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Macroprudential Diagnostics

first quarter of 2020

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Introductory remarks

The macroprudential diagnostic process consists of assessing any macroeconomic and financial relations and developments that might result in the disruption of financial stability. In the process, individual signals indicating an increased level of risk are detected based on calibrations using statistical methods, regulatory standards or expert estimates. They are then synthesised in a risk map indicating the level and dynamics of vulnerability, thus facilitating the identification of systemic risk, which includes the definition of its nature (structural or cyclical), location (segment of the system in which it is developing) and source (for instance, identifying whether the risk reflects disruptions on the demand or on the supply side). With regard to such diagnostics, instruments are optimised and the intensity of measures is calibrated in order to address the risks as efficiently as possible, reduce regulatory risk, including that of inaction bias, and minimise potential negative spillovers to other sectors as well as unexpected cross-border effects. What is more, market participants are thus informed of identified vulnerabilities and risks that might materialise and jeopardise financial stability.

The previous issue of Macroprudential Diagnostics identified trade tensions between the USA and the EU, and the uncertainty regarding future trade relations between the UK and the EU as threats that might jeopardise financial stability. There was also the uncertainty regarding the growth of the German economy and the impact of stronger slowdown in Chinese economy on global growth.

However, shock ultimately manifested itself in the form of a coronavirus pandemic that was not foreseen by that or any other analysis prepared in late 2019 and early 2020. Activities aimed at forestalling the spread of the virus resulted in consequences for the global and domestic economy that are still hard to comprehend. Although it is, at the moment, assumed that the halt in economic activity will be limited to several months, this shock, paired with already present short-term impacts, could result in a series of unfavourable effects on global economic growth and financial stability in the longer run.

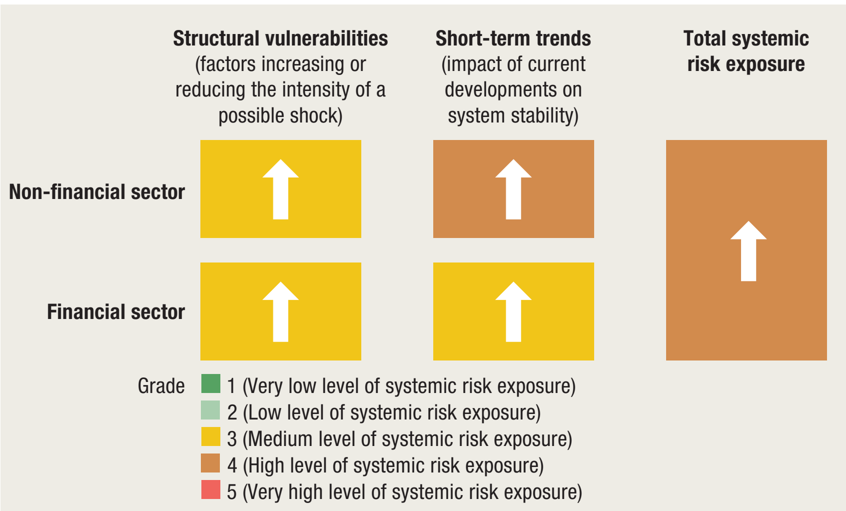
The concept of this extraordinary issue of *Macroprudential diagnostics* is adapted to the latest events. The first section of the publication presents an analysis of systemic risks based on the latest available data, while the second reviews the activities of the Government, the CNB and HANFA directed at preserving financial stability in the Republic of Croatia. The third section gives an overview of recent macroprudential measures in the Republic of Croatia and other EEA countries, with a special focus on measures associated with reactions to the consequences of the pandemic (Chapter 3.3).

1 Identification of systemic risks

The crisis caused by the coronavirus outbreak affected an exceptionally great number of countries almost simultaneously, and the macroeconomic shock to both the supply and the demand side spilled over to the financial system. The intensity and cost of this crisis will depend on the duration and intensity of economic activity limitations and generally on the time required for life and economic activities to normalise. As a result, the number of channels through which this crisis affects financial stability is exceptionally high – from epidemiological measures and activities of governments, central banks and other financial market regulators aiming at mitigating the consequence of the crisis to those associated with a strong contraction of the domestic economy and the majority of the world's economies, as well as marked turbulences in the financial markets.

Total systemic risk exposure at the end of the first quarter of 2020 is assessed as high (Figure 1). The increase in the overall risk assessment compared to the previous issue of Macroprudential Diagnostics was

Figure 1 Risk map, first quarter of 2020

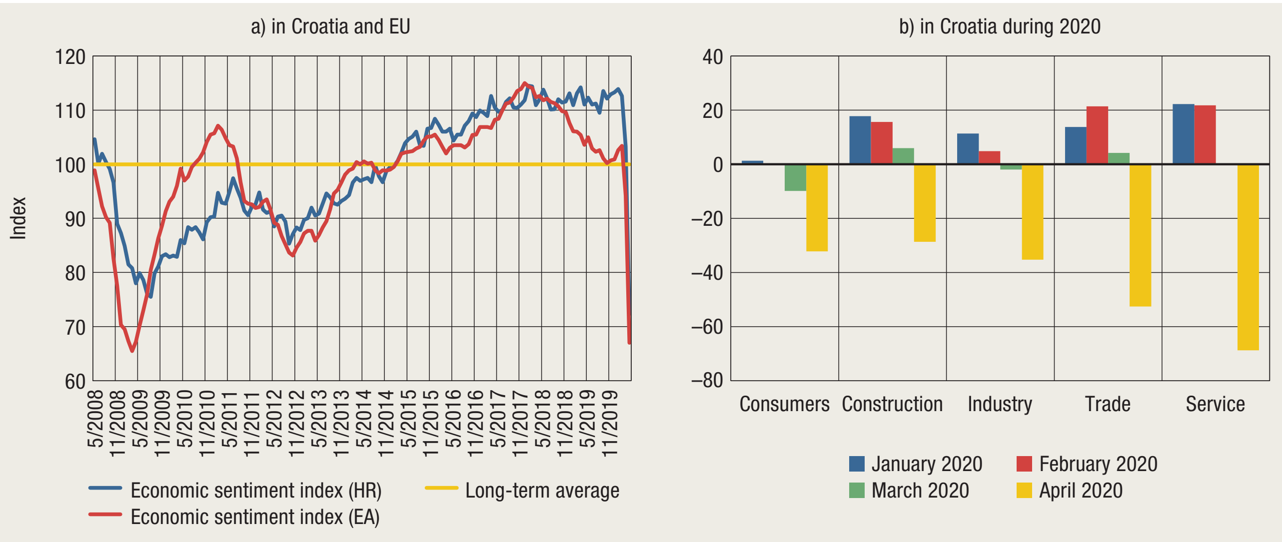


Note: The arrows indicate changes from the risk map in the third quarter of 2019 published in Macroprudential Diagnostics No. 10 (February 2020).
Source: CNB.

caused by strong macroeconomic and financial shocks associated with the epidemiologic measures to prevent the spread of the coronavirus that have negatively affected most cyclical and some of the structural components of the systemic risk of individual sectors. In response to these shocks, a series of economic, fiscal, monetary and supervisory measures aimed at stabilising the macroeconomic and financial situation were activated (Chapter 2).

Current economic trends in Croatia deteriorated strongly after the escalation of the coronavirus pandemic. The first data available for March and the first half of April indicate a strong contraction of economic activity. Thus, there was a decline in the number of employed persons and a substantial growth in the number of unemployed persons (1.5% down and 9.9% up, respectively, March 2020). These unfavourable trends were mitigated by state measures intended to preserve jobs. According to CES, some 84 thousand employers relied on this measure for slightly less than half a million of their employees. Tax Administration data indicated a substantial drop in fiscalised receipts. In the period from 24 February to 3 May 2020, they reached some 33% of those in the comparable period last year for all activities, while accommodation and food service activities registered a fall of as much as 92%. Similar trends are indicated by consumer and business confidence surveys conducted in March and April (Figure 2), with a steep decline in the economic sentiment index, which dropped to early 2009-levels. Especially prominent are pessimistic expectations regarding services and trade and the expected economic and financial situation of households in 12 months compared to the situation at the time of the survey.

Figure 2 Developments in consumer and business confidence



Sources: Eurostat, European Commission, IPSOS and data seasonally adjusted by the CNB.

Due to the extremely strong shock. which resulted in the fall of production, especially of services, capital investments and domestic and foreign demand all at the same time, the decline in economic activity this year could surpass that in the crisis of 2008. Domestic demand could be additionally reduced by great uncertainty in the labour market and serious deterioration of business and consumer optimism, while the intensity of the downward spiral in foreign demand will depend on the duration of strict epidemiological measures and the speed of recovery in Croatia's main trade partners, especially in Italy and Germany. As a result of a high share of economic activities vulnerable to social distancing measures and the small share of employees who regularly or occasionally work remotely, Croatia might be among the countries where negative effects of these measures will be more prominent.

Despite their favourable economic impact, the Government's measures to mitigate the consequences of epidemiological measures substantially increase government financing needs. The fall in personal consumption and imports will result in the additional deterioration of fiscal indicators amid reduced budget revenues, while measures aimed at the stabilisation of the economy suffering under the COVID-19 crisis will increase budget expenditures. The stability of public finances will also be negatively affected by turbulent developments in financial markets, especially due to structural characteristics, such as high public debt-to-GDP ratio and a high share of foreign currency-related debt in total public debt.

Although the consequences of the crisis have been gradually spilling over to all economic sectors, risks for corporations have been first to materialise due to the strong fall of income and traditionally high fixed costs. The Government's measures aimed at preserving jobs and the central bank's activities alleviated pressures on corporate liquidity and made their access to capital easier. However, when the Government's measures expire, their costs will rise again. There is also high uncertainty regarding their capacity to adapt and bridge the period necessary for their operations to stabilise, but also about the possibility of epidemiological measures being tightened again in the event of a second wave of the epidemic. The financing of corporate operations during the crisis might largely be effected through the increase of short-term debt paired with the utilisation of own accumulated funds from previous years, which increases risks and reduces corporate resilience. In contrast, some companies could adapt to new conditions, i.e. surplus capacity, by reducing their balance sheets, which would consequently lead to lower demand for loans.

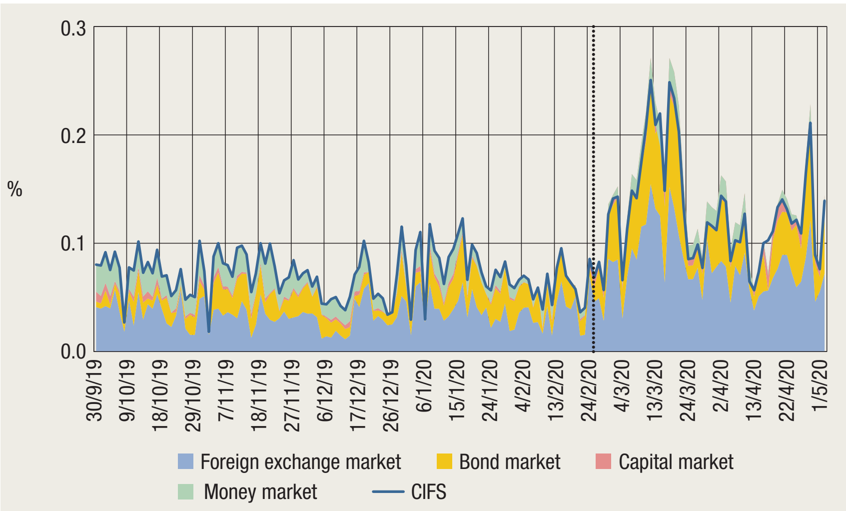
The expected negative developments in the labour market increase household vulnerability, while the growth of unemployment and the expected decrease in income are likely to reduce household demand for new loans. The Government's measures aimed at preserving employment have decelerated and mitigated the intensity of the deterioration of the labour market conditions. In the past period, household debt increased due to the relatively strong growth of general-purpose cash loans and housing loans. The growth of general-purpose cash loans started to slow down before the outbreak of the crisis because of the tightening of measures for granting consumer loans by which banks complied with the CNB's Recommendation on actions in granting non-housing consumer loans. On the other hand, the acceleration in the growth of housing loans was connected to the Government's housing loans subsidy programme in the competence of the Agency for Transactions and Mediation in Immovable Properties (APN) that was carried out in autumn 2019 and spring 2020, this latter, however, being much smaller in volume than in the previous cycles.

The real estate market is expected to face a significant slowdown in activity and a possible stagnation or fall in prices. This increases the risk of poor market liquidity and decline in the value of collateral, especially in cases of highly indebted loan users. After the strong growth in real estate prices in the previous period, the rate of which stood at 10% at the end of 2019 and was among the highest in the EU, the epidemiological measures for combating the coronavirus pandemic in March and April practically froze the sale and short-term lease market. According to the information available, most of the activity following the introduction of measures was related to previously agreed transactions, primarily those agreed under the Government's programme of subsidising APN loans. In these new circumstances, this programme, instead of being procyclical, could work counter-cyclically. Despite still favourable financing conditions, the growth in unemployment could lead to a decline in demand for real estate paired with a simultaneous growth in the supply of flats that were previously intended for short-term leasing. Prices of real estate in Zagreb will also be affected by the consequences of the earthquake, which indicated the importance of the age of a real estate property and the quality of its construction. This could lead to the segmentation of prices under these criteria. In addition, depending on the duration of the crisis, foreign demand for domestic real estate could also decrease, especially for properties on the Adriatic coast.

The exceptional volatility in the financial markets following the outbreak of the crisis, pushed short-term risks in this segment strongly upwards. They are now assessed as high. International financial markets have been marked by strong fluctuations in prices of almost all types of assets, by the freezing of individual market segments and by the growth in demand for cash and highly liquid types of assets. In these circumstances, the leading central banks have announced unprecedented quantities of liquidity in order, combined with their governments' measures, to prevent panic and try to ensure an uninterrupted flow of funding to the financial and the real sectors, focusing on entities whose operations have especially suffered from epidemiological measures.

The tightening of the conditions in the domestic financial market was temporarily reflected in the growth of the value and volatility of the financial stress index and risk premium (Figure 3). From the perspective of financial stability, it was especially important to withstand downward pressures on the exchange rate of the kuna against the euro. Therefore, the CNB intervened several times on the foreign exchange market (Chapter 2). As pressure eased, the direction of the index of financial stresses reversed. It is noteworthy, however, that the level of international reserves remains at a satisfactory level. The value of the CROBEX stock index sizeably decreased and the turbulences and liquidity issues in the bond market were mitigated though the CNB's activities, which also stabilised the yields on government bonds. The yields on international issues of government bonds grew more than those on domestic issues and the country's risk premium increased as well, almost doubling from the end of January to the end of April 2020.

Figure 3 Developments in the financial stress index for Croatia



Notes: The dotted line marks the first recorded case of coronavirus disease in RC (25 February 2020). Data shown are data available as at 6 May 2020.
Sources: Bloomberg and CNB calculations.

Despite the uncertainty regarding the consequences of this crisis, the stability of the banking system has been ensured through high levels of liquidity and capital and high coverage of non-performing loans. However, the impact of the coronavirus pandemic has started to manifest itself in short-term indicators of bank operations, although it has in this phase been significantly mitigated by the CNB's and the

Government's measures; the Government's guarantees for corporate loans combined with the CNB's temporarily relaxed regulatory requirements and ample system liquidity have provided banks, and partly their clients, with additional time to adapt to new circumstances and to bridge the period during which their usual operations are impossible (Chapter 2). Despite all this, it is unlikely that these measures will be able to fully absorb the consequences of the crisis and the long-term negative impact on banks will depend on its intensity and duration.

Bank profitability will decrease in the upcoming period due to the fall in interest income and higher impairment costs, which, together with the uncertainty regarding future litigation costs increases short-term risks in the financial system. In the circumstances of historically low interest rates, banks' interest income in 2019 increased exclusively due to general-purpose cash loans. The demand for these loans started decelerating before the crisis, while the growth of housing loans accelerated. However, the expected negative developments in the labour market and eroded consumer optimism, as well as the resulting halt in the real estate market, might cause interest income from loans to households to start to fall. If we exclude the compelling need of corporations for short-term liquidity, other corporate loans are also expected to decline. At the same time, income from the government sector might grow due to an increased need for financing. The downward trend in impairment costs might be reversed due to the expected economic contraction. However, the supervisory measures undertaken (Chapter 2) will postpone the materialisation of these costs and make it easier for banks to offer payment deferrals and/or new lending to debtors who, due to the crisis, are faced with substantial cuts to their income or have lost their jobs. In addition, one should not forget that banking sector risks have also increased due to uncertainties regarding possible expenses for litigation having to do with loans with a currency clause in CHF or a variable interest rate. The high liquidity coverage ratio (LCR), which substantially exceeds the regulatory (temporarily suspended) minimum of 100%, received an additional boost from the CNB's March and April measures (Chapter 2).

Unfavourable economic developments will halt the trend of visible improvement in the quality of banks' credit portfolios, while the growth of deposit euroisation might additionally increase credit risk by intensifying euro lending again. The quality of bank placements in the previous period improved due to the inflow of newly approved loans, recovery of old non-performing loans and their sale. However, despite the relaxation of the CNB's regulations regarding the classification of bad loans (Chapter 2) as a result of which they are not expected to grow noticeably in the first year, unfavourable economic developments might still contribute to their growth in the periods to come. In contrast to the situation after the beginning of the global financial crisis, today there is a market for non-performing loans in Croatia, which might help banks to shorten the cycle of their growth and reduction. The years-long growth in the share of loans in domestic currency and with a fixed interest rate in total loans decreased banks' potential credit risk. However, the level of this structural risk remains high. At the same time, banks' greater reliance on domestic sources of financing mitigated their structural vulnerabilities by reducing their dependence on foreign capital, which is especially visible in crisis situations and high uncertainty regarding global real and financial developments. However, given the fact that domestic sources of financing are predominantly short-term, such a financing structure increases the risk of maturity transformation, as well as the risk of currency mismatch arising from the increase in deposit euroisation, which commonly characterises crisis times in Croatia. This might stop the upward trend in kuna lending because banks, in order to mitigate the potential growth of currency risk arising from the growth of financing sources in euro, will grant increasingly more loans indexed to the euro, which will, in turn, lead to the growth of currency-induced credit risk. In addition, structural risks arising from the banking market concentration as well as from banks' balance sheets continue to be characteristic for the sector.

Overall, the unfavourable macroeconomic developments and measures prompted by the coronavirus pandemic will increase both macroeconomic and fiscal imbalances and, depending on trends in global financing conditions, the risks for (re)financing the domestic economy might increase. The financing of measures to mitigate the COVID-19 crisis will strongly increase the public debt-to-GDP ratio, while high financing needs in the upcoming period will raise interest expenses, which will additionally increase the relatively strong structural risks. The degree of corporate and household indebtedness is also high in comparison to peer CEE countries. The expected fall in nominal income of households and the reduction in corporate income will additionally increase their relative indebtedness and diminish their debt repayment ability. The increase in domestic macroeconomic imbalances might signal a rise in credit risk to the markets and, thus, push up borrowing costs for both the government and the private sector. In addition, if the rise in deposit euroisation intensifies lending in the euro, currency risk will rise both for the government and for the private sector. This additionally underlines the importance of the speedy introduction of the euro.

2 Activities undertaken with an aim of preserving financial stability during the crisis caused by the coronavirus outbreak

Epidemiological measures and uncertainty surrounding the duration of the pandemic are having a strongly negative effect on developments in the real and financial sectors in Croatia. This is why the Government, the CNB and HANFA have undertaken a series of activities to mitigate the negative effects and preserve stability in the domestic financial market, thus ensuring uninterrupted capital flows to the real sector.

The CNB employed monetary and supervisory measures to preserve financial stability, while there was no need to use the classic macroprudential instruments at its disposal (Chapter 3). The Croatian banking system faced this crisis with high capital and liquidity reserves that were accumulated at the micro- and the macro-level during the period of favourable macroeconomic and financial conditions. Accordingly, the CNB begun gradually releasing liquidity reserves, starting in March. It is worth noting that the central bank's measures can contribute to the preservation of stable financial conditions in the domestic financial market, while the solvency of individual economic entities can be ensured primarily through measures in the realm of fiscal policy. Therefore, the CNB's main activities since the outbreak of the crisis have been directed at the preservation of the stability of the domestic currency against the euro, ensuring kuna and foreign exchange liquidity of the domestic financial system and preserving stability in the government securities market.

In order to preserve the stability of the exchange rate of the domestic currency against the euro the CNB intervened in the foreign exchange market and established a currency swap line with the European Central Bank. To alleviate downward pressure on the domestic currency against the euro, the CNB carried out five foreign exchange interventions in March and April, as part of which, together with several transactions outside auctions, EUR 2.5bn were sold to banks. In addition, the CNB agreed upon establishing a swap line with the ECB which allows for the exchange of the kuna for the euro in the amount of EUR 2bn. The currency swap line will remain in place until the end of the year, enabling the CNB to provide additional euro liquidity to Croatian financial institutions, should they need it, without using its own international reserves.

The CNB increased the liquidity of the banking system through open market operations and through its decision to reduce the reserve requirement rate from 12% to 9%. In addition, in order to ensure stability in the government securities market, the CNB used fine-tuning operations and started buying government bonds of the Republic of Croatia in the secondary market. The dynamics and the volume of these transactions will depend on the developments in the government securities market and the dynamics of the Government's borrowing but also on the overall efficiency of the monetary policy and the challenges it faces in view of its primary objective, which is to maintain the exchange rate stability.

In addition to ensuring banking system liquidity, the CNB undertook further measures to ensure the liquidity of other market participants. Therefore, the list of potential participants in operations of sale and purchase of securities was expanded to include pension and investment funds and insurance companies.

By employing supervisory measures in preserving financial stability the CNB provided space for the optimal use of monetary policy instruments. By allowing banks to temporarily use the liquidity cover ratio (LCR) below the statutory minimum of 100%, the CNB provided direct support to the liquidity of the domestic economy, facilitating better financing conditions in the domestic market and helping to preserve the stability of the kuna exchange rate against the euro.

The CNB temporarily provided for a flexible approach to supervisory requirements on the classification of existing and new exposures according to the degree of their collectability and thus ordered credit institutions to retain profit generated in 2019. The adjustment of supervisory requirements on the classification of placements supports banks' lending potential by relieving pressure on their capital, which would have resulted from the growth in the share of non-performing loans that is expected in these conditions. Namely, credit institutions are allowed to continue treating exposures to clients affected by the coronavirus outbreak that were assessed as not risky at the end of 2019 and which will now be granted payment deferrals or other restructuring measures, as well as new financing directed at mitigating the effects of the coronavirus pandemic on their operations, as non-risk exposures (risk category A). At the same time, for the purpose of preserving their solvency and liquidity, credit institutions have been ordered to retain the profits generated in 2019 (allocation to capital) and appropriately adjust the payments of variable receipts.

The Croatian Financial Services Supervisory Agency adopted a set of measures and published recommendations to support the

business continuity of the financial services sector. In addition to maintaining financial stability, it aimed at facilitating and preserving the operations of institutions from the financial services sector, simultaneously protecting the interests and the rights of users of these services and the public interest. The measure that has the strongest potential impact on financial stability is the ban on dividend payments to insurance companies, which ensures that their profits are retained in Croatia, as additional liquidity support.

The Croatian Government has taken a series of measures to provide relief to sectors affected by the crisis. Among those that have a significant impact on financial stability are the deferral or write-off of tax liabilities and social contributions, as well as the Government assumption of a portion of employee costs for companies suffering under the measures adopted to combat the pandemic. Through the Croatian Bank for Reconstruction and Development (CBRD), the Government ensured guarantees for the tourist sector, exporters and indirect exporting entities or suppliers of direct exporters. The CBRD also provided for deferral and rescheduling of its clients' loan obligations. In addition, the CBRD and government agencies competent for financing companies have been ensuring special credit lines for companies hit by the crisis. An arrangement has been agreed with commercial banks under which banks will enable their clients to apply for a moratorium on their credit obligations. The execution of all forced collection measures with respect to all debtors has been suspended for a period of three months.

3 Macroprudential activities

3.1 Recent macroprudential activities in the Republic of Croatia

Notwithstanding the outbreak of the crisis associated with the coronavirus pandemic, there has been no need yet for changes in macroprudential instruments applied in Croatia. The combined capital buffer that banks are required to hold amounts to between 4% or 5.5% of total risk exposure, depending on bank size and the relation between the capital buffer for O-SIIs and the structural systemic risk buffer for each O-SII[1]. The countercyclical capital buffer, which is to be

1 O-SIIs are required to maintain either the O-SII buffer rate or the structural systemic risk buffer rate, whichever is the higher.

released at times of crisis, is not effectively applied in Croatia (its rate is 0%). By contrast, structural systemic risk buffers are not to be released in crisis situations as their reduction should, by definition, reflect a decrease in systemic risk. Nevertheless, in stress periods banks may, when necessary, use structural systemic risk buffers even without them being formally released, but they have to face the consequences in the form of limits on profit distribution (depending on the percentage of the combined capital buffer used).

3.1.1 Continued application of the countercyclical capital buffer rate for the Republic of Croatia in the second quarter of 2021

On the basis of a new quarterly analytical assessment of the development of cyclical systemic risks, the CNB announced in late March that the countercyclical capital buffer rate of 0% will continue to be applied in the second quarter of 2021. As overall economic and financial developments are strongly influenced by the events associated with the coronavirus pandemic, which have a negative impact on the global and domestic economy, it is assessed that there are currently no cyclical pressures that would require the rise in the countercyclical capital buffer rate.

3.1.2 Preparations to enter the European Exchange Rate Mechanism II and the Banking Union

3.1.2.1. Amendments to the Credit Institutions Act and the Act on the Croatian National Bank in the part related to macroprudential policy measures

Amendments to the Credit Institutions Act and the Act on the Croatian National Bank (Official Gazette 47/2020) announced in Macroprudential Diagnostics No. 10, which provide for the alignment of the Croatian legal framework with the commitments undertaken under the letter of intent to enter the European Exchange Rate Mechanism II (ERM II) and the Banking Union, of April 2020, were adopted by the Croatian Parliament and entered into force on 25 April 2020.

3.1.2.2. Decision on collecting data on standards on lending to consumers

Pursuant to the powers defined in the Act on the Croatian National Bank, in March 2020, following the end of public consultation, the CNB Governor adopted the Decision on collecting data on standards on lending to consumers (Official Gazette 36/2020). The Decision establishes a reporting system to collect a set of data necessary for the analysis and the regular monitoring of systemic risk, the monitoring of credit risk, the calibration of borrower-based macroprudential measures and, where necessary, the monitoring of actions by credit institutions on which measures have been imposed.

In addition to the achievement of the Croatian National Bank's objective regarding the contribution to the stability of the financial system as a whole, the data collected pursuant to the Decision will also serve for meeting some of the requirements from the recommendations of the European Systemic Risk Board (ESRB) on closing real estate data gaps (ESRB/2016/14 and ESRB/2019/3), which harmonise data at the EU level required for the assessment and monitoring of financial stability risks associated with real estate markets.

3.2 Macroprudential policy implementation in other European Economic Area countries

In March and April 2020, EEA countries actively implemented macroprudential policy measures, in particular capital buffers, to mitigate the effects of the crisis brought on by the coronavirus pandemic. The most often used measure was the release (in whole or in part) of the countercyclical capital buffer (CCyB), applied by eleven out of the fourteen countries that previously had a non-zero CCyB rate in order to support credit activity. Three countries (Bulgaria, Belgium and Slovakia) cancelled the announced increase or introduction of a positive CCyB rate in the following 12 months.

Apart from the CCyB, which is to be released promptly in crisis situations to raise the banks' ability to absorb losses and continue lending, some countries have decided also to release structural systemic risk buffers to achieve that same objective though this is not the buffers' purpose (the release of these buffers should reflect a reduction of structural risks). Since the onset of the crisis, six countries (Estonia, Finland, Hungary, Ireland, the Netherlands and Poland) have decided to release the structural systemic risk buffer, while Finland, Hungary and the Netherlands reduced or cut to zero the O-SII buffer rate. Hungary, Slovakia and Italy have temporarily permitted credit institutions to operate below the prescribed level of the capital conservation buffer (2.5%) without sanctions. Finally, some countries have temporarily eased borrower-based measures and requirements for loan amortisation, while the Netherlands has postponed the announced introduction of a minimum risk weight for exposures secured by mortgages on residential property.

In addition to these macroprudential policy measures, regulators in many member states have used different means (press releases, recommendations or binding measures) to limit credit institutions' dividend payments for 2019 in order to strengthen their resilience and support their capacity to finance the economy.

Table 1 Overview of macroprudential measures applied by EU member states, Iceland and Norway

	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IS	IT	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK
Capital and liquidity buffers																														
CB	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
CCB rate applied (%)	0	0	0.50	0	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	0	0	0	1.00	0	0	0	0	0	1.50	0
CCB rate pending (%)		0	0.50																										1.50	
G-SII						●			●		●						●					●					●			●
O-SII	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SRB	●		●		●		●	●		●			●	●	●	●						●	●	●		●	●		●	●
Liquidity ratio														●									●	●			●			
Caps on prudential ratios																														
DSTI	●			●	●			●			●			●				●			●			●	●	●		●	●	
LTD																												●		
LTI					●		●								●								●						●	●
LTV	●	●		●	●		●	●		●				●	●	●		●		●	●	●	●	●	●	●	●	●	●	
Loan amortisation																						●	●				●		●	
Loan maturity	●							●			●							●			●			●	●	●		●	●	
Other measures																														
Pillar II		●		●																	●						●	●		
Risk weights		●						●		●			●		●				●	●	●		●	●		●	●	●		●
LGD																							●							
Stress/sensitivity test			●	●						●					●											●				●
Other measures	●		●		●		●				●		●	●	●						●			●		●	●		●	●

Notes: The measures listed are in line with Regulation (EU) No 575/2013 on prudential requirements for credit institutions and investment firms (CRR) and Directive 2013/36/EU on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms (CRD IV). The definitions of abbreviations are provided in the List of abbreviations at the end of the publication. Green indicates measures that have been added since the last version of the table. Light red indicates measures that countries have released in response to the crisis triggered by the coronavirus pandemic.
Disclaimer: of which the CNB is aware.
Sources: ESRB, CNB and notifications from central banks and websites of central banks as at 24 April 2020.
For more detailed data, see: https://www.esrb.europa.eu/national_policy/html/index.en.html and https://www.esrb.europa.eu/home/coronavirus/html/index.en.html.

Table 2 Implementation of macroprudential policy and overview of macroprudential measures in Croatia

Measure	Primary objective	Year of adoption	Description	Basis for standard measures in Union law	Activation date	Frequency of revisions
Macroprudential measures implemented by the CNB prior to the adoption of CRD IV						
Prior to the adoption of CRD IV, the CNB used various macroprudential policy measures, of which the most significant ones are listed and described in: a) Galac, T., and E. Kraft (2011): http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-5772 b) Vujčić, B., and M. Dumičić (2016): https://www.bis.org/publ/bppdf/bispap86l.pdf						
Macroprudential measures envisaged in CRD IV and CRR and implemented by the competent macroprudential authority						
CB	Credit growth and leverage following Recommendation ESRB/2013/1	2014	Early introduction: at 2.5% level	Art. 160(6) CRD	1 Jan. 2014	Discretionary
		2015	Exemption of small and medium-sized investment firms from the capital conservation buffer	Art. 129(2) CRD	17 Jul. 2015	Discretionary
CCB	Credit growth and leverage following Recommendation ESRB/2013/1 and implementing Recommendation ESRB/2014/1	2015	CCB rate set at 0%	Art. 136 CRD	1 Jan. 2016	Quarterly
		2015	Exemption of small and medium-sized investment firms from the countercyclical capital buffer	Art. 130(2)	17 Jul. 2015	Discretionary
O-SII	Limiting the systemic impact of misaligned incentives with a view to reducing moral hazard following Recommendation ESRB/2013/1	2015	Seven O-SIIs identified by review of 31 Dec. 2019, with corresponding buffer rates: 2.0% for O-SIIs: Zagrebačka banka d.d., Zagreb, Privredna banka Zagreb d.d., Zagreb, Erste&Steiermärkische Bank d.d., Rijeka, Raiffeisenbank Austria d.d., Zagreb, OTP banka Hrvatska d.d., Split; 1.0% for O-SIIs: Addiko Bank d.d., Zagreb; 0.5% for O-SIIs: Hrvatska poštanska banka d.d., Zagreb	Art. 131 CRD	1 Feb. 2016	Annually
SRB	Credit growth and leverage following Recommendation ESRB/2013/1	2014	Two SRB rates (1.5% and 3%) applied to two sub-groups of banks (market share < 5%, market share ≥ 5%). Applied to all exposures	Art. 133 CRD	19 May 2014	Annually
		2017	The level of two SRB rates (1.5% and 3%) and the application to all exposures remain unchanged. Decision OG 78/2017 changes the method for determining the two sub-groups to which the SRB is applied. Sub-groups are determined by calculating the indicator of the average three-year share of assets of a credit institution or a group of credit institutions in the total assets of the national financial sector (indicator < 5%, indicator ≥ 5%).	Art. 133 CRD	17 Aug. 2017	At least on a biennial basis
Risk weights for exposures secured by mortgages on residential property	Credit growth and leverage following Recommendation ESRB/2013/1	2014	Maintaining a stricter definition of residential property for preferential risk weighting (e.g. owner cannot have more than two residential properties, exclusion of holiday homes, need for occupation by owner or tenant)	Art. 124, 125 CRR	1 Jan. 2014	Discretionary
Risk weights for exposures secured by mortgages on residential property	Mitigating and preventing excessive maturity mismatch and market illiquidity pursuant to Recommendation ESRB/2013/1	2014	CNB's recommendation issued to banks (not legally binding) on avoiding the use of risk weights of 50% to exposures secured by CRE during low market liquidity	Art. 124, 126 CRR	1 Jan. 2014	Discretionary
		2016	Decision on higher risk weights for exposures secured by mortgages on commercial immovable property. RW set at 100% (substituted CNB's recommendation from 2014, i.e. effectively increased from 50%)	Art. 124, 126 CRR	1 Jul. 2016	Discretionary
Other measures and policy actions whose effects are of macroprudential importance and are implemented by the macroprudential authority						
Consumer protection and awareness	Raising risk awareness and creditworthiness of borrowers following Recommendation ESRB/2011/1	2013	Decision on the content of and the form in which consumers are provided information prior to contracting banking services (banking institutions are obliged to inform clients about details on interest rate changes and foreign currency risks)		1 Jan. 2013	Discretionary
		2013	Amended Decision from 1 Jan. 2013 (credit institutions were also obliged to provide information about the historical oscillations of the currency in which credit is denominated or indexed to vis-à-vis the domestic currency over the past 12 and 60 months)		1 Jul. 2013	Discretionary
Information list with the offer of loans to consumers aimed at consumer protection and awareness raising	Raising risk awareness of borrowers pursuant to Recommendation ESRB/2011/1 and encouraging price competitiveness in the banking system	2017	The Information list with the offer of loans to consumers, available on the CNB's website, provides a systematic and searchable overview of the conditions under which banks grant loans. With the Information list, standard information available to the consumers are extended with information regarding interest rates		14 Sep. 2017	Discretionary
Structural repo operations		2016	Market operations are aimed at providing banks with longer-term sources of kuna liquidity at an interest rate competitive with interest rates on other banks' kuna liquidity sources, with debt securities of issuers from Croatia to be accepted as collateral		1 Feb. 2016	Discretionary
		2017	The aim of structural operations is to provide banks with longer-term sources of kuna liquidity. The Decision on monetary policy implementation of the Croatian National Bank (OG 94/2017) envisages the use of a pool of eligible assets as collateral for all central bank credit operations, including structural operations, thus opening up the possibility of using short-term securities for long-term CNB operations		20 Sep. 2017	Discretionary
Consumer protection and awareness	Financial stability concerns regarding risk awareness of borrowers	2016	Borrowers are strongly recommended (publicly) by the CNB to carefully analyse the available information and documentation on the products and services offered prior to reaching their final decision, as is customary when concluding any other contract		1 Sep. 2016	Discretionary
Recommendation to mitigate interest rate and interest rate-induced credit risk	Mitigation of the interest rate risk in the household sector and the interest-induced credit risk in the banks' portfolios and enhancing the price competition in the banking system	2017	The CNB issued the Recommendation to mitigate interest rate and interest rate-induced credit risk in long-term consumer loans by which credit institutions providing consumer credit services are recommended to extend their range of credit products to fixed-rate loans, while minimising consumer costs		26 Sep. 2017	Discretionary
Additional criteria for assessing consumer creditworthiness in granting housing consumer loans	Credit risk management in housing consumer loans pursuant to EBA Guidelines on creditworthiness assessment (EBA/GL/2015/11) and EBA Guidelines on arrears and foreclosure (EBA/GL/2015/12)	2017	Decision on the additional criteria for the assessment of consumer creditworthiness and on the procedure for the collection of arrears and voluntary foreclosure		1 Jan. 2018	Discretionary

Measure	Primary objective	Year of adoption	Description	Basis for standard measures in Union law	Activation date	Frequency of revisions
Recommendation on actions in granting non-housing consumer loans	Financial stability concerns due to credit risk in banks' housing loan portfolios and protection of consumers excessive debt taking	2019	CNB adopted the Recommendation on actions in granting non-housing loans to consumers, recommending all credit institutions in Croatia that grant consumer loans to apply, in determining a consumer's creditworthiness for all non-housing consumer loans with original maturity equal to or longer than 60 months, the minimum costs of living that may not be less than the amount prescribed by the act governing the part of salary exempted from foreclosure		28 Feb. 2019	Discretionary
Decision on collecting data on standards on lending to consumers	Establishment of an analytical basis for the monitoring of systemic and credit risk and the calibration of borrower-based measures and for meeting the requirements from the ESRB recommendations on closing real estate data gaps (ESRB/2016/14 and ESRB/2019/3)	2020	Decision introduces a new reporting system which provides for a monthly collection of individual data on all newly-granted consumer loans at the individual loan level and the annual collection of data on all individual consumer loan balances. The collected data will be used for the analysis and the regular monitoring of systemic risk, the monitoring of credit risk, the calibration of macroprudential measures and, where necessary, the monitoring of actions by credit institutions against which measures have been imposed		2 April 2020	Discretionary
Other measures and policy actions whose effects are of macroprudential importance and are implemented by the macroprudential authority						
Amended Consumer Credit Act	Financial stability concerns due to interest rate risk and currency risk	2013	Fixed and variable parameters defined in interest rate setting, impact of exchange rate appreciation for housing loans limited, upper bound of appreciation set to 20%		1 Dec. 2013	Discretionary
Amended Consumer Credit Act	Financial stability concerns due to interest rate risk and currency risk	2014	Banks are obliged to inform their clients about exchange rate and interest rate risks in written form		1 Jan. 2014	Discretionary
Amended Consumer Credit Act	Financial stability concerns due to currency risk	2015	Freezing the CHF/HRK exchange rate at 6.39		1 Jan. 2015	Discretionary
Amended Consumer Credit Act	Financial stability concerns due to currency risk	2015	Conversion of CHF loans		1 Sep. 2015	Discretionary
Amended Foreclosure Act	Financial stability concerns due to credit risk	2017	Increase in the share of income exempt from execution, relating to debtors with below-average net salary		22 Jul. 2017 (1 Sep. 2017)	Discretionary
Consumer Home Loan Act	Financial stability concerns due to interest rate risk and currency risk	2017	To establish the variable interest rate, the interest rate structure was defined through reference variable parameters and the fixed portion of the rate; for foreign currency consumer home loans, clients were offered one-off conversion of loans, from the currency a loan was denominated in or linked to, to the alternative currency without additional costs		20 Oct. 2017	Discretionary
Act on Amendments to the Credit Institutions Act	Compliance with the requirements for close cooperation with the ECB and the legal basis for imposing legally binding borrower-based measures	2020	Detailed provisions on the CNB's powers regarding the adoption and implementation of macroprudential measures that for the first time explicitly stipulate borrower-based measures. The ECB may issue instructions to the CNB if it assesses that a Croatian macroprudential measure, which is based on harmonised European rules and aimed at credit institutions, is not strict enough		15 April 2020 (some provisions enter into force with the beginning of close cooperation with the ECB)	Discretionary

Note: The definitions of abbreviations are provided in the List of abbreviations at the end of the publication.
Source: CNB.

Glossary

Financial stability is characterised by the smooth and efficient functioning of the entire financial system with regard to the financial resource allocation process, risk assessment and management, payments execution, resilience of the financial system to sudden shocks and its contribution to sustainable long-term economic growth.

Systemic risk is defined as the risk of an event that might, through various channels, disrupt the provision of financial services or result in a surge in their prices, as well as jeopardise the smooth functioning of a larger part of the financial system, thus negatively affecting real economic activity.

Vulnerability, in the context of financial stability, refers to structural characteristics or weaknesses of the domestic economy that may either make it less resilient to possible shocks or intensify the negative consequences of such shocks. This publication analyses *risks* related to events or developments that, if materialised, may result in the disruption of financial stability. For instance, due to the high ratios of public and external debt to GDP and the consequentially high demand for debt (re) financing, Croatia is very vulnerable to possible changes in financial conditions and is exposed to interest rate and exchange rate change risks.

Macroprudential policy measures imply the use of economic policy instruments that, depending on the specific features of risk and the characteristics of its materialisation, may be standard macroprudential policy measures. In addition, monetary, microprudential, fiscal and other policy measures may also be used for macroprudential purposes, if necessary. Because the evolution of systemic risk and the consequences of such risk, despite certain regularities, may be difficult to predict in all of their manifestations, the successful safeguarding of financial stability requires not only cross-institutional cooperation within the field of their coordination but also the development of additional measures and approaches, when needed.

List of abbreviations

Art.	Article
bn	billion
b.p.	basis points
CB	capital conservation buffer
CCB	countercyclical capital buffer
CEE	Central and Eastern European
CES	Croatian Employment Service
CHF	Swiss franc
CNB	Croatian National Bank
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
d.d.	dioničko društvo (joint stock company)
DSTI	debt-service-to-income ratio

EBA	European Banking Authority
EBITDA	earnings before interest, taxes, depreciation and amortisation
ECB	European Central Bank
ESRB	European Systemic Risk Board
EU	European Union
Fed	Federal Reserve System
FINA	Financial Agency
FOMC	Federal Open Market Committee
GDP	gross domestic product
G-SII	global systemically important institutions buffer
HANFA	Croatian Financial Services Supervisory Agency
HRK	Croatian kuna
IRB	internal ratings-based
LGD	loss-given-default
LTD	loan-to-deposit ratio
LTI	loan-to-income ratio
LTV	loan-to-value ratio
NBB	National Bank of Belgium
no.	number
OG	Official Gazette
O-SII	other systemically important institutions buffer
O-SIIs	other systemically important institutions
Q	quarter
SRB	systemic risk buffer

Two-letter country codes

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GR	Greece
HR	Croatia
HU	Hungary

IE	Ireland
IS	Iceland
IT	Italy
LV	Latvia
LT	Lithuania
LU	Luxembourg
MT	Malta
NL	The Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom

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