The CNB's Macroprudential Policy Strategy

Czech National Bank —— Macroprudential Policy Strategy

CZECH NATIONAL BANK

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Contents

I. FOUNDATIONS

The **objective** of **macroprudential policy** is to **safeguard financial stability** through the application of a set of instruments. Financial stability is a prerequisite for the successful long-term development of the real economy. It is defined as a situation where the financial system operates with no serious failures or undesirable impacts on the present and future development of the economy as a whole, while showing a high degree of resilience to adverse shocks.

A **threat to financial stability** arises due to an increase in **systemic risk** in the financial system. Systemic risk is the risk of a serious failure occurring in the entire financial system or a part thereof, with undesirable impacts on the current and future development of the economy as a whole. It has two components – a cyclical one and a structural one. **The cyclical, or time, component** is due to the procyclical behaviour of financial institutions and their clients over time. Fast-growing loans sensitive to the same macroeconomic factors across financial institutions are the main sources of risk. **The structural component** is due to the interconnectedness of financial institutions and their clients, which generates a risk of contagion, and also to the concentration of various types of risk.

Systemic risk often arises gradually and unobserved, and the situation in the financial system may not show obvious signs of an adverse state or developments. The seeds of risks to financial stability usually originate in good times, when financial institutions seem the most stable. In such periods, people and institutions tend to succumb to over-optimism and take excessive, mostly credit, risks. The subsequent materialisation of the accumulated risks in the form of a **financial crisis** has a strongly adverse long-term impact on economic growth and can have huge social and societal consequences. Historical examples include the 1930s' Great Depression, the 2007–2009 global financial crisis and the 2010–2012 euro area debt crisis.

The work of the **European Systemic Risk Board** (ESRB),[1] which the CNB is a member of, helps prevent the build-up of systemic risk in financial systems across European Union (EU) countries. The ESRB identifies major risks in the EU and issues warnings and recommendations to individual EU states aimed at mitigating systemic risks in the EU. Responsibility for conducting macroprudential policy in individual EU countries lies at **the national level**.[2] Most activities in the financial system are performed by financial institutions having their legal home in the EU Member State concerned, and those activities are also often local in nature. National authorities have the most detailed knowledge about their local financial system, including the related risks, and can thus most effectively take preventive action against the build-up of systemic risk in the economy.

The CNB is responsible for financial stability policy-making in the Czech Republic. By pursuing macroprudential policy the CNB endeavours to ensure that the Czech financial system is resilient and stable at all times. It bases its work on Czech[3] and EU[4] legislation, and also takes into account the outputs of the European System of Financial Supervision (ESFS),[5] the European System of Central Banks (ESCB) and the Basel Committee on Banking Supervision (BCBS). The CNB is a member of these institutions or works actively with them, and can thus contribute to the creation of standards.

Owing to the cross-border interconnectedness of the Czech financial system with other, mainly European, financial systems, the CNB also takes into account the **macroprudential and economic policies of other countries**, especially monetary policy, policy in the area of supervision and licensing of financial market entities, and fiscal policy, in order to make its macroprudential policy as effective as possible. These policies can fundamentally affect the pursuit of the financial stability objective. Financial stability objectives are multi-dimensional in nature, and macroprudential instruments may not always transmit easily to changes in the behaviour of financial institutions and their clients. In some cases, macroprudential policy objectives can be achieved more effectively with the support of other types of policies.

The macroprudential policy and **monetary policy of the CNB** have different objectives – financial and price stability respectively – and use different instruments. In reality, however, price stability is hard to achieve when the financial

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[1] Regulation No 1092/2010 of the European Parliament and of the Council, Chapter I, Article 3(1). The ESRB, together with the sectoral authorities (the EBA, ESMA and EIOPA), is part of the European System of Financial Supervision (ESFS).

[2] Recital 2 of Recommendation ERSB/2011/3 on National Macroprudential Mandates https://www.esrb.europa.eu/pub/pdf/ESRB_Recommendation_on_National_Macroprudential_Mandates.pdf?87d545ebc9fe76b76b6c545b6bad218c.

[3] Article 2e of Act No. 6/1993 Coll., on the Czech National Bank, and Article 26bb of Act No. 21/1992 Coll., on Banks.

[4] ESRB documents: *Flagship report on macro-prudential policy in the banking sector*, *Macroprudential policy beyond banking* and *Handbook on operationalizing macroprudential policy in the banking sector*, https://www.esrb.europa.eu/mppa/framework/html/index.en.html.

[5] Pursuant to Articles 114 and 127(6) of the Treaty on the Functioning of the European Union, the European System of Financial Supervision (ESFS) comprises the ESRB, the three European Supervisory Authorities (the EBA, ESMA and EIOPA) and the supervisory authorities of individual Member States.

system is unstable and, conversely, financial stability is hard to achieve when prices are unstable. This close relationship predetermines the need to monitor and assess the impact of the measures of these two policies on the attainment of their objectives and, if necessary, to coordinate them. The CNB therefore takes monetary policy into account when pursuing macroprudential policy.

There is also a close link between macroprudential policy and **microprudential supervision**, and not only in connection with supervision of the same financial sectors. They use the same information base, and a lot of the information obtained in the course of microprudential supervision (for example during on-site examinations and at meetings of colleges of supervisors for cross-border banking groups) is taken into account in macroprudential policy-making. The activities of macroprudential policy and microprudential supervision complement each other, as the stability of individual institutions safeguarded by microprudential policy is not a sufficient condition for ensuring the stability of the financial system as a whole, and vice versa.

The unit at the CNB responsible for financial stability shares its findings with the unit responsible for preparing the **regulatory framework**.[6] It submits suggestions for the preparation of the framework and comments on draft interpretive opinions and legal rules.

The CNB has also been assigned the role of **resolution authority**. This has increased the importance of coordinating work in the areas of financial stability and resolution. Resolution principles and instruments[7] have significant overlaps with financial system stability. Instruments of the two policies, especially those affecting the banking sector's ability to withstand losses, reduce both the risks arising from the interconnectedness of financial institutions and concentration risks.

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[6] The Financial Regulation and International Cooperation Department.

[7] https://www.cnb.cz/en/resolution/.

II. COMPETENCES, POWERS, DECISION-MAKING AND COMMUNICATION

II.1 MANDATE

The CNB's mandate for conducting macroprudential policy is laid down in Act No. 6/1993 Coll., on the Czech National Bank, which stipulates that the CNB shall, among other things, maintain financial stability.[8] The CNB is expressly entrusted to "identify, monitor and assess risks jeopardising the stability of the financial system and, in order to prevent or mitigate these risks, contribute by means of its powers to the resilience of the financial system and the maintenance of financial stability; where necessary, it must cooperate with the relevant state authorities in setting macroprudential policy".

The unit at the CNB responsible for financial stability and macroprudential policy comes under the broader remit of **financial market supervision**. It therefore works in close cooperation with other CNB supervisory units responsible for safeguarding and maintaining the individual stability of financial market entities.

II.2 COMPETENCES, POWERS AND PRINCIPLES FOR APPLYING THEM

The CNB's pursuit of macroprudential policy is based on powers laid down in the legislation in force in the Czech Republic.[9] The CNB applies its powers mainly to **financial institutions operating on the Czech financial market**. It also supports the stable and sound functioning of the financial market infrastructure. In order to safeguard financial stability, it is important that the CNB also indirectly affects non-financial private entities (such as loan applicants and investors), to which end it mainly uses legally non-binding communication instruments.

The CNB's macroprudential policy seeks to have a **preventive** effect, i.e. to prevent growth in the conditions for future financial instability, and also a **corrective** effect, i.e. to mitigate the impacts of adverse shocks.

The size and openness of the Czech economy make it highly sensitive to **shocks from abroad**. This sensitivity is magnified by the large share held by foreign investors in the ownership of financial institutions operating in the Czech Republic. The CNB's macroprudential policy must reflect this situation by applying a high degree of prudence in assessing risks and by creating buffers allowing institutions to withstand external shocks.

The CNB organises the conduct of its macroprudential policy so that it is able to respond in time and in a forward-looking manner and thus **avoid** the risk of **inaction bias**. Such bias may arise at a time of high uncertainty about the significance of the build-up of systemic risk in the economy. Systemic risk is not easy to quantify – particularly in the early phase – either through the usual financial indicators or using more complex models based on generally accepted theory. In order to fulfil its responsibility for financial stability, however, the CNB must act even if the initial social costs of its actions may at the time seem higher than their future positive results (the long-term sustainability of financial stability).[10]

As a macroprudential authority, the CNB always carefully considers the **effect of the powers it applies on the activities and regulatory burden of the entities concerned**. It also sees to it that the CNB's expenditure is efficient and effective. It therefore allocates the largest proportion of its resources to the parts of the financial system that provide **critical functions** for the real economy.

The CNB's macroprudential policy creates restrictions for regulated entities and their clients. These restrictions may be unpopular and become a source of criticism by professional associations, interest groups, the public or politicians, including by means of media pressure. In particular, systemic risk associated with rapid credit growth, accompanied by rising property prices, may only be suppressed through the radical application of instruments that will affect the interests of many market participants. Nevertheless, the CNB takes into account the social costs and benefits of the powers it applies and strives to **communicate them transparently**. For example, it focuses constantly on explaining that certain measures yield **positive effects in the long term**, effects which may not be visible at first glance.

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[8] The version of the law in force on the date of approval of this document. Unless stated otherwise, the "economy" and the "financial system" will hereinafter mean the Czech economy and the Czech financial system.

[9] Above all, Articles 2e) and 2d) of Act No. 6/1993 Coll., on the CNB, Article 26bb of Act No. 21/1992 Coll., on Banks, Directive No 2013/36/EU of the European Parliament and of the Council (CRD) and Regulation (EU) No 575/2013 of the European Parliament and of the Council (CRR).

[10] For example, the CNB is applying several measures to gradually suppress the build-up of systemic risk associated with excessive growth in loans to households accompanied by rising residential property prices (see section III.2) and is acting at a time when the debt of Czech households is still far below the excessive rates observed in some euro area countries.

At the same time, the CNB regularly assesses the effectiveness of the powers it applies, takes the necessary steps to ensure they are effective, and discontinues them if the risks subside.

The CNB also develops cooperation with other units of the state to an appropriate extent to support the performance of its financial stability duties. Of particular importance is its legislative **cooperation with the Czech Ministry of Finance**, which is responsible for preparing the regulatory framework for the functioning of the financial market.

In the process of macroprudential policy formulation, the CNB also communicates with the official interest groups of the individual parts of the financial sector (especially sectoral associations), the academic and professional community, and the public. The aim is to apply a considered and balanced approach based on a constructive dialogue with potentially affected market participants.

II.3 DECISION-MAKING AND COMMUNICATION

The CNB is independent in deciding on the application of its powers to safeguard financial stability and formulate macroprudential policy.[11] This gives it an adequate degree of discretion in applying its powers/instruments to ensure financial stability.

As a rule, the **CNB Bank Board** decides on the application of macroprudential measures. It usually does so at its semi-annual **meetings on financial stability**, where detailed analyses regarding systemic risk in the Czech financial system are submitted to the Board. The CNB discloses the results of the meeting at a press conference given by the Governor. Nevertheless, where necessary, the Bank Board may take relevant decisions on such measures at its other regular or extraordinary meetings. The CNB **publishes** a summary of all the applicable legally binding (mainly provisions of a general nature) and legally non-binding macroprudential policy acts in the Financial Stability section of the **CNB website**.

In order to ensure public awareness, predictability of its actions and transparency in maintaining financial stability and formulating its macroprudential policy, the CNB issues two key analytical documents – **the Financial Stability Report** and **Risks to financial stability and their indicators**.[12] The CNB submits the Financial Stability Report to the Chamber of Deputies once a year for information. It provides information about its analytical methods and approaches to the application of macroprudential instruments by means of thematic articles on financial stability and research publications, which are also published on the CNB website. Where necessary, the CNB also flexibly communicates major financial stability actions and events to the public (in articles, interviews and blog posts).[13]

[11] Article 9 of Act No. 6/1993 Coll., on the Czech National Bank: "(1) When carrying out the primary objective of the Czech National Bank and when exercising the powers and carrying out the tasks and duties conferred upon them by the Treaty on European Union, the Treaty on the Functioning of the European Union and the Statute and when performing other activities, neither the Czech National Bank, nor the Bank Board, nor any member of the Bank Board shall seek or take instructions from the President of the Republic, from Parliament, from the Government, from administrative authorities of the Czech Republic, from the bodies, institutions or other entities of the European Union, from governments of Member States of the European Union or from any other body. (2) The Czech National Bank and the Government shall inform each other on matters concerning the principles and measures of monetary, macroprudential and economic policy".

[12] The Financial Stability Report is the reference document for the spring Bank Board meeting on financial stability issues, while the publication *Risks to financial stability and their indicators* is the reference document for the winter meeting. Both documents are available on the CNB website.

[13] See https://www.cnb.cz/en/financial-stability/macroprudential-policy/.

III. THE CNB'S MACROPRUDENTIAL POLICY

The CNB's macroprudential policy is in principle **forward-looking**. When pursuing its macroprudential policy, the CNB applies macroprudential measures which are able to reduce the vulnerability of the Czech financial system in good time by limiting systemic risk, and to strengthen the resilience of the Czech financial system in case this risk materialises. On the one hand, the CNB thus aims to create timely barriers in the financial system against **collective risk-taking**, which, for various reasons, financial market participants may not be able to fully identify, evaluate and cover with capital or buffers at a given point in time. On the other hand, **assessing the resilience** of the financial system to shocks is an important element in the application of macroprudential policy. It is particularly important for systemically important institutions. The CNB takes into account the level of resilience to adverse economic developments both in its decisions to apply macroprudential instruments and in its decisions on the thresholds and levels of the relevant instruments. A key role is played by the results of stress tests of parts of the financial system and its linkages and interconnectedness, and also of major sectors of the real economy.[14]

The CNB's macroprudential policy is based on the assumption that the largest systemic risk is born in good times (**the financial stability paradox**). Severe crises tend to arise after prolonged periods of good times, which start to be perceived as more or less permanent. In such times, economic agents show a reduced ability to perceive and value risks, and a large number of them may take financial and investment decisions which are capable of posing a threat to their own financial stability and the stability of the entire financial sector. Macroprudential policy can narrow the space for the mass spread of such (often irrational) decisions and reduce the potential extent of the risks through the application of **countercyclical instruments**. Those instruments lead to the formation of buffers, which in turn make it possible for economic agents to cope better with any consequences of their bad decisions.

The CNB's macroprudential policy is not aimed at delivering full stability of the financial system at every moment in time and at applying a set of instruments that will prevent any market swings. Although such efforts would significantly mitigate the private sector's risk, they would also hamper business and thus have a negative effect on long-term economic growth in the Czech Republic. The aim is to minimise the probability that the materialisation of the risks undertaken will cause extensive **disruptions in the financial system** with strongly adverse impacts on the real economy. These disruptions mainly include significant restrictions on the availability of loans to creditworthy entities. So, rather than fighting market mechanisms, macroprudential policy only involves combating certain **market failures and inefficiencies (short-sightedness, herd behaviour, underestimation of risk, moral hazard, structural failures)**, which can be considered negative externalities.

Owing to the cross-border interconnectedness of the Czech financial system with financial systems in other countries (especially the foreign ownership of Czech financial institutions and exposures to foreign entities), the CNB also takes into account any coordination of its macroprudential policy with that in other relevant countries ("home-host coordination", such as the division of competencies between the foreign regulator and the Czech regulator, the regulation of exposures, and the division of capital within international financial groups). Another area of coordination is mutual recognition of macroprudential measures between countries ("**reciprocity**"). Some measures taken by macroprudential authorities in other countries may be linked with risks to financial stability in the Czech Republic and vice versa. However, before recognising foreign macroprudential measures, the CNB always assesses whether the related risks are sufficiently material to financial stability in the Czech Republic. It informs the public about its decisions on its website.[15]

The CNB cooperates in the financial stability area with the EU institutions responsible for macroprudential supervision (the ESRB) and microprudential supervision (the EBA, ESMA and EIOPA) and with international financial supervisory institutions (the IMF, the Financial Stability Board, the BCBS and the BIS), especially in the areas of creating and adjusting the regulatory environment, methodologies and analytical approaches. As part of this cooperation, it seeks to ensure that the rights ensuing from the current legislation and the CNB's status as an independent supervisor are respected. It also aims to ensure sufficient exchange of information and to share best supervisory practices. At the same time, it seeks to ensure that the fundamental characteristics and specificities of the Czech financial system and real economy are taken sufficiently into account so that the regulatory environment and the methodological and analytical approaches used help maintain financial stability in the Czech Republic and the EU.

[14] For more on stress test methodologies and results, see https://www.cnb.cz/en/financial-stability/stress-testing/.

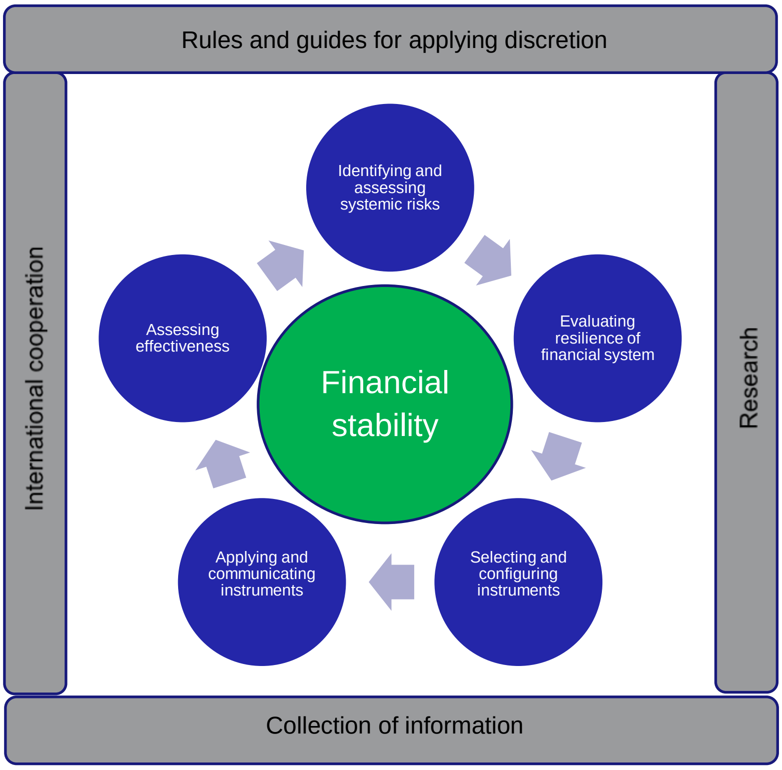
[15] See https://www.cnb.cz/en/financial-stability/macroprudential-policy/mutual-recognition-of-macroprudential-measures-reciprocity/.

III.1 CONDUCT AND ORGANISATION OF MACROPRUDENTIAL POLICY

The conduct of macroprudential policy is based on an **analytical framework** involving regular forward-looking assessments of the level and evolution of system risk and the resilience of the financial system to macrofinancial shocks. From the procedural perspective, the conduct of macroprudential policy can be described in several interrelated phases (see Figure 1).

In the **identification and evaluation phase**, the CNB focuses on the **intensity** of potential systemic risk. It does so by analysing the evolution of macroeconomic and financial characteristics of the economy, creating systemic risk accumulation indicators based on modelling of the financial system and intrinsic characteristics important for assessing financial stability, assessing those indicators, and determining their signalling levels. This phase also involves conducting ad hoc or regular surveys (such as the Bank Lending Survey and the survey on loans secured by residential property) to obtain necessary data which are not available from the usual reporting, and preparing systemic risk accumulation indicators based on modelling of the financial system or intrinsic characteristics important for assessing financial stability. The assessment of the risks identified is also based on economic theory, empirical observations and expert judgement. It must be focused on the actual degree of potential risk, not just the currently perceived level of risk.

Chart 1: Elements of the conduct of macroprudential policy



In the phase of **evaluating the resilience of the financial system**, the CNB focuses on stress testing financial and non-financial sectors and their interconnectedness**.** The CNB does not test the resilience of sectors only to potential highly adverse or crisis developments, which is one of the essential activities of financial stability supervision. It also aims to estimate the size of the impacts for the most likely macroeconomic developments (the "baseline scenario"), which helps it detect difficulties that are highly likely to materialise in the system.

In the phase of **selecting and configuring its instruments**, the CNB assesses their appropriateness and effectiveness, their calibration, their impacts on the costs and activities of market participants, and the risks of regulatory arbitrage and circumvention. Where necessary, it consults with entities affected by the instruments under consideration. It strives to obtain a thorough knowledge of their transmission channels, i.e. the mechanisms through which the instrument affects the fulfilment of the financial stability objective in the context of the Czech economy. It creates a methodological framework through which it provides information about the rules for the application of instruments.

In the **instrument application and communication** phase, the CNB aims to curb or mitigate systemic risk and maintain the resilience of the financial system. It does so by setting the level, scope, legal form and manner of communication of the instruments it uses so that they contribute as effectively as possible to limiting the materialisation of systemic risk. In this context, the CNB also defines the institutional and organisational framework for communicating the instruments it applies and regularly informs experts and the general public about developments in the area.

In the **assessment of effectiveness** phase, the CNB uses analytical methods to assess the effects and impacts of the macroprudential instruments it has applied. To this end, it also conducts on-site inspections in institutions as part of the examinations conducted by units responsible for microprudential supervision. The CNB conducts inspections relating to the macroprudential instruments it has applied mainly in systemically important institutions in order to gain a closer insight into the effects of the instruments and entities' reactions to them. Further to the assessment results, the CNB, together with the microprudential supervision units, takes the action it deems necessary to ensure that the instruments are effective.

The CNB initiates **economic and financial research** and actively applies the results in all phases of macroprudential policy formulation. The use of the information, experience, findings and methodological and regulatory approaches of foreign central banks and macroprudential authorities also plays an important role in the analysis and preparation of procedures, methods, rules, relationships, contexts and the conceptual framework of macroprudential policy and its instruments.

III.2 MACROPRUDENTIAL INSTRUMENTS

The CNB applies its **macroprudential instruments** both individually and simultaneously and has the following types available:

1. **Legally binding instruments** applied to entities regulated and supervised by the CNB, non-compliance with which is subject to penalties. Instruments defined in Czech law have the strongest legal position. They include:
    a) instruments relating mainly to capital, capital buffers, risk weights of exposures, liquidity and concentration of assets, mostly those of the banking sector;[16]
    b) instruments which the CNB may use for a period of six months (in the form of a provision of a general nature) to mitigate the consequences of or to curb risks which are not anticipated and relate to the banking sector.[17]
2. **Instruments based on recommendations**, which are not laid down directly in the legislation. The CNB uses these instruments to recommend specific responses to regulated or other entities in order to reduce risks to financial stability. Recommendations may be public or confidential. They are legally unenforceable. However, regulated entities are obliged to give the CNB reasons for not complying with them. If the CNB assesses the reasons as unconvincing, it may consider the entity's behaviour imprudent and apply all its remedial powers and options.
3. **Communication instruments.** These can be directed universally and thus affect the risk perceptions of market participants. A change in risk perceptions can change behaviour and hence affect the level of risks to financial stability. In addition to analytical and research texts, these instruments include press releases, interviews in the media, presentations at professional events and journal articles by CNB representatives.

Macroprudential instruments can have quantitative or price effects. **Quantitative** instruments consist in introducing certain limits which can limit the scope of activities carried on by financial institutions and the size of their assets and liabilities. The instruments affect how the risks undertaken are reflected in **prices of financial services**. In reality, most instruments affect both prices and quantities. Unlike monetary policy, macroprudential policy more commonly uses instruments which are primarily quantitative in nature.

The definition of macroprudential policy instruments and their appropriate application in the banking and non-banking parts of the financial system is being continuously developed by ESRB working groups. As well as enhancing knowledge of the macroprudential instruments already in place, the ESRB pays great attention to developing macroprudential instruments in areas where macroprudential authorities have so far had no appropriate tools to fulfil their mandate. The CNB is actively involved in the preparation of proposals for new macroprudential instruments and contributes to the creation of best international practices.

[16] CRR/CRD

[17] Article 26bb of Act No. 6/1993 Coll., on Banks, which applies to banks, foreign bank branches, groups of banks defined by type and groups of foreign bank branches defined by type.

III.2.1 The banking sector

The CNB has a set of macroprudential instruments that it applies mostly to the **banking sector**, which has a dominant role in the domestic financial system, a key role in managing most state-guaranteed household savings and a central role in making payments, and functions as a link between the individual parts of the financial system. The CNB deploys these instruments to ensure that the domestic banking sector has strong capitalisation, a stable liquidity position, an appropriate level of credit risks undertaken by banks, and resilience to the adverse phase of the financial and economic cycle and to highly adverse developments generally.

The mandate to enforce these principles is regulated by the EU rules contained in CRD/CRR. The CNB participates in discussions about amendments to these rules in order to maintain or enhance the powers it needs to maintain the stability of the domestic banking sector. The priorities for the period ahead include preparing for the use of instruments focused on specific market sectors and segments which are to be introduced into the EU regulatory framework. These will include additional capital requirements for exposures to particular sectors (such as commercial property). In addition to creating a capital buffer, they could foster an increase in the costs of financing such exposures, which would reduce the incentive to finance excessive volumes of them in future good times. They would also provide market participants with direct information that the national authority considers lending to this sector highly risky.

In accordance with the relevant ESRB recommendation,[18] the CNB's selection of suitable macroprudential instruments for the banking sector is based on **intermediate objectives** (see Table 1) which reflect the existence of multiple sources of systemic risk and their own transmission mechanisms. The key objectives include: (i) to mitigate and prevent excessive credit growth and leverage; (ii) to mitigate and prevent excessive maturity mismatch and market illiquidity; (iii) to limit direct and indirect exposure concentrations; (iv) to limit the systemic impact of misaligned incentives with a view to reducing moral hazard; and (v) to strengthen the resilience of financial infrastructures.

Capital requirements – specifically three types of capital buffers: to cover the risks of systemically important institutions, to cover cyclical risks and to cover structural risks – are the key instrument in the case of the banking sector. The set of instruments targeted at capital may also include a macroprudential leverage ratio (the ratio of capital to assets) and minimum risk weights for assets or parameters for their calculation.

The **capital buffer to cover the risks of systemically important institutions** (a buffer to cover systemic risks or a buffer for other systemically important institutions) is used by the CNB to curb systemic risk arising from the potential destabilisation of important banks or consolidated groups in the Czech Republic. The destabilisation of any of the systemically important 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 economy. The calibration of macroprudential instruments is based on the rule that the buffer for systemically important institutions should not usually be drawn on, even in adverse economic situations.

The CNB also applies the **countercyclical capital buffer** to increase the banking sector's resilience to risks associated with the financial cycle, especially in the form of large fluctuations in lending and the level of credit risk materialisation, which amplify cyclical swings in economic activity. If the CNB assesses that the cyclical component of systemic risk is growing, it increases the countercyclical capital buffer rate, thereby strengthening the future resilience of the Czech banking sector. Conversely, at times of increased financial stress, when credit losses and capital requirements are rising, the CNB is ready to release the buffer so that it can be used to cover potentially increased capital requirements. This instrument should prevent the transmission of an additional shock from the banking sector to the real economy while maintaining the supply of credit from banks to creditworthy clients. The creation of the buffer can also to some extent affect the rapid growth in risky loans, which are reflected in higher capital requirements. However, this is only a possible side-effect, not the primary purpose of the buffer. At the decision of the CNB, banks should begin creating the buffer right at the start of the credit recovery when conditions are "normal". If adverse conditions materialise, as reflected in a drop in the capital ratio, the buffer is released without undue delay.

The CNB is ready to use the **systemic risk buffer** to increase the sector's resilience to excessive concentration of systemic risk, which may concern specific groups of banks and segments of credit exposures.

The other macroprudential instruments used currently by the CNB include **instruments targeted at banks' borrowers** in the area of **mortgage loans**. These instruments mainly include loan-to-income, debt-to income (DTI) and debt service-

[18] Recommendation of the ESRB on intermediate objectives and instruments of macro-prudential policy (ESRB/2013/1), available at https://www.esrb.europa.eu/pub/pdf/recommendations/2013/ESRB_2013_1.en.pdf?bd77ac670a7e6ab9796f3faf57123350.

to-income (DSTI) ratio requirements. Appropriate debt service is also important for maintaining macroeconomic stability. In the area of secured loans, these instruments also include the loan-to-value (LTV) ratio.

The purpose of these instruments is to limit banks' potential credit losses and to mitigate risks associated with overindebtedness of households. LTV limits constitute a requirement for over-collateralisation of loans, making it possible to directly or preventively limit credit losses given default amid a drop in property prices. When setting the LTV limit, the CNB takes into account estimates of possible house price overvaluation. The aim of the DTI and DSTI limits is to reduce the probability of default in an adverse economic situation. The aim of macroprudential policy targeted at property markets is thus not to restrict credit growth and property price growth. In this case, prevention of excessive house price growth is a side effect of the policies applied.

Table 1: Intermediate objectives, specific risks and macroprudential policy instruments for the banking sector

Intermediate objectives	Specific risk	Existence of specific risk in Czech Republic	Key instruments
To mitigate excessive credit growth and leverage	Stronger credit growth accompanied by easing of credit standards	Yes	Countercyclical capital buffer
	Increasing leverage, increasing off-balance-sheet risk	Potential	Macroprudential leverage ratio
	Low level of risk weights in major credit portfolios	Potential	Macroprudential instrument to reduce systemic risk at Member State level (Article 458 of CRR)
	Increased credit and risk growth in specific sector	Potential	Sectoral capital requirements (especially property exposures)
	Risk of spiral between property prices and property purchase loans	Yes	LTV limits
	Risk of excessive indebtedness and debt service of households	Yes	Caps on LTI, DTI, LSTI, DSTI ratios
To mitigate excessive maturity mismatch and market illiquidity	Long-term liquidity risks	Potential	Macroprudential NSFR
	Short-term liquidity risks	No	Macroprudential LCR
To limit exposure concentrations	Concentration of real estate exposures	Potential	Systemic risk buffer
	Concentration of sovereign exposures	Yes	Public finance stress test
To limit misaligned incentives	Potential impact of difficulties in systemically important institutions on stability of financial market and real economy	Yes	Capital buffers based on systemic importance (G-SII and O-SII buffers)
		Yes	Systemic risk buffer
To strengthen the resilience of financial infrastructures	Counterparty default risk, interconnectedness of financial infrastructures	No	Margin and haircut requirements on counterparty clearing Increased disclosure Systemic risk buffer

Note: The main objective of these instruments is to strengthen the resilience of the banking sector. 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).

Risks to financial stability associated with residential property can also be mitigated through measures under Article 458 of the CRR, which can be used to adjust, for example, risk weights in the real estate exposure segment. Targeted application of macroprudential instruments can also help reduce vulnerability outside the residential property area, including in the segment of non-financial corporations.

Besides expressly macroprudential instruments, fulfilment of the CNB's macroprudential objectives can also be aided by microprudential **regulatory and supervisory instruments**, such as liquidity requirements, maturity or currency mismatch limits, caps on the size of exposures to individual institutions, sectors or regions, and various rules, prohibitions and requirements in areas such as internal risk management and asset valuation procedures, internal structures of financial institutions, governance and ownership relations with institutions in other countries.

The elements of macroprudential policy instruments for the banking sector are described in detail in The ESRB Handbook on Operationalising Macro-prudential Policy in the Banking Sector. Nevertheless, the ESRB handbook is not binding on the CNB and may not even represent the best practice in the specific national conditions. The CNB therefore chooses modified procedures when implementing some of these instruments.

III.2.2 The non-banking sector

Macroprudential policy also covers **non-banking components of the financial system**. The CNB assesses the activities and position of non-bank financial institutions on an ongoing basis and, where necessary, responds to changes in systemic risk and resilience. It may apply appropriate macroprudential instruments or initiate changes to the regulatory framework in order to strengthen their legal force.

Developing and implementing **macroprudential policy outside the banking sector** is also one of the ESRB's long-term priorities. The CNB is actively involved in meeting this priority. Its approach in doing so is based on the position that macroprudential policy should be applied to the non-banking part of the financial sector only insofar as non-bank institutions have the potential to adversely affect financial stability, both directly via their critical functions for the real economy and indirectly through the links between non-bank institutions and the banking sector.

The elaboration of suitable instruments and the setting of intermediate objectives for macroprudential policy outside the banking sector create an environment conducive to the gradual development of such policy and to its firm anchoring in the legislative framework. The CNB therefore supports the work of the ESRB, EIOPA and ESMA and other international initiatives targeted at developing possible macroprudential approaches **in the area of insurance companies, pension management companies and investment funds, which form the largest part of the non-banking segment of the Czech financial system**. The CNB considers it vital to create a comprehensive macroprudential framework for the insurance industry, a framework which, via macroprudential instruments, can offer a suitable combination of powers for national supervisory authorities and a stronger incentive for insurance companies themselves to assess the systemic dimension of risks. The CNB also sees a need for a debate about the medium-term systemic risks associated with pension management companies, management companies, pension funds and investment funds. In this area, the CNB supports better management of investment and liquidity risks by investment and pension management funds, management companies and pension management companies, transparency towards holders of fund units regarding risk perceptions, and, last but not least, financial and investment literacy of households.

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