Macroprudential Diagnostics

fourth quarter of 2018

Year III · Number 7 · January 2019

Contents

PUBLISHER
Croatian National Bank
Trg hrvatskih velikana 3, 10000 Zagreb
Phone: +385 1 45 64 555, Contact phone: +385 1 45 65 006, Fax: +385 1 45 64 687

www.hnb.hr

ISSN 2459–8887

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.

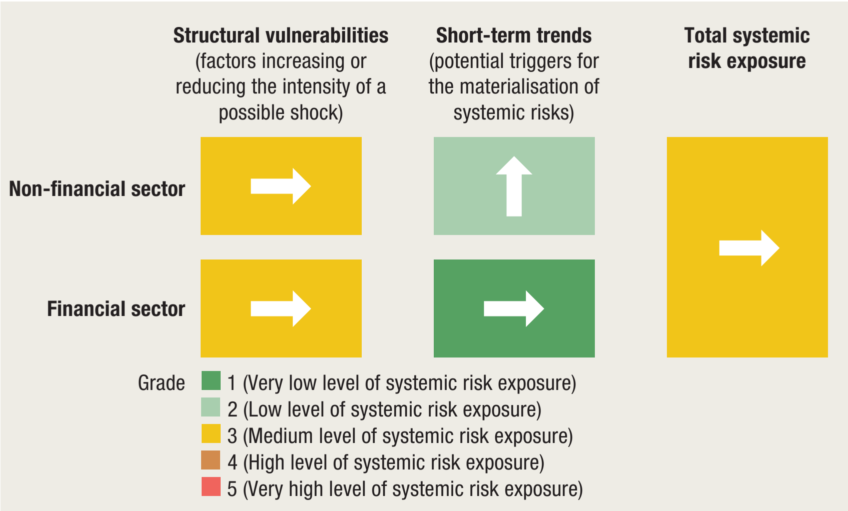
1 Identification of systemic risks

The overall assessment of the system's exposure to systemic risks has not changed since the last report, and they remain at a moderate level.

Continued economic growth in the last quarter and at the level of the whole of 2018, driven by favourable developments in international financial markets, resulted in a further improvement in the indicator of long-term debt sustainability of all domestic sectors and a reduction of the identified structural vulnerabilities of the Croatian economy. However, the levels of general government debt (74.5% of GDP at the end of September 2018) and private sector debt (95.9% of GDP at the end of September 2018, based on consolidated data) are still relatively high and, combined with the dependency on external financing, constitute a significant structural risk, making the country very vulnerable to possible changes in financing conditions in international markets. External debt of the economy as a whole is also relatively high (74.5% of GDP at the end of October 2018), but external imbalances are decreasing gradually and such trends are expected to continue (see Macroeconomic Developments and Outlook, No. 5).

The reduced vulnerability of the household sector is the result of a decrease in the debt servicing burden due to fast growth in disposable income relative to the increase in nominal debt, while contemporaneous growth in net financial assets contributed to the decrease in this sector's liquidity and solvency risks. Similarly, the positive business performance of non-financial corporations (increases in profits and gross operating surplus, based on preliminary data) also mitigate their vulnerabilities.

Figure 1 Risk map for the fourth quarter of 2018



Note: The arrows indicate changes from the risk map in the third quarter of 2018 published in Macroprudential Diagnostics, No. 6.
Source: CNB.

The structural vulnerabilities of the financial sector did not change significantly and are assessed as moderate. The banking system is still stable and highly capitalised and the majority of its vulnerabilities stem from the high level of currency and currency-induced credit risk, the high level of banking system concentration[1], as well as the concentration of exposure of credit institutions to the government sector and the groups of connected persons from the non-financial corporate sector. Taking into consideration the mitigation of risks that may arise from exposure concentration, the CNB amended the Decision on large exposures of credit institutions. These amendments define a clearer methodology for the identification of groups of connected persons that might help decrease the unfavourable effects of contagion risk materialisation and thus reduce credit risk. In addition to the main vulnerabilities of the banking system discussed above, in the conditions of historically low

1 The increase in banking system concentration, measured by the HHI based on assets, is the result of the merger of Splitska banka and OTP banka in the last quarter of 2018. In addition, Jadranska banka d.d. is expected to merge by acquisition with Hrvatska poštanska banka d.d.

interest rates on deposits – which motivate clients to keep funds on their current accounts – and combined with the further growth of long-term private sector financing, risks arising from the maturity mismatch between banks' assets and liabilities are still pronounced.

Risks that could arise from short-term developments in financial markets have not changed significantly and are still assessed as very low. The fall in the stock prices in international capital markets, which was consequently also reflected in the domestic market, was of short duration. However, higher volatility in the European stock market, accompanied by the effect of the still relatively high risk premiums of Italian parent banks (although reduced in the past months) contributed to the growth of the foreign component of the financial stress index. In addition, moderate financing conditions in domestic and international financial markets, which, among other things, benefit from the delay in ECB's monetary policy tightening, could spur excessive risk appetite among investors.

Cyclical vulnerabilities of the non-financial sector increased moderately (Figure 1, in the middle, above). Contributing to this was a notable acceleration of general-purpose cash lending of banks to the household sector, which in 2018 reached two-digit growth rates. General-purpose financing, predominantly non-collateralised, calls for special attention (see Box 1 Does intensified growth in general-purpose cash loans bring risks to financial stability?) because, stimulated by (excessively) eased credit standards, it may in the future, in particular in the downward phase of the economic cycle, lead to difficulties in household sector debt servicing and consequential losses for banks.

In addition, currently relatively more accessible general-purpose cash loans are, at least partially, also used as a substitute for housing financing, which additionally underpins the growth in residential real estate prices, standing at 6.8% at an annual level in the third quarter of 2018. However, following a long-term correction, prices have still not reached the pre-crisis levels, and the price model based on macroeconomic fundamentals still does not suggest the creation of any major imbalances or significant increase in risks related to the above growth (a more intensified rise in residential real estate prices may have an impact on a steep increase in household debt, while in banks it constitutes the threat of a significant correction of prices, and consequently a sharp decline in the value of collateral in the downward phase of the economic cycle).

2 Potential triggers for risk materialisation

The main potential triggers for risk materialisation are connected with the external environment, i.e. heightened geopolitical uncertainty and the potential rise of protectionism, which might result in the deterioration of financing conditions and rising uncertainty.

While an orderly exit of the UK from the EU should not have an unfavourable impact on financial markets because it is already priced into expectations, the rise in uncertainty concerning the manner of the exit has resulted in a slight growth of instabilities in the markets. The heightened risk of a no-deal exit (hard Brexit), if materialised, will raise the cost of financing (for more information, see ECB's Financial Stability Review), but also be reflected negatively in the economic activity of the euro area countries. Direct economic and financial effects on Croatia are estimated as insignificant because the majority of the effects will depend on the indirect impact Brexit will have on Croatia's trading and financial partners, which could be significant in the case of no-deal exit.

Risks related to the political situation in Italy and the need to carry out additional fiscal consolidation so far have not had a significant impact on other euro area countries or on Croatia. However, after the agreement between the Italian government and the European Commission on the implementation of additional fiscal measures, the risk premium for Italy decreased only slightly and did not return to the previous levels. A repeated increase in the risk premium might result in a rise in interest rates in Italy, a further slowdown in economic activity and reduced profitability of their banks. This might also be reflected unfavourably in the domestic economy since Italy is Croatia's largest trading partner. Any disruptions in the operation of Italian banks might spill over to domestic banks in their ownership. However, the probability of such a scenario is small since the current exposure and the volume of financing domestic banks could ensure are relatively low. Domestic subsidiaries are highly capitalised and finance their activity from domestic deposits.

A stronger than expected slowdown of global economic activity would have negative consequences for the financial sector, which would particularly be emphasised in the conditions of a potential escalation of protectionism and its impact on the slowdown in global trade. In such circumstances, the volatility of raw materials prices, which particularly affects large exporters, such as Brazil and Russia, lower demand from China and uncertainty regarding its adjustment to slower growth rates would be an additional potential trigger for a more considerable worsening of global financing conditions.

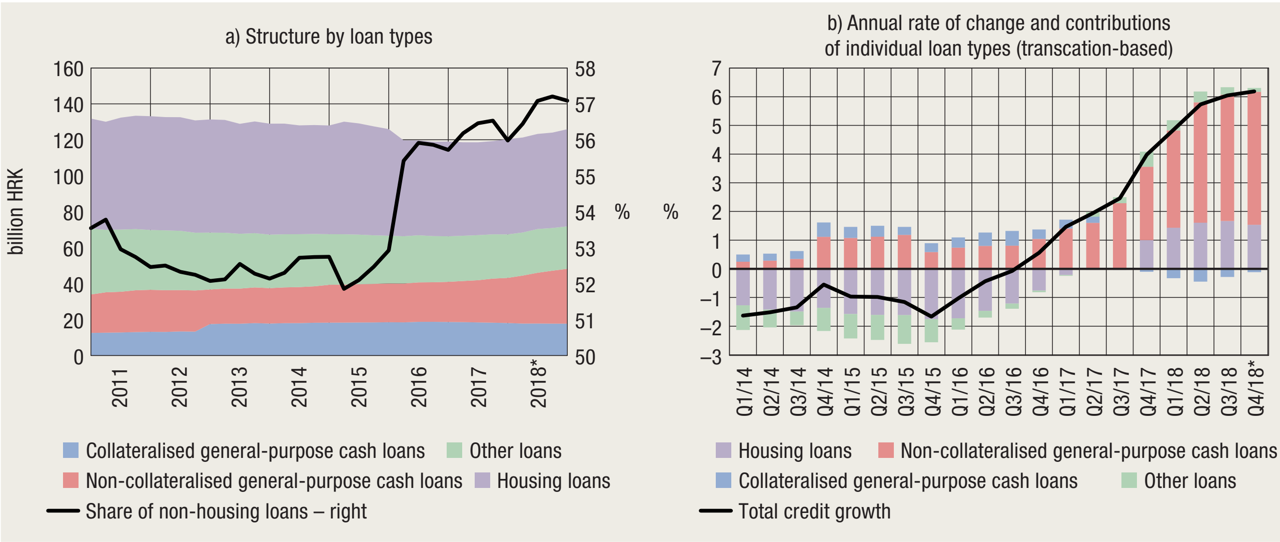
Finally, a search for yield, favourable economic conditions and ample liquidity still encourage excessive risk appetite, thus also the threat of a sudden and significant increase in risk premiums in global financial markets. The materialisation of such a scenario would result in a decrease in the value of bank assets that is shown at market price (or fair value) and a decline in the value of collateral, and, consequently, it would be more difficult for banks to meet the regulatory requirements for capital and liquidity.

As regards the domestic environment, not only does intensified emigration and the resulting labour shortage in individual activities create upward pressure on salaries, but it can also lead to jeopardising potential growth and reducing cost competitiveness. Populist pressures on the budget and the potential costs of indemnities from certain pending court proceedings or weaker than expected results in tourism might reflect negatively in fiscal policy.

Box 1 Does intensified growth in general-purpose cash loans bring risks to financial stability?

Household sector borrowing began to recover in late 2016 (see Financial Stability, No. 19, Chapter 3). The rise in employment and disposable income increased the borrowing potential, while credit growth (measured by transactions, i.e. by the difference between new lending and existing debt repayments) picked up to 6% on an annual basis (Figure 1.b) in mid-2018. Although intensified household borrowing from credit institutions is partly a result of the recovery of housing loans, which had begun at the end of 2017 in parallel with the first government housing loans subsidy programme, the strongest impetus for the acceleration in total credit growth came from general-purpose cash loans. Their growth has been intensifying gradually since 2016, reaching 12.6% on an annual basis at end-November 2018, exclusively due to non-collateralised loans, which have been growing twice as fast as the average. The rise in these loans has also increased their share in total loans, potentially substituting for collateralised forms of lending (Figure 1.a).

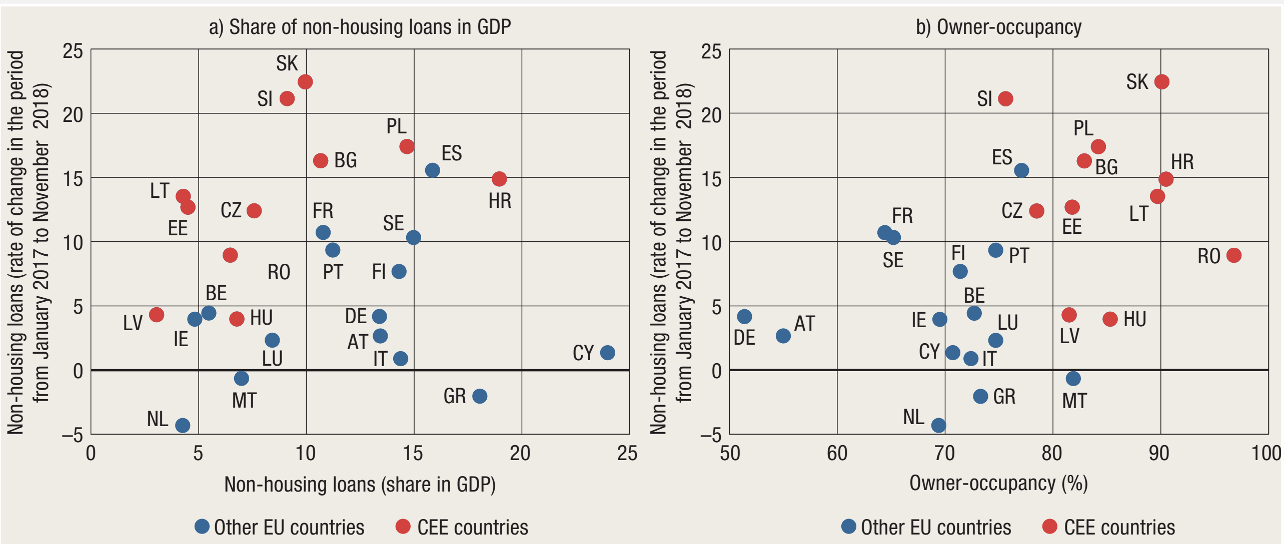
Figure 1 Household debt to credit institutions



Notes: The data as at end-2018 refer to 30 November 2018. Annual rates of change as at end-2018 refer to the period up to November 2018.
Source: CNB.

A significant rise in non-housing loans was seen not only in Croatia but also in other EU countries over the past few years, mainly in Central and East European, most notably Slovakia and Slovenia, but also in countries such as Spain, which had witnessed a long-standing drop in lending activity following the crisis (Figure 2.a). Interestingly, Croatia stands out among the mentioned countries with a somewhat higher share of non-housing loans (measured as the share in GDP) and a total amount of household loans transactions exceeding 1% of GDP annually. At the same time, these countries are characterised by the high share of owner-occupier households, which implies a smaller demand for housing loans (Figure 2.b). By contrast, total credit growth in western European countries was spurred mainly by the rise in housing loans, which also

Figure 2 Trends in non-housing loans in EU countries, depending on:

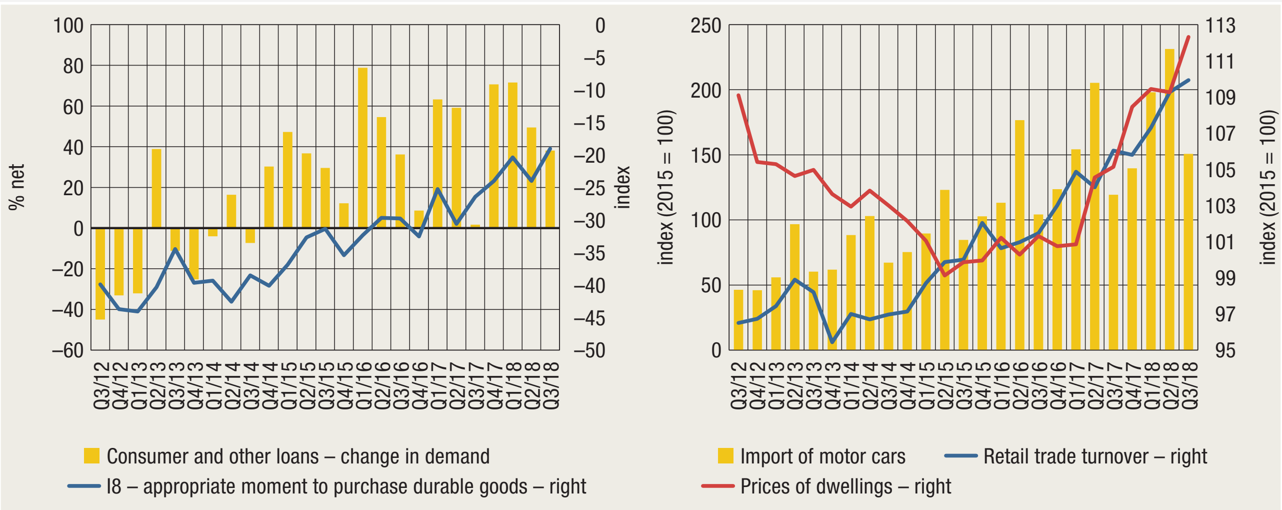


Notes: Due to differences in the classification of loans by purpose among EU countries, the figure shows non-housing loans. The data on owner-occupancy are obtained from EU-SILC 2017.
Sources: ECB and Eurostat.

set the trends of total lending in euro area countries (see ECB box on consumer credit growth).

The rise in general-purpose cash loans in Croatia may be associated with increasing household consumption. The Bank Lending Survey suggests that the demand for consumer and other loans increased, driven by the recovery of consumer confidence and durable goods consumption. Responses from the Consumer Confidence Survey point to a similar conclusion, suggesting that consumers increasingly consider this to be an appropriate moment in which to purchase durable goods (Figure 3, left). It is also possible that, in addition to financing consumption, general-purpose cash loans with longer maturities are also partly used as a substitute for car loans, which most credit institutions no longer offer, or even housing loans, in order to finance real estate purchase or renovation in a faster and simpler way (Figure 3, right).

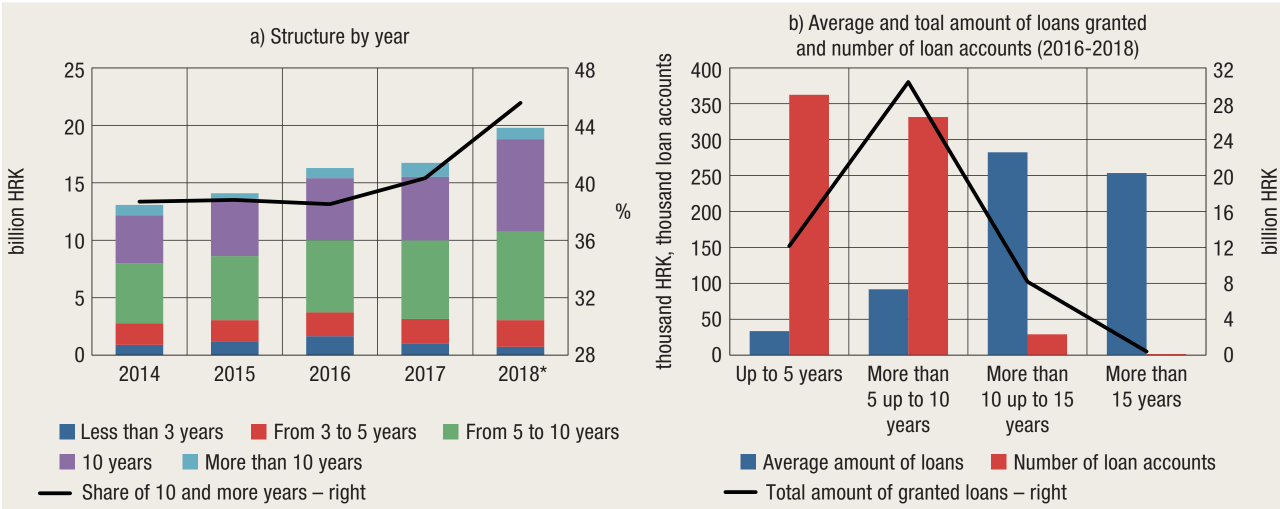
Figure 3 Change in demand for consumer loans (left) and related indicators of consumption (right)



Notes: The columns show the change in demand shown in the Bank Lending Survey (for the determinants of demand, see survey question 15). A positive value indicates an increase and a negative value indicates a decrease in demand. The line shows the index of responses on the appropriateness of the purchase of durable goods for the household based on the data from the Consumer Confidence Survey (see survey question I8). Higher index values than those in the preceding period indicate growing consumer confidence.
Sources: CBS and CNB.

The characteristics of newly-granted general-purpose cash loans may help in the identification of the main risks associated with this form of borrowing. As regards maturity, loans granted for a period of five years or more are dominant, although loans with an original maturity of ten years or more grew the most over the past two years (Figure 4.a). In addition, a survey conducted by the CNB on a sample of selected banks has shown that, on average, loans with longer initial maturities are granted for substantially higher amounts (Figure 4.b). Furthermore, even though they have generally been trending downwards, average interest rates on newly-granted cash loans are higher than those on other forms of lending. Compared with interest rates on housing loans, the second most frequent form of household lending, interest rates on cash loans

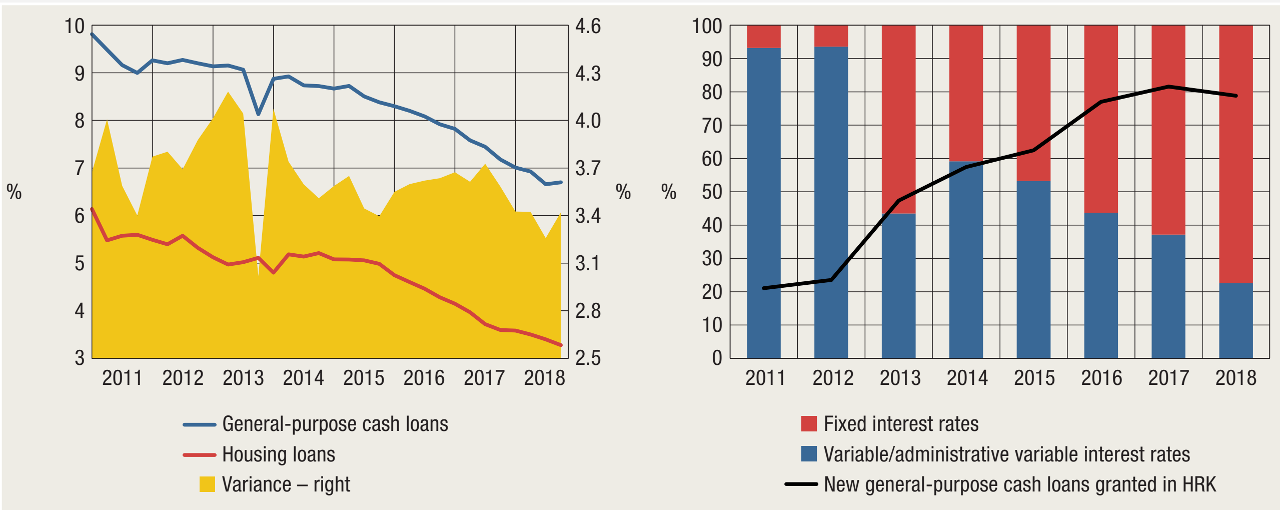
Figure 4 Characteristics of newly-granted general-purpose cash loans according to original maturity:



Note: Data for 2018 refer to the period from January to November 2018.
Sources: CNB and CNB survey on a sample of selected banks.

are, on average, 3.5 percentage points higher (Figure 5, left), reflecting the risk premium calculated by the banks with regard to this riskier type of lending. On the other hand, currency and interest rate risks for clients are less pronounced than in other forms of lending (e.g. in housing loans) as newly-granted general-purpose cash loans are predominantly granted in kuna and at a fixed interest rate (Figure 5, right).

Figure 5 Interest rates on newly-granted general-purpose cash loans (left) and interest rate and currency structure of new loans (right)



Note: Renegotiated agreements have been excluded from the calculation of average interest rates from the third quarter of 2014 onwards.
Source: CNB.

Furthermore, non-collateralised general-purpose cash loans are frequently granted within a very short period of time, sometimes without the client visiting the branch office, via mobile and online distribution channels. The simple manner in which such loans are granted, coupled with prolonged initial maturities and higher loan amounts, have increased the attractiveness of this form of borrowing. On the other hand, precisely due to the potentially higher degree of risk of such loans, credit institutions grant them with higher interest margins, enabling an immediate increase in profitability and the placement of surplus liquidity.

Since the growth in general-purpose cash loans was driven almost exclusively by non-collateralised loans, it may be considered to pose higher risks to credit institutions than the growth in housing and collateralised cash loans, as credit institutions cannot rely on a marketable instrument of collateral such as real estate or financial assets. The availability of promissory notes, guarantors and statements of approval for attachment of income mitigates risks associated with this form of lending only moderately. Systemic risks associated with this type of loan derive from the fact that, in the future, the number of households unable to meet the obligations arising from their loans may increase, causing greater losses to credit institutions than collateralised loans.

The second potential source of systemic risk is associated with the assessment of the creditworthiness of potential debtors. A survey conducted by the CNB on a sample of selected banks has shown that credit institutions in Croatia apply more relaxed standards when approving general-purpose cash loans than they do when approving housing loans. When calculating client creditworthiness and maximum repayment amounts, credit institutions do not apply a uniform methodology, as some of them take into account internally-defined minimum costs of living, while others do it indirectly, applying the maximum allowed debt service-to-income ratio. In addition, the determination of creditworthiness in the case of cash loans, particularly for clients with below-average income, is carried out according to more lenient standards than are those used for housing loans. The cost-of-living levels to be included in the assessment of creditworthiness for housing loans is set forth in the Decision on the additional criteria for the assessment of consumer creditworthiness and on the procedure for the collection of arrears and voluntary foreclosure. Furthermore, the exchange of information and the issue of credit reports to the public, formerly carried out by the Croatian Registry of Credit Obligations (HROK), have been discontinued since the beginning of 2018, making impossible the inspection of a client's debt to other credit institutions and increasing the asymmetry of information in the loan market.

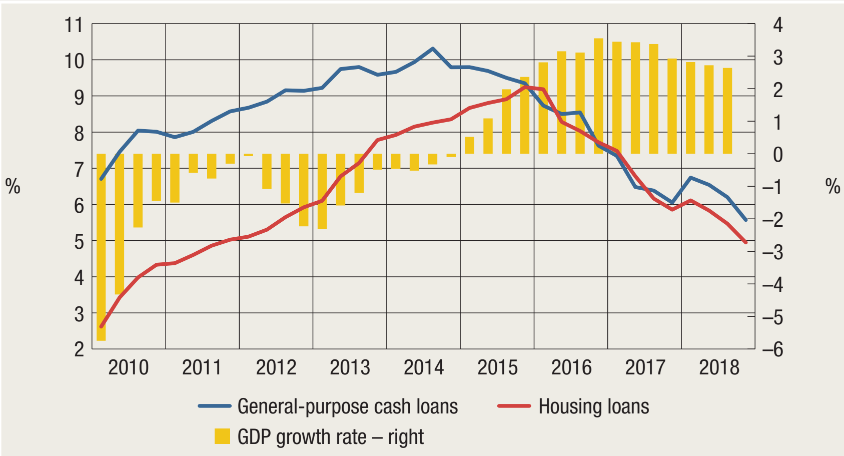
All of the above: the simple and fast manner in which loans are granted, the increase in the number of borrowers, the relaxed lending terms as well as the prolonged initial maturities could lead to an adverse selection of borrowers. For example, in a piece of research into consumer loans granted through an online service in the US, Hertzberg et al. (2016)[2]

2 Hertzberg, A., A. Liberman, and D. Paravisini (2018): Screening on Loan Terms: Evidence from Maturity Choice in Consumer Credit, The Review of Financial Studies, Volume 31, Issue 9, September, 3532–3567, https://doi.org/10.1093/rfs/hhy024

found that clients opting for loans with longer maturities were more likely to default. It seems that such clients are more exposed to income shocks and thus exhibit a higher degree of risk.

The absence of collateral and a possible adverse selection of clients when granting general-purpose cash loans may affect the stock of and developments in non-performing loans (NPLs). A comparison with housing loans shows that in Croatia, in times of growing employment and income (Figure 6) debtors managed to settle their obligations more easily, causing the share of NPLs to decline in both forms of lending. However, in the period characterised by unfavourable economic developments and intensified deleveraging, the fall in employment and household income led to difficulties in debt repayment and greater losses of banks arising from non-performing cash loans, as such loans are more difficult to recover than housing loans. The more relaxed assessment of creditworthiness and longer maturities increase the probability of default because they contribute to the increase in the share of clients that will sooner than others experience the negative consequences of economic shocks, while the absence of collateral may cause the losses of banks associated with NPLs to grow.

Figure 6 Share of non-performing loans and GDP growth rate



Note: The figure shows annualised GDP growth rates (calculated as the cumulative sums of GDP in the previous year divided by thus obtained annual GDP amounts at the end of the same quarter of the previous year).
Sources: Eurostat and CNB.

The growing exposure of banks to non-collateralised general-purpose cash loans constitutes a kind of accumulation of risks, which, should they materialise, could generate major losses for banks and weaken future household consumption. Optimistic expectations regarding debt servicing possibilities, which peak in economic upturns, contribute to the development of systemic risk, whose negative consequences can be felt only in the economic downturn. If the existing growth of general-purpose cash loans continues, it could soon become excessive, which would require action on the part of the CNB in order to preserve financial stability. Microprudential and macroprudential instruments available for this purpose include stricter creditworthiness assessment criteria, an increase in Pillar 2 capital requirements or the introduction of maturity limits. Such instruments have recently been activated by some neighbouring countries (Slovenia, Serbia).

3 Recent macroprudential activities

3.1 Continued application of the countercyclical capital buffer rate for the Republic of Croatia for the first quarter of 2020

A quarterly analytical assessment of the development of cyclical systemic risks has shown that there is still no pressure that would necessitate any corrective interventions on the part of the CNB. Specifically, a slight increase in the stock of total domestic and foreign placements to the non-financial sector in the third quarter of 2018 was accompanied by a relatively stronger nominal GDP growth, with the result that the total placements to GDP ratio decreased further. The credit gap calculated on the basis of this standardised ratio continued to decline as a result. Such trends were also observed in the specific indicator of relative indebtedness, which is the ratio of domestic credit institutions' loans to the quarterly seasonally adjusted GDP. In line with the results of the analysis, the Croatian National Bank issued in December 2018 the Announcement of the continued application of the countercyclical capital buffer rate for the Republic of Croatia for the first quarter of 2020.

3.2 Review of the identification of other systemically important credit institutions in the Republic of Croatia

In accordance with EBA Guidelines and the Credit Institutions Act, the CNB, as the designated authority in charge of identifying other systemically important credit institutions (O-SIIs), repeated the regular annual review of the identification of O-SIIs in the RC and the determination of the O-SII capital buffer. Based on the internal methodology, the review identified a total of seven O-SIIs to which a buffer of 0.2% or 2% of the total risk exposure is applied, depending on the institution's estimated systemic importance. The results of the annual review were published in January 2019.

In accordance with the Decision on the application of the structural systemic risk buffer, OSIIs are also required to maintain a systemic risk buffer applicable to all exposures, whereas, in accordance with the Credit Institutions Act, credit institutions are required to maintain either the systemic risk buffer rate or OSII buffer rate, whichever is the higher. As the systemic risk buffer rate is still the higher of the two capital buffer rates, O-SIIs have remained subject only to the application of the systemic risk buffer rate.

3.3 Overview of macroprudential measures in EU countries

In response to the continued upward phase of the credit cycle (especially regarding the household loan segment) and the real estate price growth, several EU countries raised the countercyclical capital buffer rate in the fourth quarter of 2018. In early January 2019, the non-zero countercyclical capital buffer rate was applied by seven countries (the Czech Republic (1.25%), Iceland (1.25%), Lithuania (0.5%), Norway (2%), Slovakia (1.25%), Sweden (2%) and the United Kingdom (1%)), and will in the following 12 months be applied by Bulgaria, Denmark, France, Ireland and Luxembourg. In addition, in the fourth quarter of 2018, the Czech Republic and Norway increased the announced countercyclical capital buffer rate to be applied in the 12 months to 1.75% and 2.5% respectively.

In October 2018, Slovenia's central bank broadened and supplemented the macroprudential recommendation on household lending issued 2016, which referred only to housing loans. Due to the high growth rates, extended maturities and increased amounts of cash loans, the recommendation was amended to extend the existing recommended debt service-to-income ratio (DSTI) limit to all consumer loans, while the loan repayment definition was broadened to include the repayment of all loans and not only of housing loans. The recommended maximum maturity for consumer loans was limited to 120 months. This is because, although the related risks are assessed as moderate in the currently favourable macroeconomic environment, a longer maturity of newly-granted consumer loans means that these loans could remain on banks' balance sheets after the reversal of the economic cycle, which, should macroeconomic developments deteriorate, could lead to a sharp increase in default rates on these loans.

Table 1 Overview of macroprudential measures in EU countries

	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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
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	●		●	●	●		●				●			●	●			●			●			●		●	●		●	●

Notes: The measures listed 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. Green indicates measures that have been added since the last version of the table.
Disclaimer: of which the CNB is aware.
Sources: ESRB, CNB and notifications from central banks and websites of central banks as at 15 January 2019.
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 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 the review of 8 Jan. 2019, 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, Addiko Bank d.d., Zagreb, OTP banka Hrvatska d.d. Split; 0.2% 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 have remained 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	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

Measure	Primary objective	Year of adoption	Description	Basis for standard measures in Union law	Activation date	Frequency of revisions
Risk weights for exposures secured by mortgages on commercial property	Mitigating and preventing excessive maturity mismatch and market illiquidity following 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
Additional criteria for assessing consumer creditworthiness	Credit risk management in consumer housing loans pursuant to EBA Guideline on creditworhtiness assessment (EBA/GL/2015/11) and EBA Guideline 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
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 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 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 Recommendation 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 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 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 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
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
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 credit risk	2017	Act on Amendments to the Execution Act: 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 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
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 consequently 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
CEE	Central and Eastern European
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

ISSN 2459-8704