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Macroprudential Diagnostics

second quarter of 2018

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Introductory remarks

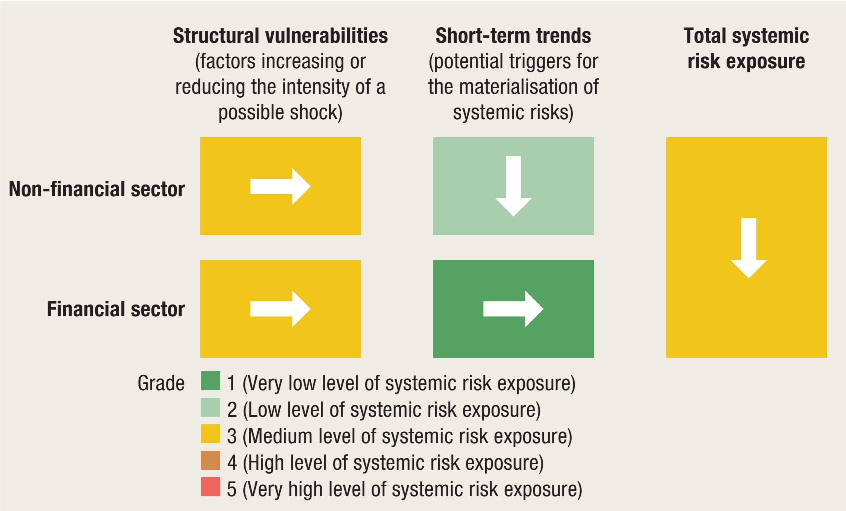
The macroprudential diagnostic process consists of assessing any macroeconomic and financial relations and developments that might result in the disruption of financial stability. In the process, individual signals indicating an increased level of risk are detected based on calibrations using statistical 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.

1 Identification of systemic risks

Having stagnated in the last quarter of 2017, real economic activity increased very slightly in the first quarter of 2018, mainly due to an acceleration in personal consumption. In contrast, for the first time after a long period, exports made a negative contribution to economic growth, primarily as a result of a decrease in the exports of goods, while industrial production also recorded a slight decline from the beginning of the year (see Bulletin No. 244). The available monthly indicators for the second quarter suggest a potential acceleration of growth, whereas the CNB expects economic activity to retain a growth rate similar to that in the previous year (see Macroeconomic Developments and Outlook No. 4). A similar trend could continue in the medium term, while important structural imbalances are expected to continue to diminish, primarily general government debt and external debt, which has a positive impact on the overall vulnerabilities of the domestic economy.

As regards general systemic risks, the exposure of the system slightly declined during the period of favourable cyclical movements compared with the analysis from the previous publication (see Financial Stability No. 19), but it has remained at a moderate level (Figure 1). The favourable direction of overall exposure was determined by short-term developments in the non-financial sector stemming from an improved liquidity position, although the already mentioned structural weaknesses of the domestic economy have remained significant and still make it vulnerable.

Figure 1 Risk map for the second quarter of 2018



Notes: The arrows mark changes relative to the risk map for the first quarter of 2018, published in Financial Stability No. 19.
Source: CNB.

General government debt continued to decline during the first few months of this year. A decline in fiscal sustainability risk was recognised by the rating agency S&P, which upgraded Croatia's credit rating in March this year, and by Fitch Ratings, which had upgraded it in January. With the easier access to international financial markets and considerably improved borrowing conditions, the years-long successful refinancing of public debt continued, which has further reduced interest expenditures, improved the fiscal position and reduced the risk exposure of the government sector. However, despite the progress achieved towards establishing long-term sustainability of public finances, the public debt-to-GDP ratio is still relatively high, which, combined with the high level of total external debt, constitutes a significant structural risk. Accordingly, the structural vulnerabilities of the non-financial sector have remained moderate, with the domestic economy still highly vulnerable to a possible deterioration in international financing conditions.

Structural vulnerabilities within the financial system, arising primarily from a high level of concentration of the banking sector, banks' exposure concentration and the currency and interest rate structure of loans granted to the private sector, are assessed as moderate (Figure 1). Although important structural indirect risks for banks (currency and interest rate-induced credit risks) have continued to decrease because of the rise of financing in domestic currency, at a fixed interest rate as well (or a variable interest rate that protects clients from interest rate risk for a longer initial period), they also increase direct risks for banks. Specifically, a reversal of the downward trend in interest rates could have an adverse impact on banks in terms of increasing their interest rate risk and maturity mismatch risk.

In contrast, the high level of capitalisation of the banking sector, the accumulation of liquidity and capital surpluses and a continuing decrease in reliance on cross-border financing have strengthened the banking sector's resilience. While the general vulnerability of the banking sector to simulated stress conditions has declined, the difference between the resilience of individual credit institutions has been growing (see Chapter 7 Stress testing of credit institutions in Financial Stability No. 19).

Current developments in the non-financial sector are mainly positive. The vulnerabilities of the non-financial corporate sector have been shrinking, primarily due to a decline in the aggregate debt of non-financial corporations[1] and lower interest expenditures. As shown by data presented by FINA, good business performance by enterprises resulted in the strengthening of their balance sheets and the improvement of their liquidity positions. However, despite the identified improvements, the uncertainties surrounding the restructuring of the Agrokor Group still remain, and the final model of the settlement and its implementation will have a decisive impact on the development in risks in this sector.

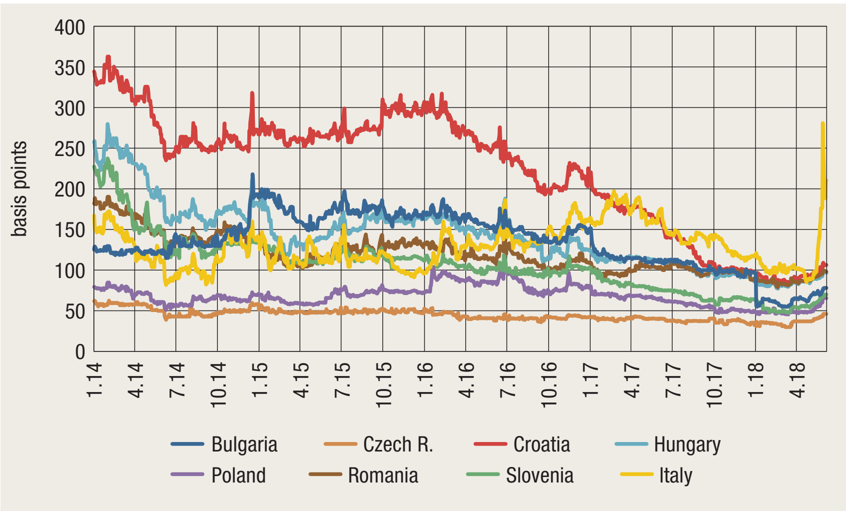
The vulnerability of the household sector has decreased slightly due to favourable labour market developments, which led to an increase in disposable income and real wages. The mild increase in total bank placements to households was coupled with a decrease in their currency and interest rate risk exposure, resulting primarily from the continuing growth of kuna lending and lending at a fixed interest rate over longer periods. This has also been a result of the CNB's active measures and recommendations (see Information list with the offer of loans to consumers and Recommendation to mitigate interest rate and interest rate-induced risk in long-term consumer loans). However the share of loans with variable interest rates in total loans has remained dominant, making borrowers potentially vulnerable to a potential interest rate growth.

1 It should be noted that statistical data slightly overestimate the decrease in the indebtedness of the non-financial corporate sector, as there is a problem of covering the sale of bank claims on non-financial corporations to other creditors.

As regards adverse short-term external developments, which have not had a significant impact on Croatia, attention should be drawn to the increased political uncertainty in Italy due to the parliamentary elections held in March this year, which has markedly increased the price Italians have to pay to borrow. This is indicated by a significant widening of CDS spreads for Italian government bonds. Croatia's risk premium has risen only slightly compared with the end of 2017, like the premiums of most other Central and Eastern European Countries. However, the CDS spread for Croatia has remained at its historical low, although it is still among the highest in the group of peer Central and Eastern European Countries (Figure 2).

Consequently, the external component of the financial stress index slightly deteriorated, but due to the strengthening of the domestic banking sector's resilience, short-term developments of the financial sector's systemic risks have remained unchanged. The risk of a spillover of the increased risk premium of Italian banks onto the domestic banking sector is rather low due to the relatively small net exposure of the domestic banking sector to Italy and the relatively low general dependence of the domestic banking sector on cross-border financing.

Figure 2 CDS spreads on five-year bonds of selected countries



Source: S&P Capital IQ.

2 Potential triggers for risk materialisation

The identified vulnerabilities show that the most significant potential triggers that may lead to risk materialisation are primarily related to developments in the external environment, and to a lesser extent also to the uncertainties surrounding the ownership and operational restructuring of the Agrokor Group (see Financial Stability No. 19).

Potential triggers from the external environment include a possible deterioration in international financing conditions, a general increase in global risk aversion, free trade restrictions and an increased propensity to protectionism. Such adverse global market trends would have the most serious consequences for countries with accumulated structural imbalances, including Croatia.

Growing instabilities in international financial markets, triggered by political and geopolitical uncertainties, increased risk aversion or a stronger tightening of monetary policy in major global economies could lead to an increase in interest rates and, in turn, boost the cost of borrowing both for the government and for private sectors in Croatia. Such trends would have a negative impact on their expenditures, worsen the long-term sustainability of public finances and increase the debt servicing burden in the private sector. This could further weaken economic activity and investments and, finally, have an adverse effect on the banking sector. In addition, the reescalation of the migration crisis and stricter state border control could produce negative effects on goods trade and tourism.

Rising investor concern regarding potential international trade restrictions and the strengthening of global protectionist measures can additionally accelerate the growth of global risk aversion. A shift towards protectionist policies in major global economies could influence other countries through trade channels, including Croatia. Furthermore, such trends could have an impact on the economic growth of Croatia's main trading partners and have an additional negative effect on domestic economic trends.

It should also be noted that, in addition to a deterioration in international market conditions and high public and private debt levels, the latest ECB Financial Stability Review refers to other key risks to the financial stability of the euro area. They primarily include potential obstacles to providing financial intermediation services, due to the fact that structural limitations in euro area countries continue to make a significant impact on bank profitability, and a potential emergence of liquidity risk in the non-banking financial sectors, which could spill over onto the whole system. The materialisation of these risks, triggered, for example, by adverse economic trends in euro area countries, could also affect the domestic economy.

3 Recent macroprudential activities

3.1 Continued application of the countercyclical capital buffer rate for the Republic of Croatia for the third quarter of 2019

Although lending activity has continued its mild recovery, an analytical assessment of the evolution of cyclical systemic risks suggests that there are still no pressures requiring corrections by the CNB. As shown by data for the first quarter of 2018, GDP growth and a continued decrease in the nominal debt of the non-financial corporations and households resulted in the further reduction of the standardised credit-to-GDP ratio. The credit gap calculated on the basis of this standardised ratio has thus remained negative, as confirmed by the specific indicators of relative indebtedness based on a narrower definition of loans (claims of domestic credit institutions, considered in relation to the quarterly, seasonally adjusted GDP). Accordingly, the Croatian National Bank issued in June the Announcement of the application of the countercyclical buffer rate for the Republic of Croatia for the third quarter of 2019 of 0%.

3.2 Recommendations of the European Systemic Risk Board (ESRB) published in the first half of 2018 and action based on the recommendations

3.2.1 Decision on the reciprocity of the macroprudential policy measure adopted by the relevant authority of Finland (OG 41/2018)

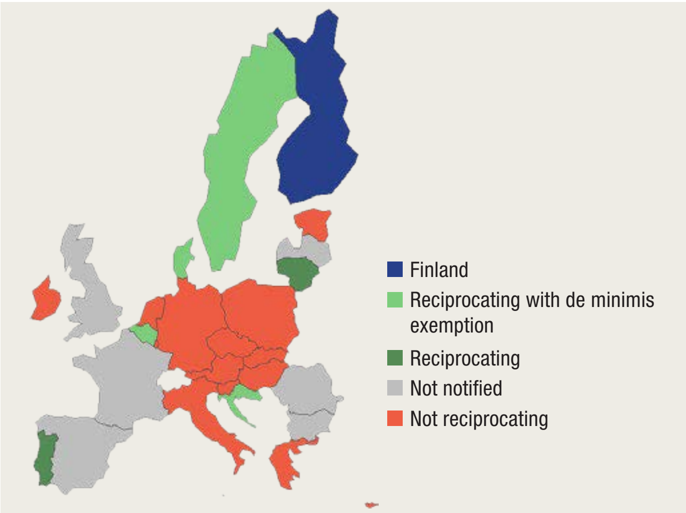
Following the ESRB's amendment to the Recommendation on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (ESRB/2018/1), in May 2018 the CNB issued the Decision on the reciprocity of the macroprudential policy measure referred to in the Recommendation of the European Systemic

Risk Board of 8 January 2018 amending Recommendation ESRB 2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures (ESRB/2018/1).

This Decision prescribes the reciprocity of the macroprudential policy measure adopted by the macroprudential authority of Finland, as recommended by the ESRB. The Croatian National Bank thus acknowledged and prescribed the reciprocation of a 15-percent floor for the average risk weight for exposures in Finland of credit institutions using the internal ratings-based approach for mortgage loans to the Finnish household sector secured by residential immovable property located in Finland. Exceptionally, a de minimis exemption applies to credit institutions whose exposure to the household sector in the Finnish mortgage market does not exceed EUR 1bn. Croatia currently applies this exemption to all banks.

The reciprocity of this measure has also been acknowledged by Belgium, Denmark, Sweden, Lithuania and Portugal, while a certain number of countries decided not to acknowledge the reciprocity of this measure due to a low level of exposure to Finland (Figure 3).

Figure 3 Reciprocation of the macroprudential policy measure adopted by the relevant authority of Finland by EU member states



Source: ESRB, CNB (as at 4 June 2018).

3.2.2 Recommendation ESRB/2015/1 on recognising and setting countercyclical buffer rates for exposures to third countries

Pursuant to Recommendation of the ESRB of 11 December 2015 on recognising and setting countercyclical buffer rates for exposures to third countries (ESRB/2015/1), the ESRB is to be submitted in the second quarter of each year a list of material third countries and, if necessary, notified of recognising and setting countercyclical buffer rates for exposures to identified third countries. Deciding on countercyclical capital buffer rates for third country exposures is also laid down in the Credit Institutions Act.

In line with the predefined analytical framework and schedule as well as the established criteria, at the end of the second quarter of 2018, the CNB reassessed the material exposures of Croatian banks to third countries, according to data available by the end of 2017. The analysis showed that, as in the previous year, only Bosnia and Herzegovina can be identified as a material third country for the Croatian banking sector. In addition, although Bosnia and Herzegovina recorded a moderate increase in lending activity, there is currently no potential cyclical pressure that would require an increased level of caution from the regulatory point of view. In June 2018 the ESRB was notified of the identified material third country.

3.2.3 Recommendation ESRB/2017/6 on liquidity and leverage risks in investment funds

Having analysed risks arising from an increasingly large role of investment funds in financial intermediation that may strengthen the impacts of a potential financial crisis, the ESRB, in February 2018, issued to the European Securities and Markets Authority (ESMA) and the European Commission the Recommendation on liquidity and leverage risks in investment funds (ESRB/2017/6). The Recommendation relates to the five areas for which, as determined by the ESRB, the ESMA should provide guidance to national supervisory authorities as regards the application of the existing macroprudential measures or possible changes to the legislative framework. These areas include: liquidity management tools, additional provisions to reduce the likelihood of excessive liquidity mismatches, stress testing, reporting by undertakings for collective investment in transferable securities and the usage of financial leverage.

In order to improve liquidity risk management, the ESRB recommended the introduction of a number of additional tools for liquidity management in cases of reductions of market liquidity, additional regulatory requirements and stress testing of investment funds. The Recommendation also provides for the establishment of a harmonised UCITS reporting framework, in order to facilitate the supervisory authorities' monitoring and assessment of their potential contributions to risks to financial stability, as well as the adoption of guidelines on a common framework for the risk assessment of financial leverage and the setting, calibration and limitation of financial leverage limits in the EU.

3.3 Overview of macroprudential measures in EU countries

Table 1 below shows macroprudential measures currently applied by EU countries in order to ensure the financial stability of the system as well as an overview of macroprudential measures applied in Croatia (Table 2), including those outside the CNB's mandate as the competent authority for macroprudential measures, and their amendments in relation to the latest issue of Macroprudential Diagnostics No. 4.

In the first half of 2018 three EU countries introduced new macroprudential measures (marked green in Table 1) and several countries tightened the already existing measures. This tightening of macroprudential policy was for the most part related to the upswing of the credit cycle and the growth in real estate prices, especially that in residential real estate prices (for more details, see Financial Stability No. 19, Box 2 Trends in the European residential real estate market, and Box 3 Application of macroprudential measures related to the residential real estate market in the EU and EEA).

Table 1 Overview of macroprudential measures in EU countries

Disclaimer: of which the CNB is aware.

	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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
G-SII						●			●		●						●					●					●			●
O-SII	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SSRB	●		●		●		●	●					●	●		●						●	●	●		●	●		●	
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	●		●	●	●		●				●			●	●			●			●			●		●	●		●	●

Note: The listed measures are in line with EU regulations, namely 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. Measures that have been activated since the previous version of the table are shown in green.
Sources: CNB, ESRB and notifications from central banks and websites of central banks as at 4 June 2018.
For more details see: https://www.esrb.europa.eu/national_policy/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 by CRD-IV 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	10 Jun. 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 counter-cyclical capital buffer	Article 130(2)	10 Jun. 2015	Discretionary
O-SII	Limiting the systemic impact of misaligned incentives with a view to reducing moral hazard following Recommendation ESRB/2013/1	2015	Identification of nine O-SIIs with corresponding buffer rates: 2.0% for O-SIIs: Zagrebačka banka d.d., Zagreb, Erste&Steiermärkische Bank d.d. Rijeka, Privredna banka banka Zagreb d.d., Zagreb, Raiffeisen-bank Austria d.d., Zagreb, Société Générale-Splitska banka d.d., Split, Addiko Bank d.d., Zagreb; 0.2% for O-SIIs: OTP banka Hrvatska d.d., Zadar, Sberbank d.d., Zagreb, Hrvatska poštanska banka d.d., Zagreb	Art. 131 CRD	1 Feb. 2016	Annually
		2018	Identification of eight O-SIIs with corresponding buffer rates: 2.0% for O-SIIs: Zagrebačka banka d.d., Zagreb, Erste&Steiermärkische Bank d.d., Rijeka, Privredna banka Zagreb d.d., Zagreb, Raiffeisenbank Austria d.d., Zagreb, Splitska banka d.d., Split, Addiko Bank d.d., Zagreb, OTP banka Hrvatska d.d., Zadar; 0.2% for O-SIIs: Hrvatska poštanska banka d.d., Zagreb	Art. 131 CRD	13 Feb. 2018	Annually
SSRB	Credit growth and leverage following Recommendation ESRB/2013/1	2014	Two SSRB 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 SSRB rates (1.5% and 3%) and the application to all expo-sures have remained unchanged. Decision OG/78/2017 changes the method for determining the two sub-groups to which the SSRB is applied. Sub-gro-ups 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	On a biannual basis at a minimum
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 commercial property	Mitigating and preventing excessi-ve maturity mismatch and market illiquidity following Recommendati-on 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 use and are implemented by the macroprudential authority						
Consumer protection and awareness	Raising risk awareness and credi-tworthiness 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 oscillation of the currency in which credit is denominated or indexed to against the domestic currency over the past 12 and 60 months)		1 Jul. 2013	Discretionary
Consumer protection and awareness	Raising risk awareness of borrowers following Recommenda-tion ESRB/2011/1 and enhancing price competition 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 con-ditions 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 sour-ces 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 colletaral 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 regar-ding 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
Consumer protection and awareness	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

Measure	Primary objective	Year of adoption	Description	Basis for standard measures in Union law	Activation date	Frequency of revisions
Other measures whose effects are of macroprudential use						
Consumer protection and awareness	Financial stability concerns due to Interest rate risk and currency risk	2013	Amended Consumer Credit Act: 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
Consumer protection and awareness	Financial stability concerns due to Interest rate risk and currency risk	2014	Amended Consumer Credit Act: banks are obliged to inform their clients about exchange rate and interest rate risks in written form		1 Jan. 2014	Discretionary
Consumer protection and awareness	Financial stability concerns due to currency risk	2015	Amended Consumer Credit Act: freezing the CHF/HRK exchange rate at 6.39		1 Jan. 2015	Discretionary
Consumer protection and awareness	Financial stability concerns due to currency risk	2015	Amended Consumer Credit Act: conversion of CHF loans		1 Sep. 2015	Discretionary
Consumer protection and awareness	Financial stability concerns due to interest rate risk and currency risk	2017	Consumer Home Loan Act: to establish the variable interest rate, the interest rate strucure is 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 is denominated in or linked to, to the alternative currency without additional costs		20 Oct. 2017	Discretionary

Note: The definitions of abbreviations are provided in the List of abbreviations at the end of the publication. Measures that have been activated since the previous version of the table are shown in green.
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, within 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 its consequences, 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
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
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
SSRB	structural 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
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UK	United Kingdom

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