.europa.eu/national_policy/ccb/all_rates/html/index.en.html.

14 "Third countries" means non-European Economic Community countries (i.e. countries other than EU Member States, Iceland, Norway and Liechtenstein).

15 Under ESRB Decision 2015-3 on the assessment of materiality of third countries for the Union's banking system in relation to the recognition and setting of countercyclical buffer rates, countries shall be identified as material for a given Member State in the following two circumstances: (i) the arithmetic mean of exposures to the third country in the eight quarters preceding the reference date was at least 1% for at least one of three metrics (risk-weighted exposure amounts, original exposure and, defaulted exposures); (ii) the exposures in each of the two quarters preceding the reference date were at least 1% for at least one of the metrics.

5.2.3 CAPITAL BUFFERS OF SYSTEMICALLY IMPORTANT INSTITUTIONS

The systemic risk buffer

CRD IV gives the option of applying a systemic risk buffer (SRB) as a relatively flexible tool primarily for preventing non-cyclical risks. The CNB uses the SRB to prevent systemic risk arising from the potential destabilisation of systemically important banks. The destabilisation of any of these banks could undermine confidence in the banking sector's ability to provide its services effectively, which, in turn, could have serious repercussions for the financial system and the entire Czech economy.

The CNB's decisions on which banks will be required to maintain an SRB, and at what rate, are based on an estimate of the systemic importance of each bank. This estimate draws on a range of indicators describing four key parameters of the bank: size, complexity, substitutability for the economy and interconnectedness with other financial institutions.¹⁶ The CNB set SRB rates for the first time in 2014 for the four systemically most important banks. The CNB is required by law to review its reasons for setting the SRB once every two years. The first regular review of the set of banks required to maintain the systemic risk buffer was conducted in 2016, using end-2015 data. The number of systemically important banks with the SRB rose from four to five and the buffer was increased for two banks. With effect from 1 January 2017, the SRB is 3% for Česká spořitelna, ČSOB and Komerční banka, 2% for UniCredit Bank and 1% for Raiffeisenbank. The CNB will further revise the set of banks required to maintain the SRB and the level of the buffer rate to be applied by them at least once every two years.

The capital buffer for other systemically important institutions

Since 2015, the CNB has been required by law to identify other systemically important institutions (O-SIIs) and to review the list at least once a year. Like the first list of O-SIIs, the first review in November 2016 was based fully on the methodology defined by the relevant guidelines of the European Banking Authority (EBA).¹⁷ It calculates scores governing the designation of entities as O-SIIs for all relevant institutions at the highest consolidation level. As a result, only regulated consolidated groups, not directly banks that are members of such groups, may be designated as O-SIIs.¹⁸ This consolidation may cover banks and selected non-banks, including subsidiaries in other countries. The CNB applies the option of exempting investment firms from the calculation, because this segment does not play a systemically important role in the Czech financial system. In line with the guidelines, the CNB raised the threshold

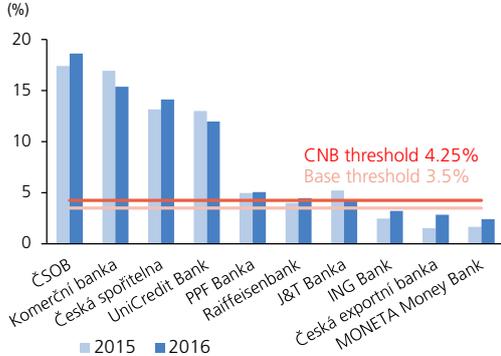
¹⁶ See the thematic article *An Additional Capital Requirement Based on the Domestic Systemic Importance of a Bank* in Financial Stability Report 2012/2013.

¹⁷ Guidelines on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions (O-SIIs).

¹⁸ In this respect, the methodology for identifying O-SIIs differs fundamentally from the methodology the CNB uses to identify the set of institutions (banks, not regulated consolidated groups) which the CNB requires to fulfil the SRB (see section 5.2.3).

CHART V.17

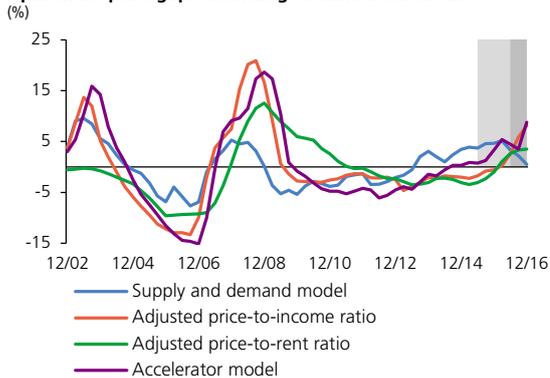
Comparison of O-SII scores for mid-2015 and mid-2016



Source: CNB

CHART V.18

Apartment price gaps according to various methods



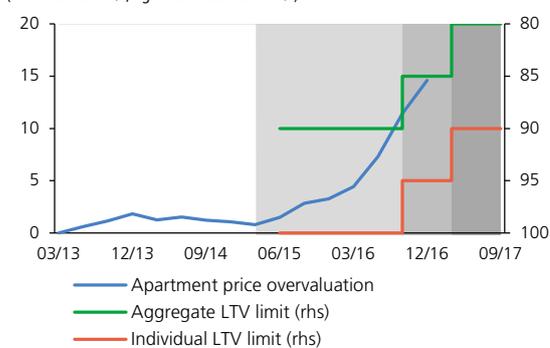
Source: CZSO, IRI, MRD, EC, CNB calculation

Note: The light and dark grey areas indicate, respectively, the periods since the entry into force of the CNB's June 2015 and June 2016 Recommendation on the management of risks associated with the provision of retail loans secured by residential property.

CHART V.19

Alternative estimate of apartment price overvaluation and LTV limits

(overvaluation in %; right-hand scale: LTV in %)



Source: CZSO, CNB, CNB calculation

Note: The overvaluation of apartment prices was obtained as the difference between the growth in those prices since the last day of June in 2013 Q1 and the growth in wages since the same date. The grey areas indicate, respectively, the phases of the entry into force and tightening of the recommended LTV limits in the CNB's June 2015 and June 2016 Recommendation on the management of risks associated with the provision of retail loans secured by residential property.

for designating entities as O-SIIs from the base level (350 bp, i.e. 3.5%) to the highest level allowed by the guidelines (425 bp, i.e. 4.25%).

Based on the review conducted in November 2016 (using mid-2016 data), the list for 2017 was unchanged. The following regulatory consolidated groups remain O-SIIs: Československá obchodní banka, Komerční banka, Česká spořitelna, UniCredit Bank Czech Republic and Slovakia, Jakobovič & Tkáč (relevant entity of the regulated consolidated group: J&T banka), PPF FH B.V. (relevant entity of the regulated consolidated group: PPF banka) and Raiffeisenbank. Only the scores of the individual consolidated groups changed (see Chart V.17).

Under the Act on Banks, an additional capital requirement can be imposed on a bank that is a member of a regulated consolidated group designated as an O-SII. However, the CNB does not regard this as necessary at the moment. Since 1 October 2014, banks with a high level of domestic systemic importance have been required to maintain a systemic risk buffer. Depending on developments in European legislation, however, this buffer may in the future be converted into a buffer for O-SIIs (for details see section 5.4.2).

5.3 RISKS ASSOCIATED WITH PROPERTY MARKETS

5.3.1 RISKS ASSOCIATED WITH RESIDENTIAL PROPERTY MARKETS

The overvaluation of property prices is increasing, as is transaction activity

Residential property prices were slightly above the level consistent with fundamentals at the end of 2016.¹⁹ Two of the approaches employed by the CNB to assess house price sustainability²⁰ were indicating that house prices were overvalued by 8%–9% (see Chart V.18). An alternative metric based on the income affordability of housing was indicating greater overvaluation. This assessment, comparing growth in house prices since the last price trough (recorded in 2013 Q3 with wage growth, was indicating overvaluation of more than 14%, with year-on-year growth of 11% (see Chart V.19). The rising growth in residential property prices was accompanied in 2016 by growth in the number of loan-financed residential property transactions (see Chart V.20).²¹ According to data from the *Survey of new loans secured by residential property* conducted by the CNB (referred to hereinafter in part of section 5.3.1 as the "Survey" and "secured loans"), these loans – including refinanced ones –

19 Property price fundamentals include macroeconomic variables, labour market indicators, demographic characteristics and financial market indicators or indicators of housing supply. Market prices are also affected by non-fundamental, often psychological and behavioural, factors, such as mass hysteria and self-fulfilling expectations.

20 The CNB uses four model-based and statistical approaches to assess house price sustainability – see Hlaváček and Hejlová (2015): *A Comprehensive Method for House Price Sustainability Assessment*, FSR 2014/2015.

21 The source of these data is the *Survey of new loans secured by residential property*. Data are available since 2014. An indicative breakdown between Prague and other districts has been available since 2015 Q3.

amounted to CZK 133 billion in 2016 H2. In year-on-year terms, they were up 5% in Q3 and more than 20% in Q4. The average loan size increased by 4% in 2016 H2.²² Year-on-year growth in the number of loans was similar in Prague and the rest of the Czech Republic. This was linked with balanced growth in property prices in the two parts of the country monitored.

High asking prices of apartments are indicating the risk of a continued price spiral

Until last year, the apartment price trend was characterised by faster growth in asking prices than transaction prices (see section 2.2). While asking prices in Prague as of the end of 2016 recorded cumulative growth of 34% compared to their previous lows (44.5% for data not adjusted for the rapid growth in 2012²³), transaction prices were 28% higher on the same date.²⁴ A sustained lead of asking prices over transaction prices could lead to self-fulfilling expectations of future price growth and a price spiral.

The CNB reacted to the risk of a price spiral by tightening its Recommendation

In June 2016, the incipient overvaluation of property prices, the high rate of growth of new loans and the significant proportion of new loans with a combination of higher loan-to-value (LTV), loan-to-income (LTI) and debt service-to-income (DSTI) ratios, led the CNB to tighten the LTV limits contained in its June 2015 *Recommendation on the management of risks associated with the provision of retail loans secured by residential property* ("Recommendation"). The recommended LTV limit ("individual limit") of 100% (with a 10% limit for loans with LTVs of 90%–100%, "aggregate limit") was lowered to 95% (with a 10% limit for loans with LTVs of 85%–95%) as from 1 October 2016 and to 90% (with a 15% limit for loans with LTVs of 80%–90%) as from 1 April 2017. The reduction of the LTV limits is consistent with the rise in the estimated overvaluation of apartment prices (see Chart V.19), which is leading to an increase in the riskiness of mortgage loans for the providers of such loans.

The limits in place until 1 October 2016 were mostly complied with...

In the first three quarters of 2016, institutions mostly observed the LTV limits. In the third quarter, as in the first half of the year, loans with LTVs of over 100% accounted for 3% of all new loans provided (see Chart V.21).²⁵ Loans with LTVs of 90%–100% accounted for 7% of total loans provided in Q3 (9% in the first half of the year), which meant

²² The average loan size was approximately CZK 1.8 million in 2016 Q2.

²³ According to the CZSO, asking prices of apartments in Prague recorded rapid year-on-year growth in 2012. As these prices went down according to alternative estimates, however, this could be just a statistical anomaly in the CZSO data.

²⁴ The average difference between asking and transaction prices in Prague cannot be determined exactly – information on such prices is only available in the form of a price index measuring their relative growth, not their absolute level.

²⁵ This amount corresponds to the 3% exemption from the limits contained in the compromise version of the proposed amendment to the Act on the CNB concerning the power to set limits on the LTV, DTI and DSTI ratios, which is currently in the legislative process.

CHART V.20

Volumes and numbers of credit-financed residential property transactions

(CZK billions; right-hand scale: thousands)



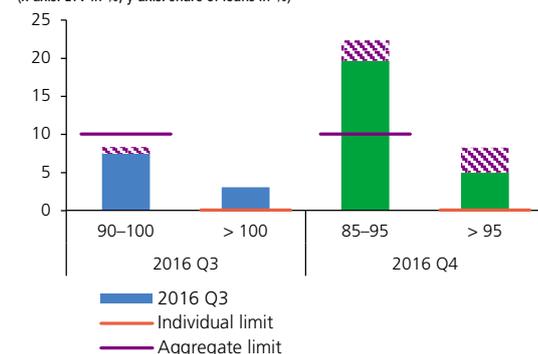
Source: CNB

Note: For some new loans, the Survey lacks postcode data for the properties used as collateral for those loans. These "unclassified" loans account for the difference between the total volume of transactions and the volume of transactions in Prague and the rest of the Czech Republic.

CHART V.21

Fulfilment of the recommended LTV limits

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



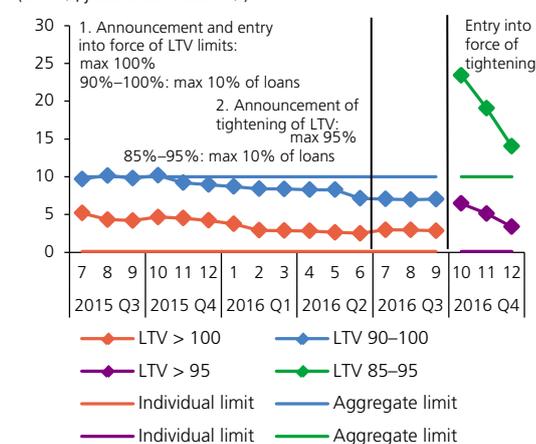
Source: CNB

Note: The share of loans with LTVs of over 100% in 2016 Q3 was unchanged from 2016 H1.

CHART V.22

Share of loans with LTVs above the recommended limits

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

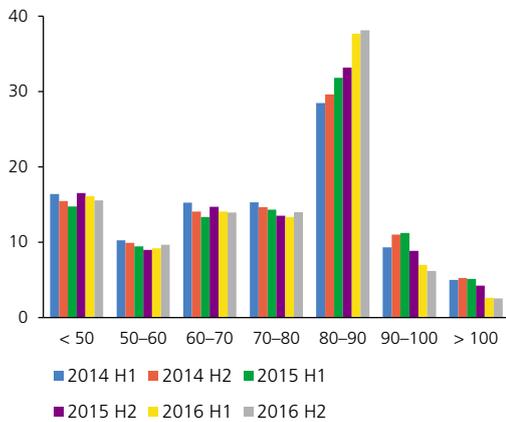


Source: CNB

CHART V.23

LTV distribution of new loans

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

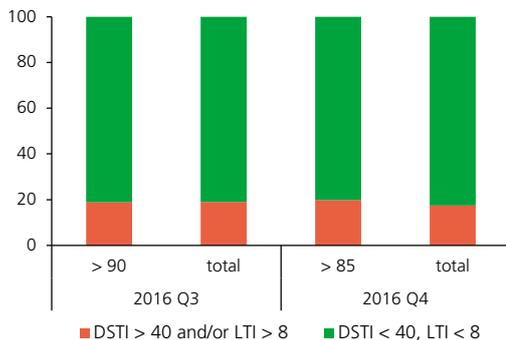


Source: CNB

CHART V.24

Characteristics of loans in selected LTV categories

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

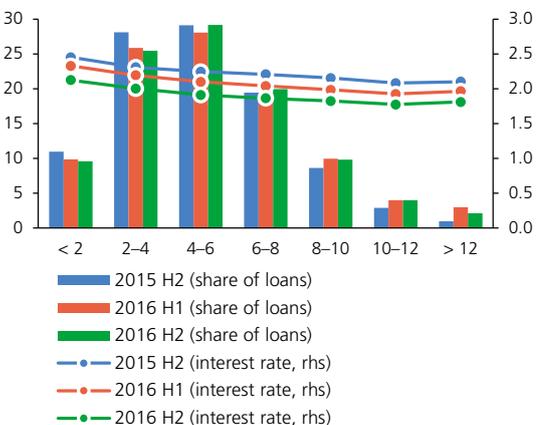


Source: CNB

CHART V.25

LTI distribution of new loans, average interest rate

(x-axis: LTI; left-hand scale: share of loans in %; right-hand scale: interest rate in %)



Source: CNB

that their limit (10%) was fulfilled at the aggregate level. However, there are still differences between institutions in their compliance with the Recommendation. The CNB responded to some of those differences in the past by imposing measures in the area of the Pillar 2 capital requirements on some institutions.

...but the tightened limits were exceeded

The tightened limits that entered into force in 2016 Q4 were complied with to a much lesser extent (see Chart V.21). Loans with LTVs of over 95% accounted for 5% of the total provided (8% in the first half of the year). Loans with LTVs of 85%–95% made up 20% of all loans provided (23% in the first half of the year), meaning that the cap on the recommended amount of such loans was exceeded by 10 pp (i.e. CZK 7 billion). However, a sharp reduction in the amount of loans in excess of the limit was recorded in December, i.e. five months after the reduction in LTV limits was announced by the CNB and two months after it entered into force (see Chart V.22). The gradual lowering of the LTV limit led to a slowdown in growth in the share of loans with LTVs of 80%–90% (see Chart V.23).

Loans in excess of the limits are being provided to clients with risky characteristics

The Recommendation stipulates that institutions should, when providing retail loans secured by residential property, prudently assess indicators of clients' ability to service loans from their own resources – especially in the case of loans with LTVs capped by the aggregate limit – and set internal limits for such indicators (see section IV, paragraph 1 and section V, paragraph 1 of the Recommendation). Such indicators include, for example, LTI and DSTI. An LTI ratio of 8 and a DSTI ratio of 40% can be considered highly risky levels, i.e. thresholds above which the risk of default increases significantly (see Box 5.1 and section 4.3 *The household stress test*). Even so, institutions are continuing to provide loans with high LTVs to clients with risky levels of these ratios. In 2016 Q3 and 2016 Q4, the proportion of such loans was similar for loans with LTVs above the aggregate limit (i.e. with LTVs above 90% in 2016 Q3 and with LTVs above 85% in 2016 Q4) as it was for loans as a whole (see Chart V.24).²⁶ The same conclusions apply to December 2016, despite the fact that institutions reduced the amount of loans with LTVs in excess of the recommended limits closest to the stipulated aggregate limit.

The riskier client characteristics are not affecting interest rates...

Interest rates on unsecured loans went down in 2016 H1 as LTI ratios rose (see Chart V.25). Likewise, rates are declining with increasing loan maturity, due, among other things, to a rising average loan size (see Chart V.26). Rates were more or less constant across DSTI ratios up to DSTI levels of 50% and above (see Chart V.27). This indicates that the interest rate level may reflect a "discount" for loan size and partly also

²⁶ Loans with an LTI ratio above 8 and/or a DSTI ratio above 40% accounted for approximately 19% (CZK 11 billion) of loans with LTVs of over 90% in 2016 Q3 and around 20% (CZK 14 billion) of loans with LTVs of over 85% in 2016 Q4.

for the expected length of the business relationship with the client.²⁷ At the same time, however, it may point to a lower risk component of the interest rate on loans with riskier characteristics. Institutions' observed interest policies may therefore be giving rise to risks associated with a potential future change in the risk component of the rate on such loans. A reassessment of the risks could lead to growth in debt service for clients with riskier characteristics and to a further increase in the risk of default.

...and the low interest rates are stabilising debt service

The lowering of interest rates to exceptionally low levels led to a reduction in debt service costs. However, the rising size of individual loans had the opposite effect. The DSTI breakdown of loans was thus little changed in year-on-year terms in 2016 H2 (see Chart V.27). As most loans have maturities of around 30 years and the dispersion of interest rates is relatively low, the relationship between the DSTI and LTI ratios is strongly correlated (see Chart V.28). The LTI breakdown of loans was also unchanged in year-on-year terms in 2016 H2 (see Chart V.25).

Institutions are also becoming increasingly reliant on intermediaries...

The proportion of loans provided through intermediaries rose by 5 pp year on year to 66% in 2016 H2. According to institutions' records, the share of buy-to-let loans remained constant at around 5%. This figure is far lower than the estimates presented by real estate firms in the media. Loans provided through intermediaries are often provided with higher LTVs and buy-to-let loans also with higher LTI and DSTI ratios. This indicates that providers are exposed to the risk of excessive reliance on intermediaries, who could exert pressure for an excessive easing of lending standards. The CNB therefore recommends institutions not to create incentive schemes for intermediaries that could result in conditions favourable for the formation of systemic risks.

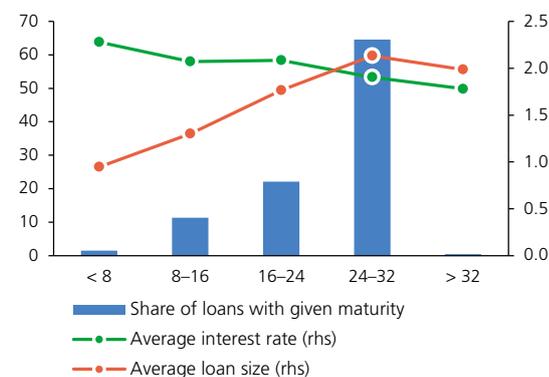
...who provide loan applicants with information on how to circumvent LTV limits

One of the recommendations states that institutions should not circumvent the LTV limits by concurrently providing unsecured consumer credit. According to information provided by banks, there is little concurrent provision of secured and unsecured loans aimed at circumvention of the recommendation by the same institution. Nonetheless, intermediaries advertise concurrent provision of loans by other institutions through their servers. Combining secured and unsecured loans could be in breach not only of the CNB Recommendation, but also of the Consumer Credit Act if it were to cause a loan applicant to become overindebted. From the perspective of the prudential approach to risk management, the rule is that clients should partly use their own funds to buy property and institutions should assess

²⁷ However, this is conditional on the client's behaviour at the time of refixation and on potential use of the provisions of the Consumer Credit Act allowing less strict conditions for early loan repayment.

CHART V.26

Maturity distribution of new loans, average interest rate and loan size in 2016 H2
(x-axis: maturity in years; left-hand scale: share of loans in %; right-hand scale: interest rate in %, loan size in CZK millions)

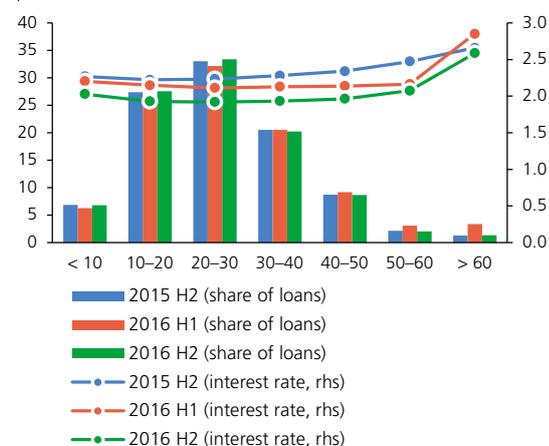


Source: CNB

Note: The possibility of drawing loans over two years is included in the maturities.

CHART V.27

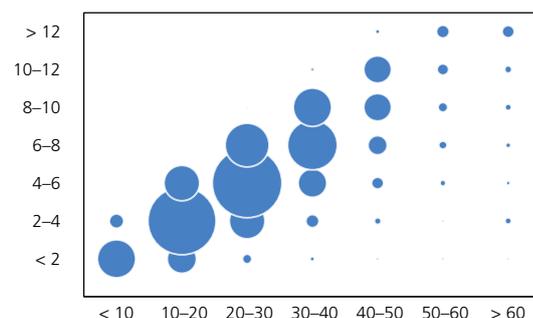
DSTI distribution of new loans, average interest rate
(x-axis: DSTI in %; left-hand scale: share of loans in %; right-hand scale: interest rate in %)



Source: CNB

CHART V.28

LTI and DSTI distribution of new loans
(x-axis: DSTI in %; y-axis: LTI; bubble size: share of loans)

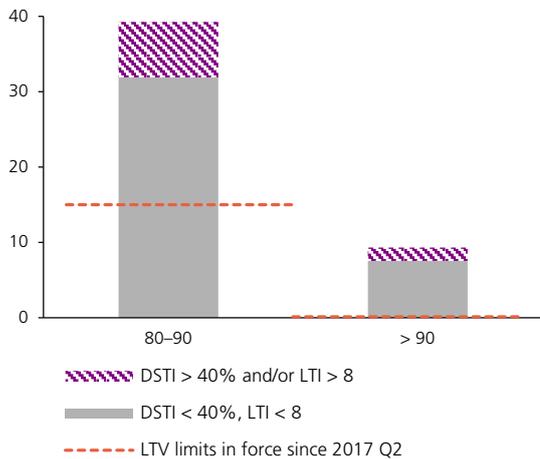


Source: CNB

CHART V.29

Characteristics of loans provided in 2016 Q4 in LTV categories capped by the recommended limits since 1 April 2017

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



Source: CNB

clients' overall level of debt, not just their individual loans. CNB will therefore regularly examine this risk in its supervisory work.

The observed risks in the area of client creditworthiness necessitate an extension of the scope of application of the CNB Recommendation...

Given the frequent provision of loans with higher LTVs to clients with riskier characteristics, the CNB deems it necessary for providers to pay great attention to indicators of borrowers' ability to repay loans from their own resources even in a less favourable economic situation. Providers should monitor the DTI and DSTI ratios,²⁸ set internal limits for them and prudently assess loan applications on the basis of them. In view of its assessment of the intensity of systemic risks, the CNB is not setting upper DTI or DSTI limits for the time being. However, providers should assess loan applications particularly carefully in the case of applicants with a DTI ratio of over eight and a DSTI ratio of over 40%. This applies notably to loans with high LTV that are subject to the aggregate limit of 15% that is in place since April 2017. Above the said thresholds, many clients do not have the necessary financial reserve to maintain their ability to service their loans in the event of adverse changes in their income situation or in the level of interest rates (see Box 5 and section 4.3 *The household stress test*). The CNB is also extending the scope of application of the Recommendation to other loans provided to clients who already have a loan secured by residential property. Given the possibility of risks spreading to non-bank funding providers, the CNB is simultaneously extending the scope of application of the Recommendation to all credit providers.²⁹

...which could also have a favourable effect on fulfilment of the LTV limits

Prudential evaluation of DTI and DSTI ratios by providers can lead to mitigation of the risks associated with loans with high LTVs. In 2016 Q4, loans with a DSTI ratio of over 40% and/or LTI of over 8 accounted for around 17% of new loans (around CZK 12 billion), while almost half were in LTV categories capped by the recommended limits since 1 April 2017 (see Chart V.29).

The CNB will step up microprudential supervision of prudent provision of consumer credit by credit institutions

The CNB will continue to increase the intensity of microprudential supervision of prudent provision of secured and unsecured consumer credit by credit institutions, including the management of intermediary networks by individual credit institutions. The CNB will declare supervisory expectations in the area of prudent provision of consumer credit. It will introduce extraordinary reporting of credit portfolio quality

²⁸ The ratio is calculated on the basis of the client's total debts when the secured loan is provided. The calculation method is described in detail in the Official Information of the Czech National Bank of 13 June 2017 *Recommendation on the management of risks associated with the provision of retail loans secured by residential property*.

²⁹ i.e. to all persons authorised as entrepreneurs to provide consumer credit.

and reporting on the functioning of consumer credit provision systems. It will ask institutions to perform internal assessments of compliance of their systems with the expected principles. After evaluating the information it receives, the CNB will give the institutions feedback and will choose on-site inspection procedures on the basis of a risk-oriented approach. The CNB will deal with any shortcomings by imposing remedial measures and, where necessary, an additional capital requirement for the risk management system.

The current settings of the CNB Recommendation do not significantly restrict the availability of housing loans

The adverse trend in the affordability of housing in some cities (see section 2.2) reflects considerably faster growth in house prices than in income, not a reduced availability of housing loans due to the CNB's macroprudential measures to date. The current settings of the CNB Recommendation do not represent a significant hit to the availability of loans for house purchase. This can be demonstrated using the example of three apartments with a floor area of 75 m² (or 50 m²) in three different cities on calculations based on average apartment prices and average incomes in those cities and on assumptions of an LTV of 80% (or 90%),³⁰ valuation of collateral at price, size of loan equal to size of applicant's debt, interest rate of 3% and a maturity of 30 years.

In Plzeň, given an apartment price of CZK 1,975,000, the applicant would obtain a loan of CZK 1,580,000, i.e. she would need to contribute CZK 394,000 of her own (197,000 with LTV at 90%). The DSTI of the loan would be 34.6% and the DTI 6.8. Similar DSTIs and DTIs below the levels viewed by the CNB as highly risky would apply for the applicants in other towns and cities, the only exceptions being Brno and Prague. In Brno, given an apartment price of CZK 2,829,000, the applicant would obtain a loan of CZK 2,263,000, i.e. she would need to contribute CZK 566,000 of her own (283,000 with LTV at 90%). The DSTI of the loan would be 49.6% and the DTI 9.8. In Prague, given an apartment price of CZK 3,950,000, the applicant would obtain a loan of CZK 3,160,000, i.e. she would need to contribute CZK 790,000 of her own (395,000 with LTV at 90%). The DSTI of the loan would be 53% and the DTI 10.5. However, if the application is made by the family of two persons with average income, resulting DSTI and DTI values would be halved, falling thus below the levels that the CNB finds as highly risky. The viable alternative for young people is a smaller starting apartment. Despite the high prices of apartments in Prague, the DSTI of the loan would be 35% and the DTI 7 for an apartment with a floor area of 50 m² for a single applicant with average income. The DSTI of 33% and the DTI of 6.5 would apply in the similar case in Brno. For applicants with average income, the creditworthiness checks laid down in the Consumer Credit Act will represent a far greater constraint than the macroprudential recommendations adopted by the CNB.

³⁰ This assumption of an LTV of 80% has been chosen to illustrate the potential quantitative implications of the CNB Recommendation. It does not represent an indication of the future settings of the indicator upper limit and should not be interpreted in this way.

The CNB has drafted legislation incorporating macroprudential instruments for managing risks related to mortgage lending

Given the low legal force of the Recommendation and the limited set of institutions it pertains to, the CNB submitted a legislative proposal giving it the power to set binding credit ratio limits for consumer credit providers (and hence also providers of secured loans).³¹ This power is contained in a proposal for an amendment of the Act on the CNB drawn up by the CNB together with the Ministry of Finance.³² Following consultations with industry, a compromise proposal containing limits on three credit ratios, namely LTV, DTI (debt-to-income) and DSTI (debt service-to-income).³³ If the CNB were to identify growth in systemic risks on the basis of its regular assessments, it would announce limits on one or more credit ratios by issuing a provision of a general nature. The provision would take effect no earlier than four months after the announcement of the limit so that institutions have enough time to incorporate the changes into their transaction and risk management systems, internal methodologies and IT systems. The CNB also accepted an industry proposal for providers to be able to apply exemptions from the limits set by the CNB for 3% of loans in each quarter. After approval by the Government of the Czech Republic, discussion of the amendment to the Act on the CNB was commenced in the Chamber of Deputies (the lower house of the Czech parliament).

Limits on credit ratios are becoming a standard part of macroprudential instruments in EU countries

According to information from the ESRB, macroprudential authorities in 19 EU countries currently use one or more of the above-mentioned credit ratios.³⁴ All 19 countries use LTV, 14 of them through legally binding regulations. Fourteen countries use a DTI or DSTI ratio, nine of them through binding regulations. The legislation in force in the Netherlands allows for the application of three proposed instruments (LTV, DTI and DSTI). A draft law under preparation in Austria contains the same option.³⁵ In Slovakia, too, the central bank is empowered under the loans act to set three instruments – besides LTV and DSTI it also determines the maximum loan maturity.³⁶

31 The scope of application is thus extended to non-bank providers of such loans and to credit unions.

32 Chamber of Deputies Document 1009, <http://www.psp.cz/sqw/text/tiskt.sqw?O=7&CT=1009&CT1=0> (in Czech only).

33 The method for calculating the ratios would be set in a CNB decree.

34 ESRB: A Review of Macroprudential Policy in the EU in 2016, April 2017.

35 Advice of the Financial Market Stability Board, FMSG/2/2016 <https://www.fmsg.at/en/publications/warnings-and-recommendations/2016/advice-2-2016.html>.

36 NBS Decree No. 10/2016, <http://www.nbs.sk/en/financial-market-supervision1/macprudential-policy/current-status-of-macprudential-instruments/current-setting-of-instruments-for-retail-loans>.

BOX 5: RISKY DSTI AND LTI LEVELS

Assessment of risky DSTI levels

The DSTI ratio serves as an indicator of clients' ability to service their loans in accordance with their chosen repayment schedule. To determine risky DSTI levels, the CNB uses the concept of the financial reserve under stress (FR_s) for new loans:

$$FR_s = \text{net income}_s - (\text{subsistence level} + \text{property maintenance costs}) - \text{loan repayments}$$

The calculation of this indicator is based on the logic of the household stress test (see section 4.3).³⁷ The financial reserve denotes consumers' monthly net income minus essential costs (the subsistence level plus property maintenance costs) and repayments associated with the consumer's debt under the chosen stress. Subsistence costs (net of housing costs) are based on the values set by the Ministry of Labour and Social Affairs for the first and other persons in the household and take into account the number of loan applicants and their dependants for loans reported in the Survey.³⁸ Property maintenance costs are set at 1.5% of the collateral on these loans per year and cover the set of costs associated with owning property (maintenance, repairs, management, insurance, etc.). The stress consists in a 10% decrease in income – expressing the probability of loss of employment or a drop in income for a certain period of time – and a rise in interest rates of 0.6 pp a year for five years (i.e. a cumulative increase of 3 pp). The interest rate stress respects the fixation and repayment periods of the individual loans reported in the Survey. So, if the loan has a fixation period of five years, the interest rate increase will happen all at once in the fifth year (a 3 pp rise in rates) and will affect subsequent instalments only up to the amount of the unrepaid part of the principal. If such a loan has a maturity of five years, the rise in interest rates will not affect it at all.

FR_s levels lower than the financial reserve threshold (FR_{TH}) are deemed risky.³⁹ For the purposes of determining the upper DSTI

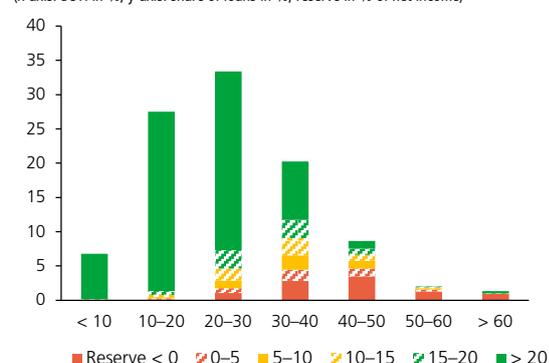
37 There are differences between the household stress test and the financial reserve calculation in this box. The household stress test assesses the overindebtedness of the household sector and works with stocks of loans. The financial reserve calculation in this box is focused on the financial resilience of mortgage applicants and therefore works solely with new loans.

38 The figures are CZK 3410 for the first person in the household, CZK 2,830 for the second person in the household and CZK 2,110 for each dependant. The subsistence level therefore works out at CZK 8,350 for a couple with one child and CZK 10,460 for a couple with two children.

39 As the methodology presented in this box is aimed at assessing the resilience of applicants for new mortgages, the calculation of the financial reserve risk threshold works with a narrower definition of essential expenditure than the household stress test and the threshold is therefore set at a positive level.

CHART V.1 BOX

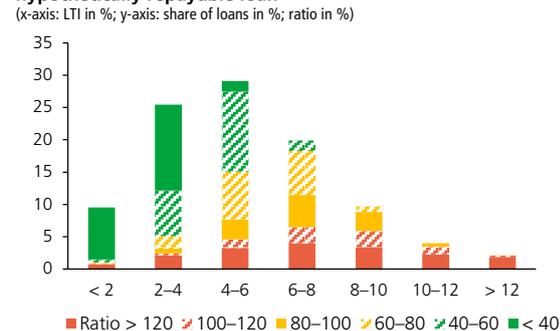
Share of loans by DSTI and financial reserve under stress
(x-axis: DSTI in %; y-axis: share of loans in %; reserve in % of net income)



Source: CNB

CHART V.2 BOX

Share of loans by LTI and ratio of the loan provided to the hypothetically repayable loan
(x-axis: LTI in %; y-axis: share of loans in %; ratio in %)

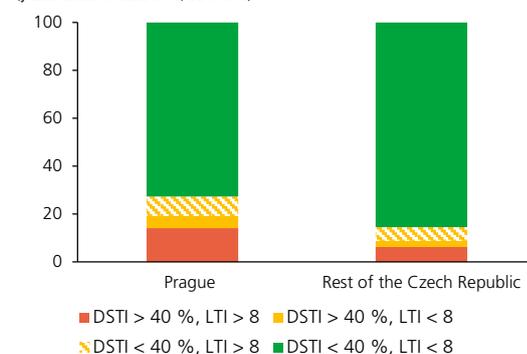


Source: CNB

Note: If the loan provided is equal to or greater than the hypothetically repayable loan, the ratio of the two is, respectively, equal to or greater than 100%. HRLS denotes the hypothetically repayable loan of the consumer under stress as described in Box 5. It represents the biggest loan the consumer would be able to repay over the longest possible maturity if her monthly instalments were at the maximum permissible level. After paying such instalments, the consumer under distress would be left at the financial reserve threshold of 10% of net income and at least CZK 5,000 a month.

CHART V.3 BOX

Share of loans with risky LTI and DSTI levels
(y-axis: share of loans in %; DSTI in %)



Source: CNB

limit, that threshold is 10% of net income, or at least CZK 5,000. The requirement for a minimum absolute FR_S serves to cover sudden necessary expenditures, which to some extent are independent of income level. The share of loans provided in 2016 H2 for which FR_S falls below the reserve threshold increases significantly for loans with a DSTI ratio above 40% and predominates for loans with a DSTI ratio above 50% (see Chart V.1 Box). Such loans can therefore be regarded as highly risky. Despite some minor methodological differences, the same conclusion applies to the household stress test conducted on existing loans (see section 4.3).

Assessment of risky LTI (DTI) levels

The LTI ratio serves as an indicator of clients' ability to service their loans over their period of economic activity. To determine risky LTI levels, the CNB uses the concept of the hypothetical repayable loan under stress (HRL_S) for new loans:

$$HRL_S = (1 - FR_{TH}) * (net\ income_S - subsistence\ level - loan\ repayment_S - property\ maintenance\ costs) * maturity_{max}$$

HRL_S represents the biggest loan the consumer would be able to service over the longest possible maturity if her monthly instalments were at the maximum permissible level. After paying such instalments, the consumer under stress would be left at the financial reserve threshold FR_{TH} ($FR_S = FR_{TH}$). As in the DSTI case, a stress consisting in a 10% decrease in income and a 3% rise in interest rates is considered. The financial reserve threshold is again 10% of net income and at least CZK 5,000. The consumer's remaining period of economic activity up to the age of 65 or 30 years, whichever is the shortest, is taken as the longest possible maturity.

The HRL_S of individual consumers is compared with the size of the loans actually provided to them. This yields the share of loans (L) which are larger than those which consumers would, under stress, be able to service over their period of economic activity ($L > HRL_S$ or also $L/HRL_S > 100\%$). The share of such loans provided in 2016 H2 increases significantly for loans with an LTI ratio above 8 (see Chart V.2 Box), and they can thus be regarded as highly risky. However, the share is already rising sharply for loans with an LTI ratio above 6. The above conclusions also apply to the DTI ratio, which providers should monitor.

Combination of risky DSTI and LTI levels

Loans for which both credit ratios exceed the highly risky DSTI 40% and LTI 8 levels accounted for almost 9% of credit production in 2016 H2. A further 2.5% and 6% of loans,

respectively, had a risky DSTI or LTI level only. The share of loans with risky DSTI and/or LTI levels provided to finance residential property in Prague was larger. This is linked with the higher price-to-income ratio in the capital city (see section 2.2 and Chart V.3 Box). It can be seen from the HRLs relationship that the setting of the LTI limit would be quantitatively the same as the setting of the DSTI limit combined with the constraint on the maximum maturity. The DSTI limits could thus serve as the regulatory maximum instalment in the HRLs calculation. The combination of a DSTI limit and a maximum maturity is applied by the macroprudential authorities in, for example, Slovakia, Estonia and Lithuania. LTI limits have been set in Ireland and the UK.

5.3.2 RISKS ASSOCIATED WITH COMMERCIAL PROPERTY MARKETS

Commercial property prices may be slightly overvalued, but the amount of new loans for financing commercial property is not increasing significantly

The method used by the CNB to assess commercial property prices in the prime segment⁴⁰ was indicating modest but rising overvaluation for commercial property – like residential property – at the end of 2016 (see Chart V.30). However, the trend in commercial property prices in the Czech Republic is similar to that in many other European countries and is linked to a large extent with the very low yields on alternative assets. While the amount of prime property transactions increased year on year in 2016 H2 (see section 2.2), the amount of new loans secured by commercial property provided by banks in the Czech Republic⁴¹ fell slightly (see Chart V.31). In the first half of the year this amount had still been rising in year-on-year terms. Credit activity shifted from investment in office and retail property to investment in industrial property in the second half of the year.

As for lending standards, the LTV ratio and the debt service coverage ratio are showing favourable trends...

The share of new loans with LTV ratios of higher than 70% decreased sharply in 2016 H2. Lending standards were therefore tightened in terms of collateralisation. The majority of new loans were provided with LTV

⁴⁰ Overvaluation estimated by panel regression on a sample of Central and Eastern European countries, specifically CZ, SK, PL, HU and RO, and also DE. The panel regression consists in estimating equilibrium prices for individual property types using data on rent and vacancy rates for each property type, the VIX volatility index, GDP and government bond yields in each country of the panel as well as the USA. Estimated overvaluation obtained by comparing estimated equilibrium prices and observed prices, which are obtained as the rent-to-prime yield ratio. In the case of retail property, the estimate does not take into account the vacancy rate, for which data are not available. For more details, see CNB Research Project C5/16. The data on commercial property market for this project are obtained from Jones Lang LaSalle.

⁴¹ According to data from a now regular survey of eight banks covering around 70% of the market as of 30 June 2015.

CHART V.30

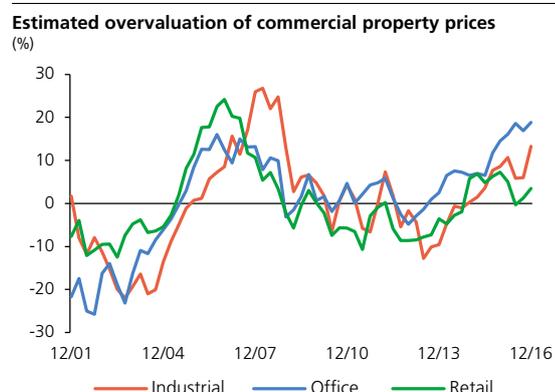


CHART V.31

Amount of new loans secured by commercial property (CZK billions)

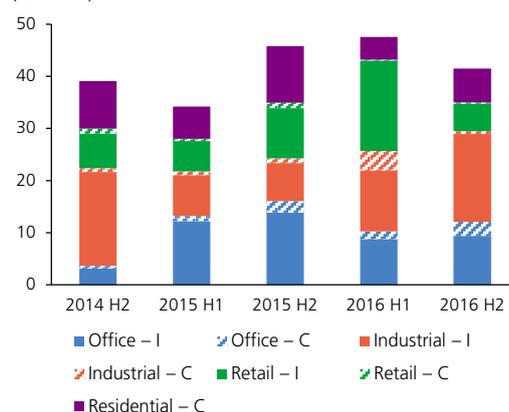


CHART V.32

Distribution of new loans by LTV in 2016 H2 (x-axis: LTV in %; y-axis: CZK billions)

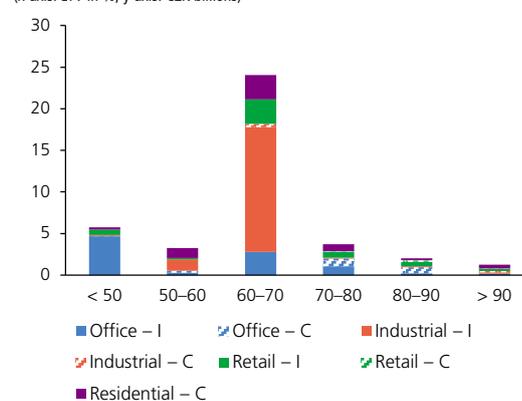
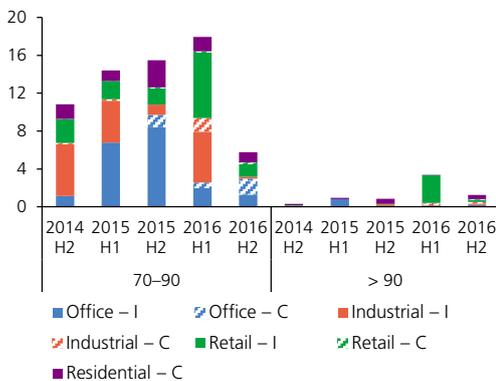


CHART V.33

Distribution of new loans by LTV over time

(x-axis: LTV in %; y-axis: CZK billions)



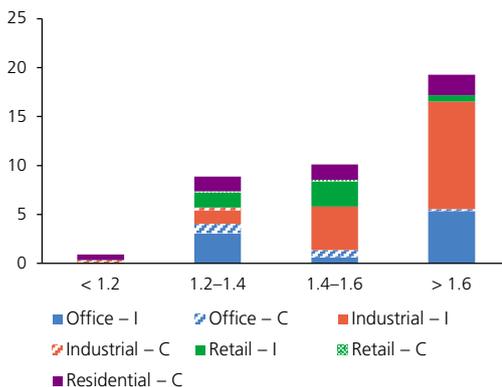
Source: CNB

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

CHART V.34

Distribution of new loans by DSCR in 2016 H2

(x-axis: LTV in %; y-axis: CZK billions)



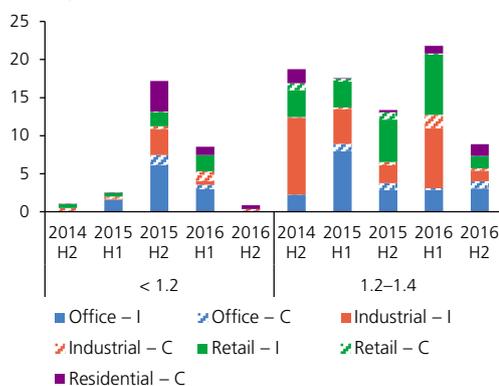
Source: CNB

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

CHART V.35

Distribution of new loans by DSCR over time

(CZK billions)



Source: CNB

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

ratios of 60%–70% (see Chart V.32). In the first half of the year, new loans had still been moving from lower LTV categories to the 70%–80% category. The amount of new loans in this category was gradually increasing since 2014 H2 (see Chart V.33). A tightening of lending standards is also indicated by the debt service coverage ratio (DSCR). In the second half of the year, almost two-thirds of loans were provided with a DSCR of more than 1.4 (see Chart V.34). The tightening of lending standards that began in the first half of the year, when the share of new loans with a DSCR of less than 1.2 fell sharply, thus continued (see Chart V.35).

...but institutions may not necessarily behave prudently when determining DSCR values

The share of new loans with both a risky LTV and a risky DSCR decreased substantially in 2016 H2 compared to 2015 H2 (see Chart V.36). However, the determination of DSCR values is subject to subjective assessment by the provider, as it entails estimating the future income arising from the construction or possession of property. However, perceptions of property market developments can be strongly procyclical. For example, expected property rental income or the future vacancy rate may be set on the basis of currently high levels.

The risk has increased most of all in the case of new loans secured by industrial property

The indicator of the riskiness of new loans secured by commercial property⁴² (see Chart V.37) indicates a year-on-year decrease in riskiness across all the monitored types of commercial property in 2016 H2. The indicator of the risk-weighted amount of new loans,⁴³ which additionally takes the amount of new loans into consideration, increased only slightly in the case of industrial property.

5.4 MACROPRUDENTIAL POLICY AND THE REGULATORY ENVIRONMENT IN THE EU

5.4.1 AN OVERVIEW OF MACROPRUDENTIAL MEASURES IN THE EU

Macroprudential authorities in EU countries mostly use instruments to prevent misaligned incentives and curb excessive credit growth. Non-euro-area countries are more active in applying macroprudential instruments. The CNB ranks among the most active macroprudential authorities in the EU.⁴⁴ Table V.5 summarises the application of the instruments as of January 2017 and the year-on-year change in the

42 The indicator of the riskiness of new loans secured by commercial property was created using data on the estimated overvaluation of property prices for each property type and the LTV and DSCR of loans in the individual categories of values, weighted by the share of loans in those categories. Higher values of this indicator signal higher loan riskiness. Conversely, higher DSCR values mean lower loan riskiness. For this reason, inverse values of the DSCR were used to construct the indicator.

43 This indicator is calculated by multiplying the amount of new loans in the individual categories by their riskiness indicators.

44 Review of Macroprudential Policy in the EU in 2016. ESRB, 2017.

settings of macroprudential policy in the European countries under review (the EU plus Norway).⁴⁵

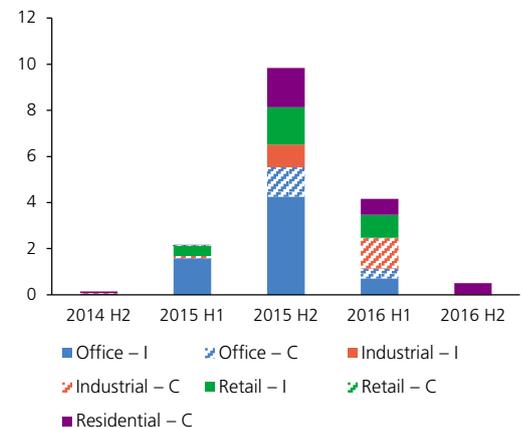
Misaligned incentives can be prevented by means of a buffer for O-SIIs or the SRB. All the EU Member States completed the process of identifying systemically important institutions in 2016. There are 202 systemically important institutions, 14 of which are global systemically important institutions (G-SIIs). Two of these are parent banking groups of domestic systemically important banks.⁴⁶ The CNB drew up a list of O-SIIs in 2015 and regularly reviews its composition (see section 5.2.3). As in Denmark, it uses the SRB to mitigate risks associated with domestic systemically important banks. The SRB rate is no more than 3% in the countries under review. Other Member States have reduced the risks associated with domestic systemically important banks using a capital buffer for O-SIIs, which can be no more than 2%. In some countries, a combination of an SRB and an O-SII buffer is used. The identified G-SIIs started to fill up the buffer during 2016. The buffer should reach full capacity corresponding to their systemic importance by 2019.

Most Member States, including the Czech Republic, have introduced the capital conservation buffer at the highest admissible rate. The rest will make it up by the end of 2018. Given the credit market situation, some countries are applying the countercyclical buffer (CCyB). All Member States were obliged to set a CCyB rate in 2016. The CNB has been doing so since 2014. Of the European countries under review, non-zero CCyB rates have been introduced in Sweden, Norway, Slovakia and the UK as well as the Czech Republic (see section 5.2.2).⁴⁷ Only in Sweden and Norway, however, were the rates active in 2016.

The residential property sector continues to be a source of risks to financial stability in many Member States. Measures mitigating residential property market risks thus continue to be introduced and tightened. The most common measure is an upper LTV limit combined with a LTI or DSTI limit. A minimum risk weight increasing the capital requirements for mortgage loan providers is also used (see section 5.3.1). The ESRB identified increased risks associated with exposures secured by residential property in some EU countries in its regular analyses of systemic risk in 2016. A detailed risk review with regard to national market specificities was performed for 11 Member States (AT, BE, DK, FI, LU, NL, SE, UK, EE, MT and SK). It was based on an assessment of the risk of default, a drop in collateral values and unexpected losses for the banking system. The risk of a drop in collateral values was identified for all the countries under review, and the risk of default was identified in all but one country (EE).

CHART V.36

Amount of new loans with an LTV of more than 70% and a DSCR of less than 1.2
(CZK billions)

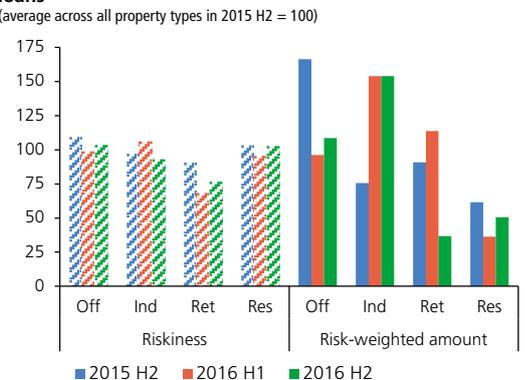


Source: CNB

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

CHART V.37

Indicator of the riskiness and risk-weighted amount of new loans
(average across all property types in 2015 H2 = 100)



Source: CNB

Note: Off: office property, Ind: industrial property, Ret: retail property, Res: residential property. The indicator of the riskiness of new loans secured by commercial property was created using data on the estimated overvaluation of prices for each property type and the LTV and DSCR of loans in the individual categories of values, weighted by the share of loans in those categories. The indicator of the risk-weighted amount of new loans was created by multiplying the previous indicator by the amount of new loans.

45 ESRB (2017): National measures in the EU/EEA notified to the ESRB, or of which the ESRB is aware, and that are of macro-prudential interest (January 2017), <https://www.esrb.europa.eu/mppa/html/index.en.html>.

46 Société Générale as the parent banking group of Komerční banka and UniCredit Group as the parent banking group of UniCredit Bank CZ/SK.

47 The CCyB was introduced in Slovakia in 2016 with effect from June 2017. In Sweden the CCyB rate was increased from 1.5% to 2% in April, and in the UK it was lowered from 0.5% to 0% in June in response to Brexit.

The risk of losses for the banking system was identified for a smaller number of countries (BE, FI, LU). The ESRB issued warnings⁴⁸ to all the countries under review except SK, EE and MT. For those countries, the ESRB confirmed the existence of risks, but stated that the adopted and planned preventive macroprudential measures to mitigate them were sufficient and praised the proactive stances of their macroprudential authorities.⁴⁹ The Czech Republic was not among the countries under review. In the regular risk assessment, however, it was very close to the reviewed countries according to the quantitative criteria and was one of the candidates for a warning. Compared to the other countries, the Czech Republic was the worst off in terms of overvaluation of residential property prices, as measured by the ratio of residential property prices to income, and also in terms of year-on-year growth in loans for house purchase to households.

The CNB monitors the activities, risk assessment approaches and measures of foreign macroprudential authorities. It also analyses their possible cross-border effects in connection with the framework for mutual recognition of macroprudential measures. Based on voluntary reciprocity,⁵⁰ the Member States decided on the reciprocation of a Belgian measure reducing the risks in the residential property market and the Estonian systemic risk buffer in 2016. The approaches of Member States varied considerably. The CNB did not reciprocate the Belgian measure,⁵¹ as the exposure of domestic banks to mortgage loans for residential property located in Belgium is virtually zero. Neither did the CNB directly reciprocate the Estonian measure,⁵² as the Czech banking sector has non-material exposure to Estonia. However, the setting of an SRB of at least 1% of the total exposure contains elements of reciprocation of the above measure for the five systemically most important banks.

48 The warnings are available on the ESRB website
<https://www.esrb.europa.eu/mppa/warnings/html/index.en.html>.

49 In Slovakia, this included approval of the legal possibility to implement these measures.

50 For details see FSR 2015/2016, section 4.4.2.

51 The Belgian macroprudential authority decided to prolong a measure requiring banks applying the IRB approach to credit risk management to increase the risk weight for mortgage loans for residential property located in Belgium by 5 pp.

52 Under Article 133 of the CRD, the Estonian macroprudential authority decided to set a 1% systemic risk buffer rate applied to domestic exposures of all banks authorised in Estonia with effect from 1 August 2016.

TABLE V.5

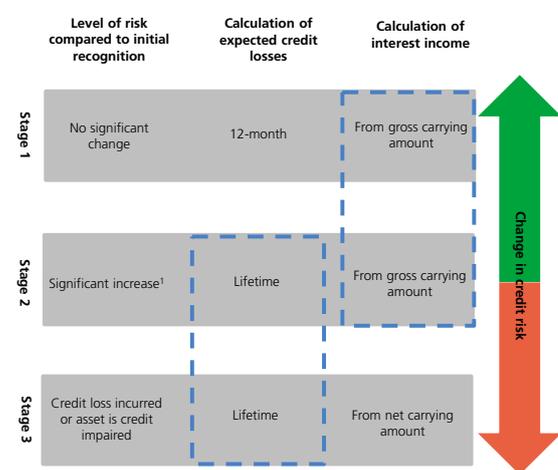
List of active macroprudential instruments in the EU and Norway
(as of 1 January 2017)

| Riziko Opatření | AT | BE | BG | CY | CZ | DE | DK | EE | ES | FI | FR | GR | HR | HU | IE | IT | LT | LU | LV | MT | NL | NO | PL | PT | RO | SE | SI | SK | UK |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Capital conservation buffer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Countercyclical capital buffer (CCyB) | | | | | • | | | | | | | | | | | | | | | | | | | | | • | | • | |
| Leverage ratio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • |
| Loan-to-value (LTV) | | | | • | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| Debt-service-to-income (DSTI) | | | | • | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| Loan-to-income (LTI) | | | | | | | • | | | | | | | | | | | | | | | | | | | | | | • |
| Loss-given-default (LGD) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Risk weights | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | • |
| Systemic risk buffer (SRB) | | | • | | | | | | | | | | | | | | | | | | | | | | | | | • | |
| Global systemically important institution buffer (G-SII buffer) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • |
| Other systemically important institution buffer (O-SII buffer) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | • |
| Liquidity ratio | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loan-to-deposit (LTD) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pillar II | | | | | | • | | | | | | | | | | | | | | | | | | | | | | | |
| Loan amortisation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Loan maturity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stress test | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | |
| Other measures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Source: ESRB, adapted by CNB
 Note: The table is derived from the overview of macroprudential measures published on the ESRB website. It is a simplified list of measures. Red dots denote a tightening and green dots a relaxation of the measures in 2016.

CHART V.38

Scheme for reporting financial assets under IFRS 9



Source: CNB

Note: ¹There is a rebuttable presumption that the credit risk has increased significantly when contractual payments are more than 30 days past due.

5.4.2 IMPLEMENTATION OF IFRS 9 AND ITS EXPECTED IMPACT ON THE CZECH AND EU BANKING SECTORS

IFRS 9 is a new international accounting standard governing the accounting, classification and valuation of financial assets, liabilities and hedge instruments. This standard will be implemented by banks which currently report their results according to international accounting standards (IFRS) for accounting periods beginning on or after 1 January 2018.⁵³

The introduction of the standard is expected to have the biggest impact on the reported results of European banks in the area of impairment of financial assets and provisioning. The other areas governed by the standard are not expected to record such significant changes. As regards impairment, the concept of incurred losses⁵⁴ will be replaced by the concept of expected losses. The aim is to identify credit losses earlier and prevent a recurrence of the situation recorded during the financial crisis, when credit losses were reported too late and provisioning was insufficient.⁵⁵

Financial assets will be reported in three stages according to the level of credit risk. Rules for calculating losses and interest income are set for each stage (see Chart V.38). The switch to the new standard will probably result in a one-off increase in provisions, which will be newly accounted for as the amount of expected losses. The higher level of provisions will be reflected directly in a drop in banks' book equity.⁵⁶ The impact of the standard is therefore a subject of debate and numerous analyses at the national and international level.

In the EU, the EBA conducted a survey of 58 banks and banking groups at the beginning of 2016.⁵⁷ According to the survey results, the growth in total provisions will mainly be the result of stage 2 financial assets, as expected lifetime credit losses will now be estimated for them. The increase in total provisions compared to the current levels is estimated at up to 30%. The total capital ratio and the Tier 1 capital ratio are estimated to decrease by up to 75 bp, and maybe more for some banks (see Table V.6).

As domestic banks were not included in the EBA survey, in April 2016 the CNB asked the six most important domestic banks and banking groups to fill in the same questionnaire as the one used by the EBA. The survey results indicate that the impact on domestic banks should be lower. The new standard will lead to an increase in provisions of up to 20%

53 The large majority of domestic banks (as measured by market share in the banking sector) report their results according to IFRS.

54 Under the IAS 39 standard currently in force.

55 Cohen, B. H. and Edwards, G. A. (2017): *The new era of expected credit loss provisioning*.

56 The overall changes in the net book value of bank assets resulting from the changes in accounting methods (the changes in the amount of total provisions, the classification of financial instruments, etc.) will be reflected directly in equity in the retained earnings/accumulated losses of previous accounting periods.

57 EBA (2016): Report on results from the EBA impact assessment of IFRS 9.

TABLE V.6

Results of the EBA and CNB impact assessments of IFRS 9

| Estimated increase of provisions (%) | | | |
|--------------------------------------|--------------------------|---------------|----------------|
| 75% percentile (EBA/CNB) | +30/+20 (STA), +10 (IRB) | | |
| | Low estimate* | Mid estimate* | High estimate* |
| Average (EBA/CNB) | +13/+2.5 | +18/+8.3 | +23/+13.3 |
| Median (EBA/CNB) | +20/+10 | | |
| Impact on Tier 1 ratio (bp) | | | |
| 75% percentile (EBA/CNB) | -75/-50 | | |
| | Low estimate* | Mid estimate* | High estimate* |
| Average (EBA/CNB) | -43/-21 | -57/-33 | -73/-46 |
| Median (EBA/CNB) | -50/-50 | | |

Source: CNB, EBA

Note: *The low estimate is the least conservative value. The mid estimate is the value between the low and high estimates. The high estimate is the most conservative value. The exact survey methodology is given in EBA (2016): Report on results from the EBA impact assessment of IFRS 9.

compared to the current levels. The total capital ratio and the Tier 1 ratio are estimated to decrease by up to 50 bp, and possibly more in some cases.

In September 2016, the European Parliament issued a *resolution on International Financial Reporting Standards: IFRS 9*⁵⁸ owing to the potential adverse impact on European banks' capital and hence on their ability to lend. Referring to the results of the EBA survey, it called for an examination of the possibility of introducing a phase-in regime to distribute the impact of the standard on regulatory own funds over time.⁵⁹ Based on the European Parliament's request, the European Commission issued a set of concrete suggestions on transitional arrangements in November 2016.⁶⁰ The European Commission's proposals were assessed by the EBA⁶¹ and discussed at the level of the Council of the European Union in April 2017. The specific form of the temporary arrangements was still under discussion at the time this report was being prepared. However, it is likely that banks will get the opportunity to distribute the impact on regulatory capital over four to five years (2018–2021/2022).

5.4.3 THE CNB AS A RESOLUTION AUTHORITY AND THE MREL

Pursuant to the Recovery and Resolution Act, the CNB has been the resolution authority in the Czech Republic since 1 January 2016. The resolution framework is aimed at providing for fast and effective resolution with minimum risk to financial stability while maintaining any systemically important functions of the institutions concerned. This objective is served by both planning (which involves the CNB drawing up resolution plans for banks and other institutions) and the resolution financing arrangement. A Resolution Fund, to which all relevant institutions contribute, has been set up. This is a source of funds that can be used in potential resolution to finance resolution itself. The CNB has a wide range of harmonised resolution instruments and processes.

Resolution processes and instruments also have systemic impacts. One of the most discussed areas – one which is also very important for the stability of the domestic banking sector – is the setting of minimum requirements for eligible liabilities (MREL). These are based on one of the most important resolution instruments, the bail-in. The aim of this instrument is to transfer the costs and losses of resolution of an institution to its shareholders or certain groups of creditors and thus minimise resolution expenditure from the public purse. However, for a bail-in to be viable, the institution must have enough eligible liabilities for loss absorption or possible recapitalisation, which the CNB will decide to convert or amortise in the event of a crisis.

58 European Parliament resolution 2016/2898(RSP).

59 This pertains solely to the distribution of the impact on regulatory capital. The impact on equity will be one-off in nature and there is no discussion of distributing it over time.

60 European Commission regulation 2016/0360 (COD).

61 Opinion EBA–Op-2017-02.

The CNB will set the MREL for individual institutions taking into account the resolution strategy applied and the expected use of instruments. According to the BRRD directive, it was supposed to do so as from 2016. However, it is not doing so as yet, because the interpretation of the legislation and standards has yet to be unified at the EU level. The MREL should consist of two components: a loss absorption amount (LAA) and a recapitalisation amount (RCA). It is also still expected that where the resolution plan assumes that the institution will be wound up in standard liquidation or insolvency proceedings in the event of failure, it will be possible to set the RCA at zero. For institutions where full liquidation is not appropriate and ensuring continuity of critical functions is preferable, and for systemically important institutions, the MREL may be markedly higher given the need to maintain the recapitalisation component.

The view of the base for the calculation of the MREL and of how capital buffers should be taken into account in its calculation has shifted. It is likely that the Pillar 1 and Pillar 2 capital requirements will form the base for calculating the MREL. Capital buffers should not be included in the base for the recapitalisation need. Nevertheless, they should be taken into account when setting the MREL as a loss absorption buffer. The schedule for meeting the MREL has also changed. A transition period lasting up to 2022 can be expected to be set for fulfilment of the new duty.

The CNB regards the rules for setting the MREL as an important element of the new regulatory framework, one which may significantly affect banks' behaviour and business models. The CNB considers it important that the future applicable framework allows a sufficiently high MREL to be set for loss absorption and possible recapitalisation, particularly for systemically important institutions. On the other hand, the framework should respect the conditions in national banking sectors and the business model, mode of financing and risk profile of each institution.

5.4.4 REGULATORY CHANGES UNDER PREPARATION IN THE EU

The Commission is preparing a review of the macroprudential policy framework in the EU.

The Commission launched a public consultation on the preparation of a review of the EU macroprudential framework. The CNB regards it as crucial to increase the flexibility of the use of capital buffers. It has long maintained position that the use of the SRB instead of the O-SII buffer is primarily a result of incorrectly configured O-SII buffer rules. It therefore recommends significantly increasing or completely abolishing the current 2% cap and removing the link to capital buffers mitigating risks associated with the systemic importance of the parent company. The SRB could then be used as a buffer serving primarily to address risks arising from institutions' exposures and it should also be possible to apply it to sub-categories of institutions with similar business models or to individual sub-categories of exposures. The CNB welcomes the debated possibility to apply the CCyB to only a part of exposures, for example to mortgage loans to households. If this is not incorporated into the revised framework, the CNB recommends that the option to apply Article 458 of

the CRR, which can be used to respond to emerging systemic risks by implementing various macroprudential measures, be made simpler and more flexible. It considers it appropriate to incorporate instruments mitigating risks on both the residential and commercial property markets into EU legislation. However, it should be left to national authorities to set such instruments.

The ESRB is discussing the outlines of macroprudential policy beyond banking

To a large degree, current macroprudential policy and its instruments apply solely to banks. However, the importance of non-bank institutions is growing in the EU. The assets of investment funds have been recording particularly strong growth in the Czech Republic in recent years (see Chart III.1). In June 2016, the ESRB issued a strategic document⁶² analysing systemic risks beyond banking and ways of managing such risks effectively. Many of the risks targeted by current macroprudential policy are also relevant to non-bank financial institutions, so there should be similar ways of curbing them (an activity-based approach). Besides the existing risks, the extension of the macroprudential framework beyond banking should limit regulatory arbitrage between the two sectors. The CNB has long maintained that macroprudential regulation beyond banking is desirable, but its instruments must reflect the specificities of the non-banking sector.

Regulatory technical standards governing the use of Articles 124 and 164 of the CRR have not yet been set

Property risks can be addressed using Article 124 of the CRR, which allows minimum risk weights to be increased for banks applying the STA approach, and Article 164 of the CRR, which enables the minimum LGD to be increased for banks applying the IRB approach (see section 4.3.2 of FSR 2015/2016). These provisions allow the supervisory authority to increase the risk weights in the standardised approach and LGD in the internal rating based approach to credit risk management. To apply the articles, the supervisory authority must prove that the risks weights or LGD do not match the real risks. In addition, it should take into account future developments on the property market and financial stability. Limits on the relevant indicators were preliminarily set in a 2015 EBA consultative document. However, technical regulatory standards have yet to be published.⁶³ Despite that, Article 124 is applied by seven Member States, with one also simultaneously applying Article 164. For the CNB, Article 164 is more relevant, as it can be used in the event of a build-up of risks linked with a continued downward trend in risk weights set using domestic banks' internal models for mortgage loans (see section 3.1). Where appropriate, macroprudential authorities can also respond to systemic risks of this type by applying Article 458 of the CRR, as is the

⁶² Macroprudential policy beyond banking: an ESRB strategy paper, July 2016.

⁶³ The absence of such standards may also complicate the application of Article 458, which the macroprudential authority may use to increase risk weights, among other things, in the event of growth in systemic risks, although only if the risks cannot be reduced by setting capital buffers or by applying Articles 124 and 164.

case in Belgium, where the macroprudential authority has increased the risk weight on mortgage loans for banks using the IRB approach by 5 pp. In connection with the approaches to setting risk weights, a debate on the rules for credit risk management approaches⁶⁴ is continuing in the Basel Committee (for details see FSR 2015/2016, p. 113). The ECB, too, has started to assess the variability of supervised banks.

The ECB has launched a review of internal models of banks supervised in the SSM

The ECB is assessing whether the internal models of banks supervised in the SSM comply with regulatory requirements. The aim of the project (the targeted review of internal models, TRIM) is to reduce unwarranted differences in the internal models that the supervised banks use to set risk weights, which have a fundamental influence on capital requirement levels. The conclusions of the project should be available in 2019 and may have an impact on the use of internal models by banks operating in the Czech Republic.

In the EU, there are signals that some banking groups are considering converting their subsidiaries into branches

Owing to the different degrees of strictness of national supervisory, macroprudential and resolution authorities, parent companies from the euro area are considering converting their subsidiaries in countries with "too" strict approaches into banks. One example of less strict policy is the approach applied in the Single Supervisory Mechanism (SSM) in the euro area, according to which the buffer rate applying to systemically important banks should not exceed 2% of CET1. These signals cannot be ignored and need to be incorporated into strategic thinking about the course of policies at national level. From the macroprudential policy perspective, the conversion of subsidiaries into branches would have only minor impacts. The CNB would be left with reduced room to set capital requirements for systemically important banks and macroprudentially motivated requirements under Pillar 2. The possibility of setting requirements for exposures located in the Czech Republic through the countercyclical buffer would remain preserved. Measures in the area of property exposures could be imposed using Article 458 of the CRR or through the ESRB mechanism of reciprocation of national macroprudential measures. However, it would be slower and more complicated than at present.

⁶⁴ Both for the IRB approach (where the risks weights on individual exposures should to some extent be linked with their levels in the STA approach) and for the STA approach (where the risk weights would to some extent respond to changes in underlying risks).