5 MACROPRUDENTIAL POLICY

Pursuant to Article 2 of the Act on the CNB, the CNB maintains financial stability and sees to the sound operation of the financial system in the Czech Republic. To achieve these objectives, it conducts macroprudential policy. To this end, it uses a set of macroprudential instruments focused mainly on the banking sector, which is the largest sector in the domestic financial system. This section evaluates the current position of the Czech economy in the financial cycle, the resilience of the domestic financial sector to the risks identified, and the tasks and recommendations arising from analyses for the settings of the CNB’s macroprudential policy instruments. The first part of this section briefly introduces the intermediate objectives of macroprudential policy and the macroprudential policy instruments available for fulfilling those objectives. It places them into context with the conclusions of the assessment of the relevant risks. The second part describes the settings of the capital buffers used to enhance the resilience of the domestic 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.

5.1 THE CNB’S MACROPRUDENTIAL POLICY OBJECTIVES AND INSTRUMENTS

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

<table>
<thead>
<tr>
<th>Intermediate objectives</th>
<th>Specific risk</th>
<th>Existence of specific risk in CZ</th>
<th>Key instruments</th>
<th>Applied in CZ</th>
<th>Detailed information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitigate excessive credit growth and leverage</td>
<td>Strong credit recovery accompanied by easing of lending standards</td>
<td>Yes</td>
<td>Countercyclical capital buffer</td>
<td>Yes, 1.25% from 1/2019; 1.5% from 7/2019; 1.75% from 1/2020; 2.0% from 7/2020</td>
<td>5.2</td>
</tr>
<tr>
<td>Mitigate excessive leverage, rising off-balance sheet risk</td>
<td>Low risk weights of significant credit portfolios</td>
<td>Potential</td>
<td>Macroprudential leverage ratio</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Mitigate excessive leverage, rising off-balance sheet risk</td>
<td>Elevated growth in loans and risks in specific sector</td>
<td>Potential</td>
<td>Macroprudential tool to mitigate systemic risk at Member State level (Article 458 CRR)</td>
<td>No</td>
<td>Box 3.1</td>
</tr>
<tr>
<td>Mitigate excessive leverage, rising off-balance sheet risk</td>
<td>Risk of spiral between property prices and property financing loans</td>
<td>Potential</td>
<td>Sectoral capital requirements (in particular real estate exposure)</td>
<td>Not as yet, CNB reacts to property exposure risks with other instruments</td>
<td>5.3</td>
</tr>
<tr>
<td>Mitigate excessive leverage, rising off-balance sheet risk</td>
<td>Risk of excessive household indebtedness and debt service</td>
<td>Yes</td>
<td>LTV caps</td>
<td>Yes, since 2015, tightened in 2016 and 2017</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>LTI, DTI, LSTI, DSTI caps</td>
<td>Yes, DTI and DSTI since 2018</td>
<td>5.3</td>
</tr>
<tr>
<td>Mitigate excessive credit growth and leverage</td>
<td>Long-term liquidity risk</td>
<td>Potential</td>
<td>Macroprudential NSFR</td>
<td>Microprudential general requirement since 2016</td>
<td>4.2</td>
</tr>
<tr>
<td>Mitigate excessive credit growth and leverage</td>
<td>Short-term liquidity risk</td>
<td>No</td>
<td>Macroprudential LCR</td>
<td>Microprudential minimum standard since 2015</td>
<td>4.2</td>
</tr>
<tr>
<td>Limit exposure concentrations</td>
<td>Property exposure concentration</td>
<td>Potential</td>
<td>Systemic risk buffer</td>
<td>Not as yet, CNB reacts to property exposure risks with other instruments</td>
<td>-</td>
</tr>
<tr>
<td>Limit exposure concentrations</td>
<td>Sovereign exposure concentration</td>
<td>Yes</td>
<td>Public finance stress test</td>
<td>Yes, option of additional capital requirements in event of elevated sovereign risk, since 2015</td>
<td>4.4</td>
</tr>
<tr>
<td>Limit misaligned incentives</td>
<td>Potential impacts of problems in SIFIs on financial market stability and real economy</td>
<td>Yes</td>
<td>SIFI capital surcharges (G-SII and O-SII buffer)</td>
<td>No, O-SIs identified, different instrument applied</td>
<td>5.1</td>
</tr>
<tr>
<td>Limit misaligned incentives</td>
<td></td>
<td>Yes</td>
<td>Systemic risk buffer</td>
<td>Yes, since 2017 for five banks</td>
<td>5.1</td>
</tr>
<tr>
<td>Strengthen resilience of financial infrastructures</td>
<td>Counterparty default risk, interconnectedness of financial infrastructures</td>
<td>No</td>
<td>Margin and haircut requirements on CCP clearing</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Strengthen resilience of financial infrastructures</td>
<td></td>
<td></td>
<td>Increased disclosure</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>Strengthen resilience of financial infrastructures</td>
<td></td>
<td></td>
<td>Systemic risk buffer</td>
<td>No</td>
<td>-</td>
</tr>
</tbody>
</table>
Among the most important macroprudential instruments in the current regulatory framework defined in CRD IV/CRR are capital buffers, which are applied on top of the 8% minimum capital requirement and the Pillar 2 requirements (see section 3.2.1). The CNB currently applies three capital buffers to increase the resilience of the banking sector (see Table V.2). The buffer rates\textsuperscript{103} 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\%.\textsuperscript{104} This rate will not change over time. The countercyclical capital buffer (CCyB) is intended to reduce the risks associated with excessive credit growth and leverage, i.e. risks connected with banking sector vulnerability accumulated in the favourable phase of the financial cycle. The CNB set the CCyB rate at 0.5% at the end of 2015 and has increased it five times since then. At the time of publication of this FSR, the CCyB rate applied to exposures in the Czech Republic is 1.25%. Over the last year, the CNB Bank Board decided to increase it to 1.5% with effect from July 2019, 1.75% with effect from January 2020 and 2% with effect from July 2020. The justification and underlying arguments for the Bank Board’s most recent decision, taken at its May meeting this year, is contained in section 5.2. The systemic risk buffer can be used to suppress various sources of non-cyclical risks to banking sector stability. The CNB currently uses it to mitigate the risks associated with the existence of systemically important banks. Since 2017, five systemically important banks have been required to maintain a non-zero buffer, with rates ranging between 1% and 3%. The legislation favours the application of a buffer for other systemically important institutions (O-SIIs) to mitigate risks connected with the systemic importance of banks. However, this buffer can be set at a maximum of 2%, which may not be sufficient in the case of the Czech Republic.\textsuperscript{105} The CNB updates the list of other systemically important institutions\textsuperscript{106} every year but does not actively apply the O-SII buffer. However, this will change as regulatory changes to the macroprudential framework enter into force. Under these changes, it will be necessary to apply the O-SII buffer to mitigate risks associated with the systemic importance of banks (see Box 5.1). At the time of publication of this Report, the sum of the capital buffers – the “combined capital buffer” – is 3.75%–6.75% depending on the institution’s systemic importance.

Table V.2
Summary of capital buffers in the Czech Republic (%)

<table>
<thead>
<tr>
<th>Capital buffer</th>
<th>Rate</th>
<th>Date of effect</th>
<th>Rate applied at time of publication of FSR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital conservation buffer</td>
<td>2.50</td>
<td>2014</td>
<td>2.50</td>
</tr>
<tr>
<td>Countercyclical capital buffer</td>
<td>2.00</td>
<td>7/2020</td>
<td>1.25</td>
</tr>
<tr>
<td>Systemic risk buffer</td>
<td>1.00 – 3.00</td>
<td>2014</td>
<td>1.00 – 3.00</td>
</tr>
<tr>
<td>Buffer for other systemically important institutions</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: CNB

Since 2016, the CNB has identified marked growth in property prices accompanied by strong growth in property purchase loans as the most significant domestic risk. Since 2015, it has been applying the instruments formulated in its Recommendation\textsuperscript{107} to mitigate risks associated with the provision of retail loans secured by residential property. The CNB

\textsuperscript{103} More detailed information about buffer rates and other macroprudential policy instruments in the Czech Republic can be found on the CNB website: https://www.cnb.cz/en/financial-stability/macroprudential-policy/.

\textsuperscript{104} The buffer rate is expressed as the ratio of best-quality capital (Common Equity Tier 1) to the total risk exposure.


\textsuperscript{106} For details, see the CNB website: https://www.cnb.cz/en/financial-stability/macroprudential-policy/list-of-other-systemically-important-institutions/.

\textsuperscript{107} More detailed information is available in the Recommendation on the management of risks associated with the provision of retail loans secured by residential property.
Currently recommends that lenders should not provide such loans with LTVs of over 90% (the “individual limit”) and should limit the provision of loans with LTVs of 80%–90% to 15% of new loans in the quarter (the “aggregate limit”). In addition, the CNB introduced caps on the debt-to-income (DTI) ratio of nine annual incomes and the debt service-to-income (DSTI) ratio of 45% with effect from October 2018. Section 5.3.1 provides a more detailed description of the risks associated with the residential property market and mortgage lending and of the configuration of the instruments used to mitigate these risks. It also includes information on minor changes and clarifications made to some provisions of the Recommendation.

In recent years, the CNB has ranked among the most active macroprudential authorities in the EU. It monitors the activities, risk assessment approaches and measures of other macroprudential authorities. It also analyses the cross-border effects of macroprudential measures in connection with the framework for mutual recognition of macroprudential measures (reciprocity). In 2018, the CNB decided on the reciprocation of macroprudential measures activated in Belgium, France and Sweden. In all cases, it decided not to reciprocate the measures given the very limited relevant exposures of domestic banks.

### BOX 5.1: MOST IMPORTANT CHANGES TO THE CRD V/CRR II MACROPRUDENTIAL FRAMEWORK

In December 2018, the European Council and the European Parliament agreed on changes to the CRD V/CRR II regulatory package, including a modification of the macroprudential framework. An important change brought in by these legislative amendments is the introduction of two binding regulatory instruments – a net stable funding ratio requirement and a leverage ratio requirement. The final shape of the two instruments was subject to a series of discussions about their settings. Particularly important was the debate on possible national discretion in calibrating the leverage ratio, as recommended by the Basel Committee on Banking Supervision. According to its recommendation, it would be possible under exceptional macroeconomic circumstances to temporarily exclude exposures to the central bank from the denominator of the leverage ratio and simultaneously to reset its minimum required level. The CNB supported this option, as it would have allowed the rise in bank deposits at the CNB connected with the marked increase in the CNB’s international reserves, and hence in the denominator of the leverage ratio, to be taken into account. However, the discretion was not included in the final version of the regulatory package. The regulatory package removes the option of using Pillar 2 for macroprudential purposes. This is justified by a need for a clearer division of powers between supervisory and macroprudential authorities.

An adjustment concerning the systemic risk buffer (SRB) is a substantial change in the CRD V/CRR II macroprudential framework from the CNB’s viewpoint. Under the new legislation, it will not be possible to apply the SRB to mitigate...
risks associated with the systemic importance of banks in the way the CNB does now.\textsuperscript{110} For these purposes, it will only be possible to use the O-SII buffer or the global systemically important institutions buffer. The CNB opposed this change. At international fora, it has long pointed out that the use of the SRB instead of the O-SII in many EU countries is due to the fact that the O-SII buffer rate is capped by law at 2\% of risk-weighted exposures. The regulatory package contains a change in the O-SII buffer cap. In the case of subsidiary banks, the buffer will be limited by the O-SII rate for the parent bank, or 1\% where no rate is set for the parent bank.\textsuperscript{111} This threshold would apply to all domestic systemically important institutions that currently have a non-zero SRB, and according to the CNB’s analyses it might not be sufficient to cover the related risks.\textsuperscript{112} The CNB will therefore continue to examine how to cover risks associated with the systemic importance of domestic banks beyond the O-SII buffer.

The option of newly using the SRB also for sectoral exposures (different rates for different sectors) is a legislative change intended to strengthen the resilience of banks to systemic risks in a more targeted way.\textsuperscript{113} This specifically concerns exposures to the residential property, commercial property, non-financial corporations and household sectors. In addition, it will be possible to apply the sectoral SRB to only some banking sector institutions. The flexibility of this buffer should also be enhanced by the removal of the restriction on its use to long-term non-cyclical systemic risks only. This means it could newly react to cyclical risks where such risks cannot be mitigated by the CCyB or where the across-the-board effect of the CCyB requires a different approach to be considered. The SRB and O-SII buffers will be summable to 5\%. A higher limit will also be possible subject to approval by the Commission, the ESRB and the EBA. The EBA in cooperation with the ESRB will prepare a methodology for setting the new form of the SRB. The CNB will assess it and take it into account where appropriate in its own practice. The above regulatory changes are expected to take effect in Czech law in January 2021. In the meantime, the CNB will disclose any changes made to its approaches in connection with the new legislation.

\textsuperscript{110} Besides the CNB, the Danish central bank applies the SRB in this way. Information on the SRB rate in the Czech Republic is available on the CNB website: https://www.cnb.cz/en/financial-stability/macroprudential-policy/the-systemic-risk-buffer/.

\textsuperscript{111} In the case of parent banks, the O-SII buffer will be capped at 3\%, with the possibility of an increase subject to approval by the ESRB, the EBA and the Commission.


\textsuperscript{113} The current use is based on total exposures, making the application of the buffer to selected exposures relatively complicated. So far the buffer has been applied in this way only to a very limited extent in practice.
5.2 THE COUNTERCYCLICAL CAPITAL BUFFER

The countercyclical capital buffer (CCyB) is designed to increase the resilience of the financial system to risks associated with the effect of the financial cycle. One of the manifestations of an expansionary phase of the cycle in the real economy is higher cyclical risk-taking, accompanied by strong credit growth, growth in debt and a very low default rate. In the event of a downturn in the financial cycle, accumulated risks may materialise and credit losses may increase, affecting banks’ capital. Another feature of an upward phase of the financial cycle is growth in the banking sector’s vulnerability due to cyclically low provisioning and/or decreasing risk weights. An economic downswing results in them returning to higher levels and potentially also in a need to top up capital so that the capital requirement can continue to be met once risk-weighted assets increase. The optimum CCyB rate is supposed to eliminate the negative impacts of all these manifestations of the financial cycle on the banking sector, prevent further transmission of the shock to the economy and maintain the supply of bank credit. For these reasons, the CNB sets the CCyB rate based on a comprehensive assessment of indicators of the financial cycle and the vulnerability of the banking sector and other factors affecting the sector’s resilience (see Figure V.1).114

**Figure V.1**
The CNB’s approach to setting the CCyB rate

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114 The main part of the CNB’s approach to the countercyclical capital buffer in the Czech Republic and the decision-making process from the assessment of the position of the economy in the financial cycle through to the setting of the buffer rate are described in Hájek, J., Frait, J., Plašil, M. (2017): The Countercyclical Capital Buffer in the Czech Republic, thematic article, FSR 2016/2017.
The CNB decided to increase the countercyclical capital buffer rate to 2.00% with effect from July 2020

The CNB Bank Board decided at its meeting on 23 May 2019 to increase the CCyB rate to 2.00% with effect from 1 July 2020 (see Chart V.1). When making its decision, it took into account the indicators and analyses presented below, taking particular note of those serving to assess shifts in the financial cycle and their impacts on potential credit losses and those reflecting the vulnerability of the banking sector (see Table V.3). The Bank Board agreed that the domestic economy was probably close to the peak of the financial cycle and the likelihood of a further increase in the countercyclical capital buffer rate had thus decreased significantly.

**Chart V.1**
Applicable and pending CCyB rate in the Czech Republic  
(% of total risk exposure)

**Table V.3**
Indicators of the financial cycle and the vulnerability of the banking sector  
(year-on-year change)

The financial cycle indicator increased and was driven mainly by developments in the household sector

The aggregate financial cycle indicator (FCI) serves as a starting point for assessing shifts in the cycle. It rose further in 2018 Q4, reaching levels close to 0.18 (see Chart V.2). Its growth was driven by strong credit growth in the household sector (especially for loans for house purchase) and a related rise in residential property prices. Growth in the FCI was also fostered by low interest rate spreads and an increase in corporate indebtedness (see section 2.2).

Growth in bank loans remains strong across the main credit segments...

Year-on-year growth in loans to the private non-financial sector has been stable at 6%–8% since the start of the expansionary phase of the financial cycle (2015 Q4). Their total volume rose by 6.7% in 2019 Q1 (see Chart V.3). The growth rate increased in the case of loans to non-financial corporations and households for consumption, standing above its historical averages in both segments (see Chart V.4). Loans for house purchase recorded a slight slowdown, reflecting the subsiding effect of frontloading before the DTI and DSTI limits took effect. However, the rate of growth of loans to households for house purchase remained above-average in the medium-term and long-term contexts.

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...genuinely new bank loans were volatile in late 2018 and early 2019

The volume of genuinely new\(^{117}\) bank loans to the household sector rose by 9.4% year on year in 2018 H2. Conversely, it decreased by 16.3% in 2019 Q1 (see Chart V.5). This was fostered by frontloading before the new Recommendation on the management of risks associated with the provision of retail loans secured by residential property of 12 June 2018 entered into force.\(^{118}\) The frontloading effect also resulted in the provision of a relatively large volume of loans with highly risky characteristics, especially mortgage loans with high DTI and DSTI ratios (see section 5.3.1, Chart V.17, Chart V.18 and section 4.3). However, a partial increase in risky characteristics was also observed for loans to finance the purchase and construction of commercial property, where an increase in loans with high LTV ratios and low DSCR was recorded (see section 5.3.2), and partly also for loans to non-financial corporations, which showed volatility. They decreased in volume by 6% in 2018 H2, while increasing by 8.7% in 2019 Q1. The creditworthiness of individual non-financial corporations may have been partially worsened by macroeconomic developments leading to a fall in profitability in this sector and a rise in the number of loss-making firms (see section 2.2).

\(^{117}\) Genuinely new loans are adjusted for refinanced and refixed loans.

The shift of the Czech economy into the growth phase of the financial cycle continued in 2018

Persisting strong credit growth and continued growth in the FCI suggest that the domestic economy moved further into the growth phase of the financial cycle. It thus entered the fourth year of the expansionary phase at the end of 2018. Sustained easy financial conditions remain an important factor fostering a further shift of the domestic economy in the financial cycle. The perceived real costs of debt $^{119}$ for new loans to households for house purchase are still very negative (−4.4% as of 31 December 2018). Real interest rates adjusted for inflation expectations as measured by the CPI index were also very low (see Chart II.8). The environment of low interest rates and strong wage growth encouraged increased drawdown of loans by the household sector. This was reflected in continued growth in property prices, which were overvalued by around 15% according to the CNB’s analyses (see Chart II.13 and section 2.1). Conditions were thus still in place for a spiral between property price growth and an increasing level of debt, to which the CNB had responded earlier with macroprudential measures (see section 5.3.1 and Chart V.13).

The expansionary phase of the financial cycle implies higher build up of cyclical risks and growth in potential future losses

These manifestations point to higher cyclical risk-taking, which may result in the domestic banking sector incurring higher credit losses if economic conditions deteriorate. The prudential estimate of these losses of CZK 26.4 billion (i.e. 1.06% of risk-weighted assets) would be covered by a CCyB rate of around 1.25% $^{120}$ (see Table V.4, conditional credit loss distribution). An indicative conversion of the values of the FCI leads to the same conclusion (see Table V.4 and Table V.1 CB). However, the values of the CCyB rate obtained in this manner cannot be interpreted mechanically. The conditional credit loss distribution and the FCI primarily provide information about the absolute size of banks’ potential credit losses and do not cover the aspects of the financial cycle that affect the banking sector’s vulnerability and impact on risk weights. Both these facts should be taken into account when deciding on the CCyB rate.

$^{119}$ Perceived real debt servicing costs are nominal client rates adjusted for wage growth.

$^{120}$ Implied losses of CZK 26.4 billion correspond to 1.06% of risk-weighted assets. The nearest possible CCyB rate that fully covers the implied losses is 1.25%, as the CCyB rate is rounded up to the nearest quarter of a per cent.
The current phase of the financial cycle is reflected in exceptionally low impairment losses and an optimistic perception of the degree of credit risk undertaken...

Favourable economic conditions are usually reflected in rising vulnerability of the banking sector. One of the representative indicators for describing the risks associated with cyclicity in the banking sector is the ratio of the margin on the stock of loans to provisions per unit of credit.\textsuperscript{121} This ratio increased further during 2018, which may indicate greater sensitivity to a deterioration in economic conditions (see Chart V.6). Another manifestation of the upward phase of the financial cycle is the very low default rate of banks’ clients and the related almost zero asset impairment losses during 2018 (see Chart V.7).

The ratio of provisions to total loans recorded a one-off increase after the switch to the new IFRS 9 accounting standard but resumed its downward trend in the rest of 2018 and was lower at the end of 2018 than a year earlier (see Chart V.2 CB).

…and is affecting the outcomes of banks’ risk models, thereby contributing to a decline in risk weights

The favourable cyclical developments are being reflected in the calibrations and results of banks’ risk models.\textsuperscript{122} The risk weights for the main IRB portfolios have been decreasing constantly since the expansionary phase of the financial cycle started (see Chart V.8).\textsuperscript{123} The observed decline and the resulting lower volume of risk-weighted assets may mean that the banking sector’s assessment of risks is over-optimistic on the aggregate level.\textsuperscript{124} A deterioration in the economic conditions accompanied by an increase in the default rate would lead to risk weights gradually returning to higher levels. In order to comply with the currently applicable capital requirement,\textsuperscript{125} this would imply a need to top up additional capital. Based on the risk weights observed at the beginning of the expansionary phase of the financial cycle, the capital requirement for IRB credit portfolios would be CZK 24.3 billion higher in absolute terms than its actual level at the end of 2018 (see Chart V.9).


\textsuperscript{123} Between December 2015 and December 2018, the average risk weight on loans to corporations decreased by around 5.7 pp, that on retail loans secured by residential property by 5.2 pp and that on other retail loans by 7.2 pp.

\textsuperscript{124} Risk weights can be affected by other factors in addition to the financial cycle, such as change in collateral quality, enhanced risk management processes and macroprudential measures taken.

\textsuperscript{125} In percentage terms.
The new IFRS 9 accounting standard is likely to lead to unintended procyclical behaviour of banks

One of the implications of the IFRS 9 accounting standard is an additional source of banking sector vulnerability. IFRS 9 is supposed to be beneficial to financial stability from the long-term perspective, because unlike the previous IAS 39 standard it allows for early and sufficient loan loss provisioning. However, the results of the macro stress tests of banks published in the CNB’s Financial Stability Reports (for details see FSR 2017/2018) support the view that IFRS 9 may have a cliff effect in the form of a rapid and sharp pass-through of an adverse situation to capital in certain conditions.

The CCyB rate should respond to potential credit losses and banks’ vulnerability

The CCyB should ensure that the banking sector is sufficiently resilient to all the risks associated with the expansionary phase of the financial cycle. When deciding on the rate, it is therefore desirable to take into account both the potential credit losses arising from excessive credit growth and the cyclical development of risk weights and other signs of rising vulnerability of the banking sector. The quantification of the first effect corresponded to the losses implied by the conditional credit loss distribution at the end of 2018, which amounted to around CZK 26.4 billion (i.e. 1.06% of risk-weighted assets). The quantification of the second effect is based on the absolute increase in the capital requirement due to the return of risk weights on loan portfolios under the IRB approach to the level observed at the start of the expansionary phase of the financial cycle.126 This increase is around CZK 24.3 billion (i.e. 0.98% of risk-weighted assets). The simple sum of these effects (2.04%) has to be adjusted for the volume of exposures in default from the conditional credit distribution, for which the effect of change in risk weights is not considered (i.e. CZK 0.7 billion, or 0.05%). The resulting effect implies a need for around CZK 50 billion of capital, which the CCyB rate should cover. This amount of capital represents 1.99% of the value of risk-weighted assets as of the end of 2018 (CZK 2,514 billion), implying a CCyB rate of 2.00% (see Table V.4 and Chart V.10). This figure is in line with the simplest quantitative rule taking into account the duration of the financial cycle. Under this rule, the CCyB rate should go up by 0.25% for each semester of the expansionary phase of the financial cycle. The domestic economy is currently in the eighth semester of the expansionary phase of the financial cycle, which equates to a rate of 2.00% under this rule (see Table V.5).

126 The economy entered the expansionary phase of the financial cycle in 2015 Q4.
According to the CNB, the standard CCyB rate for covering the usual level of cyclical risks is 1%

In previous publications, the CNB has emphasised that it prefers to act with a high degree of prudence in deciding on the CCyB rate and to set a non-zero CCyB rate when cyclical financial risks are still close to their usual, standard levels and have not yet become significantly elevated. The aim of the standard rate concept is to ensure that the banking sector’s resilience starts to be supported in a timely manner after the acute phase of a cyclical contraction, or even a financial crisis, has subsided. The CNB’s detailed approach to setting and calibrating the standard CCyB rate is described in the thematic article on financial stability 2/2019. 127 According to the current assessment, cyclical risks have reached elevated levels, corresponding to a need to set the CCyB rate above the standard level. The concept described will therefore no longer affect the setting of the CCyB rate during the current financial cycle but should be applied in the early expansionary phase of the new cycle.

Materialisation of cyclical risks and growing tensions in financial markets will be the key signal to lower the CCyB rate

The CNB stands ready to lower or completely zero the CCyB rate in the event of a sudden turnaround in the financial cycle. However, a gradual decrease in lending activity or more prudential lending will not constitute a reason for lowering the CCyB rate, as the cyclical risk assumed at times of above-average credit growth and relaxed credit standards stays in banks’ balance sheets. The quantitative approaches used as a guide for setting rates cannot be relied on to reduce the CCyB rate either.

127 Plašil, M. (2019): The Countercyclical Capital Buffer Rate for Covering the Usual Level of Cyclical Risks in the Czech Republic, thematic article on financial stability 2/2019, CNB.
because they are primarily used when deciding on rate increases. Clear signals of increased risk materialisation, reflected in rising risk weights, growing costs of risk and increased provisioning, will thus be grounds for reducing the CCyB rate.\textsuperscript{128} On the other hand, a weakening credit supply will be an important factor when deciding to release the buffer. Indicators of stress in financial markets (such as the CISS indicator\textsuperscript{129} for the Czech economy or money market rate spreads) may be a leading or coincident signal of this. The process of lowering the CCyB rate must be optimally timed, as a very early reduction would increase the banking sector’s capital surplus, which might not be used prudently to cover future losses and the draining of which might further increase the sector’s vulnerability. Conversely, releasing the buffer too late could result in a credit crunch and would render it impossible to smooth the downward phase of the financial cycle.

Deviations of the credit-to-GDP ratio from its trend do not provide a suitable guide to increasing or releasing the CCyB for the Czech Republic

In accordance with an ESRB recommendation,\textsuperscript{130} the CNB should take into account the credit-to-GDP ratio and its deviation from the long-term trend when determining the position in the financial cycle and deciding on the CCyB rate. In 2018 Q4, the ratio was 89.3\% and the relevant gap 2.4 pp. The CNB has long maintained that this approach is not a suitable tool for assessing cyclical risks in the Czech economy and is subject to a range of shortcomings which reduce its reliability.\textsuperscript{131} The additional gap (the expansionary credit gap), which uses an alternative approach to determining the long-term trend and partially eliminates the problems associated with the recommended methodology, was 1.4 pp (see Chart V.3 CB).\textsuperscript{132} However, this indicator must be also viewed as only a very rough way of assessing the position in the financial cycle, with limited direct usefulness as regards deciding on the CCyB rate.

\textsuperscript{128} The results of the macro stress test of banks indicated that the CCyB would be fully used to absorb the shock to banks’ capital in the event of particularly adverse economic developments (see section 4.1).

\textsuperscript{129} Its construction method is based on Holló et al. (2012): CISS – A Composite Indicator of Systemic Stress in the Financial System, ECB working paper series.

\textsuperscript{130} European Systemic Risk Board: Recommendation (ESRB/2014/1) on guidance to EU Member States for setting countercyclical capital buffer rates, January 2014.

\textsuperscript{131} It was published regularly in previous Financial Stability Reports. For a more detailed explanation see also the thematic article Geršl, A., Seidler, J.: Excessive Credit Growth as an Indicator of Financial (In)Stability and its Use in Macroprudential Policy in FSR 2010/2011.

\textsuperscript{132} More detailed methodological information about the additional gap can be found in the thematic article The Countercyclical Capital Buffer in the Czech Republic published in FSR 2016/2017.
5.3 RISKS ASSOCIATED WITH PROPERTY MARKETS

5.3.1 Risks Associated with Residential Property Markets

The CNB evaluates risks associated with the property market on an ongoing basis...

Previous Financial Stability Reports identified a spiral between credit financing of property purchases and rapidly rising property prices as a significant source of systemic risk in the domestic economy. The CNB evaluates the level of these risks on an ongoing basis and responds to them where necessary by applying macroprudential tools and microprudential supervision. This approach is based on the set of rules contained in the Official Information Recommendation on the management of risks associated with the provision of retail loans secured by residential property (the “Recommendation”). The Recommendation sets quantitative limits on some mortgage loan indicators and qualitative criteria for the prudential provision of such loans. With effect from October 2018, the Recommendation was extended to include caps on the debt-to-income (DTI) and debt service-to-income (DSTI) ratios. This prevents selected groups of the population becoming overindebted and aligns the process of assessing the income situation of loan applicants across domestic banks.

...and monitors compliance with the recommended limits

In addition to regularly assessing the property market situation, the CNB is paying increased attention to growth in, and risk characteristics of, housing loans. The main source of information for the aggregate analyses is the semi-annual Survey of loans secured by residential property (the “Survey”). It enables the CNB to check compliance with the recommended limits on selected indicators thanks to detailed information on individual loans. However, it also provides a whole range of other information necessary for optimally configuring macroprudential instruments. Following the introduction of the DTI and DSTI caps, the Survey for 2018 H2 was extended to include data on total debt and debt service relative to clients’ incomes and other data allowing for more refined analyses (the purpose of mortgage loans, for example).

![Chart V.11](image1.png)

**Six-month totals of components of new loans for house purchase**

(CZK billions; moving six-month totals)

![Chart V.12](image2.png)

**New housing loans and mortgage loans**

(annual totals in CZK billions)

Source: CNB

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133 Supervisory benchmark 1/2017 of November 2017 on the provision of loans to households by credit institutions.
134 Some quantitative limits were incorporated into the draft amendment to the Act on the CNB that is currently in the legislative process.
Banks provided a record amount of housing loans in 2018

Genuinely new loans (excluding refinancing and refixations) increased gradually in 2018 H1 and then picked up significantly (see Chart V.11). This was due to a media campaign reflected in efforts to obtain loans in the months just before the DTI and DSTI caps were introduced. Drawings of new housing loans slowed at the year-end. However, their total amount for 2018 as a whole remained at a record high (CZK 232 billion, of which CZK 187 billion in mortgage loans; see Chart V.12). Weakening credit growth was also observed in the first few months of 2019. The observed decline was due in part to exhaustion of credit market capacity as a result of frontloading. However, a tightening of conditions caused by the introduction of the DTI and DSTI caps, growth in client interest rates and worsening housing affordability owing to a rapid rise in property prices also played a role.

The setting of DTI and DSTI caps led to a fluctuation in the provision of mortgage loans

The CNB stated in December 2018 that less than 9% of loans provided would have had LTIs of over 9 or LSTIs of over 45% in 2018 H1 and that the share of such loans would very likely have been higher if clients’ other debts had been taken into account in the DTI and DSTI data. The true impact of the DTI and DSTI caps on the amount of mortgage loans provided cannot be assessed at the moment. In 2018 Q3 and Q4, the volume of genuinely new mortgage loans was CZK 7 billion and CZK 8 billion higher respectively than the average since 2015 (CZK 41.5 billion). In 2019 Q1, by contrast, it was CZK 9 billion lower. Given the simultaneous introduction of the DTI and DSTI caps and the growth in property prices and interest rates on housing loans, the impact of each of these factors cannot be fully identified. The CNB expects the above factors, combined with the effect of last year’s base, to foster a drop in new mortgage loans in 2019 as a whole. As the monthly volumes of genuinely new mortgage loans provided in March and April 2019 were just CZK 1 billion lower than the monthly average since 2018 (CZK 13.8 billion), the full-year decline should not be significant.

Favourable conditions for a spiral between housing loans and property prices persist…

The high demand for housing loans was reflected in renewed rise in property price inflation in 2018 H2 (see section 2.1). The spiral between credit financing of property purchases and optimistic expectations of a future rise in the value of property thus started to intensify slightly again after having slowed in the previous quarters (see Chart V.13). The financial conditions for purchasing property remain favourable, boosting the attractiveness of investing in housing. A renewed movement down the spiral in the rest of 2019 cannot be ruled out, but conditions for the spiral to escalate will probably persist in the medium term.

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135 Although client interest rates increased only slightly and the conditions for financing property on credit remain favourable, growth in households’ borrowing capacity – indicating the size of a safely repayable loan – halted at the end of 2018. If the CNB’s macroeconomic forecast (Inflation Report, May 2019) materialises for household income and interest rates, borrowing capacity should decline slightly in 2019. This could lead to some weakening of demand for housing loans and a drop in total loans drawn.
...and according to the Survey the average loan size provided also rose in line with the growth in property prices

The rising property prices led to a corresponding increase in the average size of loans provided for house purchase (see Chart V.14). This growth exceeded the growth in net incomes (see section 4.3). Given the introduction of recommended DTI and DSTI caps, households partly responded to this growth by increasing the average number of clients per loan application (see Chart V.14). The median value of total debt taking additional debt into account reached around CZK 2.3 million in 2018 H2. 136 Clients with the median debt included households with both high and relatively low incomes: around half of the applicants declared a net income of below CZK 35,000 (see Chart V.4 CB). Due to the potentially high sensitivity of a large proportion of clients to changes in economic conditions (see section 4.3), it is vital, in the interests of financial stability, to carefully assess the risk characteristics of loans provided and monitor whether the recommended limits are being circumvented.

Compliance with the recommended LTV limits remained satisfactory overall...

Data from the Survey for 2018 H2 indicate that banks were broadly compliant with the recommendation in force as regards LTV limits. The share of loans with LTVs of 80%–90%, which can account for a maximum of 15% of new loans, decreased slightly further, reaching 9% in December 2018 (see Chart V.15). Banks were thus compliant with the aggregate limit by a sufficient margin. Riskier loans continued to be moved into the 70%–80% LTV category and also into lower categories (see Chart V.16). As in the previous period, banks provided some loans with an individual LTV limit of over 90%, the level above which loans should not be provided under the Recommendation. However, the total share of these loans remained low, falling below 2% of new loans in 2018 Q4. Overall, compliance with the recommended limits thus improved further.

136 The client’s average total debt was CZK 3 million and the most frequent amount (mode) was CZK 2 million (see Chart V.4 CB and Chart V.5 CB). In addition to the mortgage loan itself, the total debt takes consumer credit, mortgage loans taken out earlier and any other revolving loans and credit lines into account.
...but the CNB will continue to pay increased attention to compliance with the limits and monitor any circumvention tendencies

Although most credit institutions are compliant with the recommended LTV limits, some tendencies identified on the basis of the data from the Survey may indicate that in good times lenders have a natural tendency to value collateral on the basis of current market prices, regardless of the fact that those prices may be overvalued in an upward phase of the cycle (see section 2.1). The Survey revealed that almost 17.5% of loans had an LTV ratio exactly equal to the aggregate 80% limit and 4.5% of loans had an LTV ratio exactly equal to the individual 90% limit (see Chart V.6 CB). These results may indicate optimisation of loan size (adjustment of the numerator of the LTV ratio) or of collateral value (adjustment of the denominator of the LTV ratio). The CNB will therefore assess the prudential collateral valuation process in order to prevent any circumvention of the limits using approaches that do not conform to the Recommendation. Another aspect will be continued monitoring of concurrent provision of unsecured loans and mortgage loans aimed at circumventing the LTV limit. According to the available data, however, this practice is not going on to an increased extent (see Chart V.7 CB).

The CNB regards the current LTV limits as sufficient, but continued property price growth could require a tightening soon

Property price inflation accelerated again at the end of 2018 and the estimated overvaluation of property prices increased (see Chart II.13, section 2.1). From the financial stability perspective, this led to a weakening of the effectiveness of the LTV limits, whose current levels were already previously described by the CNB as upper bounds. The CNB does not deem it necessary to tighten the limits immediately. However, continued growth in house price overvaluation could necessitate a reassessment of the sufficiency of the current limits. The CNB therefore stands ready to reassess, if necessary, the sufficiency of the current limits and respond to a further build-up of systemic risk by tightening them.

137 A potential risk to financial stability would arise if institutions did not take consistent and systematic account of cyclical developments the property market when valuing collateral.

The process of adjustment to the new recommended DTI and DSTI limits is gradual. Overall, institutions did not meet them...

In 2018 Q3 – immediately before the recommended DTI and DSTI caps took effect – credit institutions were lending to a significant extent to clients who had high additional debt and an excessive debt service burden according to the Survey (see Chart V.17 and Chart V.18). Loans provided in this period may thus be associated with high risk. Additional (mostly consumer) loans are provided at higher interest rates than mortgage loans and significantly increase debt service costs, although they usually have shorter maturities. Following the introduction of the recommended limits in October 2018, this trend was reversed and the shares of loans in excess of the limits started to decline towards the 5% exemption. However, the adjustment process has not yet been completed and institutions were non-compliant with the recommended limits overall in 2018 Q4. Institutions' compliance with the recommended limits can be described as having been particularly insufficient in October and November 2018.

...their non-compliance with the recommended limits mainly concerned the DSTI ratio...

The share of loans with a DSTI ratio of over 45% was 24% in 2018 Q3 and fell to less than 12% in Q4 (see Chart V.19). Despite the turnaround towards more prudent DSTI levels, the share of loans breaching the permitted exemption more than doubled. The quarter-on-quarter drop in the proportion of loans in excess of the limit was due mainly to the transfer of part of the loans to the DSTI category of 40%–45%. In its previous Financial Stability Reports, the CNB has also described this category as risky and recommended that institutions provide loans in this category with increased prudence. Household stress tests (see section 4.3) confirm that the provision of loans with a DSTI ratio of over 40% is associated with high risk. This conclusion applies despite some increase in client interest rates and the related reduction of the potential for them to rise suddenly and sharply in the future. The CNB will therefore require constant, highly prudent assessment of risks associated with potential growth in debt service above sustainable levels from institutions.

138 In the case of the LTI and LSTI ratios, the shares were close to the permitted 5% exemption (see Chart V.8 CB and Chart V.9 CB). The non-compliance with the recommended limits is thus due mainly to additional debt.
...while the share of loans in excess of the DTI limit almost adjusted to the permitted 5% exemption

The share of loans with a DTI of more than 9 also dropped following the introduction of the limits. It declined to less than 6% in 2018 Q4 (see Chart V.20). Although the 5% exemption for the provision of loans above the limit was exceeded, the observed trend can be regarded as satisfactory overall. A reduction in the supply of loans to clients with higher additional debt can be regarded as the main channel for adjustment to the recommended limits for both ratios. This is indicated by the distribution of loans according to risky LTI and LSTI levels, which remain relatively stable across the Surveys despite recording a clear fall in 2018 Q4 (see Chart V.8 CB and Chart V.9 CB). Another way of meeting the recommended limits is to increase the number of loan applicants, as their combined income will be higher (see Chart V.14).

Interest rates only partially reflected the risks undertaken in 2018 H2

Interest rates on mortgage loans increased year on year on average, reflecting the gradual pass-through of the previous increases in monetary policy rates and developments on the government bond and interest rate swap markets (see section 2.1). Banks tried to differentiate loan rates based on the LTV ratio in 2018 H2, incorporating the level of risks particularly into rates on loans with LTVs of over 80% (see Chart V.21). The highest average interest rates were recorded in the 80%–90% LTV category, which may reflect increased client demand for this type of loans amid limited supply by lenders. Unlike the LTV parameter, banks did not seem to take the DTI and DSTI ratios into account when setting interest rates in 2018 H2. Average interest rates on loans that simultaneously had an LTI of over 8 or an LSTI of over 40% \(^{139}\) were lower than those on less risky loans across all LTV categories. The lowest interest rates were recorded for loans with an LTV of 90%–100% and an LTI or LSTI exceeding the above levels. Although the frequency of these loans is not high and may include specific loan cases, the CNB will closely monitor how banks account for credit risk using corresponding risk mark-ups.

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\(^{139}\) The LTI and LSTI ratios instead of the preferred DTI and DSTI ratios had to be taken into account for the purposes of year-on-year comparison. The levels DTI and DSTI have only been reported since the Survey for 2018 H2 and data for previous period are not available.
The CNB is leaving the DTI and DSTI limits unchanged
The DSTI ratio is more restrictive for mortgage applicants and providers. Capping this ratio is crucial in a situation where interest rates on mortgage loans fall to exceptionally low levels. This occurred in the domestic economy particularly in 2016 and 2017, when average rates on new mortgages stood at around 2% or even lower. These rates started to rise in 2018, approaching 3% at the end of the year. In 2019 Q1, by contrast, they declined slightly. Owing to the growth in these rates (by more than 1 pp since the cyclical trough in 2016 and by 0.4 pp since the decision to set a DSTI cap), the potential room for them to rise sharply has been partly reduced and the risk of a surge in debt service has consequently decreased. However, the extent of this reduction is still small. This, together with insufficient compliance with the current DSTI limit of 45%, makes an increase in the cap on this ratio impossible. The CNB continues to expect lenders to be highly prudent in providing loans with DSTI ratios of between 40% and 50% given the conclusions of its analyses and household stress tests (see section 4.3). These demonstrate that loans with DSTI ratios of over 40% must be regarded as highly risky.

The CNB has made several technical changes to the Recommendation
On the basis of discussions with mortgage providers, the CNB has redefined the reference volume of loans used as the base for calculating the volume of new loans subject to exemptions from the LTV, DTI and DSTI limits. The reference volume is now one-half of the sum of all retail loans secured by residential property provided in the two previous quarters or one-half of the sum of other consumer credit not secured by residential property provided in the two previous quarters. The CNB has also clarified the provisions on the refinancing of consumer credit not secured by residential property for clients who already have a retail loan secured by residential property and are simultaneously increasing the outstanding principal of the unsecured loan by more than 10% as part of the refinancing process. In such cases, lenders should always assess whether clients’ total debt satisfies the recommended DTI and DSTI limits.

The CNB is seeking the statutory power to set upper limits on the LTV, DTI and DSTI ratios for mortgage loans
The CNB and the Czech Ministry of Finance have submitted into the legislative process an amendment to the Act on the CNB that would empower the CNB to set upper LTV, DTI and DSTI limits in a legally binding manner through provisions.
of a general nature. All three ratios are regulated by the current Recommendation. A switch to setting these ratios in a legally binding manner will therefore have no major impact on current bank providers of these loans or on consumers. However, the limits must be legally binding in order to ensure a level playing field on the market and to prevent unfair competition between lenders in the future. In this respect, the entry of new (especially non-bank140 and foreign) providers into this market segment would be problematic, as enforcement of the rules set out in the Recommendation would not be as effective for them as it is for domestic banks.

5.3.2 Risks Associated with Commercial Property Markets

The amount of new bank loans secured by commercial property remains stable over the cycle...

New loans secured by commercial property amounted to CZK 43 billion in 2018 H2.141 Loans for investment in office property fell slightly, while loans for investment in retail centres grew (see Chart V.22). Total loans secured by commercial property remain stable over time, fluctuating around CZK 40 billion. Unlike loans secured by residential property, the volumes provided do not respond to business and financial cycle fluctuations. Their share in banks’ balances sheets is falling.

140 In European countries, most mortgage loans are provided by banks. In some of them, however, the share of non-bank providers has risen sharply in recent years. In the Netherlands, non-banks currently account for around one quarter of the market. Outside Europe, for example in the USA, non-bank firms have provided (or subscribed) around half of all mortgage loans in recent years. This represents a significant rise compared with the pre-crisis years. This is due in part to the fact that banks have partially withdrawn from the market after their negative experience during the crisis and are concentrating mainly on high-quality mortgages. Moreover, non-bank providers apply laxer regulation.

141 The results are based on a regular semi-annual survey on loans secured by commercial property among eight banks covering around 70% of the market.
...and the risks associated with commercial property markets continue to be largely exported

Owing to the limited share of exposures secured by commercial property in the balance sheets of Czech banks, developments in this market do not pose an immediate threat to financial stability even if prices gradually rise and become overvalued (see section 2.1). A large proportion of commercial property is financed by foreign capital and any materialisation of risks would primarily affect the financial systems in investor countries. The risks to the domestic banking sector may also be partly mitigated by the relatively even distribution of loans between different types of commercial property. A potential threat to the domestic financial stability could arise in the future from the growing investments of Czech households and other domestic investors in real estate funds, whose performance is directly or indirectly linked with developments in the commercial property market. However, the importance of these investments remains marginal despite this growth.

The risk characteristics of new loans deteriorated slightly overall in 2018 H2

Most of the new loans provided in 2018 H2 had LTVs of 60%–70%, i.e. relatively safe levels (see Chart V.23). The share of loans in this category is gradually declining over time at the expense of riskier loans (see Chart V.10 CB). However, the absolute volume of riskier loans remains low. As regards DSCR, loans in the 1.2–1.4 range – considered by the industry to be the norm for most types of commercial property – remain the most frequently provided ones (see Chart V.24). However, the observed levels and the high proportion of loans with a DSCR of more than 1.4 do not necessarily imply an absence of credit risks. On the contrary, they may signal over-optimistic estimates of future property income in the current phase of the business and financial cycle. An increase in overall credit risk is suggested by an increase in loans with simultaneously riskier levels of collateral (an LTV of over 70%) and the ability to generate income to cover debt (a DSCR of below 1.2). These loans amounted to almost CZK 10 billion in 2018 H2, more than double the level in the previous half-year. However, given the low volumes of loans secured by commercial property, the results may reflect ad hoc factors and the risk characteristics of only a very limited number of loans.

Overall, the risks associated with loan financing of residential and commercial property purchases and construction represent one of the main sources of potential systemic risk in the Czech Republic. As in several other EU countries, analyses conducted by the ESRB indicate a similar conclusion. The CNB will therefore continue to pay great attention to these risks in the period ahead and consider the application and configuration of instruments that will keep them at an acceptable level.

![Chart V.24](Image)

**Chart V.24**

DSCR distribution of new loans in 2018 H2

(x-axis: DSCR; y-axis: CZK billions)

![Chart V.25](Image)

**Chart V.25**

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

(CZK billions)