



STRATEGIC FRAMEWORK FOR MACROPRUDENTIAL POLICY AT THE BANK OF SLOVENIA

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List of abbreviations

GDP	Gross domestic product
CRD IV	Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms
CRR	Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012
DGS	Deposit guarantee scheme
DTI	Debt-to-income ratio
DSTI	Debt-service-to-income ratio
EBA	European Banking Authority
ECB	European Central Bank
EC	European Commission
ESCB	European System of Central Banks
ESRB	European Systemic Risk Board
EU	European Union
EWS	Early warning system
GLTDF	Gross loans to deposits flows
LCR	Liquidity coverage ratio
LGD	Loss given default
LTD	Loan-to-deposit ratio
LTi	Loan-to-income ratio
LTV	Loan-to-value ratio
LSTI	Loan-service-to-income ratio
NSFR	Net stable funding ratio
FSB	Financial Stability Board
O-SIIs	Other systemically important institutions
OJ EU	Official Journal of the European Union
OGRS	Official Gazette of the Republic of Slovenia
PD	Probability of default
SSM	Single Supervisory Mechanism
ZBS	Bank of Slovenia Act
ZBan	Banking Act
ZMbNFS	Macroprudential Supervision of the Financial System Act

The strategic framework for macroprudential policy will be updated every three years.

1 INTRODUCTION

The global financial crisis made it clear that existing economic policies were not sufficient to maintain financial stability. The bodies responsible for supervising the financial system lacked proper mandates, analytical tools and instruments for elimination and mitigation of systemic risks. It became evident that a new macroprudential policy was needed to fill the gap. By building resilience to systemic risks, macroprudential policy is an upgrade of microprudential policy. In the event of conflicts between the two, it is the systemic aspect of macroprudential policy that must take precedence.

The aim of macroprudential policy is to identify, monitor and assess systemic risks to financial stability. Its ultimate objective is to safeguard the stability of the financial system. Macroprudential policy increases the resilience of the financial system, and prevents the build-up of systemic risks through the use of macroprudential measures. However, merely defining a policy is not enough. A policy only becomes effective when it is made operational. Following the European Systemic Risk Board (hereinafter: ESRB) recommendation on the intermediate objectives and instruments of macroprudential policy (hereinafter: Recommendation ESRB/2013/1), macroprudential authorities set out their macroprudential policy strategy. This strategy is a key step towards a well-functioning macroprudential policy.

With this document, the Bank of Slovenia is putting in place a strategic framework for the implementation of macroprudential policy to meet its intermediate objectives. In accordance with the Recommendation ESRB/2013/1, it is essential to define and set the intermediate objectives of macroprudential policy. This makes it operational, transparent, accountable, and lays the foundation for selecting the instruments.

The procedure for implementing the macroprudential policy is partly set out in existing legislation at the national and EU level. The Bank of Slovenia's mandate to strive for financial stability through the implementation of macroprudential policy in Slovenia is determined by the Bank of Slovenia Act (hereinafter: ZBS-11), the Banking Act (hereinafter: ZBan-22) and the Macroprudential Supervision of the Financial System Act (hereinafter: ZMbNFS³).

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¹ Official Gazette of the Republic of Slovenia, No. 72/06 with amendments.

² Official Gazette of the Republic of Slovenia, No. 25/15 with amendments.

³ Official Gazette of the Republic of Slovenia, No. 100/13.

2 AIM OF MACROPRUDENTIAL POLICY

The aim of macroprudential policy is to identify, monitor and assess systemic risks to financial stability. Its ultimate objective is to safeguard the stability of the financial system. Macroprudential policy increases the resilience of the financial system, and prevents the build-up of systemic risks by the using macroprudential measures. This ensures financial sector's sustainable contribution to economic growth.⁴

Financial stability is a state in which the financial system is able to carry out financial intermediation without disruption, thereby supporting sustained economic growth.

Systemic risks are defined as risks of disruptions in the financial system that could have serious adverse effects on its functioning and may negatively affect the real economy. There are two dimensions of systemic risk: cyclical and structural. The cyclical dimension captures the evolution of risks in the financial system over time. The structural dimension captures the distribution of risks across the entire financial system. Both dimensions of systemic risk demand specific responses from macroprudential policy.

The global financial crisis has shown that risks to financial stability were not detected in time. Tools to address them were also not sufficient. There was a general belief that threats to financial stability could be successfully managed by microprudential and monetary policy tools. However, this belief proved to be wrong. The severity of the crisis demanded major changes; the introduction of macroprudential policy. It takes into account the risks to financial stability at the national level, the attributes of financial systems as well as cross-country differences of financial cycles.

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⁴ Article 2 of the ZMbnFS; ESRB: ESRB Handbook on Operationalising Macroprudential Policy in the Banking Sector, 2018 (hereinafter: the ESRB Handbook).

Macroprudential policy differs from other economic policies in:⁵

- the objective: limiting systemic risks;
- the scope of analysis: the whole financial system and its interactions with the real economy;
- the set of powers and instruments.

Macroprudential policy may have side effects, resulting in the less than optimal the level of financial intermediation. This may have adverse effects on the real economy. This document outlines the strategic framework used by the Bank of Slovenia to safeguard financial stability, while taking into account the potential side effects. Bank of Slovenia strives to ensure that long-term benefits of macroprudential policy outweigh its potential adverse side effects.

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⁵ Financial Stability Board, IMF and BIS: Macroprudential policy tools and frameworks: update to G20 Finance Ministers and Central Bank Governors, 14 February 2011.

3 INSTITUTIONAL ARRANGEMENTS OF MACROPRUDENTIAL POLICY

The macroprudential mandate in Slovenia is legislated by the ZMbNFS Act. It defines the status, objectives, tasks, powers and operation of the Financial Stability Board (hereinafter: FSB). The FSB is the macroprudential authority in Slovenia. Its task is to shape macroprudential policy, which is then implemented by the Bank of Slovenia, the Insurance Supervision Agency (hereinafter: ISA), and the Securities Market Agency (hereinafter: SMA).

Members of the FSB are two representatives from each supervisory authority and two representatives of the Finance ministry. With exception of the Finance ministry' representatives, each member has one vote. This safeguards the independence of macroprudential policy. The FSB meets at least four times each calendar year.

On the basis of the ESRB Recommendation on the macroprudential mandate of national authorities (hereinafter: Recommendation ESRB/2011/3), and in light of the banking sector's key role in the Slovenian financial system, the Bank of Slovenia plays the lead role in the FSB, The FSB is chaired by the Governor of the Bank of Slovenia.

The ZMbNFS Act also defines how macroprudential supervision is conducted in Slovenia, by specifying the tasks, powers, supervisory measures and instruments, and functioning of the supervisory authorities responsible for macroprudential supervision.

Macroprudential supervision requires close cooperation of the aforementioned supervisory authorities, because the risks inherent in one segment may spill over to the rest of the financial system if they are not identified quickly and effectively. The interconnectedness of financial institutions and markets means that risk monitoring and assessment should be based on a broad set of macroeconomic and financial data and risk indicators.

The effectiveness of macroprudential policy also depends on the cooperation between EU Member States with regards to the use of macroprudential instruments at the national level. The ZMbNFS Act requires the supervisory authorities and the FSB to work together and to exchange data with the supervisory authorities of other EU Member States, the ESRB, the Single Supervisory Mechanism (SSM) and other international financial institutions, to the extent and in ways set out by EU regulations.

Bank of Slovenia' representatives are involved in the relevant committees and working groups of the Eurosystem, the European System of Central Banks (hereinafter: ESCB), the European Banking Authority (hereinafter: EBA) and the ESRB that are involved with macroprudential policy matters.

The FSB may propose that supervisory authorities adopt measures and instruments in response to identified risks to financial stability. Its guidance can take three different forms (recommendations, warnings and instructions), depending on to the severity of the identified risks. Guidance may be issued as part of the ordinary process of identifying, monitoring and mitigating systemic risks carried out by the FSB, or in response to a warning or recommendation issued by the ESRB or the ECB. The supervisory authorities respond according to the principle of "act or explain". The FSB decides on a case-by-case basis as to publish the guidance. As the recipient of the ESRB measures for the banking sector, the Bank of Slovenia reports on measures that have been adopted.

The Bank of Slovenia periodically updates the European institutions of any changes in macroprudential policy. The ECB may, however, tighten macroprudential policy instruments at its own discretion; this process is prescribed by the EU legislation.⁶

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⁶ Directive 2013/36/EU, last amended by Directive 2019/878/EU, also known as the CRD IV.
Regulation (EU) No 468/2014 ECB of 16 April 2014 (ECB/2014/17).

4 LEGAL FRAMEWORK

The European legal framework for macroprudential policy consists of Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms (hereinafter: CRR),⁷ Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (hereinafter: CRD IV),⁸ Regulation (EU) No 1024/2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions⁹ and numerous non-binding acts, such as recommendations and guidelines issued by the ESRB, the ECB and the EBA. Under Regulation (EU) No 1024/2013, the ECB has the an option to tightening measures adopted by national authorities that proceed from European legislation (the CRD IV or the CRR).

The ZBS grants the Bank of Slovenia a mandate to ensure financial stability, while upholding the principles of an open market economy and freedom of competition.

The legal framework for implementing macroprudential policy in Slovenia is set out by the ZMbnFS Act. This law sets out the general guidance for implementing macroprudential policy that applies to the financial system. The CRD IV was transposed into Slovenian legislation by the ZBan-2 Act and its secondary legislation, thus providing a detailed legal framework for the Bank of Slovenia's macroprudential decision making. The process of transposing the CRD V into national legislation is currently underway.

The Bank of Slovenia secondary legislation for implementing macroprudential policy in accordance with the ZMbnFS Act and the ZBan-2 Act. Secondary legislation is approved by the Governing Board of the Bank of Slovenia, and is published in the Official Gazette of the Republic of Slovenia. The Governing Board also issues legal acts addressed to banks in accordance with the ZBan-2 Act.

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⁷ OJ EU L 176, last amended by Regulation (EU) No 2019/876 or the CRR II.

⁸ OJ EU L 176, last amended by Regulation (EU) No 2019/876 or the CRR II.

⁹ OJ EU L 287.

5 RELATIONS BETWEEN POLICIES

5.1 Micro- and macroprudential policy

Micro- and macroprudential policy are closely related, but their short-term objectives may at times be contradictory. However, in the long-term they complement each other. The interaction might be described as: the health of individual financial institutions is a necessary but not a sufficient condition for financial stability.¹⁰ If the conflict between the two policies arises, it is the macroprudential policy, with the systemic aspect, that must take precedence.

The objective of microprudential supervision is to ensure safety and solidity of individual banks. Another objective of microprudential supervision is to reduce the likelihood of bank failures. The purpose and scope of the microprudential supervision conducted by the Bank of Slovenia are set out in the ZBan-2 Act. Under this act, the banking supervision, among other things, focuses on assessing the risks that banks are or might be exposed to in their operations, and on assessing financial standing and the risks that banks are or might be exposed to in due to relations with other business entities. Microprudential supervisory activities also include checks on supervised entities' compliance with macroprudential measures.

The two policies encourage the build-up of capital and liquidity reserves in the upswing of the financial cycle. However, there may be differences in the timing of implementation of measures and the scale of the required reserves. For example, microprudential policy requires a higher level of bank capitalisation when systemic risks materialise, while macroprudential policy tries to stabilise the system as a whole, and focuses on preventing excessive deleveraging.

5.2 Monetary and macroprudential policy

Monetary and macroprudential policy overlap in several aspects, as they both affect the financial system. Monetary policy is formulated at the Eurosystem, for the entire euro area, while macroprudential policy largely remains in the national domain.

Monetary policy may impact financial stability via its effect on:

- the level of interest rates, and consequently on borrowing costs;
- the risk appetite of financial intermediaries;
- asset prices and exchange rates

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¹⁰ Osiński, J., Seal, K. and Hoogduin, L.: Macroprudential and Microprudential Policies: Towards Cohabitation, IMF Staff Discussion Note (SDN 13/05), June 2013.

The Bank of Slovenia will monitor the effects of monetary policy on financial stability. It will take them into account when formulating its macroprudential policy.

6 INTERMEDIATE OBJECTIVES OF MACROPRUDENTIAL POLICY

The purpose of the intermediate macroprudential policy objectives is to operationalise the ultimate objective. In addition to making the macroprudential policy operational, the objectives also increase the transparency and accountability of macroprudential measures.

The ESRB recommends that macroprudential authorities pursue intermediate objectives to help meet the ultimate objective of macroprudential policy: a stable and resilient financial system. In accordance with the Recommendation ESRB/2013/1, it is essential to define and set the intermediate objectives of macroprudential policy. Slovenia has introduced the following intermediate objectives:¹¹

- a) To mitigate and prevent excessive credit growth and excessive leverage;
- b) To mitigate and prevent excessive maturity mismatch and market illiquidity;
- c) To limit direct and indirect exposures concentrations;
- d) To limit the systemic impact of misaligned incentives with a view to reducing moral hazard;
- e) To strengthen the resilience of financial infrastructures.

The Bank of Slovenia has a set of indicators to monitor the evolution of systemic risks and to assess whether the intermediate objectives are achieved. The indicators also guide the decisions in connection with the activation, deactivation and calibration of macroprudential instruments. A list of potential indicators is provided in Table 1.

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¹¹ Described in detail in the ESRB Handbook, 2018.

Table 1: List of potential indicators used by the Bank of Slovenia to assess the attainment of individual intermediate objectives

To mitigate and prevent excessive credit growth and leverage
Year-on-year growth in net lending to the non-banking sector
Credit-to-GDP gap
Leverage
Real estate prices
To mitigate and prevent excessive maturity mismatch and market illiquidity
LTD ratio for the non-banking sector
Share of liquid assets to total assets
Share of wholesale funding to total assets
Proportion of sight deposits held by non-banks
To limit direct and indirect exposures concentration
Contagion risk
Share of investments in government securities to total assets
Share of deposits accounted for by the 30 largest depositors
Share of 20 largest exposures to capital
To limit the systemic impact of misaligned incentives with a view to reducing moral hazard
Return on equity
Net interest margin
Share of the banking system's total assets to GDP
Market share of the five largest banks
To strengthen the resilience of financial infrastructure
Year-on-year growth in the value and number of customers' payment transactions
Net issued currency in circulation
Proportion of leasing business in arrears for more than 90 days
Return on equity of leasing companies

Note: The set of indicators is illustrative in nature, and will be expanded or modified over time depending on the identified systemic risks and the evolution of the financial system (i.e. financial entities, markets, instruments etc.). The Bank of Slovenia will not publish the indicator threshold levels that guide the decisions in connection with the introduction, deactivation and calibration of macroprudential instruments.

Source: Bank of Slovenia.

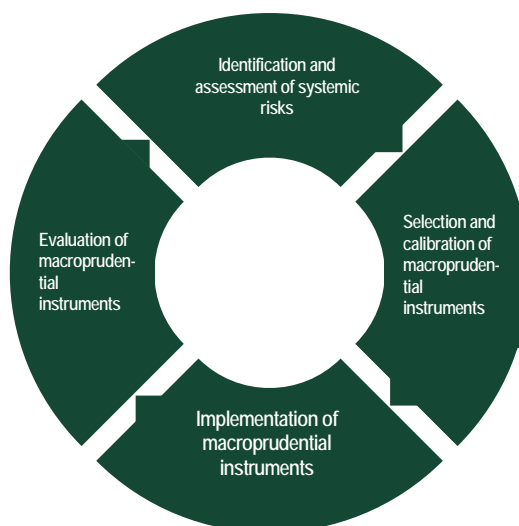
7 STAGES IN THE MACROPRUDENTIAL POLICY DECISION-MAKING PROCESS

The macroprudential policy decision-making process has the following stages:¹²

- identification and assessment of systemic risks;
- selection and formulation (calibration) of the macroprudential instruments;
- implementation of the macroprudential instruments;
- evaluation of macroprudential policy and the macroprudential instruments.

The stages of the macroprudential policy cycle are illustrated in Figure 1. In practice they are closely linked, and cannot be considered separately. Each of the four stages of the macroprudential policy cycle is described below.

Figure 1: Macroprudential policy cycle



Source: ESRB Handbook, 2018.

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¹² Taken from the ESRB Handbook, 2018.

8 IDENTIFICATION AND ASSESSMENT OF SYSTEMIC RISKS

The Bank of Slovenia has put in place a process for identifying systemic risks. The results of this process are published in the Bank of Slovenia's regular publications, including in the Financial Stability Review¹³ and the Monthly report on bank performance.¹⁴ Several tools are used at the Bank of Slovenia to identify systemic risks, including:

8.1 Risk dashboard

The risk dashboard provides a direct link between systemic risks and the intermediate macroprudential policy objectives. It is a starting point for the decision whether to introduce macroprudential measures. The risk dashboard displays the level of risks in the Slovenian financial system. The risks are colour coded using a four-colour scale: green (low risk), yellow (moderate risk), orange (elevated risk) and red (high risk). The final assessment also includes expert judgment and is therefore a combination of quantitative and qualitative factors.

The risk dashboard classifies the risks with regard to the intermediate macroprudential policy objectives. Indicators have threshold values that show whether the intermediate objectives are met. The forecasts for the evolution of risks are displayed with an arrow that indicates increasing, decreasing or unchanged risk.

The risk dashboard also monitors the level of contagion risk, which can impact bank solvency.

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¹³ <https://www.bsi.si/en/publications/financial-stability-review>

¹⁴ <https://www.bsi.si/en/publications/monthly-report-on-bank-performance>

8.2 Early warning system

The early warning system (hereinafter: EWS) provides decision makers with prior information about the build-up of risks for banks and the banking system. The purpose of the EWS is to identify periods of strengthening financial imbalances, because they increase the risk of banking crises. The EWS makes it possible to decompose the probability of a banking crisis into factors related to individual banks, the banking system and the macroeconomic environment. The tool helps identify the main factors of that make the banking sector vulnerable. Therefore, EWS supports macroprudential policy decision making.

The Bank of Slovenia uses the EWS to test the forecasting power of its indicators. When selecting the indicators that best forecast a banking crisis, the Bank of Slovenia follows the ESRB recommendation on guidance for setting countercyclical buffer rates (hereinafter: Recommendation ESRB/2014/1).

8.3 Stress tests

Macro stress tests, which take a top-down approach, are used to identify potential systemic risks. They help assess the potential impact and the consequences of an unlikely but plausible macroeconomic scenario. They forecast the impact of baseline and adverse macroeconomic scenarios on bank balance sheet items, profitability and solvency over a three-year period.

The macro stress tests complement the micro stress tests, which take a bottom-up approach. The bottom-up supervisory stress tests analyse the stability of individual banks. They are conducted by banks using internal models and data. The supervisor provides guidance in the matter. The macro stress tests apply the same methodology to all banks, and are based on data from the banks' regulatory reporting.

8.4 Identification of other systemically important institutions and analysis of structural risks

The Bank of Slovenia meaningfully uses the EBA methodology¹⁵ to regularly identify other systemically important institutions (O-SIIs) and to assess their importance to the financial system. The reason for the special treatment of O-SIIs is that their failure may endanger financial stability, and may lead to significantly larger adverse effects on the financial system and the entire economy compared to failure of systemically less significant institution. Systemically important institutions are identified based on the size, importance, complexity and, cross-border activity, and interconnectedness. Capital buffer is set accordingly. In addition, the Bank of Slovenia is developing a more extensive framework for monitoring, assessing and analysing structural risks, which encompasses structural risks at the level of banks and the entire financial system.

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¹⁵ Guidelines on the criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions (O-SIIs) (EBA/GL/2014/10; 16 December 2014).

9 SELECTION AND CALIBRATION OF MACROPRUDENTIAL INSTRUMENTS

Bank of Slovenia will formulate its macroprudential policy on the basis of assessment of risks in the financial system. It will tailor the choice of macroprudential measures to the type of identified risks (cyclical or structural).

9.1 Toolkit of instruments

Based on the identified level of systemic risks and the resilience of the banking system, the Bank of Slovenia will select suitable macroprudential instruments to prevent further build-up of systemic risks and to further strengthen the resilience of the banking system. The macroprudential instruments can be classified into three main groups: liquidity instruments, capital instruments and borrower-based instruments. In the table below, they are linked to intermediate objectives they address (see Table 2).

Table 2: List of macroprudential instruments that the Bank of Slovenia can use in connection with intermediate objectives of macroprudential policy

INTERMEDIATE OBJECTIVE	INSTRUMENT	TYPE OF INSTRUMENT
To mitigate and prevent excessive credit growth and leverage	Loan-to-deposit ratio (LTD)	Liquidity instrument
	Countercyclical capital buffer	Capital instrument
	Sectoral capital requirements	Capital instrument
	Macroprudential leverage ratio	Capital instrument
	Loan-to-value ratio (LTV)	Borrower-based instrument
	Debt-service-to-income ratio (DSTI)	Borrower-based instrument
	Loan-service-to-income ratio (LSTI)	Borrower-based instrument
	Loan-to-income ratio (LTI)	Borrower-based instrument
	Debt-to-income ratio (DTI)	Borrower-based instrument
	Systemic risk buffer	Capital instrument
To mitigate and prevent excessive maturity mismatch and market illiquidity	Gross loans to deposits flows (GLTDF)	Liquidity instrument
	Liquidity coverage ratio (LCR)	Liquidity instrument
	Net stable funding ratio (NSFR)	Liquidity instrument
	Additional liquidity requirements	Liquidity instrument
	Macroprudential unweighted limit to less stable funding ratio (LTD)	Liquidity instrument
To limit the direct and indirect exposure concentrations	Large exposure restrictions	
	Systemic risk buffer	Capital instrument
To limit the systemic impact of misaligned incentives with a view to reducing moral hazard	Limits on deposit rates	Liquidity instrument
	Capital buffers for other systemically important institutions (O-SIII buffer)	Capital instrument
To strengthen the resilience of financial infrastructures	Systemic risk buffer	Capital instrument
	Increased disclosure	

Note: In case new intermediate objectives or macroprudential instruments are introduced, Bank of Slovenia will update the list of intermediate objectives and instruments accordingly. Additional macroprudential instruments will be selected based on their effectiveness and efficiency in addressing the identified risks in the financial system.

Source: Bank of Slovenia.

The macroprudential policy instruments currently in place are described on the [Bank of Slovenia's website](#).

9.2 Principles of instrument selection and calibration

When selecting and calibrating macroprudential instruments the Bank of Slovenia will strive to abide by the following principles:

- 1) **effectiveness**: the extent to which the instrument is able to rectify market deficiencies, and to contribute towards achieving the ultimate and intermediate macroprudential policy objectives;
- 2) **efficiency**: the ability of the instrument to achieve ultimate and intermediate macroprudential objectives at minimal cost or by causing minimal side effects;
- 3) **proportionality**: the burden that the instrument places on individual institution is proportionate to its contribution to systemic risks, while taking into account the systemic importance of the individual institution;
- 4) **simplicity**: the definition of the instrument, its requirements and the external communication should be simple, to facilitate better understanding;
- 5) **avoidance of regulatory arbitrage**:¹⁶ when designing and selecting the instrument. This can entail a simultaneous usage of several instruments. The principle can also be applied through intensive coordination between supervisory authorities with a macroprudential mandate;
- 6) **avoidance of negative cross-border spillovers**: negative cross-border effects will be assessed and minimised when selecting, calibrating, activating and deactivating macroprudential instruments;
- 7) **consideration of national attributes**: the characteristics of the Slovenian banking system will be taken into account when selecting and calibrating macroprudential instruments.

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¹⁶ Regulatory arbitrage consists of “those financial transactions designed specifically to reduce costs or capture profit opportunities created by differential regulations or laws.” Partnoy, F. (1997). Financial Derivatives and the Costs of Regulatory Arbitrage. *Journal of Corporation Law*, 22, 211.

10 IMPLEMENTATION OF MACROPRUDENTIAL INSTRUMENTS

The Bank of Slovenia will use a guided discretion approach when implementing macroprudential policy. It will also strive to follow the principles of effective macroprudential policy (outlined in section 10.2). Special attention will be devoted to communication of macroprudential measures with the interested stakeholders.

10.1 Guided discretion approach

The Bank of Slovenia will use a guided discretion approach in its identification of risks, its selection and calibration of macroprudential instruments. Such approach allows the use of discretion within predefined a framework. The guided discretion approach largely combines the strengths of a discretionary approach with those of a rules-based approach (see Table 3).

Table 3: Strengths and weaknesses of rules based and discretionary approaches when applied to macroprudential policy

	Strengths	Weaknesses
Rules-based approach	<ul style="list-style-type: none"> transparent predictable easy to communicate relies on quantitative data macroprudential authority can build up reputation (time consistency) eases expectation formation rules can act as automatic stabiliser no need for continual justification or express decisions 	<ul style="list-style-type: none"> may be hard to design appropriate rules given the inherent uncertainty rather static concept does not allow discretion limited experience with macroprudential instruments (additional experiences may make it difficult to follow the rules) data may not be available, or is available too late, limited experience when choosing indicators indicators are influenced by policy areas other than macroprudential policy (e.g. fiscal policy) difficult to measure success in achieving the ultimate macroprudential policy objectives, including the prevention and mitigation of systemic risks a variable can no longer be a reliable indicator of underlying risks when it becomes a target of regulation (the Lucas critique)
Discretionary approach	<ul style="list-style-type: none"> flexible tool, which can be tailored to current situation can rely on qualitative data can allow decision makers to learn from interactions between macroprudential policy, the financial system and the economy ensures the ability to react to unforeseen consequences 	<ul style="list-style-type: none"> expert judgement, less transparent risk of inaction bias discretionary policy can be time inconsistent can be subjected to external pressures

Source: ESRB Handbook, 2018.

10.2 Principles of effective macroprudential policy

When formulating and implementing macroprudential policy the Bank of Slovenia will strive to abide by the following principles:

- 1) **Independence of macroprudential policy**, the short-term side effects of macroprudential policy are often more evident and easier to measure than its long-term benefits. Macroprudential policy may come under pressure because of its countercyclical actions, therefore its independence is vital.
- 2) **Transparent communications** improves the understanding of macroprudential policy among the expert and general public. It is important that macroprudential policy decisions are published and explained, except when publication would cause risks to financial stability.
- 3) **Accountability** is the Bank of Slovenia's legal and political commitment to explaining and clarifying its decisions to the people of Slovenia and their elected representatives. It is closely linked to transparency, which is an economic category, while accountability is a legal category.
- 4) **Overcoming inaction bias** entails a proactive role in designing and conducting macroprudential supervision.
- 5) **The guided discretion approach** allows for the use of discretion within a predefined framework.
- 6) **Flexibility**, macroprudential policy must have an adequate toolkit of macroprudential instruments to limit or prevent the build up of systemic risks.
- 7) **Creation of an adequate legal framework**, macroprudential policy needs a clear legal framework that allows it to be effective.
- 8) **Coordination** with microprudential, monetary policy and relevant international institutions helps to make the implementation of macroprudential policy more effective.

10.3 Communication with stakeholders

Communication covers all four stages of macroprudential policy decision-making process. It includes communication with all the interested stakeholders such as target institutions (credit institutions), EU institutions, expert and general public.

The systemic risk assessment is published in the Bank of Slovenia's regular reports and publications. The key findings regarding systemic risks are presented to the general public in press releases and during journalist briefings. Banks and the expert public are also informed of the current developments at conferences and seminars. If necessary, Bank of Slovenia also publishes FAQs on its website. The channel and the complexity of communication are tailored to the target audience.

11 EVALUATION OF MACROPRUDENTIAL POLICY AND INSTRUMENTS

The evaluation of macroprudential policy encompasses evaluations of the individual instruments, and of macroprudential policy as a whole. The Bank of Slovenia will endeavour to examine these aspects:

- 1) **suitability of the instrument:** can the activated instrument address the identified systemic risk;
- 2) **effectiveness of the instrument:** the extent to which the activated instrument has addressed the identified systemic risk and contributed to achieving intermediate objectives of macroprudential policy;
- 3) **efficiency of the instrument:** the extent to which the long-term benefits of the measure outweigh its short-term side effects. Efficiency is of particular relevance when assessing the cyclical measures;
- 4) **proportionality:** the extent to which the effect of the measure on the individual institution is in line with its contribution to systemic risk. The systemic importance of the individual institution is also taken into account;
- 5) **avoidance of regulatory arbitrage:** the extent to which the opportunity for regulatory arbitrage has been limited;
- 6) **avoidance of negative cross-border spillovers:** the extent to which the macroprudential measure may cause negative cross-border effects, and to what extent they have been addressed.

12 BANK RECOVERY AND RESOLUTION SYSTEM AND DEPOSIT GUARANTEE SCHEME

Macroprudential policy can reduce the likelihood of future financial crises, but it cannot eliminate them. Therefore, it is vital that crisis management mechanisms are put in place. Properly established recovery and resolution systems can support macroprudential policy objectives. Effective and credible recovery and resolution systems can strengthen market discipline, and reduce incentives to take up excessive risks, and thus reduce the need for macroprudential interventions.

To strengthen the economic and monetary union, and to help safeguard financial stability, a banking union has been established at the EU level. It has three pillars: the Single Supervisory Mechanism (SSM), the Single Resolution Mechanism (SRM¹⁷) and a standardised approach to deposit guarantee schemes (DGSD¹⁸).

The anticipated changes to financial security networks in the EU and in Slovenia will place a greater emphasis on strengthening crisis readiness and on crisis management, to prevent or mitigate the macroeconomic, intersectoral or fiscal consequences of potential crises. These changes are expected to positively affect financial stability.

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¹⁷ Regulation (EU) No 806/2014, OJ L 225.

¹⁸ Directive 2014/49/EU, OJ L 173.

13 APPENDIX

13.1 Transmission mechanisms of macroprudential instruments

One of the most important metrics for evaluating the potential performance of instruments is their expected transmission mechanism. This section gives a general overview of the transmission mechanisms for the three main groups of macroprudential instruments: liquidity instruments, capital instruments and borrower-based instruments.

Capital instruments address externalities arising from strategic complementarities. The use of these instruments reduces risks, and provides credit institutions with buffers that may be used during the contractionary phase of financial cycle.

Borrower-based instruments set quantitative constraints. Like capital instruments, they are designed to tackle the externalities caused by strategic complementarity, however they address borrowers rather than lenders. Borrower-based instruments include LTV, LTI, DSTI and, in part, large exposures restrictions.

Capital and borrower-based instruments can also be used to reduce externalities caused by interconnectedness. The appropriate instrument include sectoral capital requirements, the systemic risk buffer, the O-SII buffer and large exposures restrictions.

Liquidity instruments aim to reduce banks' vulnerabilities in arising from (excessive) exposure to sources of unstable funding, and to reduce the probability of shocks on the funding side. Examples of liquidity instruments include LCR, NSFR, additional liquidity requirements, unweighted limit on less stable funding (LTD ratio), GLTDF and constraints on excessive growth in deposit interest rates.

Figure 2 illustrates the pathways by which the tightening of three types macroprudential instruments can affect the credit cycle or increase resilience. Slovene financial system is dominated by banks, so bank responses (green fields) are more prominent. A relaxation of macroprudential measures follows the contraction of the financial cycle. Its aim is to reduce procyclicality. When considering buffers, the effect of their release is different in crises and non-crises periods. When there is no crisis, the transmission mechanism is roughly the opposite than when the buffer is build-up. In crisis, the banks may increase their voluntary buffers, due to their risk aversion. Ideally, the release of buffers would encourage countercyclical behaviour as it allows banks to absorb losses. Capital tools that are (potentially) cyclically flexible include the countercyclical capital buffer, sectoral capital requirements, and leverage ratio.

Figure 2: Transmission mechanisms for capital instruments, liquidity instruments and borrower-based instruments (taken from CGFS: Operationalising the selection and application of macroprudential instruments, CGFS Papers No 48; December 2012)

