

No.

21

Year 12
VII 2020

The cover features a photograph of classical stone columns, likely from a government building or bank, with a blue color overlay. A horizontal band with a green-to-yellow gradient and a circuit-like pattern is positioned above the columns. The title 'FINANCIAL STABILITY' is printed in large white letters at the bottom.

FINANCIAL STABILITY

CROATIAN NATIONAL BANK

CROATIAN NATIONAL BANK

Financial Stability

No. 21, Zagreb, July 2020

PUBLISHER

Croatian National Bank
Publishing Department
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

Those using data from this publication are requested to cite the source.

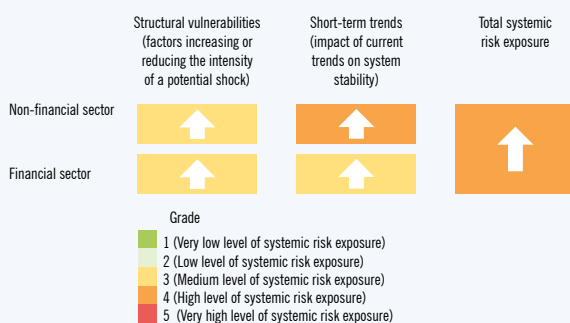
ISSN 1847-0017 (online)

Contents

Introduction	5
1 Macroeconomic environment	7
Box 1 Overview of the measures to help the economy hit by the coronavirus pandemic	13
2 Government sector	14
3 Household sector	17
4 Real estate	22
Box 2 Commercial real estate market in Croatia	26
5 Non-financial corporate sector	30
Box 3 Who applied for CES grants for job preservation?	35
6 Banking sector	38
Credit institutions' measures for clients affected by the coronavirus pandemic	40
Migrations of non-financial corporation loans	42
Box 4 Digital business transformation: a channel for the preservation of bank profitability in Croatia	50
Box 5 NPL investors in Croatia	53
7 Macroprudential policy instruments	55
Box 6 Analytical overview: Recent developments in general-purpose cash loans	59

Introduction

Risk map, May 2020



Note: The arrows show changes since the outbreak of the crisis caused by the coronavirus pandemic, i.e. changes in relation to the Risk map for the fourth quarter of 2019 published in Macprudential Diagnostics, No. 10).

Source: CNB.

The global economic shock caused by the COVID-19 pandemic and the ensuing epidemiological measures, which led to a sudden suspension of economic and social activities across the world and turbulence in the international financial markets, marked the first half of 2020. Amid a strong and sudden contraction of the global economy and a considerable worsening of the global economic climate as a result of the uncertainty regarding further developments in the pandemic and its duration, systemic risks to the stability of the global financial system rose considerably.

In Croatia, too, the pandemic had an unfavourable impact on developments in economic activity, with the expectations that in 2020 the country will see the biggest fall in the annual GDP growth rate since independence. The coronavirus pandemic and the epidemiological measures introduced were a big shock for non-financial corporations as seen in a sudden drop in the volume of operations, the effects of which spilled over to the labour market and economic expectations of households. In such conditions, to reduce the unfavourable consequences for the economy and preserve financial system stability, the Government of the Republic of Croatia (RC), the Croatian National Bank (CNB) and the Croatian Financial Services Supervisory Agency (HANFA) took a number

of coordinated actions counteracting instabilities in the financial markets and mitigating illiquidity shocks for non-financial corporations and households. The pressures on the foreign exchange and bond markets started with the first reported cases of COVID-19, prompting the CNB to respond with CNB foreign exchange interventions and adjustment of monetary policy instruments, thus ensuring system liquidity, which helped calm the financial markets and preserve banking and overall financial sector stability. The Government of the RC adopted a package of measures aimed at preserving jobs and businesses severely impacted by the COVID-19 crisis and the CNB and the Government have established a framework within which credit institutions may act to ease the burden of repayment and access to financing for the enterprises and households hit by the crisis.

Although the range of fiscal, monetary and supervisory measures taken temporarily alleviated the unfavourable impacts of the pandemic, the fall in economic activity combined with Government measures inevitably led to a fall in general government revenues and a sharp rise in financing needs. Nevertheless, the Republic of Croatia maintained its investment credit rating and a relatively low risk premium, which is associated with the favourable global financing conditions while, if accepted, the proposed EU grants and loans are expected to help ease the burden of financing the costs of the crisis in the forthcoming years. The exact scale of the consequences of the crisis on the economy is not known yet and will largely depend on further developments in the epidemiological situation and the duration of the associated extraordinary economic and social circumstances on the domestic and the global level. However, when compared with the 2008 global financial crisis, the Croatian economy today is more resilient; households' and enterprises' vulnerability decreased considerably while membership in the EU provides Croatia with access to EU funds and mechanisms for faster economic activity recovery.

This time credit institutions were highly capitalised and very liquid when economic activity started to slow down, which made it easier for them to absorb the initial shock. However, the biggest risk to their business operations in the forthcoming period lies in the expected fall in profitability amid rising credit risk, while the moratorium on household and corporate loan repayment only postponed the risk's materialisation. The

period of stress also had an impact on the real estate market, which, after years of price growth, is marked by great uncertainty, which will in turn have an impact on house evaluations and the marketability of the collateral on banks' balance sheets. However, the developed secondary market of non-performing loans may facilitate the cleaning up of their balance sheets. Stress testing of credit institutions conducted thus far have confirmed system resilience to possible losses in the situation of a sudden and grave global crisis. Even though the current worsening of some aspects of macroeconomic developments is even greater than such assumptions, the analyses shown in the chapters and boxes of this Report indicate that the banking system is able to withstand the burden of the crisis.

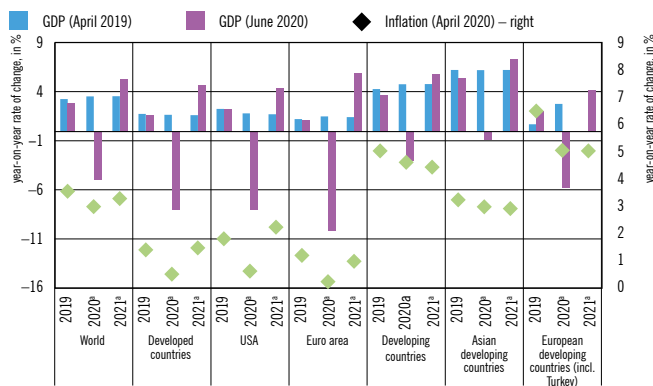
And finally, worth noting is that the first half of 2020 saw the finalisation of the preparations for entry of the RC into the European Exchange Rate Mechanism (ERM II) and the banking union, the first formal step towards achievement of the strategic objective of the introduction of the euro. Thus a number of regulatory changes were adopted in April 2020 that provided the legal basis for the establishment of close cooperation between the Croatian National Bank (CNB) and the European Central Bank (ECB) and other activities that the Republic of Croatia committed

to under the letter of intent for entry in the ERM II were also being finalised. In June, the ECB concluded a comprehensive assessment of the quality of assets and resilience to stress of the Croatian banks that determined that none of the five banks assessed had capital shortfalls. The entry in the ERM II and the banking union will greatly contribute to the safety and stability of the domestic banking sector and help the economy to recover from the crisis.

Upon establishment of close cooperation, some of the supervisory powers of the CNB as the competent authority for the supervision of credit institutions will be transferred in the framework of the Single Supervisory Mechanism to the ECB, which will be directly responsible for the supervision of significant credit institutions that have head offices in the RC, while less significant credit institutions will be supervised by the CNB in cooperation with the ECB. However, the implementation of the macroprudential policy of the RC, which aims to contribute to the maintenance of stability of the financial system as a whole, taking into account the specific characteristics of the domestic economy and the banking sectors, and based on a harmonised European legal framework, national discretionary powers and the national legislation, will remain primarily the responsibility of the CNB, in cooperation with the ECB.

1 Macroeconomic environment

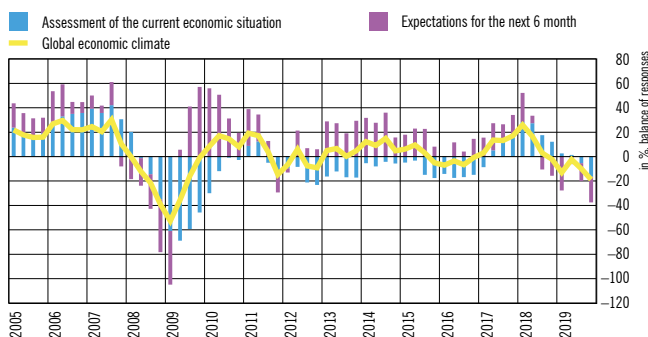
Figure 1.1 Most global economies will record a sharp annual fall in economic activity in 2020



* Forecast.
Source: IMF (WEO, June 2020/April 2019).

A sharp fall in global economic activity and great uncertainty regarding the duration and consequences of the coronavirus pandemic have resulted in increased risks to financial stability on the global level. Central bank measures stabilised the international financial markets and maintained the relatively favourable financing conditions for the governments and the real sector; however, the risks associated with their possible destabilisation amid increased macroeconomic imbalances on the global level have risen considerably. The coronavirus pandemic had a great impact on domestic macroeconomic developments, with Croatia facing a sharp contraction in economic activity.

Figure 1.2 Global economic climate deteriorated

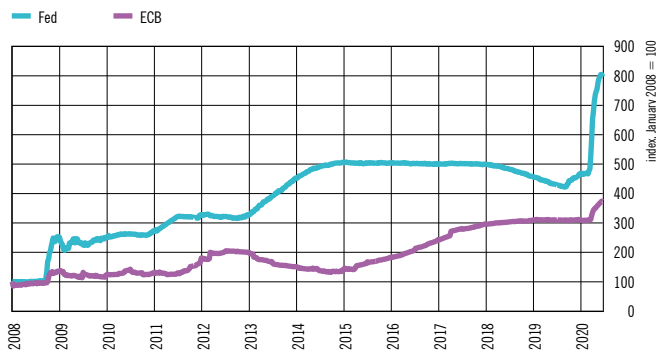


Notes: The Ifo World Economic Climate indicator is based on the quarterly survey of the current economic situation and short-term expectations and is weighted using the GDP based on purchasing-power-parity of each country. The indicator value may range between -100 and 100. Positive values represent a positive assessment of the economic climate and vice versa.
Source: Ifo World Economic Survey (WES).

International environment

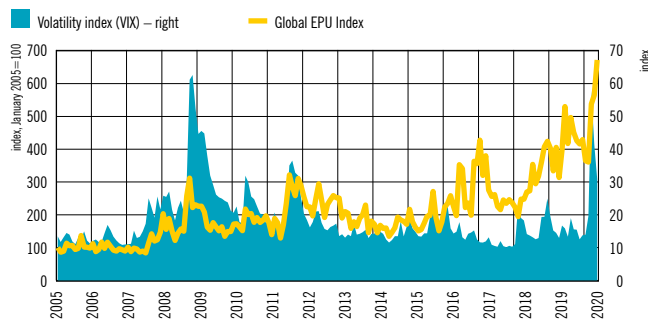
This year the global economy will be marked by a strong recession caused by the consequences of the measures to contain the spread of the coronavirus (Figure 1.1). The growth in the global economy slowed down already in 2019 and the suspension or considerable slowdown in economic activity throughout the world in the first half of 2020 led to a historical fall in global economic activity, accompanied by great uncertainty regarding future developments. This is also mirrored in a substantial deterioration in the global economic climate and negative expectations regarding the next half of the year (Figure 1.2). Under the assumption that the pandemic will be stopped in the second half of 2020, the IMF expects to see a contraction in economic activity of approximately 8.0% on an annual level in the developed countries, a much bigger contraction than that expected in the developing countries (-3.0%). The IMF also stresses that among the larger countries, only China could

Figure 1.3 Leading central banks provided thus far unparalleled liquidity support to the economies



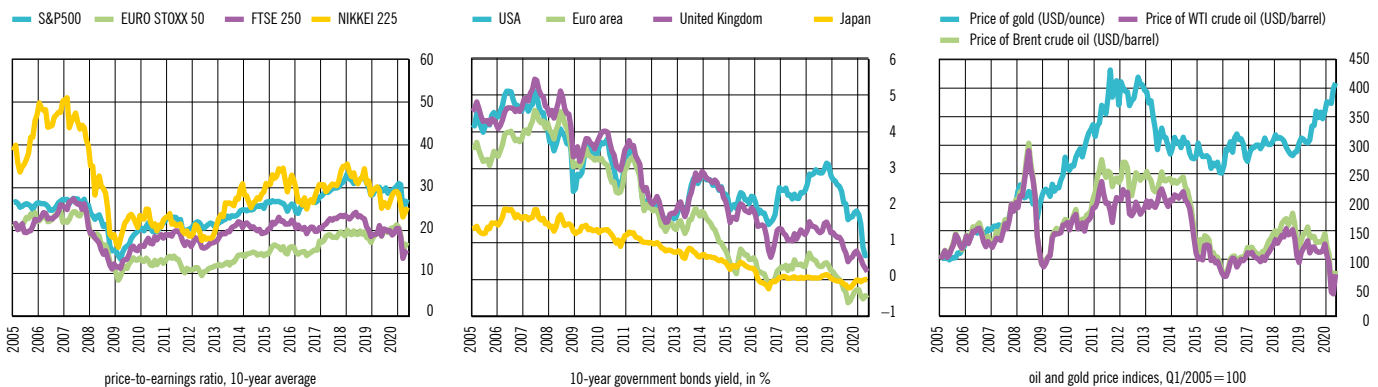
Source: Federal Reserve Bank of St. Louis.

Figure 1.4 Very strong increase in economic and political uncertainties and capital market volatility



Notes: VIX is a measure of expected implicit fluctuations in the S&P500 options, calculated and published by the Chicago Board Options Exchange (CBOE). The Global Economic Policy Uncertainty Index (EPU) is an index that shows uncertainty in the future policy-related economic issues and it is weighted using PPP-adjusted GDP of the included countries. Sources: Bloomberg and Policyuncertainty.com.

Figure 1.5 Rising risk aversion and great uncertainty regarding future developments in the pandemic strongly affect the financial markets



Note: Price-to-earnings ratio for S&P500 was taken from Robert Shiller's website. Sources: Bloomberg, OECD and <http://www.econ.yale.edu/~shiller/>.

achieve a positive rate of economic growth. China is also expected to lead the global economic recovery in 2021.

The escalation of the pandemic was followed by high volatility in the financial markets. However, the measures taken by governments, central banks and other financial markets regulators spurred their stabilisation and gradual recovery. With great fluctuations in the prices of all forms of assets, some segments of financial markets practically froze following the outbreak of the pandemic and the markets recorded a sharp increase in the demand for cash and highly liquid assets. Even the prices of gold, traditionally perceived as a safe haven in turbulent times, recorded a fall in the first wave of panic; however, after the initial shock, the value of gold recovered (Figure 1.5). Stock prices, as well as their price to earnings ratio also sunk, reflecting investors' concern regarding future business results of enterprises. However, as the epidemiological situation stabilised and the measures eased, the stock markets started to recover slowly in the middle of the second quarter of the year.

The developments in foreign exchange rates in the first half of 2020 were also marked by the coronavirus pandemic. A pronounced rise in risk aversion and rising propensity towards safe liquid assets increased the demand for the American dollar, which strengthened against most of the global currencies (Figure 1.7). This trend was halted by the exceptionally expansionary monetary policy of the Fed coupled with its currency swap agreements with a large number of central banks, which ensured additional dollar liquidity globally. After initial weakening, the exchange rate of the euro against the dollar recovered. Similar developments were also seen in the exchange rate of the euro against the Swiss franc and the yen. As the pandemic escalated, the currencies of many emerging markets were faced with very strong depreciation pressures, which mostly eased off gradually during the second quarter of 2020.

Central banks around the world promptly took a number of standard as well as unconventional measures to stabilise financial markets and mitigate the negative consequences of the pandemic on economic activity. Leading central banks entered the crisis amid conditions of very low current inflation and subdued inflationary expectations. In addition to reducing reference interest rates where the situation permitted, such as the US, after the escalation of the pandemic central banks provided an unprecedented amount of liquidity in the system. In the context of their programmes, the Fed and the ECB ensured long-term financing of banks, accepting government and corporate bonds as collateral in their operations. In addition, the Fed and the ECB further relaxed their rules on eligible collateral in their operations. The significant volume of these activities, combined with securities purchases, led to an extremely sharp rise in their balance sheets. In this way, in cooperation with governments, central banks managed to prevent any panic following the escalation of the pandemic. Such extremely expansionary monetary policy is expected to continue in the rest of the year and in a larger part of 2021.

Current risks in the international environment

The biggest risk to global financial stability lies in the uncertainty regarding the future course of the epidemic and its consequences on economic growth and international financial markets (1.4). The potential vulnerabilities in some of the major global economies were already relatively high even before the pandemic, which further exacerbated them, particularly in the case of private and public sector indebtedness. Increased risks were particularly associated with the slowdown in Chinese economy and the high debt level of all its sectors. Also, there is a rising concern regarding the high public debt level of the US, which expects to see a strong recession this year.

Government measures providing support to the economy have widened fiscal imbalances in EU countries. The possible growth in risk premiums could jeopardise public debt sustainability of vulnerable member states and thus further destabilise their economies. This is particularly true of Italy. These risks are further enhanced by a relatively strong interconnectedness between the governments and banks, which increases systemic risks for the financial system. However, in the conditions of low interest rates and under the assumption that in the case of most of the countries this is just a one-off increase in public debt, markets can be expected to go easier on its sustainability. At the same time, in the case of countries that might nevertheless be forced to take stricter savings measures, this could have an unfavourable impact on the dynamics of their economic recovery.

If the extremely negative macroeconomic developments continue into the rest of the year, the private sector might face even greater problems in debt servicing. These difficulties in the EU were largely mitigated by measures taken by govern-

Figure 1.6 The spread between 10-year and 2-year bonds is very low

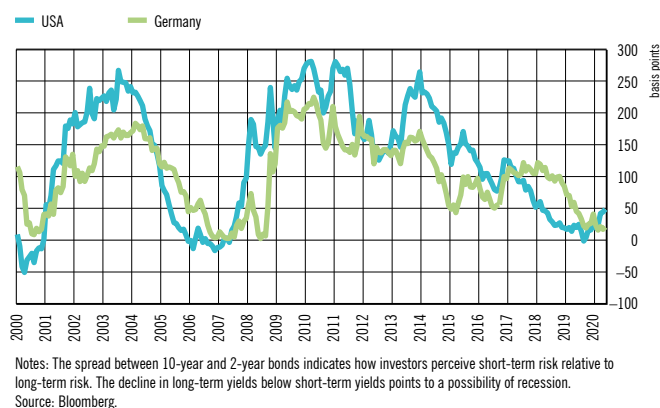


Figure 1.7 The search for safe, highly-liquid assets following the outbreak of the pandemic increased the demand for the American dollar

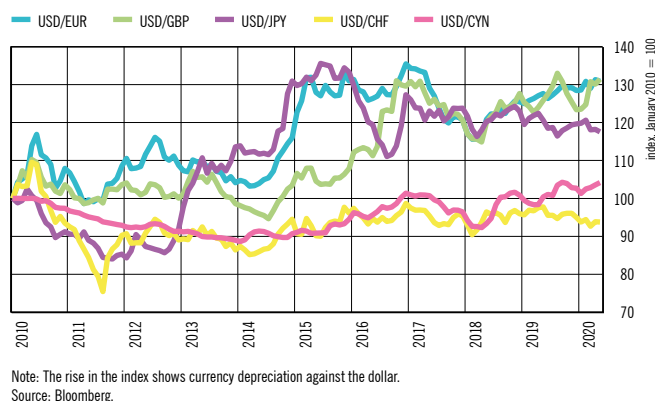
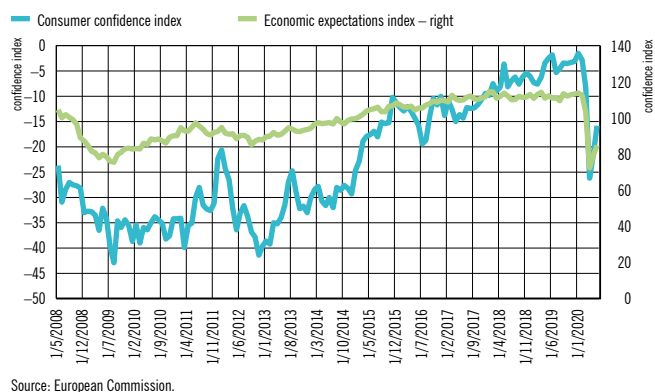


Figure 1.8 The coronavirus pandemic quickly influenced expectations regarding future economic developments, which plummeted



ments, the ECB and other European central banks, but it is very likely that in the case of a prolonged recession they will not be sufficient to prevent bankruptcy of some of the enterprises and unemployment growth. However, if the measures are such as to provide indiscriminate support to enterprises with no future, this will thwart the potential growth rate. This recession is specific as various economic activities are not highly correlated and some will be harder hit than others even in the case of recovery. In addition, the weakening of economic activity, combined with negative developments in the labour market could result in a sharp fall in real estate prices.

Further increase in credit risk and deterioration of the existing portfolio quality could also potentially threaten the stability of some financial institutions. In addition, the possible absence of any economic recovery in the following year, in conjunction with a prolonged period of low interest rates, might threaten bank margins and profitability and thus have an unfavourable impact on financial stability.

Geopolitical risks might rise if the pandemic adds momentum to further deglobalisation and protectionist activities. Before the escalation of the pandemic, geopolitical risks were mitigated by the UK's orderly exit from the EU with no immediate raising of barriers to the movement of goods and services as well as progress achieved in trade negotiations between the US and China. However, there is still uncertainty regarding the final regulation of trade relations between the UK and EU, as there is with respect to US-China relations, particularly concerning intellectual property rights and industrial subsidies.

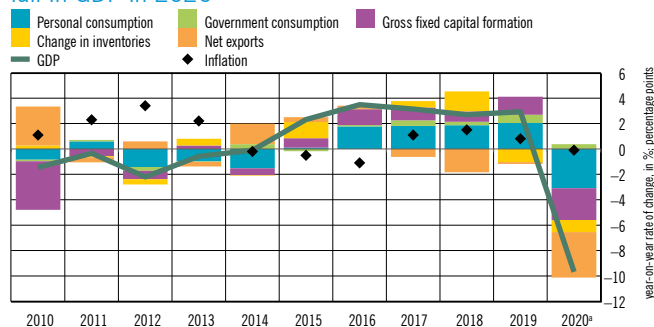
Domestic environment

The Croatian economy was also faced with a strong contraction in economic activity following the outbreak of the COVID-19 pandemic. In the first quarter of 2020 economic activity fell by 1.2% from the previous quarter (growing by 0.4% on an annual level), mirroring the impact of the introduction of restrictive epidemiological measures in mid-March, which had a considerable impact on the unfolding and intensity of economic activity.

The pandemic and the epidemiological measures had the biggest impact on the economy in April and May, as suggested by the available macroeconomic data for that period. Thus, at the end of May, the number of unemployed persons rose to 157 thousand from the same month of the previous year and the number of employed persons fell by approximately 50 thousand.¹ Consumer and business confidence surveys point to a sharp fall in the level of optimism and extremely unfavourable expectations in the economy in April, while May and June recorded a small recovery in confidence, although the indices

¹ The dynamics of the number of employed and unemployed persons during this period was largely influenced by job preservation measures for all entrepreneurs with a fall in income due to the COVID-19 pandemic. In April 2020 this measure was used by over 100 thousand enterprises for over 500 thousand workers.

Figure 1.9 Contraction of exports, investments and personal consumption is the biggest contributing factor to the expected fall in GDP in 2020



* Forecast.

Note: The figure shows contributions to GDP growth, the annual rates of change in real GDP and the average annual rate of change in the consumer price index (CPI).

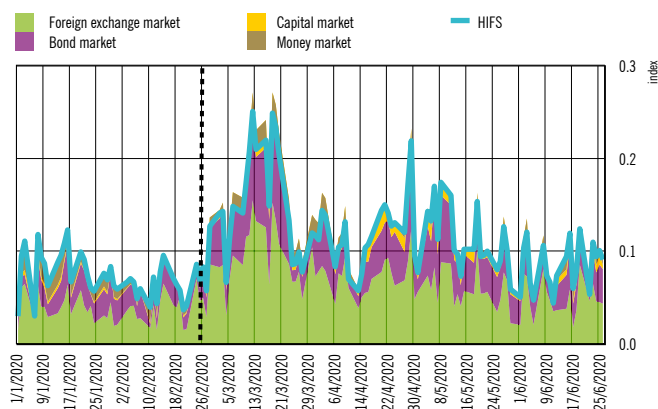
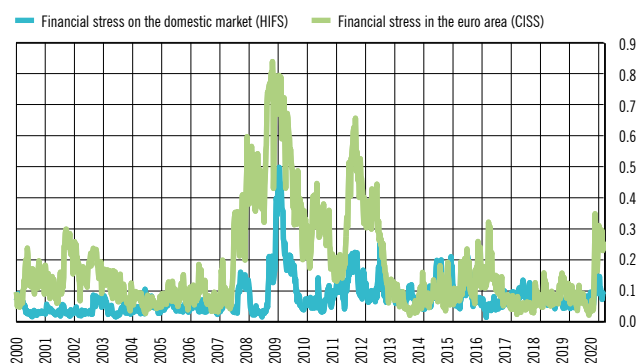
Sources: CBS and July 2020 CNB projection.

continue to be low (Figure 1.8). Also, the new surge in the number of COVID-19 cases in the second half of June might spur a further fall in confidence in the rest of the year. Immediately following the outbreak of the pandemic, taking into account the speed of materialisation and intensity of macroeconomic shocks, a comprehensive package of measures to help the economy was adopted in a joint action by the Government, CNB and HANFA. An overview of the major economic, fiscal, monetary and supervisory measures is given in Box 1. The adopted measures should partly mitigate the unfavourable developments during the pandemic and accelerate economic activity recovery once the pandemic is over.

Due to the unfavourable impact of the pandemic on economic activity, real GDP is expected to fall by 9.7% in 2020, the biggest contraction in the annual rate of change in GDP since Croatia's establishment as sovereign state. Such developments mirror a simultaneous decline in almost all components of aggregate demand: the expected sharp fall in exports, primarily tourist services due to the pandemic and the implementation of epidemiological measures in Europe and around the world, as well as a reduction in corporate investments and personal consumption of households (Figure 1.9). The coronavirus pandemic will bring to a halt the consecutive five-year expansion during which the domestic economy grew at an average real rate of 2.9%, which was also recorded in 2019.

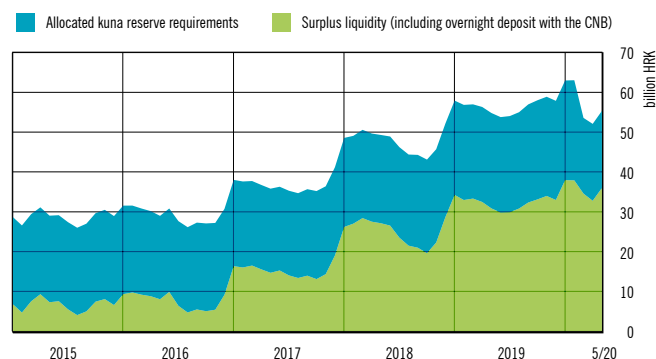
The domestic foreign exchange and bond markets initially responded strongly to the outbreak of the pandemic but soon stabilised owing to the measures taken. The financial stress index rose temporarily following the outbreak of the epidemic due to the pressures on the foreign exchange and bond markets (Figure 1.10). The depreciation pressures on the exchange rate of the kuna against the euro were due to the increased demand of domestic sectors for foreign exchange that was primarily governed by changes in the expectations regarding future developments of the exchange rate and outflows from investment funds, with the exchange rate reaching EUR/HRK 7.63 in mid-April, having depreciated by 2.5% from February (when Croatia

Figure 1.10 Macroeconomic shocks also spilled over to the financial sector causing an increase in the financial stress index



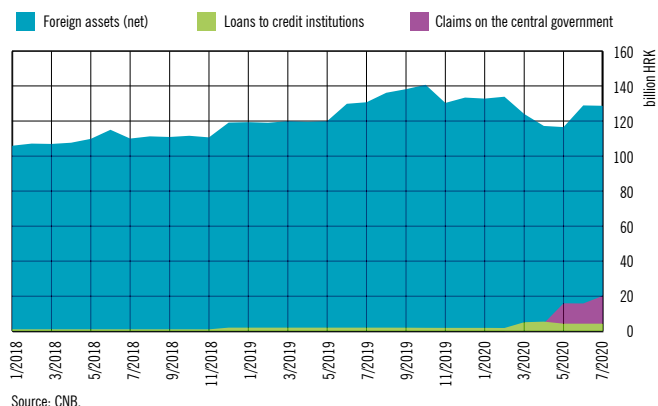
Notes: The dotted line marks the first recorded case of coronavirus disease in the RC (25 February 2020). Data shown are data available as at 26 June 2020.
Sources: Bloomberg and CNB calculations.

Figure 1.11 CNB measures preserved high financial system liquidity



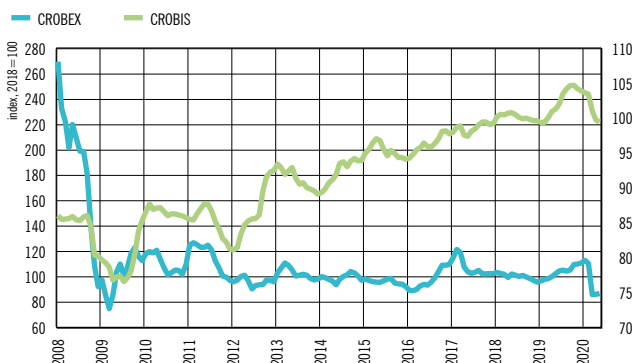
Source: CNB.

Figure 1.12 Active measures in the pandemic changed the structure of CNB assets



Source: CNB.

Figure 1.13 The CROBEX index hits record lows, similar to the level recorded during the global financial crisis in 2009



Source: Zagreb Stock Exchange.

was still corona-free). This prompted the CNB to intervene in the foreign exchange market by selling a total of EUR 2.7bn to the banks, thus stabilising the exchange rate of the kuna. Foreign exchange interventions led to a fall in international reserves, but their current level can still be assessed as adequate for preserving the stability of the exchange rate. In April, a currency swap line was agreed with the ECB that enables EUR 2bn worth of kuna to be swapped for the euro. The CNB replaced the kuna liquidity withdrawn in foreign exchange interventions by conducting structural and regular open market operations, fine tuning operations during which securities of the RC were purchased, and by reducing the reserve requirement rate from 12% to 9% (Figure 1.11). Also, the list of potential participants in operations of sale and purchase of securities was expanded to include pension and investment funds and insurance companies. The measures taken resulted in an easing of tensions on the bond market and lowering of the financial stress index to the level recorded in 2019.

Negative investor sentiment also marked the developments in the capital markets in early 2020 (Figure 1.13). The CROBEX index fell to the levels recorded at the beginning of the global financial crisis in 2009. This correction followed a small recovery in CROBEX in 2019, although its average value in that year was still two times lower than before the outbreak of the global financial crisis in 2008. Despite a small correction following the outbreak of the pandemic, the CROBIS index remained relatively stable, still at higher levels than in the 2009 financial crisis period and the debt crisis of the countries of the euro area periphery, which reflects the favourable impact of the expansionary monetary policy.

Current risks in the domestic environment

The current risks in the domestic macroeconomic environment are closely related to the development of the epidemi-

ological picture in Croatia as well as the intensity of the possible continued pandemic in the EU and the rest of the world, which will determine economic activity recovery in the main foreign trade partner countries. Each further impediment in the movement of people and cross-border operations would have a negative impact on domestic economic developments. Even without a new lockdown, a continuation and intensification of the pandemic would lead to uncertainty and fear and further postpone economic activity recovery, which could also reduce potential growth over a medium term and considerably prolong the recovery in economic activity in Croatia to the level recorded before the outbreak of the pandemic.

Over a medium term, the domestic environment will continue to see all the risks that may arise from the international and domestic environment and which were present before the outbreak of the pandemic, such as the unfavourable impact of geopolitical tensions and global strengthening of trade protectionism and unfavourable demographic trends and labour force outflow.

Box 1 Overview of the measures to help the economy hit by the coronavirus pandemic

The coronavirus pandemic and the introduction of epidemiological measures restricting free movement and free labour in order to contain the pandemic had a big negative impact on real and financial developments in the country¹. The Government, CNB and HANFA took coordinated actions to mitigate the negative economic consequences of the pandemic and maintain stability in the domestic financial market. Shown below is a systematic overview of the most important measures, which helped maintain financial stability.

The Government of the Republic of Croatia:²

- Croatian Employment Service job preservation support to sectors hit by the coronavirus in the case of enterprises that recorded a 20% fall in income in the amount of HRK 3 250 for March and HRK 4 000 for April and May, in addition to an exemption from the payment of contributions. The support continues to be paid out in June, but to qualify, enterprises must have a fall in income in excess of 50%.
- Write-off of tax liabilities of enterprises that recorded a fall in income in excess of 50% and a deferral of tax liabilities of enterprises that recorded a fall in income of between 20% and 50% as a result of the pandemic
- VAT payment deferral until invoice settlement
- Deferral of various public dues
- Agreement with banks to ensure a minimum three-month moratorium to clients hit by the pandemic on the repayment of credit liabilities
- A three-month suspension of measures of forced collection for all debtors
- Approval of HBOR guarantees for exporters or indirectly exporting economic entities or suppliers of direct exporters and enterprises in tourism for additional liquidity, the extension of the maximum guarantee rate and the provision of favourable loans for micro, small and medium-sized enterprises by HAMAG-BICRO

Croatian National Bank³ – monetary policy measures:

- Interventions in the foreign exchange market
- Instituting a currency swap with the ECB
- Conducting structural and regular (weekly) open market operations
- Reducing the reserve requirement rate from 12% to 9%
- Conducting auctions of direct RC securities purchases
- Extending the list of potential participants in securities purchase and sale operations to pension and investment funds and insurance companies

Croatian National Bank – supervisory measures:

- Enabling a temporary use of the liquidity coverage ratio below the prescribed minimum of 100%
- More flexible approach to supervisory rules enabling the introduction of accelerated procedure of reprogramming by credit institutions in relation to designated clients without client reclassification as being in default
- Retaining the profit made by banks in 2019
- Temporary suspension of certain supervisory activities (e.g. stress-testing)

Croatian Financial Services Supervisory Agency:⁴

- Ban on dividend payouts by insurance companies
- Decision on waiving fees for issuers listed in the regulated market in 2020
- Recommendation for granting moratorium to leasing company clients.

1 Similar epidemiological measures were implemented in most EU countries and other global economies.

2 These measures are just a part of an extensive aid package to the economy during the coronavirus epidemic, adopted at the 214th and further extended at the 222nd session of the Government of the RC.

<https://vlada.gov.hr/sjednice/214-sjednica-vlade-republike-hrvatske-29015/29015>

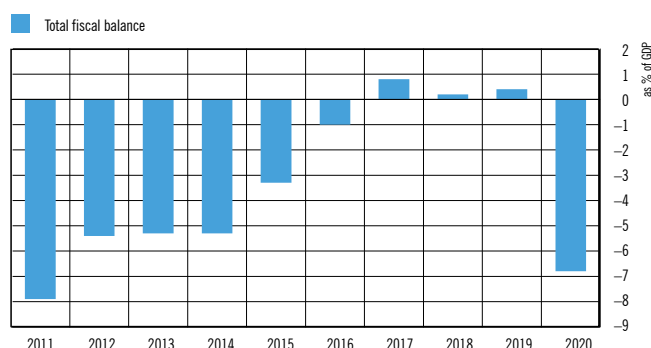
<https://vlada.gov.hr/sjednice/222-sjednica-vlade-republike-hrvatske-29132/29132>

3 <https://www.hnb.hr/javnost-rada/covid-19>

4 <https://www.hanfa.hr/upozorenja-hanfe/covid-19/>

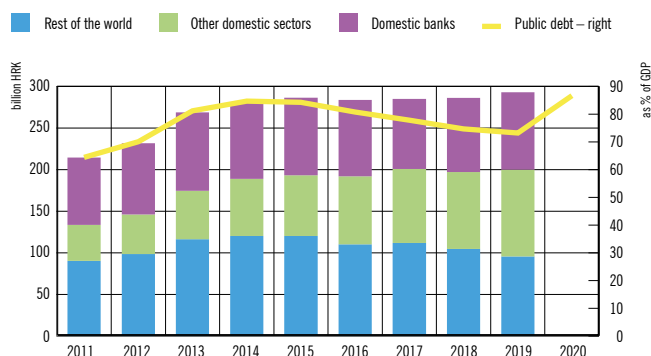
2 Government sector

Figure 2.1 After several years of public finance consolidation, a large deficit is expected in 2020 due to the pandemic



Note: Projection for 2020 is taken from amendments to the state budget and the financial plans of extrabudgetary users for 2020.
Source: Eurostat.

Figure 2.2 Rise in public debt due to larger financing needs will cancel out the several-year downward trend in public debt



Note: Projection for 2020 is taken from amendments to the state budget and the financial plans of extrabudgetary users for 2020.
Sources: Eurostat and CNB.

The outbreak of the coronavirus pandemic had a dramatic impact on fiscal movements in the first half of 2020. Sluggish economic activity and numerous discretionary measures taken to alleviate the negative effect of the pandemic on the economy caused a deterioration in all fiscal indicators. As a result, a notable general government deficit and a sharp increase in the public debt level are expected in 2020, while government guarantees issued during the pandemic may additionally raise government liabilities in the forthcoming years. The current high degree of interconnectedness between the government and the banking sector may increase further due to growing financing needs. These movements raise potential government sector risks to financial stability.

The global health crisis triggered by the coronavirus pandemic also had an adverse impact on public finances. The sharp economic contraction automatically led to a fall in revenues and an increase in the expenditures of the general government. The implementation of the package of measures that the Croatian government adopted to alleviate the economic consequences of the pandemic (for measures taken to alleviate the negative consequences of the pandemic, see chapter 1 Macroeconomic environment) gave a strong upward push to expenditures, largely on account of job preservation grants, as the government subsidised wage costs of enterprises that recorded a revenue decrease of more than 20%, and slightly reduced government revenues, mostly on account of a write-off of public

charges (income tax and social contributions and profit tax) for enterprises whose revenues shrank by more than 50% during the pandemic.²

With amendments adopted in May, the state budget and the financial plans of extrabudgetary users were adjusted for the effects of the economic contraction and the measures taken. The revenue side of the budget was significantly reduced from the originally planned amount. As a small portion of the expected gap between revenues and expenditures was closed by savings made on particular expenditure items, the total amount of planned expenditures did not change significantly. As a result, the consolidated general government deficit, which is projected to be around -6.8% of GDP in 2020 (Figure 2.1), is still exposed to significant negative risks. This brought an abrupt stop to favourable fiscal trends that marked the period from 2016 to 2019, when consolidated general government continuously recorded a marginal surplus. The surplus came to 0.4% of GDP in 2019, with growth seen in all major revenue categories (6.7%) and a slightly lower increase in expenditures (6.3%).

Public debt might reach 86.7% of GDP in 2020 according to the adopted amendments to the 2020 budget, which implies a sharp increase from the 73.2% of GDP seen in 2019³ (Figure 2.2), and is higher than any previously recorded public debt-to-GDP ratio in Croatia. The upsurge in this ratio is a result of a large deficit in 2020 and the parallel strong contraction of GDP. Such public debt dynamics will offset the downward trend of the public debt-to-GDP ratio present from 2014, during which this ratio dropped by around 11.5 percentage points.

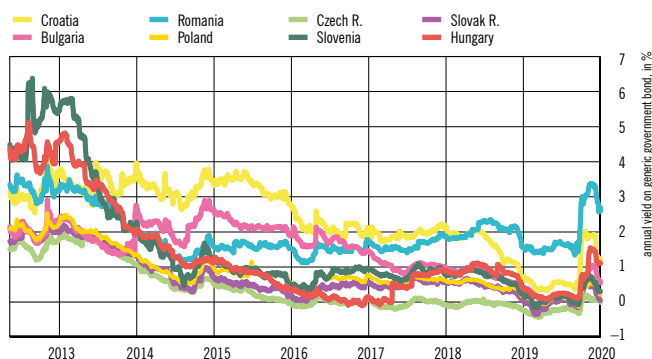
Government bond yields remained at historical lows, notwithstanding their initial slight upward movement immediately after the pandemic outbreak (Figure 2.3). The low level of government bond yields is a reflection of extremely expansionary monetary policy in Europe and the USA and abundant liquidity in the domestic financial system, provided by the CNB's expansionary monetary policy, which included the purchase of government securities. Yields on government bonds of other CEE countries also rose moderately just after the onset of the pandemic, but dropped to relatively low levels soon afterwards.

Croatia's credit rating remained at investment grade in early 2020, but Fitch revised Croatia's outlook downward from positive to stable. More specifically, the worsening of fiscal indicators mostly reflects the automatic decrease in government

² According to ESA methodology, revenues are recorded on an accrual basis, so that other government measures, such as the deferrals of public charges granted to enterprises whose revenues dropped 20%-50% as a result of the pandemic and the VAT payment deferral and its payment based on invoices settled, will not be recorded as a decrease in general government revenues and will not affect general government deficit.

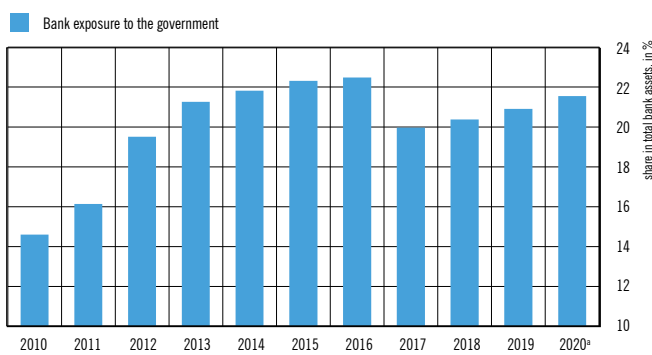
³ The high public debt level in Croatia is also partly due to the implementation of the pension reform, under which the second pillar of the pension system was introduced, as well as the wide scope of the general government, due to the adjustment of sector classification of institutional units with ESA 2010 methodology, to include Croatian Roads, Croatian Motorways, Rijeka – Zagreb Motorway, and the CBRD.

Figure 2.3 Expansionary monetary policy prevented a substantial increase in the risk premium



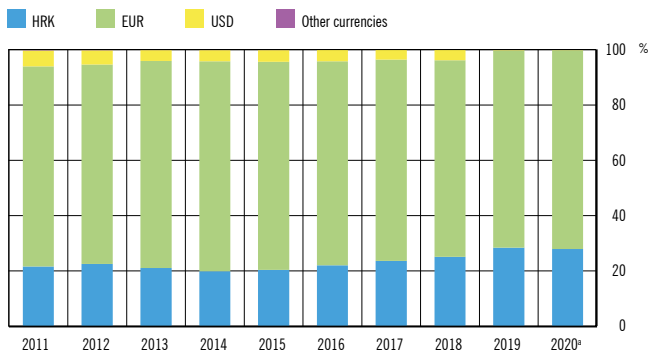
Source: BoA Merrill Lynch.

Figure 2.4 Persistently high interconnectedness between the banking sector and the government



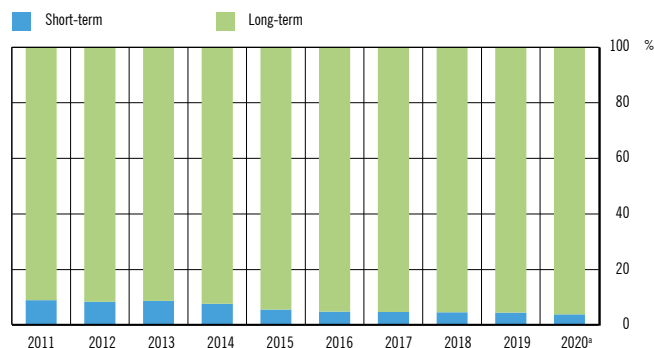
* denotes April 2020.
Source: CNB.

Figure 2.5 Public debt remains sensitive to sudden changes in the kuna exchange rate



* refers to the first quarter of 2020.
Source: CNB.

Figure 2.6 Maturity structure of public debt is favourable and contributes to the maintenance of financial stability



* refers to the first quarter of 2020.
Source: CNB.

revenues and the rise in expenditures following the economic downturn, while the change in the character of fiscal policy is strictly associated with one-off government measures implemented to help the pandemic-hit economy.

A relatively mild increase in the risk premium for Croatia and the maintenance of the credit rating facilitated general government borrowing, contributing to the preservation of the overall financial system stability. Following the pandemic outbreak, the government borrowed in the domestic market on several occasions and, by issuing EUR 2bn worth of bonds with an interest rate of 1.5% (yield of 1.6%) in the international market in June 2020, it secured the remaining required funds for 2020. Also, the government announced financing by means of EU grants and loans, which are currently being discussed in detail and which should help to finance the costs associated with the pandemic in the years to come.

The rise in financing needs in the first half of 2020 further strengthened the interconnectedness between the government and the banking sector. In April 2020, placements to the government accounted for 22% of total bank assets (an increase of 2 percentage points from end-2019) (Figure 2.4, for more details, see chapter 6 Banking sector). Notwithstanding the June issue of EUR 2bn worth of bonds in the international market, the government continued to rely mostly on domestic funding sources, so that the most recent data on the public debt structure (for April 2020) show that 67% of total public debt was issued in the domestic market and only 33% was issued in the foreign financial market.

The currency, interest rate and maturity structure of public debt steadily improved, but the share of public debt in euro was still very high on the eve of the crisis. Although the share of foreign currency public debt has been constantly decreasing

over the last five years, 71.4% of public debt is still denominated in euro, which increases both the government's vulnerability to possible weakening of the kuna against the euro and the risks to financial stability (Figure 2.5). Particularly important in this context was the strong and prompt response by the CNB at the beginning of the pandemic, which mitigated depreciation pressures in the foreign exchange market. On the other hand, long-term debt (Figure 2.6) and fixed interest rates (around 90% of public debt is contracted at fixed interest rates) still prevail in the public debt structure, which facilitates public debt management and decreases interest rate and maturity risks, as well as potential risks to financial system stability.

The Convergence Programme of the Republic of Croatia foresees that unfavourable fiscal developments might be mitigated in 2021, provided that the coronavirus pandemic eases and economic recovery begins. Economic growth should automatically improve developments in general government revenues and expenditures, with the waning of the effect of government one-off measures, which would substantially reduce the deficit. The public debt-to-GDP ratio should gradually decrease in 2021, after growing rapidly in 2020.

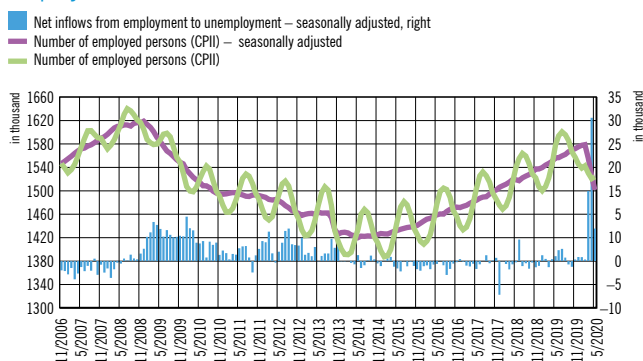
Current risks to financial stability in the government sector

As in other sectors, current risks in the general government sector are primarily related to the epidemiological situation and containment of the COVID-19 pandemic. A possible new wave of the pandemic in the second half of 2020 would likely lead to the reimposition of measures to restrict business activity, though they would probably not be as stringent as in the spring. Such a scenario would adversely affect the estimated general government balance, fuelling further increases in public debt. The described risks depend on the epidemiological situation, possible duration and intensity of the second pandemic wave and related containment measures. Also, guarantees for easier granting of favourable loans to exporters and the tourism sector are part of the government's current response to the pandemic, which, if materialised, might raise potential government liabilities.

A potential positive impact on the government sector might be made by the announced financing through EU grants and loans. While details of this arrangement are still being discussed by the member states, one of the objectives is to facilitate the financing related to the adaptation of enterprises to new ways of doing business amid the pandemic (e.g. digitalisation) and provide additional support to job preservation. Coupled with the expected maintenance of low interest rates, this would also ease the burden of crisis costs in the forthcoming years.

3 Household sector

Figure 3.1 COVID-19 pandemic led to a sharp fall in employment



Note: Net inflows from employment are calculated as the difference between inflows to registered unemployment based on termination of employment and outflows from registered unemployment based on the beginning of employment
Sources: CNB and CES.

Figure 3.2 Banks foresee a slump in demand for consumer loans

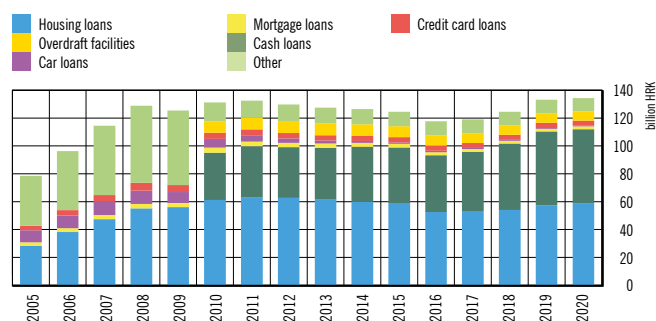


Notes: The figure shows household demand for loans expected in the following quarter. A positive value indicates an increase and a negative value a decrease in demand.
Source: CNB (Bank lending survey).

The contraction of global and domestic activity triggered by the coronavirus pandemic led to a spike in unemployment. The significant risk of a decrease in disposable income and the expected fall in tourism revenues raised uncertainty in the household sector and subdued consumer confidence. However, vulnerabilities of the household sector are less pronounced than in the periods preceding past crisis episodes. Future materialisation of risks to financial stability will depend on the further evolution of the epidemiological situation, which will set the pace of recovery in the labour market and overall economic activity.

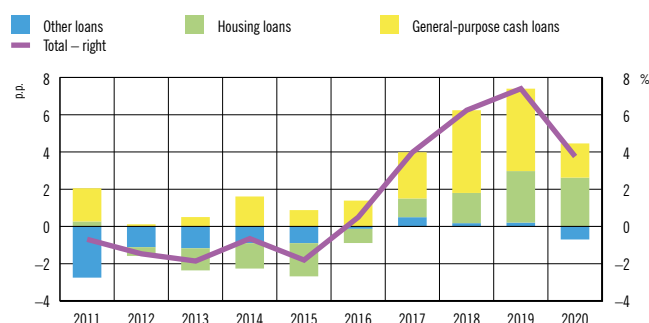
The sharp economic contraction triggered by the COVID-19 pandemic had a profound and negative impact on the labour market. A sharp increase in unemployment was seen at the very beginning of the pandemic, when uncertainties about the evolution of the epidemiological situation coincided with stringent measures restricting movement and businesses. From March to May, registered unemployment grew on account of strong inflows from employment (Figure 3.1), so that the registered unemployment rate according to the CES data stood at 9.5% in May 2020, an increase of 2.5 basis points from May 2019. Unfavourable labour market trends were mitigated by government grants for job preservation, which, according to available data, were used by over 100 thousand employers for more than half a million workers (see Box 1 Overview of the measures to help the economy hit by the coronavirus pandemic), accounting for more than a third of the total labour force. In view of the continued tightening of eligibility conditions for grants and bearing in mind their relatively short-term nature, the favourable impact of grants on the labour market might weaken over time.

Figure 3.3 Upward trend in total household debt to credit institutions was interrupted by the outbreak of the COVID-19 pandemic



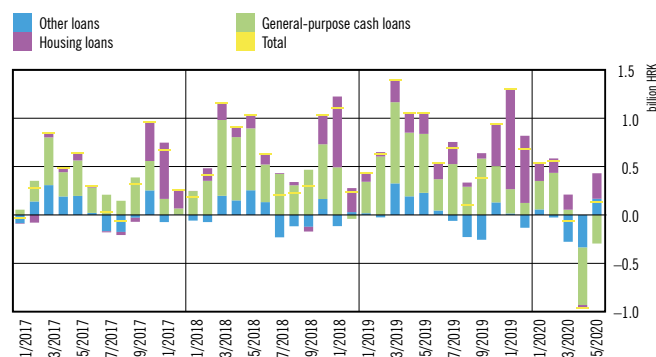
Notes: Cash loans and overdraft facilities have been excluded from the category of other household loans since the end of 2010 because they have become new categories. Balance as at 31 May 2020.
Source: CNB.

Figure 3.4 Annual increase in household loans was interrupted in the first half of 2020



Notes: The figure shows the transaction-based change in debt, which excludes exchange rate changes, price changes and other changes. Data for 2020 refer to the 12-month period until May 2020.
Source: CNB.

Figure 3.5 Fall in cash loans coincided with the COVID-19 pandemic



Note: The figure shows the transaction-based change in the balance of household loans, which excludes exchange rate changes, price changes and other changes.
Source: CNB.

Adverse labour market trends lowered expectations of households and their readiness to spend and take on new debt. This is evident in the substantial fall in consumer confidence after the pandemic outbreak (see chapter 1, Figure 1.8), when banks also expected a sharp downturn in demand for loans, consumer loans in particular (Figure 3.2), which was attributed to a lower propensity to buy durable goods. Consumer confidence improved slightly as measures were eased in the following months, but it remained at low levels.

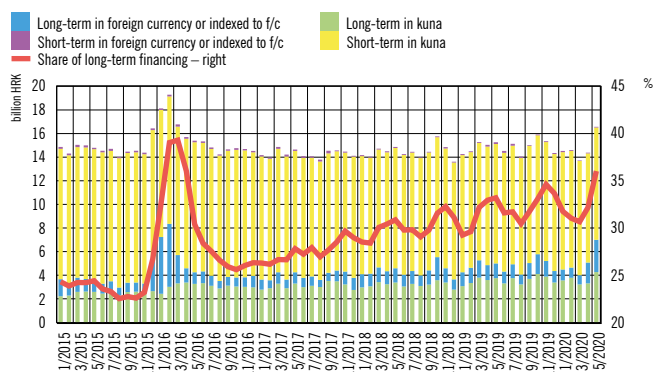
The rise in household debt to credit institutions came to a halt with the outbreak of the COVID-19 pandemic (Figure 3.3). After growing steadily in the first two months of 2020, the balance of household loans was stagnant from end-February to May. On the one hand, the debt edged up in March and May driven by the kuna depreciation, whereas net transactions reduced the balance of household loans, as existing loan repayments were larger than new loans (Figure 3.5). The annual growth rate of household loans (transaction-based) halved in May compared to late 2019 (Figure 3.4).

Such developments were largely due to lower amounts of new general-purpose cash loans, whereas the dynamics of housing lending was similar to that in 2019, thanks to subsidies. It is worth noting that the upward trend in general-purpose cash loans started to decelerate as early as end-2019 (see Box 6 Recent developments in general-purpose cash loans), so that the amount of loan growth (transaction-based, Figure 3.5) held steady throughout 2019 at the previous year's level. However, due to the sharp fall in April, overall transactions in these loans were negative in the first five months of 2020, that is, repayments of existing loans exceeded the amount of new loans. The increase in housing loans, which picked up perceptibly in 2019, slowed down according to the data for the first five months of 2020. Continuation of housing credit activity is also attributable to the realisation of the new housing loan subsidy programme, starting from May 2020. The rising tendency to purchase residential property is also reflected in price hikes. However, the economic slump and the earthquake that hit Zagreb in March 2020 raised uncertainty regarding future developments in this market (see chapter 4 Real estate).

The average debt maturity steadily increased, partly due to larger amounts of renewed agreements, which reduced the current debt servicing burden (Figures 3.6 and 3.7). Most of the renewed agreements are associated with the deferral and rescheduling of loans that banks granted at the request of loan users facing loan repayment difficulties due to circumstances associated with the coronavirus pandemic. Payment deferrals and the growing share of housing loans lengthened the initial maturity of household loans (Figure 3.7), which may reduce current debt payments for some debtors.

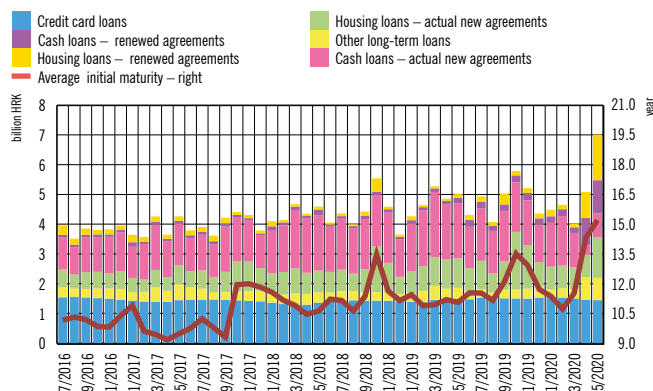
Currency risk associated with household loans is still perceptible, and its decrease was interrupted in early 2020. In late May 2020, similarly to the year before, kuna loans accounted for 54% of total household loans (Figure 3.8). This makes households extremely vulnerable to the weakening of the

Figure 3.6 Share of long-term financing in newly-granted loans continued to increase



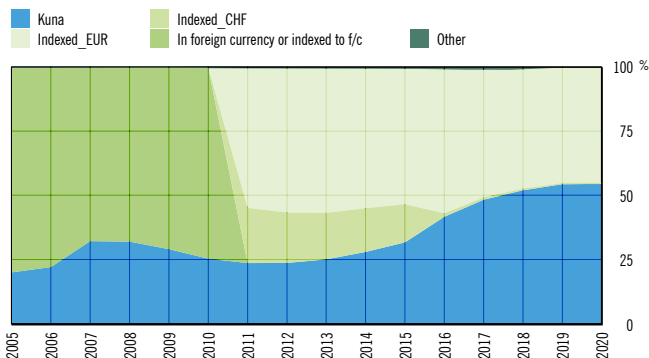
Source: CNB.

Figure 3.7 Growth in the share of renewed agreements in newly-granted long-term household loans



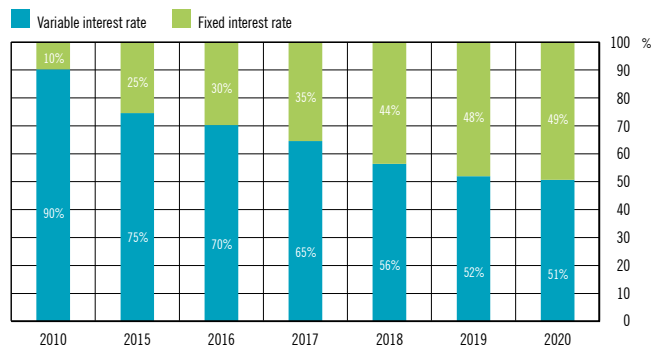
Source: CNB.

Figure 3.8 Upward trend in the share of kuna loans came to an end



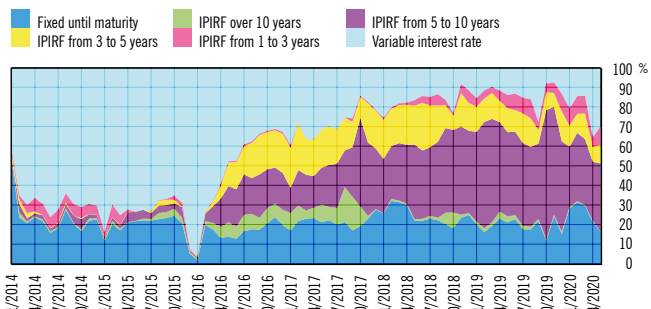
Notes: Since the end of 2010, the category of foreign currency loans or foreign currency-indexed loans has been divided into two subcategories: euro-indexed and Swiss franc-indexed loans. Balance as at 31 May 2020.
Source: CNB.

Figure 3.9 Fall in the share of variable interest rate loans lost momentum



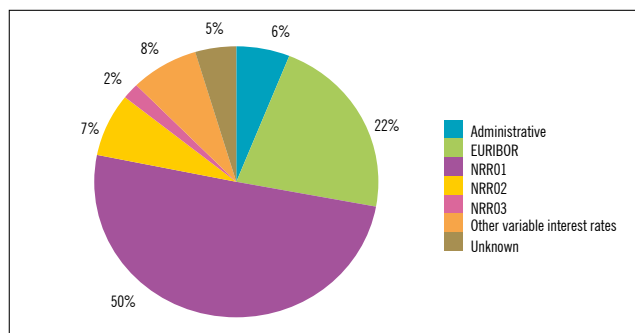
Notes: The figure does not include credit card debt and overdraft facilities. Balance as at 31 March 2020.
Source: CNB.

Figure 3.10 Interest rates that are fixed over a period shorter than loan maturity are dominant in newly-granted housing loans



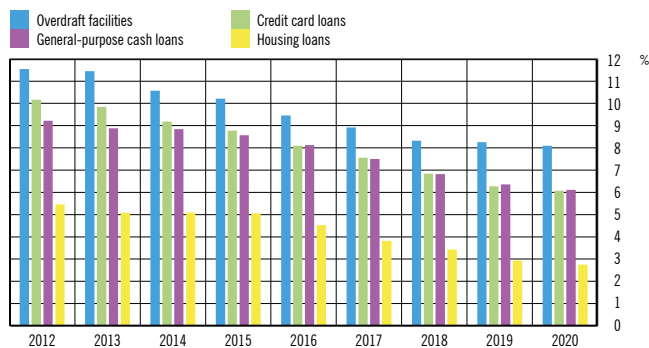
Notes: The structure presented is based on the information on the period of initial interest rate fixing and serves as an approximation. Fixed rates are fixed to maturity and variable rates are those which are variable or fixed up to a period of 12 months.
Source: CNB.

Figure 3.11 Interest rate risk is limited by the structure of reference parameters to which interest rates are linked



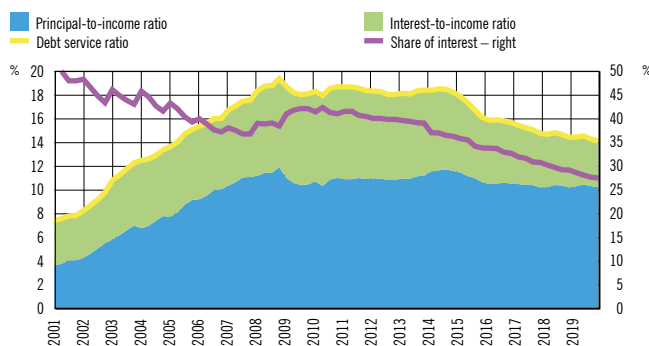
Note: The structure of the balance of loans on 31 December 2019 is shown according to the reference parameter to which the change in the variable interest rate is linked, i.e. to which the change in interest rates is linked after the expiry of the initial period of interest rate fixing.
Source: CNB.

Figure 3.12 Continued downward trend in interest rates on newly-granted loans



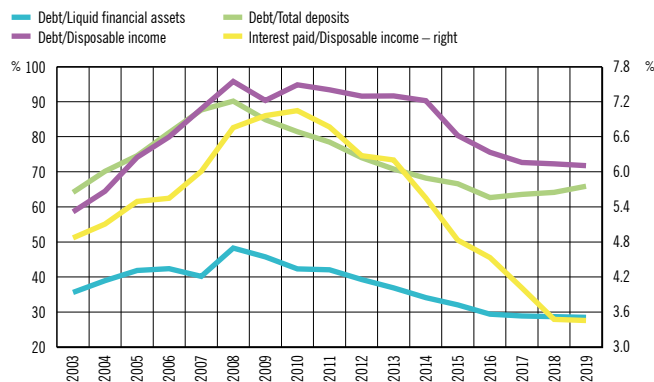
Notes: Renewed agreements are excluded for housing loans and cash loans from 2015 onwards. Data for 2020 are up to May.
Source: CNB.

Figure 3.13 Share of interest expenses in total debt burden at a historical low



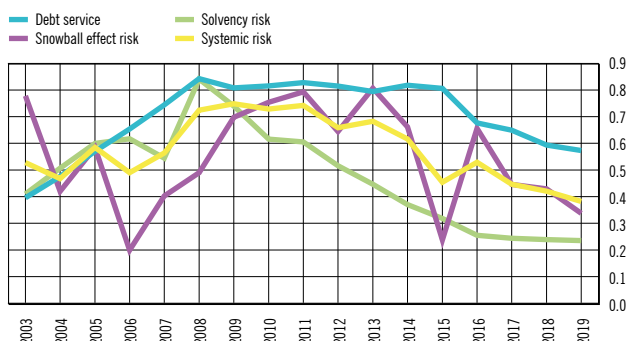
Note: A description of the calculation of the debt service ratio is available in the Analytical overview: How much are Croatian households burdened with debt repayments?, chapter 3, Financial Stability, No. 20.
Source: CNB.

Figure 3.14 Household debt burden did not change much in 2019



Source: CNB.

Figure 3.15 Systemic vulnerability of the household sector were at moderate levels on the eve of the COVID-19 pandemic



Note: Household sector vulnerability is measured by the household systemic risk, i.e. by the average of normalised (to the value range 0 – 1) risks measuring debt service risk (DSR), solvency risk (SR) and “snowball-effect” risk (SNR) which are defined as follows:

$$DSR_t = \frac{\text{Debt servicing cost}_t}{\text{Disposable income}_t}$$

$$SR_t = \frac{\text{Debt}_t}{\text{Net financial assets}_t}$$

$$SNR_t = \frac{\text{Interest payments}_t}{\text{Debt}_t + \text{Debt}_{t-1} + \text{Debt}_{t-2} + \text{Debt}_{t-3}} \cdot \left(\frac{\text{Disposable income}_t}{\text{Disposable income}_{t-4}} - 1 \right)$$

Source: CNB.

domestic currency, with the exception of those generating income in euro (mostly from tourism). The policy aimed at maintaining stability of the kuna against the euro reduces such risks in the short-term, while the adoption of the euro might eliminate them permanently.

Similarly, the household sector's exposure to interest rate risk did not change much, with the share of loans granted with fixed interest rates accounting for almost half of total household loans at the end of the first quarter of 2020 (Figure 3.9). The slower growth in the share of fixed rate loans may be associated with the relative strengthening of housing loans, which are slightly more often granted with variable interest rates than cash loans, which are predominantly granted with fixed interest rates (Figure 3.10). However, the interest rate risk for debtors with such loans is limited by the expected maintenance at low levels of interest rates and the reference parameters to which interest rates on household loans are linked (Figure 3.11).

Excluding renewed agreements, interest rates on newly-granted loans continued to decrease (Figure 3.12). Interest rates on housing loans dropped to below 3% in 2019 and averaged 2.75% in the first five months of 2020. By contrast, the fall in interest rates on overdraft facilities was less pronounced, so that this form of borrowing continued to be most expensive for consumers, with the average annual interest rate of 8.1%. Interest rates on general-purpose cash loans and credit card loans decreased more, averaging 6.1% a year in 2020. The steady slide in interest rates is supported by continued favourable financing conditions in the European market and further strengthening of

the CNB's expansionary monetary policy.

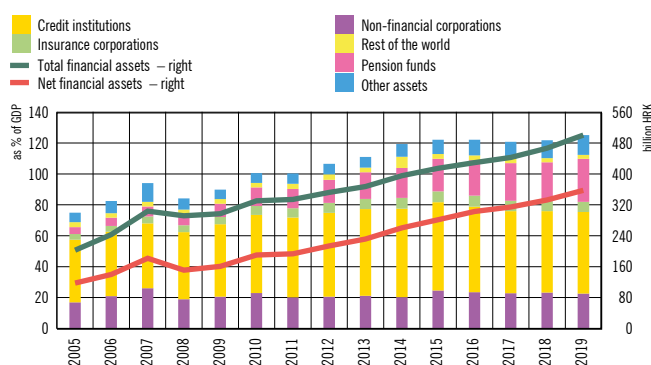
On the eve of the crisis caused by the COVID-19 pandemic, household sector vulnerabilities were moderate in comparison with historical trends. The drop in interest rates and growth in disposable income in 2019 added to the fall in the debt service ratio and snowball-effect risk, while other systemic vulnerability indicators remained stable at moderate levels (Figures 3.13, 3.14 and 3.15). At the same time, the share of interest expenses in total debt burden (Figure 3.13) dropped to a historical low (28% at end-2019), whereas, notwithstanding the growth in the household debt-to-deposit ratio, the solvency risk decreased marginally owing to the rise in the net financial assets of households. Financial assets of households grew mostly on account of the increased value of the shares in mandatory pension funds based on individual capitalised savings and voluntary pension funds, as well as of the rise in deposits with banks, the dominant form of household financial assets (Figure 3.16).

Current risks in the household sector

In the conditions of unfavourable economic developments triggered by the COVID-19 pandemic, the financial vulnerabilities of the household sector are expected to increase. Unfavourable trends in the labour market might exert further downward pressures on employment, which, coupled with the drop in tourism revenues, might contribute to a decrease in disposable income of some households. As the growth in income and financial assets contributed most to a reduction in risk accumulation in the household sector from 2015 to 2019, the end of such trends is likely to have a negative impact on the sector's financial vulnerability. If the government subsidy programme is continued, loan growth might be mostly driven by housing loans, while the rise in cash loans, which was in the past fuelled by strong consumer confidence, has already come to an end.

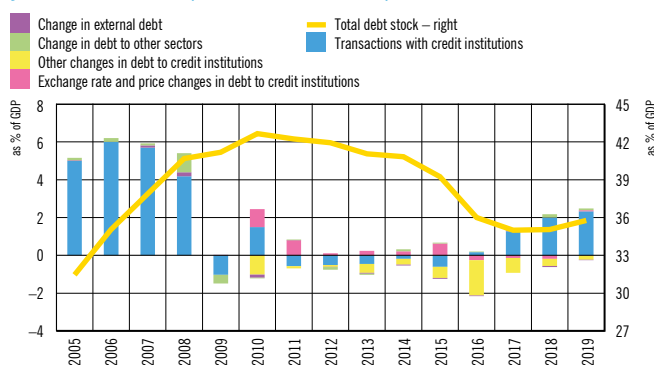
However, in contrast with the periods preceding past crisis episodes, financial risks in the household sector are less pronounced. The share of kuna loans and the stock of loans with fixed interest rates are at record highs. Nevertheless, as household borrowing was weaker than in the past (Figure 3.17), household debt burden is more moderate, so that any systemic

Figure 3.16 Deposits with credit institutions and pension fund shares are the dominant forms of household financial assets



Source: CNB.

Figure 3.17 Credit expansion was much weaker in recent years than in the pre-financial crisis period



Note: Changes in debt to other sectors and the rest of the world are shown as the difference between the end of the previous year and relativised share in GDP.
Source: CNB.

impact of negative shocks in the macroeconomic environment might be milder than in the preceding crisis. While a possible strong economic shock might trigger an increase in the share of households unable to service their debt efficiently, it might still be less intense than in the previous crisis.

4 Real estate⁴

Figure 4.1 Recovery in the residential real estate market in Croatia lagged behind that in the EU, but real estate prices almost reached pre-crisis levels in late 2019

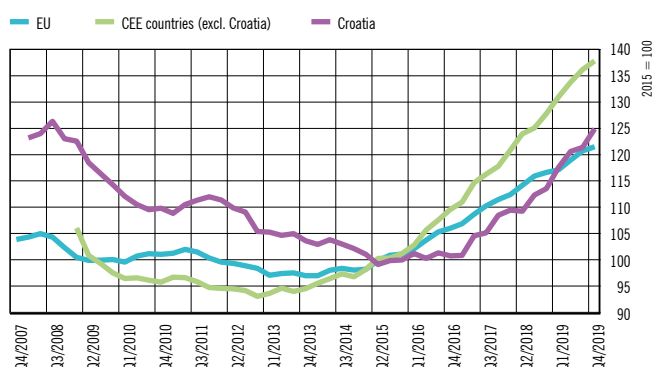
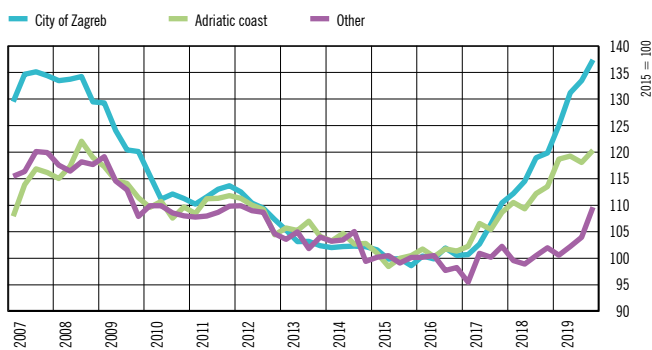


Figure 4.2 Average prices of real estate in Zagreb and on the Adriatic coast hit pre-crisis levels



The strong upward trend in residential real estate prices that marked the last few years continued into the first quarter of 2020, though at a slightly slower pace than in late 2019. However, these prices might hold steady or fall in the forthcoming period due to the negative consequences of the pandemic on economic growth, heightened uncertainty regarding job security and income levels, the slump in real estate market activity and the increased propensity to hold more liquid and safer investments. This raises the risk of poor market liquidity and decline in the value of collateral held in banks' balance sheets.

Epidemiological measures and unfavourable macroeconomic developments practically froze the real estate market towards the end of the first quarter and throughout most of the second quarter of 2020. The negative macroeconomic shock took place at the end of the first quarter, so that the price increase in that quarter might be only marginally lower than the average 9% seen in 2019, which was among the highest in the EU (Figure 4.1). The increase in prices in the preceding period was particularly strong in Zagreb and on the Adriatic coast (Figure 4.2), where they reached pre-crisis levels, with indicators of a divergence of real estate prices from the level based on macroeconomic fundamentals that suggested a slight real estate overvaluation in late 2019 (Figure 4.3).

While the number of sale and purchase transactions was on the rise in 2019, it was still much lower than before the preceding crisis, and it is expected to plummet in 2020

⁴ This chapter analyses developments in the real estate market and monitors operations of non-financial corporations in the construction and real estate activities.

Figure 4.3 Residential real estate prices above the level based on fundamentals

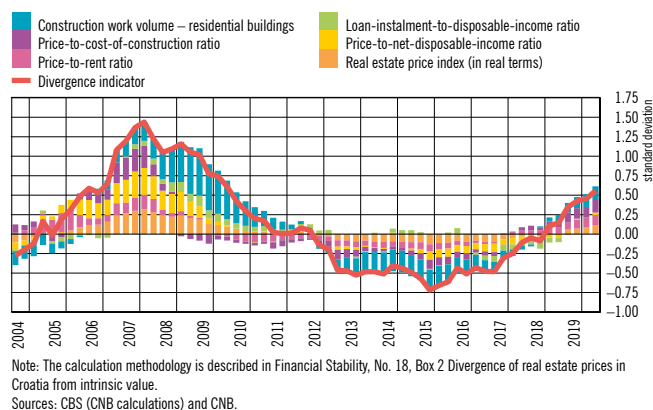
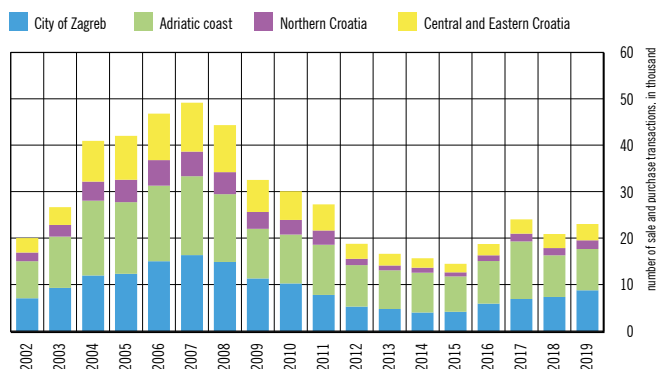


Figure 4.4 Real estate market activity in Croatia halved from the period before the global financial crisis

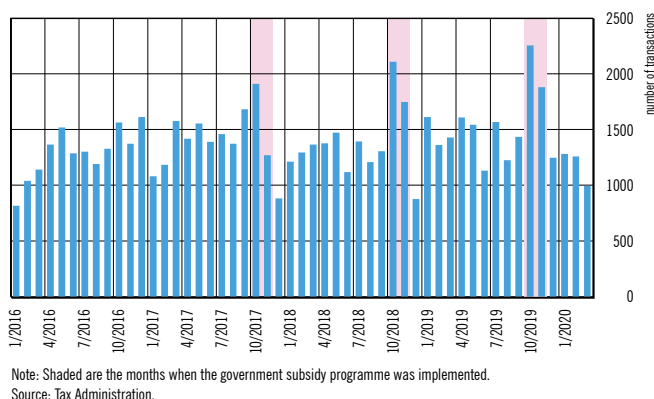


(Figure 4.4). At the same time, as with prices, Zagreb and the Adriatic coast predominated both in the number of sales and purchases and in their regional distribution, accounting together for around two thirds of all transactions (Figure 4.4).

Most of the activity in the real estate market following the imposition of epidemiological measures related to previously agreed transactions, primarily those agreed under the Government's housing loans subsidy programme (hereinafter referred to as 'APN') (Figure 4.6). The last call for applications for the APN's subsidy programme lasted from 30 March to 30 April 2020, when 3,681 new applications for government support were received (Figure 4.6). A quarter of all transactions in the period from 2017 to 2019 was realised within the subsidy programme, while market activity usually leaped in the months of the programme implementation (Figure 4.5).

The recent growth in the prices of residential real estate was mostly driven by strong demand. In addition to record low

Figure 4.5 Number of transactions grew sharply in recent years at the time of the APN's programme implementation

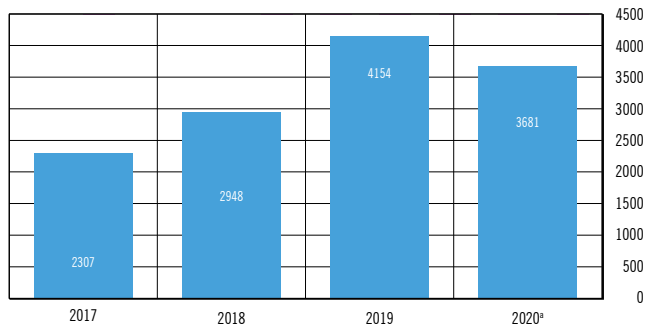


interest rates on housing loans, noteworthy among the factors that added to demand were favourable labour market trends and positive expectations of consumers with regard to profitability of real estate investments that marked the period up to 2020 and the government programme of subsidised housing loans (Figure 4.8 and Figure 4.11). Price trends on the Adriatic coast and in Zagreb were also strongly influenced by developments in the tourism sector (daily and weekly rentals). In the current conditions of low interest rates on deposits and following the negative experiences of many investors in the capital market, surplus funds are often being directed to the real estate market instead of to deposits or securities. A positive impulse to the growth of prices also came from the Amendments to the Real Estate Transfer Tax Act, which reduced the real property transfer tax rate from 4% to 3% for all agreements concluded in 2019.

Supply of residential real estate adjusted relatively slowly to larger demand. This is confirmed by developments in the volume of construction works and issued building permits (Figure 4.9). One of the reasons behind the diminished capacity of the construction sector to respond more efficiently to market developments is the strong shock suffered by this sector during the preceding crisis. Excessive indebtedness significantly hindered the operation of construction enterprises, many of which have gone bankrupt in the meantime. Furthermore, by highlighting the risks associated with construction activity, the crisis discouraged entities not primarily engaged in construction, which were very active in that market in the period before 2008. The adjustment of supply was also slowed by labour shortages. More specifically, some cross-border workers that had previously worked in this sector have left the country, as did some domestic workers after Croatia joined the EU. While labour costs in the construction sector grew faster than the costs of construction materials, they were still outpaced by the rise in real estate prices (Figure 4.7).

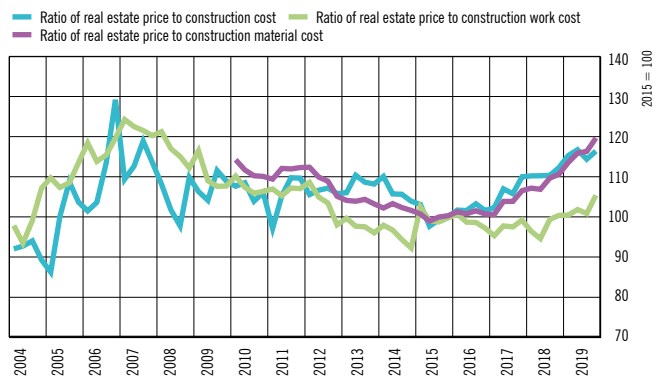
Debt related to the real estate sector decreased slightly in 2019 from the previous year. Housing loans went up, while

Figure 4.6 Subsidy programme continued into 2020



* Applications received up to 30 April 2020. For previous years, the figure shows approved applications. In 2017 and 2018, 97% of received applications were approved on average.
Source: APN.

Figure 4.7 Costs of labour and construction materials grew more slowly than real estate prices



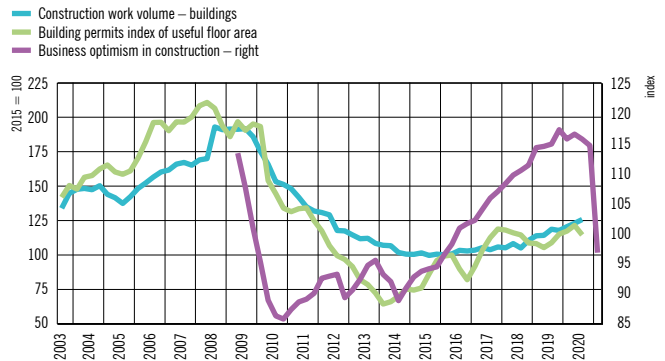
Sources: CBS and Eurostat.

Figure 4.8 Developments in the labour market and consumer confidence will be the key determinants of real estate price developments in the future



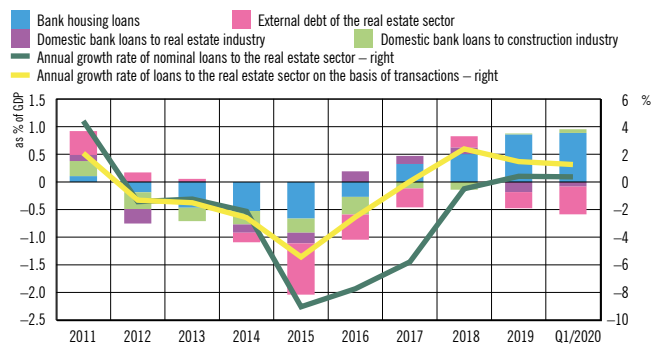
* Index of planning the purchase or construction of real estate was calculated according to consumers' answers to the question on plans regarding the purchase or construction of real estate in the next 12 months from the CNB's Consumer Confidence Survey.
Source: CNB.

Figure 4.9 Business optimism in construction took a dive



Note: The index of volume and building permits is seasonally adjusted.
Sources: CNB and CBS.

Figure 4.10 Housing lending intensified in 2019



Notes: Changes in debt are shown in relation to the same period of the previous year and are based on transaction data. External debt includes the debt of the real estate and construction industries.
Source: CNB calculations.

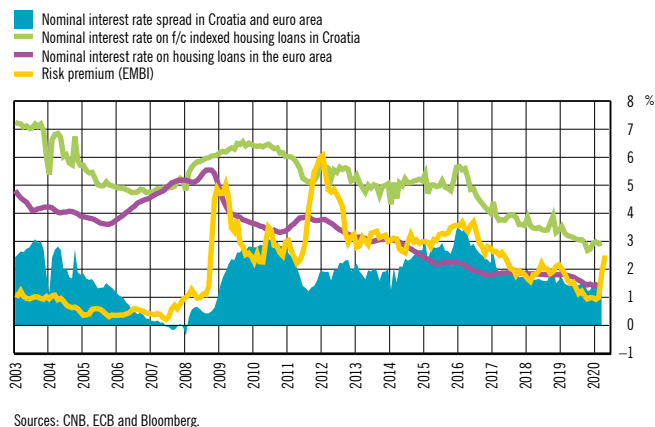
the loans of domestic credit institutions to real estate companies and their foreign liabilities, as well as domestic and foreign liabilities of construction companies went down (Figure 4.10).

Current risks in the real estate market

Future trends in real estate prices are characterised by a high degree of uncertainty. In addition to the evolution of the pandemic, prices will largely depend on the duration of its impact on the economy, in particular developments in the labour market, tourism, and consumer expectations in general (Figures 4.8 and 4.9).

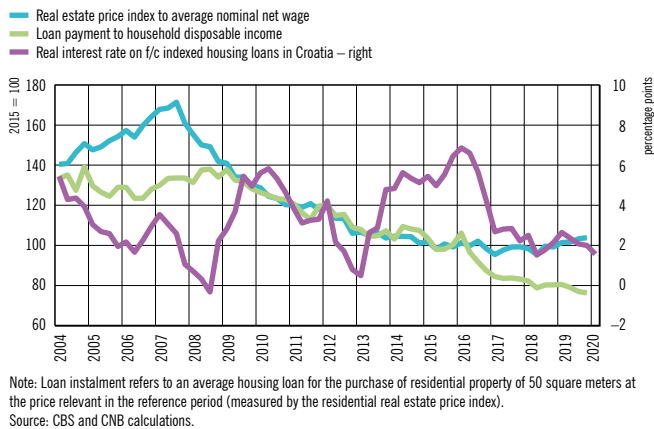
A major slowdown in the real estate market raises the risks associated with its low liquidity, while a possible decrease in prices would diminish the value of collateral. Despite the continued relatively favourable financing conditions, the growth in unemployment could dampen demand for real estate.

Figure 4.11 Interest rates on housing loans hit record lows



Furthermore, if investors in real estate intended for short-term leasing face difficulties in debt servicing due to the possible lack of tourist demand, the supply of flats may grow and could exacerbate the fall in real estate prices. Prices of real estate in Zagreb will also be affected by the consequences of the earthquake, which might push up the demand for newer and better quality

Figure 4.12 Price growth slightly lowered the financial availability of real estate



real estate. This could lead to the segmentation of prices under these criteria. In addition, depending on the duration of the crisis at a global level, foreign demand for domestic real estate could also decrease, especially for properties on the Adriatic coast.

Box 2 Commercial real estate market in Croatia

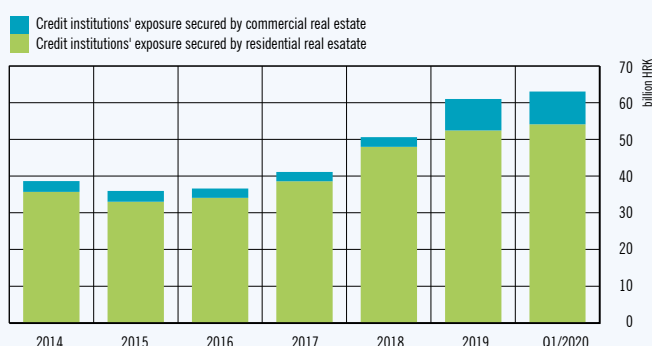
The commercial real estate market in Croatia has not been a major source of systemic risks so far and, in comparison with the residential real estate market, its significance was much lower from the standpoint of domestic financial system stability. However, as it is impossible to exclude a scenario in which the accumulation of systemic risks associated with developments in this market may threaten financial stability, the CNB has been steadily working to improve the process of these risks identification and monitoring and has begun to collect additional data on developments in particular segments of this market.¹

As with residential real estate, in the past unsustainable developments in the segment of commercial real estate² were associated with numerous financial crises. The reason is the strong correlation with real developments and the relatively inelastic supply of such properties and, in some cases, the strong impact of international capital on this segment of the real estate market. This is why the identification and assessment of systemic risks associated with the commercial real estate market are an important part of the overall analysis of a country's financial stability. Together with relevant data from the CNB and CBS, the analysis presented in this Box is based on additional indicators for the commercial real estate market collected from market participants³. These indicators are available for a short period that does not cover the entire business cycle and relate mostly to Zagreb and its surroundings, which are the most liquid segment of the market and for which reliable agency data are available.

Credit institutions' exposure to the commercial real estate sector stands out as the most important channel of the sector's impact on financial stability, both in terms of exposures arising from granted loans and exposures secured by commercial real estate collateral, particularly when there is a burst of price bubbles in the market. Data from domestic credit institutions on their exposures secured by residential and commercial real estate show that in Croatia less than one seventh of total exposures backed by real estate collateral is secured by commercial property. While this indicator was higher in 2019 and early 2020 than the average for the previous five years, it is evident that trends in this market are much less significant in the context of financial stability than those in the residential property market and that systemic risks associated with credit institutions' exposure to this sector did not grow much in the period under review (Figure 1).

The relatively low level of systemic risks associated with commercial real estate in the last few years was also a result of relatively low activity and stable movements in prices and returns in particular segments of the market.

Figure 1 Credit institutions' exposures secured by commercial real estate are much smaller than those secured by residential real estate



Source: CNB (COREP).

Similar to the trends in the residential property market (see chapter 4 Real estate), following a steady slowdown that had started as early as 2007, construction activity slightly increased in recent years, as indicated by the number of building permits issued for non-residential buildings and the floor area of completed non-residential buildings (Figure 2.a).⁴ Nevertheless, it is still just half of that seen in the period preceding the global financial crisis. Industrial buildings and warehouses predominate both in terms of the number of issued building permits for non-residential buildings and in terms of the floor area of completed buildings. However, most of them were not built for commercial purposes but were built by enterprises for their own purposes, which means that they are not counted as commercial property. The number of building permits issued for hotels and similar buildings has been growing since 2015, which is attributable to good tourist season results and the expected continuation of positive trends in that sector, whereas the number of permits issued for traffic and communication buildings, wholesale and retail trade buildings and office buildings has for the most part held steady or decreased (Figure 2).

Activity in the commercial property sector measured by sale and purchase transactions also picked up in recent years, with strong fluctuations over the years according to data of a private agency (Figure 3). Transactions were particularly intensive in the hotel segment and were the largest in both absolute and relative terms in 2019 (Figure 3). They were followed by offices, whose relative importance varied over the years, while investment in retail facilities, which used to dominate in the past, was much lower. Purchase and sale transactions involving

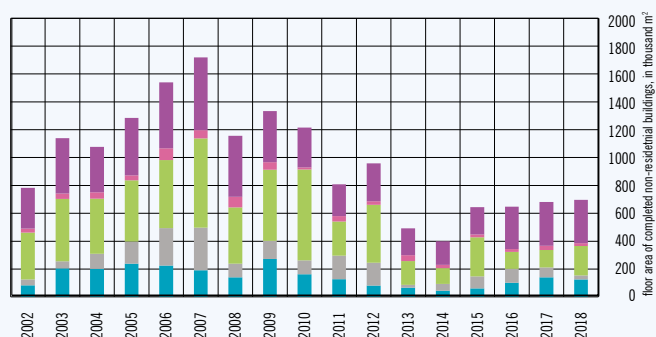
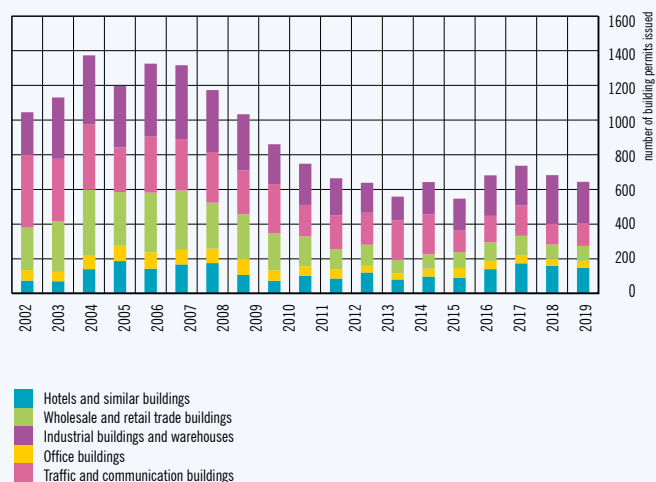
1 In late 2019, the CNB started to collect physical data on the commercial real estate market from several agencies engaged in this activity in Croatia.

2 Eurostat observes commercial property in broader and narrower terms; in broader terms, commercial property includes all properties except those that are occupied by their owners and those used for non-market activities, such as social housing or part of property in state ownership. Corporate properties that are used for own purposes are not considered commercial property. In addition, according to Eurostat, commercial property in narrower terms includes only rental properties and income-producing investment properties. The European Systemic Risk Board Recommendation amending Recommendation ESRB/2016/14 on closing real estate data gaps (ESRB/2019/3) defines commercial real estate as 'any income-producing real estate, either existing or under developments'.

3 An analysis of the hotel market has been left out due to the unavailability of data.

4 The CBS defines non-residential buildings as 'constructions without dwelling areas, or those in which less than 50% of the overall useful floor area is used for dwelling purposes'. This means that their coverage is broader than that of Eurostat and the EBRD as many of them are not intended to provide income.

Figures 2.a and 2.b Construction activity in the segment of non-residential real estate remained much below that before the preceding crisis



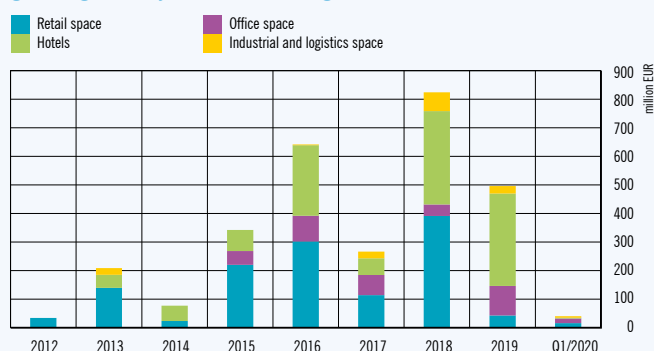
Source: CBS.

logistics centres accounted for the smallest share throughout most of the period under review.

From 2017 to the first quarter of 2020, the share of excess capacity in the office space market stabilised at a relatively low 3% of total office space available for rent, after its strong upsurge in the last post-crisis recession period (Figure 4). At the same time, the decrease and stabilisation of available office space led to a mild increase in rental prices towards the end of the period under review, regardless of whether office space is graded as class A or class B, with available data on the return on investment in class A office space pointing to its gradual decrease (Figure 5). In the first quarter of 2020, the main source of demand for office space in Zagreb was the IT sector, whose employees took 56% of total space rented in that quarter, followed by activities associated with business consulting and finance.⁵

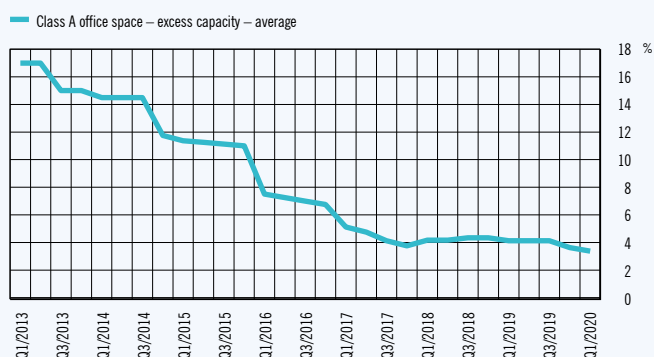
⁵ According to data from CW CBS International Croatia.

Figure 3 Estimated annual amounts of purchase and sale transactions in the commercial real estate market suggest growing activity in the hotel segment



Source: Colliers.

Figure 4 There is relatively little available office space in Zagreb and its surroundings



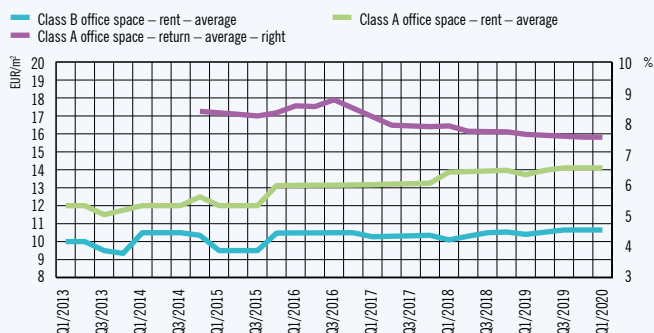
Note: Data refer to the City of Zagreb and its surroundings.

Sources: CBRE, Colliers, CW CBS International and Spiller Farmer nekretnine.

In the period up to the end of the first quarter of 2020, availability of retail rental space was slowly declining for the most part, averaging around 4% and 11% for A- and B-segments respectively at the end of the period (Figure 6). Returns on the A-segment did not change in the recent period and were around 7%, with rental prices also being relatively stable (Figure 7). By contrast, rental prices in the B-segment market edged up in the previous period (Figure 7).

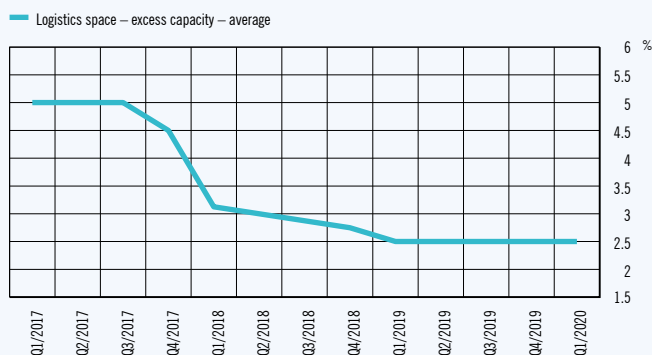
The market for industrial real estate and logistics centres is the least developed segment of the domestic commercial real estate market. Supply of warehouse space is very limited and mostly consists of older buildings, with a sparse supply of new space. According to market participants, this is in part due to administrative barriers and high communal charges that are paid per cubic instead of square metre, which discourages investment in the construction of such objects. For these reasons, the segment of logistics space is characterised by a very low availability of rental space, of around 3% (Figure 8), with rental prices and returns being higher than in peer countries (Figure 9).

Figure 5 Rents in the office space market on the rise regardless of the office space class



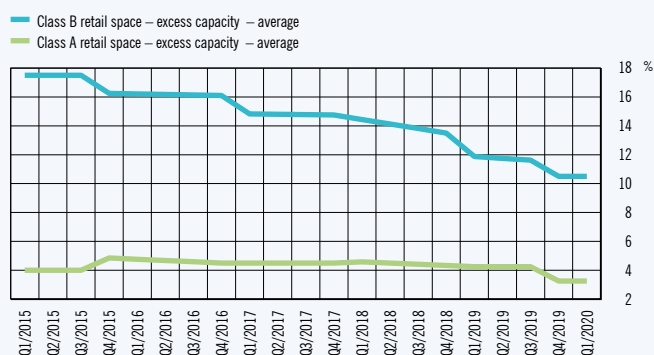
Notes: Data refer to the City of Zagreb and its surroundings.
The return is the ratio between annual rental income and the price paid for the real property.
Sources: CBRE, Colliers, CW CBS International and Spiller Farmer nekretnine.

Figure 8 Occupancy rate of logistics space is very high due to a limited supply of new projects



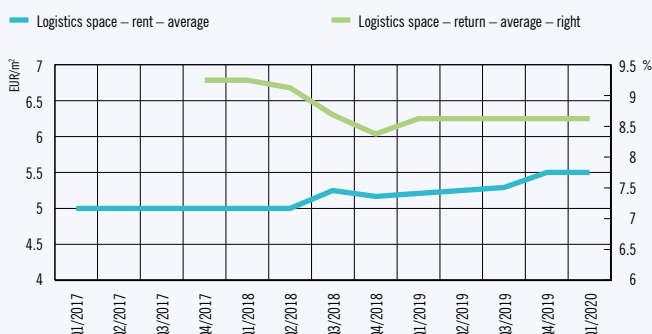
Note: Data refer to the City of Zagreb and its surroundings.
Sources: Colliers, CW CBS International and Spiller Farmer nekretnine.

Figure 6 Available retail rental space steadily falling since 2015



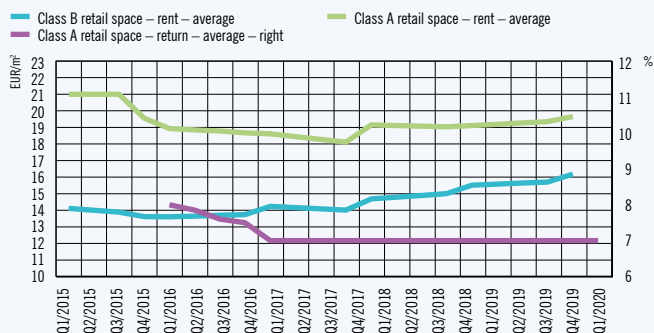
Notes: Data refer to the City of Zagreb and its surroundings.
Sources: CBRE, Colliers, CW CBS International and Spiller Farmer nekretnine.

Figure 9 Insufficient supply of logistics space is the reason for rising rental prices



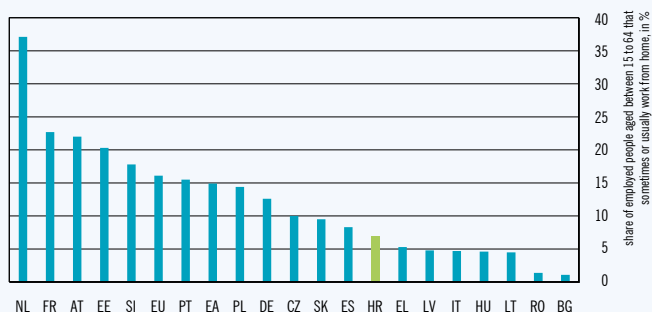
Notes: Data refer to the City of Zagreb and its surroundings.
The return is the ratio between annual rental income and the price paid for the real property.
Sources: CBRE, Colliers, CW CBS International and Spiller Farmer nekretnine.

Figure 7 Rents in the retail space market growing gradually, while returns remain stable



Notes: Data refer to the City of Zagreb and its surroundings.
The return is the ratio between annual rental income and the price paid for the real property.
Sources: CBRE, Colliers, CW CBS International and Spiller Farmer nekretnine.

Figure 10 Share of employed persons in Croatia who sometimes or usually work from home in the total number of employed persons was relatively low in 2019



Source: Eurostat.

In the forthcoming period, developments in physical indicators on the commercial real estate market, and thus also financial stability, might be influenced by the trends seen in the market for some time, such as the growing online sale and increasingly frequent practice of working from home, which have been intensified by the coronavirus pandemic. These changes in human behaviour undoubtedly affect almost all segments of the commercial real estate market⁶ and may create problems to some participants as regards servicing their debts.

Working from home, which characterised most countries in the period when strict epidemiological measures were in force, was very rare in Croatia before the pandemic (Figure 10). However, the first analyses made by agencies dealing in commercial real estate point to a significant shift in the attitude towards this type of work, on the part of both employers and employees. It may therefore be expected that some employers will to a certain extent continue with this practice in the future. In addition, the office space market in Zagreb has also been affected by the earthquake, which damaged some offices, so that market activity intensified immediately following the event due to rising demand for offices in safer buildings.

During the lockdown period, the process of “transition” to online purchase also picked up significantly. Assuming that some users will continue with that habit after normalisation of living conditions, demand for logistics space may be expected to grow further together with stronger investment activity in that segment, whereas demand for retail space may decrease.

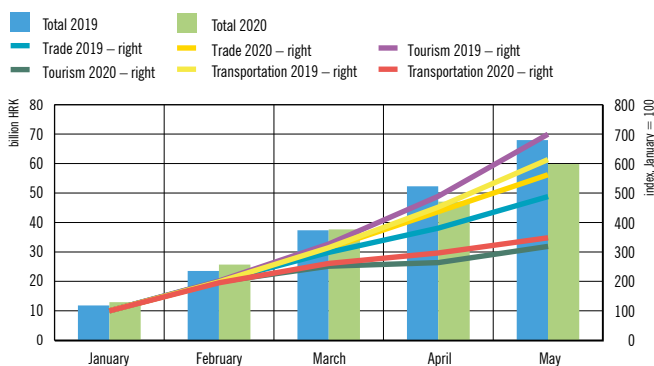
Tourism is one of the sectors hardest hit by the consequences of the coronavirus pandemic. In view of the uncertainty surrounding its duration and intensity in the remainder of the year, increased caution on the part of investors in hotels and similar buildings is expected, which may reduce investments in that sector when compared with previous years.

The analysis of available data shows that physical indicators for all observed segments of the commercial real estate market were relatively stable in the previous period. This suggests that there were no excessive price increases in that market segment or significant changes in the level of systemic risks associated with market developments. By analogy, observed from the standpoint of credit institutions, the level of their exposure to commercial real estate does not pose a significant systemic risk in such conditions.

⁶ In terms of its purpose, commercial real estate may be divided into office space, retail space, industrial and logistics space and hotels.

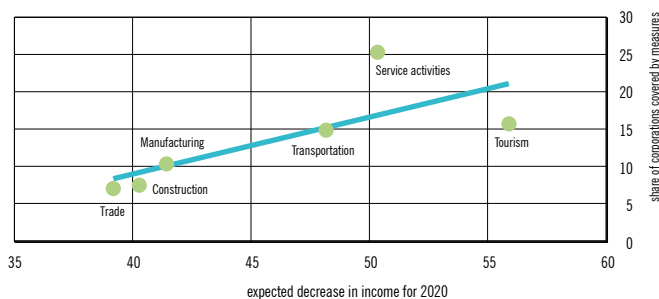
5 Non-financial corporate sector

Figure 5.1 Turnover of non-financial corporations plunged in April and May



Note: The figure shows the cumulative amounts of fiscalised receipts from the beginning of the year to the given month. Source: Tax Administration.

Figure 5.2 Share of corporations covered by the measures is the largest in activities involving social contact



Note: Expected decrease in income based on estimates of applicant corporations (loan payment deferral, rescheduling and loans to preserve financial liquidity). Sources: CNB and FINA.

The epidemiological measures imposed in mid-March and changes in consumer behaviour triggered by the coronavirus, because of the sudden halting of business operations, delivered an exceptional shock to the non-financial corporate sector, which led to the materialisation of liquidity risk in the short run. Though non-financial corporations had a lower debt level and favourable initial liquidity on the eve of the COVID-19 crisis, uncertainty regarding the duration of crisis and the likelihood of the second wave, as well as possible long-lasting consequences on the operation of the most severely affected activities, forced corporations and their creditors to apply a number of protective measures to preserve liquidity and solvency. Increased borrowing for the purpose of financing liquidity might limit the sector's prospects for recovery in the forthcoming years.

The novel coronavirus epidemic and epidemiological measures for its containment considerably reduced the business volume of non-financial corporations. The implementation of epidemiological measures starting from mid-March required the imposition of restrictions on population movements, social distancing and lockdown, which triggered a drastic slump in consumption and in the business revenue of many corporations. The sharpest fall was recorded in activities that involve close contact with clients and are therefore most vulnerable to social distancing measures (Figure 5.1). Accommodation and food service activities and travel agencies (tourism activities) especially suffered from epidemiological measures as their revenues dropped the most or, at the time of the most stringent

measures, fell to zero. They were followed by manufacturing and trade, service activities, and transportation, storage and communications (Figure 5.2).

Coordinated action by the government and the central bank (see Box 1 Overview of the measures to help the economy hit by the coronavirus pandemic) eased the wave of illiquidity in the non-financial corporate sector. Disburdening of cash flows in the period of significantly reduced income and harder liquidity maintenance was achieved through job preservation grants, by which the government paid a substantial portion of corporations' obligations for wages and contributions (see Box 3 Who applied for CES grants for job preservation?), and through options to reduce tax liability⁵. Furthermore, the government set up a central system to collect applications through FINA, which is in charge of putting in place and maintaining a digital platform for the electronic application for measures, for collecting data necessary for the approval of measures, and for monitoring their realisation. Within the system, a scoring system was established to assess the threat to business entities, the so-called COVID Score. This indicator⁶ shows that those currently most threatened are corporations dealing in tourism, services and transportation and corporations that applied for loan payment deferrals (Figure 5.4).

Continued bank financing was made easier by CNB supervisory measures.⁷ To enable them to offer easier financing conditions for the economy, credit institutions were permitted a preferential treatment of claims related to COVID-19 arrangements that reduced the burden of existing credit liabilities on enterprises through loan payment deferrals (moratorium) and rescheduling and by offering liquidity financing loans.

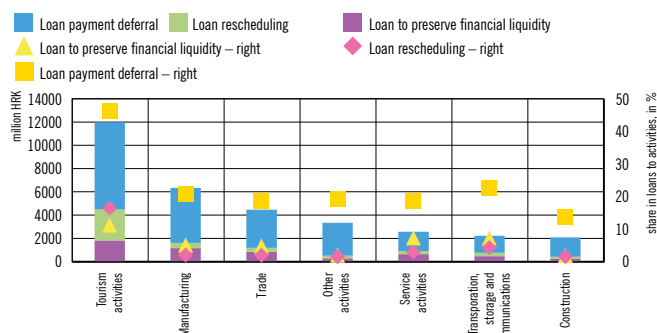
The absolute monthly amount of newly-granted loans to the non-financial corporate sector (including rolled-over / restructured loans) exceeded HRK 10bn in April 2020, which was the largest amount in the last five years (Figures 5.3, 5.5 and 5.6). Difficulties in liquidity maintenance spurred credit activity and changed the structure of new loans. In contrast with 2019, when new loans prevailed, mostly for working capital and with a stable share of new investment loans, in the period of increased insecurity following March, loans comprised mostly new and rolled-over working capital loans and rolled-over (restructured) investment loans, while there were almost no new investment loans. Net transactions in loans of domestic credit institutions to non-financial corporations decreased

5 See https://www.porezna-uprava.hr/Stranice/COVID_19_informacije.aspx for more details on tax relief measures.

6 According to the revised methodology applied as of 2 June 2020.

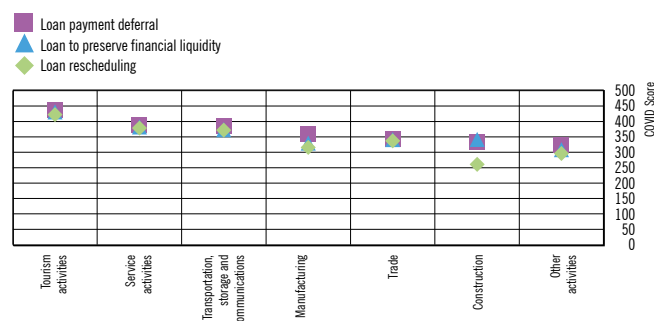
7 In additions, enterprises have at their disposal CBDR and HAMAG programmes, which were additionally strengthened in May by the European Commission's second amendment to the Temporary Framework for state aid measures to support the economy. Under the programme, Croatia was approved around EUR 322m (HRK 2.450bn) for guarantees and loans intended for micro, small and medium-sized enterprises affected by the coronavirus pandemic.

Figure 5.3 Tourism activity predominates in requested and granted loans, deferrals and rescheduling of existing obligations



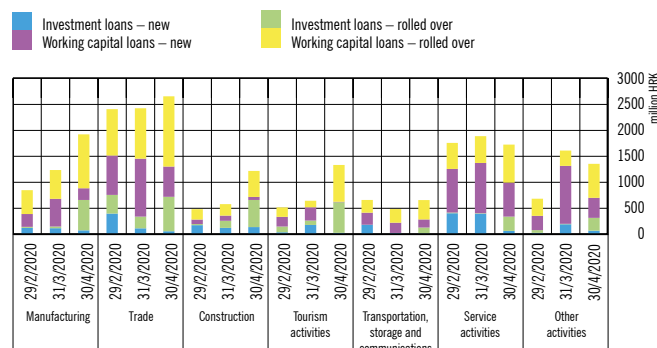
Note: Shares in the loans to activities are ratios of loan amounts associated with measures to the loan balance as at 31 March 2020.
Sources: CNB and FINA.

Figure 5.4 COVID score by activities and measures



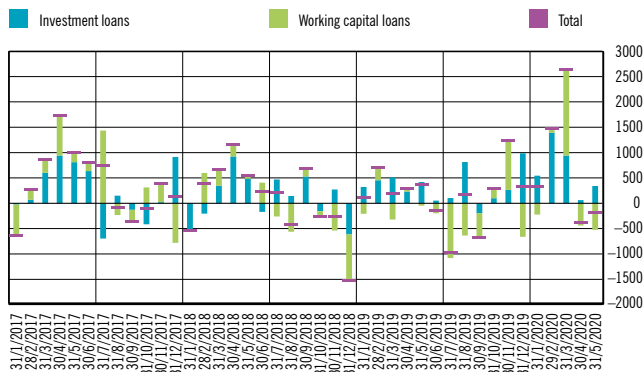
Notes: The total score is based on assessment of the threat to the dominant activity of an enterprise, its credit rating, job preservation criteria (reduction in employment after the onset of the pandemic), fall in business revenue (current and estimated), and assessment of future liquidity, bearing in mind the actual and estimated fall in business revenue. A higher score represents a higher potential threat to business due to the COVID-19 pandemic.
Source: FINA.

Figure 5.5 Reversal in demand for loans



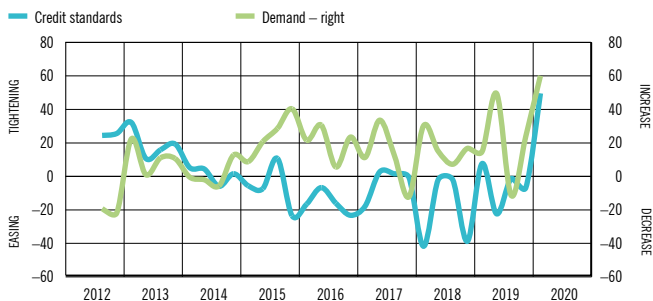
Source: CNB.

Figure 5.6 Net transactions falling after the outbreak of the COVID-19 pandemic



Source: CNB.

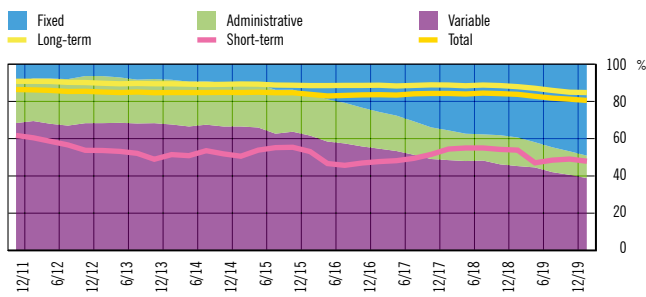
Figure 5.7 Sharp spike in credit demand in early 2020 was accompanied by the tightening of credit standards for corporate loans



Notes: Positive values show an increase in demand and the tightening of credit standards, whereas negative values show a decrease in demand and the easing of standards. Data show the net percentage of banks weighted by the share in total corporate loans.

Source: CNB.

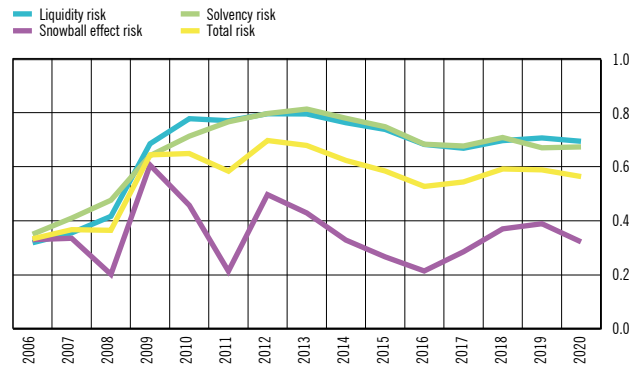
Figure 5.8 Large share of total corporate debt in foreign currency falling slowly since the second half of 2019 as interest rate risk continues to decrease



Notes: Presented is the share of foreign currency loans (lines) in total corporate debt (by maturity). It is assumed that total external debt is denominated in foreign currencies. Debt indexed to foreign currencies (a foreign currency clause) is also included. Interest rate risk is presented by the areas and it relates to a breakdown of bank loans to non-financial corporations by interest rate variability.

Source: CNB.

Figure 5.9 Improved business performance and lower costs of interest payments reduce the debt repayment burden and overall riskiness



Notes: Vulnerability indicators of the non-financial corporate sector. The vulnerability of the non-financial corporate sector was estimated by three indicators. The liquidity risk indicator was calculated as the ratio of the sum of the total debt amount and interest payments of the sector to gross operating surplus (GOS), i.e.:

$$LR_t = 0.5 \cdot \frac{\text{Debt}_t}{\text{GOS}_t} + 0.5 \cdot \frac{\text{Interest payments}_t}{\text{GOS}_t}$$

The solvency indicator was calculated as the debt-to-equity ratio:

$$SR_t = \frac{\text{Debt}_t}{\text{Equity}_t}$$

The snowball effect indicator is based on the ratio of debt servicing burden $b_{t+1} = \text{debt}_{t+1} / \text{GOS}_{t+1}$, adjusted by implicit interest rates i_t and growth rates of gross operating surplus g_t :

$$SNR_t = \frac{i_t - g_t}{1 + g_t} \cdot b_{t-1}$$

These indicators were normalised to the value range 0 – 1 and the total risk was calculated as the average of the three mentioned normalised indicators:

$$TR_t = \frac{LR'_t + SR'_t + SNR'_t}{3}$$

Sources: CNB and FINA.

sharply following the outbreak of the COVID-19 pandemic, regardless of the loan purpose (Figure 5.6).

In addition to the high demand caused by the COVID-19 crisis, the results of the April 2020 bank lending survey show the parallel tightening of lending terms (Figure 5.7). More specifically, notwithstanding the measures to help the businesses stricken by the COVID-19 crisis, credit institutions have been faced with much higher credit risk, to which they responded by tightening credit standards, as expected. Financing of overhead expenses exposes credit institutions to additional credit risk as corporate business activities are reduced to a minimum; however, to some extent it is necessary to prevent the materialisation of corporate liquidity risk and its spillover into other sectors. Uncertainty regarding the duration of the COVID-19 crisis may also threaten the solvency of enterprises, which suggests that they must transform their business to adapt to new challenges.

As a result of the years-long downward trend in the share of loans with variable interest rates, the corporate sector was less exposed to market risks on the eve of the crisis (Figure

5.8). Liquidity financing associated with the COVID-19 crisis reduced the share of corporate loans with variable interest rates by two additional percentage points as such financing is granted at fixed interest rates. Interest rate risk might be reduced even more in the remainder of the year if additional liquidity financing to clients hit by the COVID-19 crisis is contracted at fixed interest rates. The share of fixed interest rate loans went up to 45% by the end of March 2020.

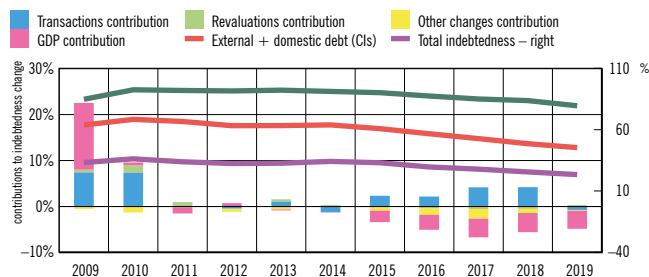
Currency risk in the corporate sector remained high. The share of loans denominated in or indexed to foreign currency decreased steadily, but the total exposure of the non-financial corporate sector to currency risk remained at high levels. In normal circumstances, indebtedness in foreign currencies does not pose high risk for export-oriented enterprises, that is, those that realise most of their revenue (or at least the part covering credit liabilities) in the foreign currency in which they borrow. However, the COVID-19 pandemic and the suspension of economic activity might cause a fall in foreign currency revenues, which would elevate currency-induced credit risk due to the currency mismatch between revenues and credit liabilities to banks (Figure 5.8).

Thanks to good business performance and very favourable financing conditions, the corporate sector was able to face the growing risks triggered by the COVID-19 pandemic with the best liquidity and solvency position of the past ten years (Figure 5.9). While liquidity and solvency risk indicators are higher than in the period preceding the 2008 crisis, it is noteworthy that the several years before that crisis were marked by a substantial increase in indebtedness from relatively low initial levels. The COVID-19 crisis and anti-pandemic measures will fuel corporate sector borrowing for the purpose of financing current liquidity, which will, coupled with the drop in operating income, lead to a surge in liquidity and solvency risks. Furthermore, after snowball-effect risk edged lower in the first quarter due to the fall in the implicit interest rate and the growth in gross operating surplus, the expected drop in gross operating surplus might fuel the increase in snowball-effect risk, notwithstanding the anticipated maintenance of very favourable financing conditions.

The total unconsolidated indebtedness of the non-financial corporate sector dropped to 87.6% of GDP at the end of 2019 (Figure 5.10). The main factors behind this decline (by a total of 4.6 percentage points of GDP from the end of 2018) were GDP growth and, to a lesser extent, deleveraging by enterprises based on external debt reduction, while debt to domestic credit institutions held steady and debt to other financial institutions (mostly leasing companies) grew marginally.

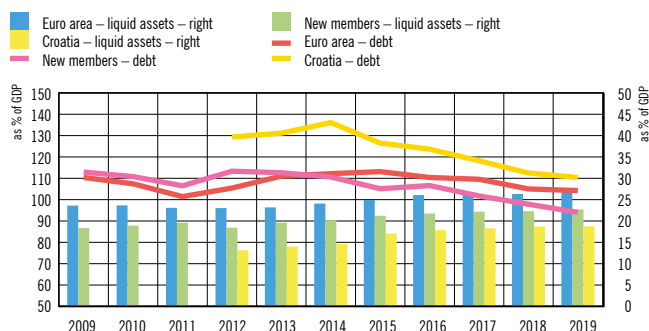
Notwithstanding the favourable trends seen in recent years, corporate debt in Croatia is still high when compared internationally (Figure 5.11). The debt of the Croatian corporate sector is higher than that of the group of new EU member states, and its liquidity is slightly lower, indicating the persistently high risks arising from a high debt level.

Figure 5.10 Indebtedness of the corporate sector continued to fall in 2019



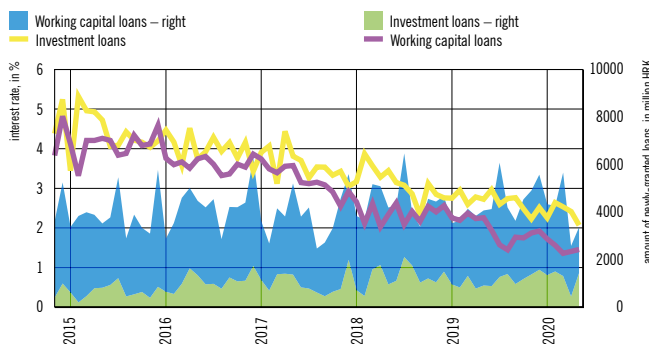
Notes: The figure shows the decomposition of changes in indebtedness (debt/GDP) at an annual level. Revaluation includes foreign exchange differences and price changes, while other changes include sector reclassifications, write-offs, etc. The lines show the unconsolidated debt of non-financial corporations. The difference between total unconsolidated debt and the sum of external debt and debt to domestic credit institutions is the debt to domestic leasing companies, insurance and other financial institutions (funds, factoring companies, etc.) and non-financial corporations (including enterprises to which bank loans have been assigned). Sources: CNB, FINA and HANFA.

Figure 5.11 In international comparison, Croatian corporations have larger net financial debt and lower liquidity



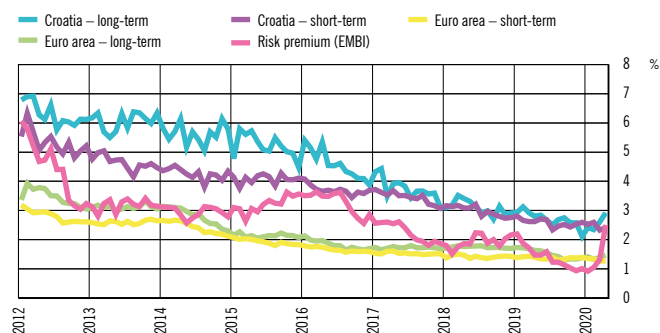
Notes: Net debt is the difference between financial liabilities and financial assets. Lines denote indebtedness and columns denote liquid assets. Unconsolidated debt also includes liabilities to suppliers and other payment obligations. Source: Eurostat.

Figure 5.12 Interest rates on newly-granted corporate loans in Croatia continued to decrease



Notes: The figure shows amounts of newly-granted loans (right) and weighted interest rates by instrument. Working capital loans include credit card loans and giro account overdrafts. Source: CNB.

Figure 5.13 Interest rates on long-term corporate loans have grown in 2020 due to renewed agreements



Note: The figure shows weighted interest rates on the new business volume of loans.
Sources: ECB, Bloomberg and CNB.

Corporate debt servicing has been made easier by favourable global financing conditions and measures taken, which offset the rise in risks. Favourable financing of corporate liquidity shortage was also made possible by the CNB decision that COVID-19 related loans be classified as performing loans for the time being, which reduced risk provisioning costs as well as the price of such placements, providing for the continued stagnation of domestic banks' interest rates on newly-granted corporate loans at historical lows. Interest rates on newly-granted loans to non-financial corporations continued to decrease slowly (investment loans) or held steady (working capital loans, Figure 5.12).

Short-term corporate financing costs in Croatia remained at around 3% in 2019, while the price of long-term financing was slightly lower (Figure 5.13). The weighted interest rate

on all long-term loans grew in April under the influence of the rising share of renewed investment loans in total new loans due to the COVID-19 pandemic, mostly those that are more expensive, which led to an apparent increase in the price of long-term loans.

Key risks linked to the non-financial corporate sector

The COVID-19 pandemic suspended the operation of almost one fifth of all business entities, primarily in activities that are mostly affected by social distancing measures. The operation and income of these activities plummeted by more than 90% in a very short period of time. The consequences of the COVID-19 crisis will be felt even after the pandemic comes to an end because of the latent threat of the reactivation of the same virus or the activation of the similar virus, which will necessitate the restructuring of the business models of enterprises engaged in activities characterised by close social contact with clients.

In a very short period, many enterprises adapted their business models by strengthening digitalisation and relying on supply channels to enable "remote" work and sale of goods and services. Some activities even made extra profits (providers of IT solutions, express couriers, etc.), while some small entrepreneurs, acting together or providing specific solutions, also found market niches in the new situation. Grants facilitated the survival and adjustment of operations in the short run. However, longer provision of non-selective grants might keep enterprises with unviable business models in the market and slow the reallocation of resources towards sound enterprises that should be at the forefront of the economic recovery.

Box 3 Who applied for CES grants for job preservation?

The coronavirus-caused crisis has hit the economy hard, especially activities affected by social distancing measures. Nevertheless, the measures taken by the government through the Croatian Employment Service (CES) to preserve jobs in the sectors hit by the coronavirus have been of much help in covering employee costs.

CES data¹ show that more than 100 thousand² legal entities received grants for March and April within the job preservation programme³ (hereinafter referred to as 'grants'), of which, as expected, more than 90 percent were accounted for by micro enterprises (up to ten employees), which are numerically dominant in the corporate sector (Figure 1). Data available for March and April show that more than HRK 3.8bn was paid in grants to more than 590 thousand employed persons.

The correlation of CES data on the business entities that received grants for March and April 2020 with those in the database of the Financial Agency (FINA) for 2018 showed that two fifths of all enterprises in the FINA database⁴ received grants, with 36%, 64%, 62% and 55%, respectively, of micro, small, medium-sized and large enterprises enjoying support (Figure 2). In terms of activity, more funds were used in service activities that involve a higher degree of social contact, which were hit the most by anti-epidemic measures, and the manufacturing sector, which depends on delivery of raw materials and components and is affected by uncertainty regarding orders and the relatively small opportunities to organise remote work⁵ (Figure 2).

Most enterprises that are grant recipients do not have bank loans as banks are exposed to less than 20% of such enterprises. However, bank exposure to these enterprises is large. At end-March, enterprises that received grants accounted for almost two thirds of all indebted corporate bank clients and around 58% of all loans to non-financial corporations, or 18% of total bank loans. As expected, the majority of exposures are related to service activities, manufacturing and business services (Figure 3).

Bank exposure to enterprises using grants differs across bank groups, which reflects the diversification of their loan portfolios. Enterprises that used grants in late March 2020 accounted for 17% and 24% of total loans from systemically important and other credit institutions respectively, which is consistent with the larger share of enterprises in the portfolios of small banks. Clients of the former bank groups that received grants accounted for 24% and 42% respectively of total interest

Figure 1 Statistics of CES measures for March and April

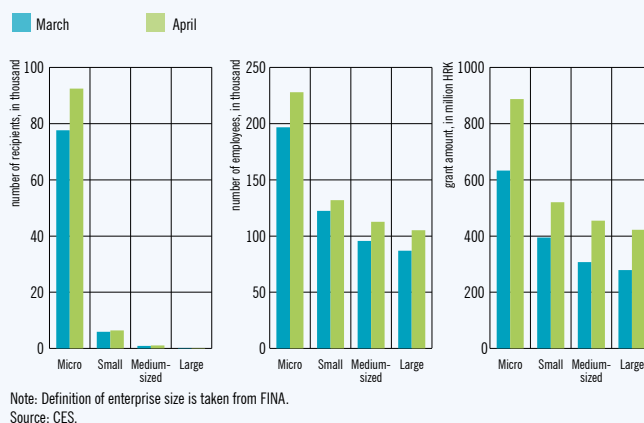
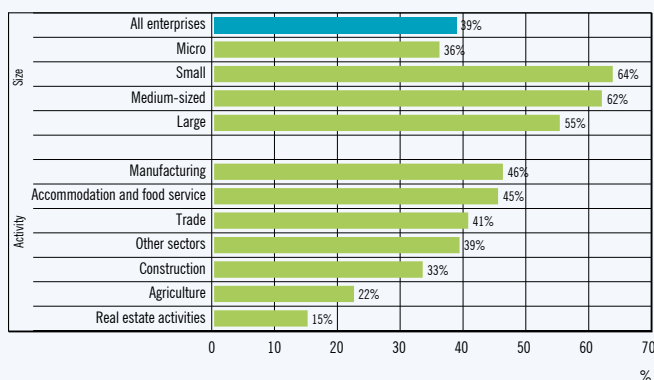


Figure 2 Rate of approved measures by activity and size



income on loans, that is, noticeably more than their share in the portfolio, which is the result of higher interest rates charged to the corporate sector than to other clients (Figure 4).

A probit econometric method was employed to examine econometrically which variables are correlated with the higher probability of using grants, where 1 denotes enterprises using grants and 0 denotes those

¹ Data on paid grants were taken from the official CES website as at 1 July 2020.

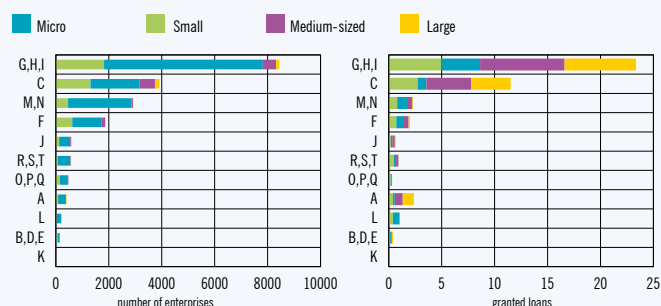
² More than 82 thousand of which received support both for March and April.

³ The Management Board of the Croatian Employment Service (CES) adopted a new measure at its meeting on 20 March 2020.

⁴ The FINA database contains data based on the annual statements of entrepreneurs that are profit tax payers. As the most recent data available in the FINA database refer to 2018, the analysis does not cover enterprises first established in 2019 and 2020.

⁵ Based on real-time economic and financial data, the International Labour Organisation identified the following as hardest-hit sectors: accommodation and food services, manufacturing, trade, real estate activities, and business and administrative activities. Source: ILO Monitor: COVID-19 and the world of work. Second edition: Table 2 Workers at risk: Sectoral perspective.

Figure 3 Loans to enterprises that applied for grants, by activity and size

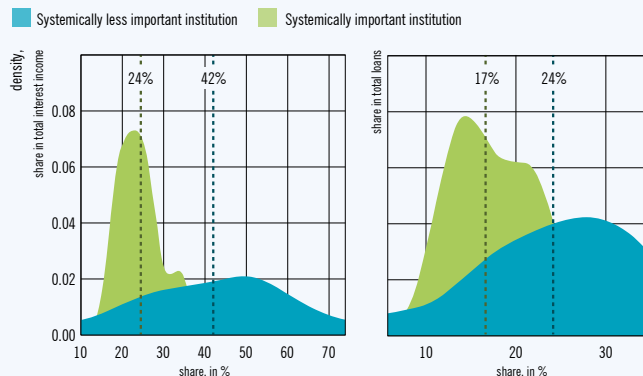


Note: Activities are grouped as follows: Agriculture – A; Energy – B, D, E; Manufacturing – C; Construction – F; Service activities – G, H, I; Communications (IT sector) – J; Financial sector – K; Real estate activities – L; Business services – M, N; Public sector – O, P, Q; Other – R, S, T. Definition of enterprise size is taken from FINA. Sources: CES and CNB.

that do not use grants.⁶ Two rank variables were used as independent variables: size (from 1 to 4 for micro, small, medium-sized and large enterprises) and estimated required social contact for pursuing an activity (from 1 to 7, where 1 denotes the minimum required contact). We also used enterprise-specific variables describing margins, profitability, financing structure and liquidity, obtained from the FINA database for 2018.

Results confirm that, in comparison with micro enterprises and with other variables unchanged, the probability of using grants is higher by 14% and 12% for small and medium-sized enterprises, respectively, while there is no significant difference for large enterprises. As regards activities graded according to required social contact, in comparison with agriculture, the probability of using grants is 21%, 23% and 30% higher in trade, manufacturing, and accommodation and food service activity, respectively, keeping other variables unchanged. As regards enterprise-specific variables, they moved in the expected direction, so that

Figure 4 Distribution of loans to enterprises – grant recipients in total loans and interest income



Sources: CES and CNB.

enterprises with lower margins, lower profitability, less capital and a higher share of financing from lenders and less cash were more likely to apply for grants (Table 1).

Econometric model results reflect the nature of the crisis that affected the non-financial corporate sector and the rules for applying for grants. In terms of size, small enterprises are also most flexible with regard to the labour force. As they require physical contact with clients, service activities (accommodation and food service and trade) were hit the most by the suspension of operations due to the epidemiological measures. In addition to these two activities, manufacturing was also much exposed to the impact of the pandemic due to its dependence on the delivery of raw materials and components as well as uncertainty regarding orders and the relatively small opportunities to organise remote work. Furthermore, classification to a particular activity also indirectly describes labour intensity and the share of fixed costs.

⁶ The analysis excludes enterprises whose activity was unspecified in the available FINA database from 2018.

Table 1 Probit analysis results, marginal effects on averages, total and by size

Size rank	All enterprises		Micro		Small		Medium-sized		Large	
1 (Micro)										
2 (Small)	0.14	***								
3 (Medium-sized)	0.12	***								
4 (Large)	0.04									
Social contact rank										
1 (Agriculture)										
2 (Construction and real estate activities)	0.12	***	0.13	***	0.08	**	−0.01		−0.01	
3 (Other sectors)	0.19	***	0.21	***	0.10	***	−0.09		−0.03	
4 (Transportation and storage)	0.18	***	0.18	***	0.19	***	0.11		0.08	
5 (Trade)	0.21	***	0.21	***	0.18	***	0.21	***	0.17	
6 (Manufacturing)	0.23	***	0.23	***	0.20	***	0.17	*	0.35	**
7 (Accommodation and food service activities)	0.30	***	0.29	***	0.34	***	0.38	***	0.56	***
Enterprise-specific variables										
Margin (EBITDA/revenue)	−	***	−	***					−	***
Return on equity	−	***	−	***	−	***			+	***
Capital-to-assets ratio	+	***	+	***						
Share of financing from lenders	+	***	+	***	+	***	+	***		
Share of cash in assets	−	***	−	***	−	***	−	*		
Number of observations	72,001		60,734		9,100		1,749		418	
Pseudo R ²	2%		1%		3%		9%		12%	
Area below the ROC curve	60%		58%		62%		70%		72%	

Source: CNB (CES and FINA data).

6 Banking sector

Figure 6.1 Growth of lending to the household and non-financial corporate sectors stopped in April

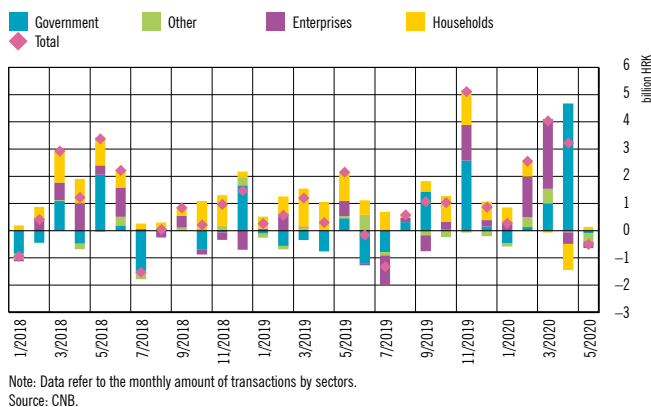
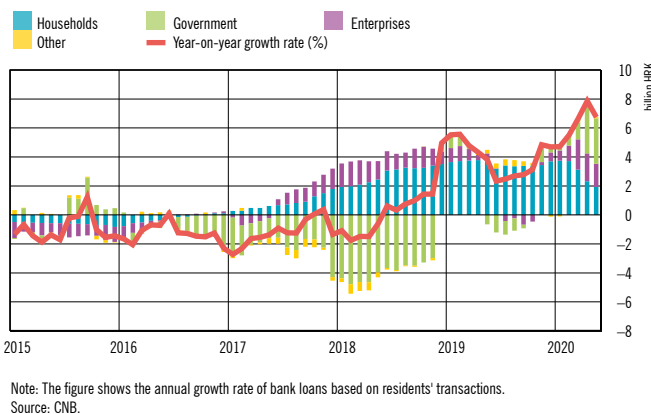


Figure 6.2 Decrease in loans to the private sector offset by an uptick in lending to the government



The banking sector met the economic slowdown with high levels of capitalisation and liquidity buffers. Increased government financing needs led to a further growth in the already high banking sector exposure to the central government. The improvement of the loan portfolio quality that resulted from the cleaning of non-performing placements from balance sheets and the favourable macroeconomic environment lasted until March 2020, but the trends are likely to reverse in the forthcoming period. The CNB and the Government set up an operational framework within which credit institutions could operate to relieve the repayment burden and to facilitate access to financing for crisis-hit firms, while fiscal stimulus measures to aid these enterprises and households have had a positive effect on banking system stability by reducing credit risk.

Short-term trends

The coronavirus pandemic has reversed the dynamics and structure of bank lending activity in Croatia, giving a strong boost to lending to the government. Loans to the household sector continued the growth trend of the last few years in the first two months of 2020. However, both housing loans and general-purpose cash loans, two main loan categories, decelerated as early as in March and plummeted in April. Housing loan subsidies implemented by the Croatian Government intensified the dynamics in the housing loan segment of household lending in May, but developments in cash loans remained negative (Figures 6.1 and 3.5). Anticipating these negative developments,

enterprises used available credit lines in February and March, which strengthened corporate lending, primarily working capital loans (Figures 6.1 and 5.6). The pace of lending to non-financial corporations then eased in April.

Lending to the government grew after March due to increased government financing needs (for more details, see chapter 2 Government sector). This was the main reason for the acceleration of credit growth, which stood at 7.4% annually in May 2020 (Figure 6.2). As a result of these changes, coupled with the impact of exchange rate differences, bank assets grew at an accelerated rate and were 7.7% higher at the end of May this year than in the same month in the previous year (Figure 6.3).

Bank deposit growth accelerated amid crisis conditions that generated depreciation pressures on the domestic currency. Total deposits of residents were 10.7% higher on an annual level in May (Figure 6.4), reaching the highest growth rate in the last ten years. The COVID-19 outbreak was immediately followed by financial market instability and strong withdrawals of funds from investment funds⁸, which may be assumed to have been partly transferred to residents' deposits in banks. Deposits also grew because households limited their spending, for both objective and precautionary reasons, because of the pandemic and containment measures, surrounded by heightened uncertainty, and increased their bank account balances⁹.

March saw the first major increase in deposit euroisation¹⁰ since 2008. Euro deposits increased by a considerable EUR 4.0bn on the basis of transactions in March, driven by expectations of depreciation pressures, while kuna deposits did not change much (Figure 6.5). The growth of deposit euroisation stopped after the CNB had alleviated depreciation pressures by a series of foreign exchange interventions (see chapter 1 Macroeconomic environment).

Due to historically high liquidity levels, supported by monetary policy measures (Figure 1.11), interest rates continued to fall. This includes a continued decrease in interest rates on sources of funds: at the end of April 2020, interest rates on kuna time deposits were 0.52% and those on foreign currency time deposits 0.39%, with the result that lending interest rates also decreased (Figure 6.6)¹¹. The increase in risk premium, suggested by a widening spread between Croatian bonds and risk-free (German) bonds, has not had a spillover effect on interest rate developments thanks to the CNB's accommodative monetary policy stance. The forthcoming period is therefore

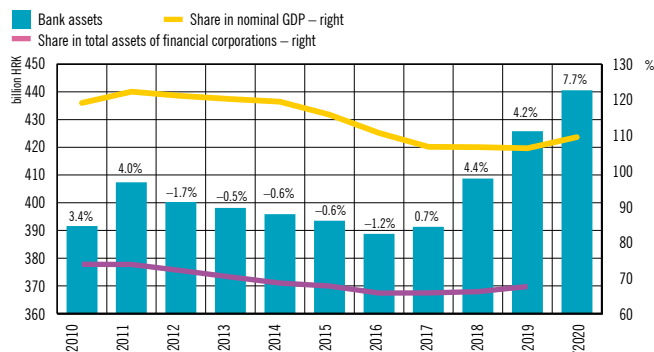
8 The total net assets of UCITS decreased by HRK 6.7bn between 21 February and 24 March as a result of the redemption of shares. Source: [HANFA Press Release](#).

9 The overall impact on the household financial balance is twofold, as the income of part of the population remained on the previous level, whereas the income of the other part decreased and/or might be lost.

10 For more details, go to [HNBlog: Euroisation at the time of crisis](#).

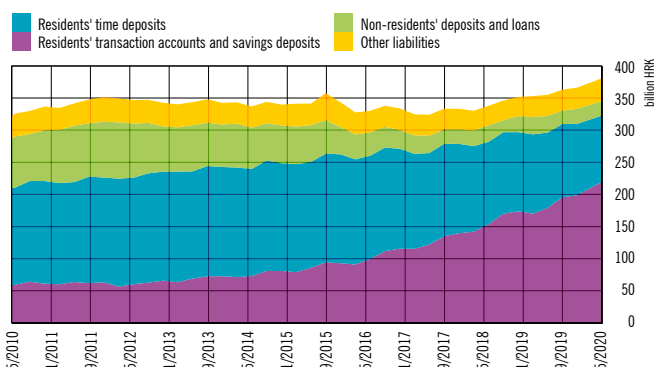
11 Bank interest rates on new long-term loans, including renewed agreements on loans previously granted at higher interest rates, edged up, but interest rates on the stock of loans continued to drop due to a decrease in benchmark interest rates.

Figure 6.3 Strong annual growth of bank assets resulting from lending activity



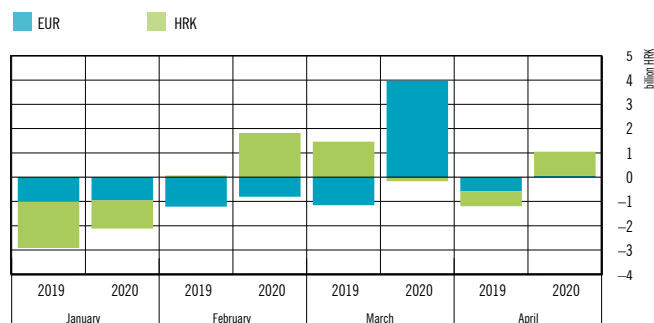
Notes: The figure shows the annual rate of change in total net assets. Data on the total assets of financial corporations are available from 31 December 2019. Source: CNB.

Figure 6.4 Record-high resident deposit growth



Source: CNB.

Figure 6.5 Deposit euroisation



Note: The figure shows transaction-based balances of deposits and transactions accounts of households and non-financial corporations. Source: CNB.

also not expected to see any upward pressures on either deposit or lending interest rates.

Systemic risks

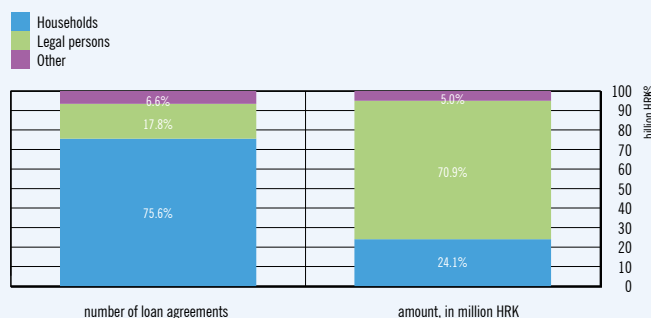
Most systemic risks have increased due to the coronavirus pandemic. The deteriorating macroeconomic environment is causing an increase in credit risk, which will have an adverse effect on bank profitability. Exposure concentration risk has also increased due to an upsurge in lending to the government. In addition, bank exposure to currency-induced and interest rate-induced credit risks has remained high and so has concentration risk in the system.

Credit institutions' measures for clients affected by the coronavirus pandemic

At the outbreak of the COVID-19 crisis, the CNB adjusted the regulatory framework by allowing credit institutions to change repayment terms for existing credit obligations and to grant additional credit to clients whose income was reduced due to the pandemic, while continuing to classify them as non-defaulting clients. Measures reported by banks to the CNB are shown in the text below.

Out of 80,565 applications for the change of credit repayment terms and new exposures submitted until 10 June, in the total amount of HRK 41.774bn, in terms of the number of applications submitted, 75.7% were granted and in terms of the amount, 65.6%. Most applications were submitted by the household sector and the highest amounts were applied for by the non-financial corporate sector (Figure 1). The largest number of applications (95.1%) asked for a moratorium¹², a temporary suspension of repayment of obligations due

Figure 1 Most applications were submitted by households, while the majority of the amount is accounted for by legal entities



Note: Bank survey conducted by the CNB; data are until 10 June 2020.
Source: CNB.

12 Moratoriums provide for the deferral of existing credit obligations for three, six or nine months, or until the end of the credit repayment period (depending on individual banks).

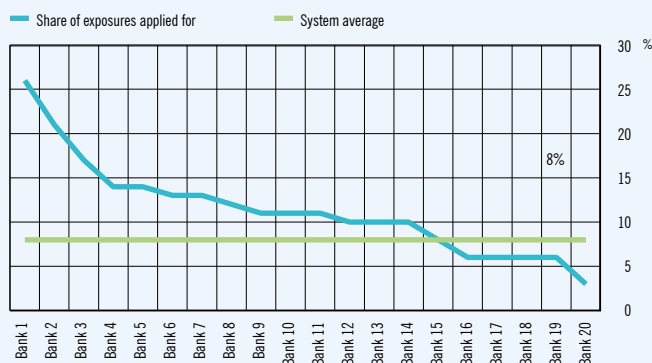
Credit risk

Unfavourable economic developments stemming from the COVID-19-induced crisis will halt the trend of marked improvement in bank loan portfolio quality. In an effort to mitigate the negative economic consequences of the pandemic on the financial positions of bank clients and banks themselves, the CNB, under conditions of extremely heightened uncertainty, temporarily relaxed regulations on the classification of non-performing placements, while prohibiting the payments of dividends from the previous year. This enables banks, once they have deferred or restructured credit obligations of otherwise non-defaulting clients afflicted by the coronavirus pandemic, to temporarily postpone the reclassification of the part of these

atorium¹², a temporary suspension of repayment of obligations due for a period that depends on the application, the borrower's profile and the bank's internal policies (between three to twelve months). Credit institutions also received a small number of applications for other forbearance measures providing for the change of other terms, in addition to payment deferral and granting new liquidity. Most of the forbearance measures requested, including moratoriums, were granted until the beginning of June, whereas applications for additional liquidity, much lower in number, were granted in a negligible share.

The exposure of the banking sector to clients who submitted applications that were not rejected by 10 June is not viewed as systemically significant. Data on the exposure prior to the submission of applications (March 2020) show that the amount of all applications approved and in the approval process accounted for 8% of the total bank exposure at the overall system level. However, relative exposure to crisis-affected clients differs significantly across banks: in three small banks it even exceeds 15% of total exposure to households and legal entities (Figure 2).

Figure 2 Shares of application-based exposures differ significantly across banks



Source: CNB.

exposures with uncertain future quality. Specifically, credit institutions are allowed to continue treating exposures to pandemic-affected clients that were assessed as not risky at the end of 2019 and that will be granted payment deferrals or other forbearance measures, as well as new financing, as non-risk exposures (risk category A) in the next one-year period. This will facilitate access to funding for crisis-affected clients and postpone the potential recognition of loan losses of enterprises whose operation will be disrupted by the pandemic and the resultant burdening of bank capital until the moment when a more credible assessment becomes possible.

The loan portfolio quality was improving when the crisis emerged and the share of non-performing loans in total loans amounted to a relatively low 5.4% at the end of March (Figure 6.7). Despite the improvement, loan quality in Croatia has remained poor compared to the EU average, but due to the above-average coverage of non-performing loans their pressure on own funds has remained moderate. The coverage of non-performing loans by value impairments reached almost 70% (Figure 6.8).

Expectations are that these favourable recent trends will be followed by an increase in the materialisation of credit risk in the coming period. The expected economic downturn, still very uncertain in terms of intensity, length and its unfavourable impact on the labour market, household income and enterprise operations, will result in an increase in non-performing loans.

The sale of claims has remained a key factor in the cleaning of banks' balance sheets. In 2019, banks continued to sell large amounts of non-performing placements, with an amount of HRK 4.2bn of claims sold (gross principal and interest), mainly from non-financial corporations¹³, which in general account for the largest share in the structure of sales (Figure 6.9). The developed secondary market for non-performing loans is expected to facilitate the cleaning of banks' balance sheets in the coming years (See Box 5 NPL investors in Croatia).

Although no increase in non-performing loans is evident so far, for the most part due to the mentioned softer regulatory approach, banks started to recognise a potential rise in credit risk as early as in March. In line with IFRS 9¹⁴, which requires correct and timely recognition of future expected credit risks, an increase in the reclassification of exposures from stage 1 (instruments with no significant increase in credit risk since initial recognition) into stage 2 (instruments with a significant

Figure 6.6 Continued decline in lending and deposit interest rates

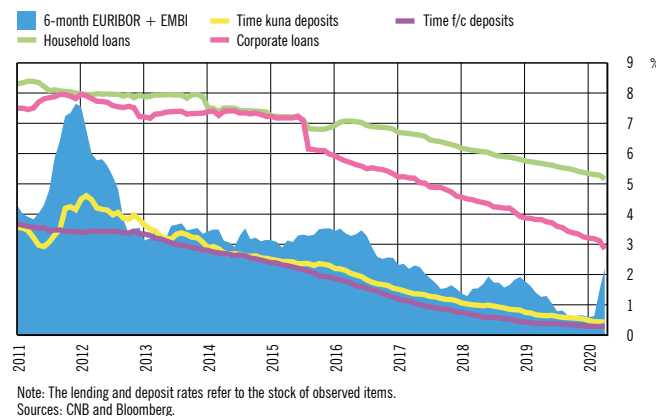
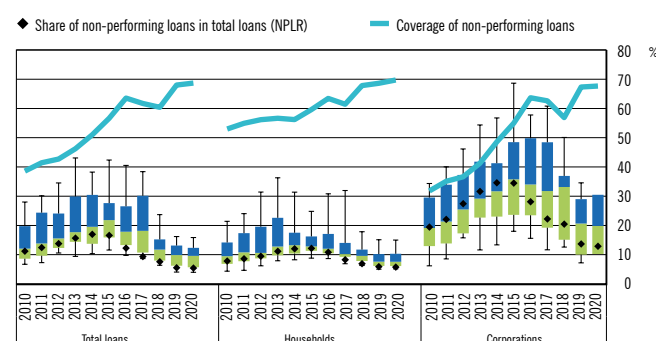


Figure 6.7 Continued improvement of credit quality



increase in credit risk since initial recognition) was first recorded as early as in March. As a result, stage 2 exposures grew by almost HRK 11bn (on a gross basis) from the beginning of March to the end of May and their share in total exposures went up from 10.5% in February to 15.8% at the end of May (Figure 6.10), while reclassifications to stage 3 (credit-impaired instruments) remained at a low level, in line with regulatory relief measures.

As banks started to receive applications from clients affected by the COVID-19 crisis regarding financial relief measures after March, and given that the CNB enabled a more relaxed regulatory treatment, forbore exposures can be expected to increase no earlier than in the remaining part of 2020. The composite credit quality indicator, which includes forbore performing exposures and all non-performing exposures (with and without forbearance measures), shows that exposures to clients in financial difficulties decreased in the previous years (Figure 6.11). Following a slowdown in this dynamics in early

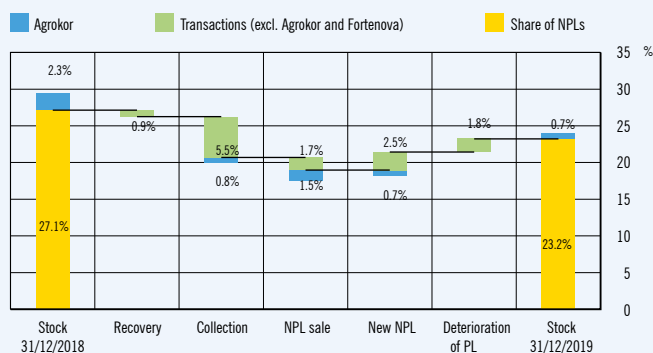
13 The largest share is accounted for by the sale of claims of Fortenova Group d.d.

14 Under the accounting standards of IFRS 9, since 1 January 2018 loans have been classified into three categories according to the degree of credit risk: stage 1 – no significant increase in credit risk since the initial recognition of an instrument, stage 2 – a significant increase in credit risk and stage 3 – value impairment (NPL).

Migrations of non-financial corporation loans

During the loan repayment period, the credit institution continuously monitors changes in the borrower's risk profile and classifies them into appropriate risk categories, depending on the degree of risk and expected losses arising from potential default. The loan portfolio risk is therefore a dynamic characteristic of the portfolio quality, whose direction and speed of "movement" should be spotted in time in order to assess the sector's future profitability and capitalisation. Irrespective of the supervisory measures allowing for a temporary favourable classification of claims against the borrowers whose income was impaired due to COVID-19 (see [here](#)), banks will probably gradually reclassify claims against the borrowers that they assess as having long-term business difficulties.

Figure 1 Decomposition of changes in NPLs, 31 December 2018-31 December 2019



Source: CNB calculations.

Table 1 One-year rating migration matrix of non-financial corporation loans in 2019

From/in	A	BC	Exit of loans from bank assets	Of which: claims sold	Row total	M _{SVD}	ΔM _{SVD}
A	83.80%	2.60%	13.60%	0.00%	100.00%		
BC	3.30%	69.90%	26.80%	6.40%	100.00%	3.80%	1.10%
New loans	86.60%	13.40%	0.00%		100.00%	57.00%	-3.20%

Notes: The classification groups¹⁵ A1 and A2 are performing loans (marked A), while B1-B3 and CC are non-performing loans (marked BC). The MSVD represents the average probability of classification changes weighted by the intensity of changes over a year. The difference between the MSVD metric of the upper and lower triangular matrix (ΔMSVD) approximates the speed of "movement" of migrations and its sign the direction. The migration matrix shows one-year changes in the classification of total non-financial corporation loans in the period from 31 December 2018 to 31 December 2019. ΔM_{SVD} in row "BC" represents migrations within the A-BC submatrix and does not include new loans or loans exiting from assets, and ΔM_{SVD} in row "New loans" refers to the whole migration matrix. Source: CNB calculations.

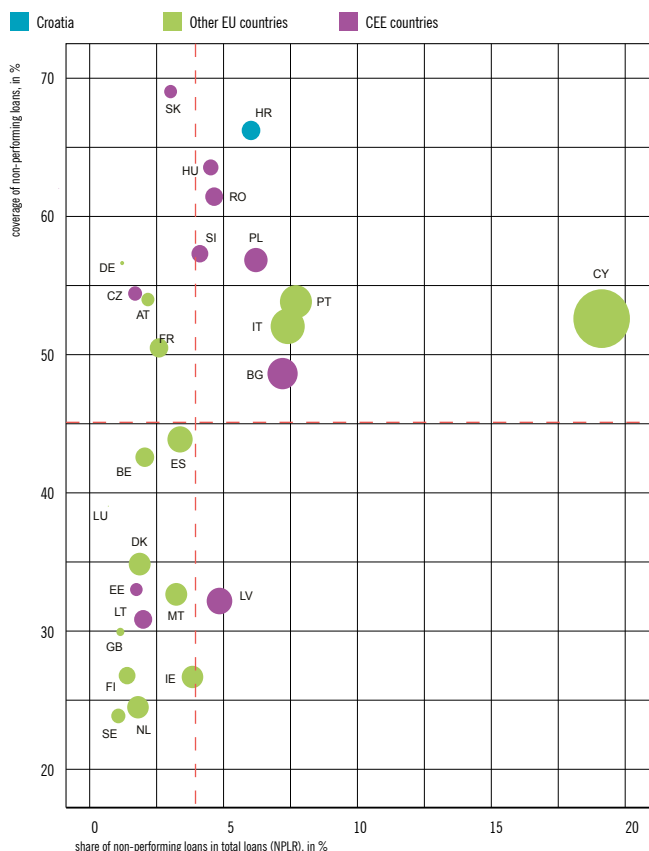
In the period from the end of 2018 to the end of 2019, about 84% of performing non-financial corporation loans (A) remained performing, while 3% of loans recorded a deterioration of quality with objective evidence of impairment (B and C classification). About 13% of performing loans exited bank assets in that period, which could be attributed to the regular repayments of loan instalments falling due and the net impact of exchange rate differences, but also to one-off effects, such as to some of the debt being transferred from the non-financial corporations sector to the government sector because of the activation of government guarantees (for shipyards, etc.). About 70% of loans remained non-performing, while about 3% of them recovered and liabilities falling due continued to be repaid regularly. A large share of non-performing loans (about 27%) exited the assets of credit institutions, primarily due to the enforcement of collateral

and the write-off of irrecoverable claims, while about 6.5% of loans were sold. The low degree of recovery of non-performing loans is an indication of structural problems in the cleaning of banks' balance sheets, most importantly the slow pace of judicial proceedings.

The quality of total loans slightly improved in 2019, as ΔM_{SVD} is 1.1%, which means that the weighted probability of loans migrating towards the lower, performing triangle of the matrix was 1.1 percentage points higher than the probability of migration towards the upper, non-performing triangle. In other words, the probability that one kuna of a loan classified as non-performing will become performing is 1.1 percentage point higher than the probability that one kuna of the loan will deteriorate and become non-performing.

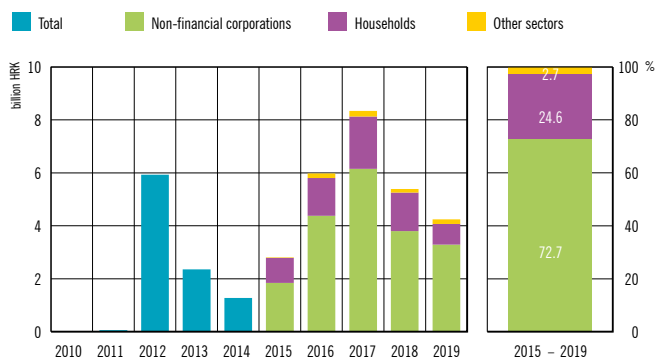
¹⁵ Non-financial corporation loans are classified according to International Financial Reporting Standard 9: Financial Instruments (IFRS 9). IFRS 9 classifies instruments (in this case loans) into three stages: stage 1 (A1) includes corporate loans with no significant increase in credit risk. Corporate loans that record a significant increase in credit risk, but without any objective evidence of value impairment, are classified in stage 2 (A2), whereas corporate loans with objective evidence of value impairment are classified in stage 3, with the classification risk category defined depending on expected credit losses (B1, B2, B3, and CC for expected credit losses of 100%). The migration matrices were calculated over a one-year period for 2019 in relation to 2018 at the level of individual enterprises, based on credit institutions statistics. The migrations of the number of enterprises were calculated using a slightly different, unweighted approach: the number of enterprises was not weighted by the amount of their liabilities, but uniformly distributed in the matrix. This approach puts the focus on enterprises, rather than on their liabilities.

Figure 6.8 Although credit quality in Croatia is somewhat weaker than the EU average, the pressure on capital is moderate



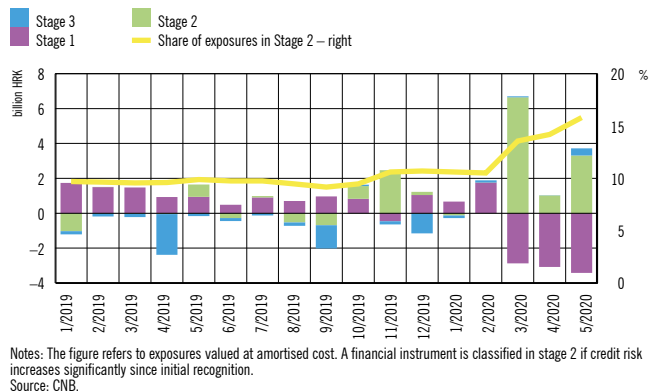
Notes: The size of a data dot size indicates the ratio between net non-performing loans and banks' own funds. The vertical and horizontal dotted lines indicate the average of all EU countries. Greece was excluded from the overview for greater clarity.
Sources: ECB and CNB.

Figure 6.9 Claims of non-financial corporations make up the largest share of sold claims



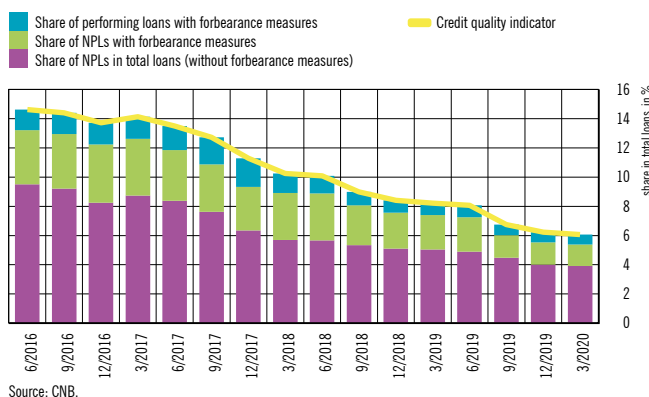
Note: The figure is based on data submitted to the CNB by banks and savings banks.
Source: CNB.

Figure 6.10 Increase in the reclassification of exposures indicates a rise in credit risk in the system (monthly change)



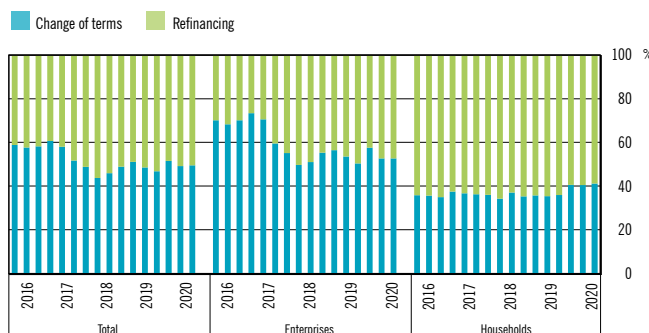
Notes: The figure refers to exposures valued at amortised cost. A financial instrument is classified in stage 2 if credit risk increases significantly since initial recognition.
Source: CNB.

Figure 6.11 Trend of improvement of the composite credit quality indicator is slowing down



Source: CNB.

Figure 6.12 Forbearance measures differ across sectors (balance)



Source: CNB.

2020, forbore exposures can be expected to increase in the following periods. Data on the forbearance method applied show differences among sectors that could persist in the future: changes of loan terms (annexes to loan agreements) and refinancing are equally represented in the enterprise-oriented measures used so far, while refinancing accounts for almost 60% of household-oriented measures (Figure 6.12).

Profitability

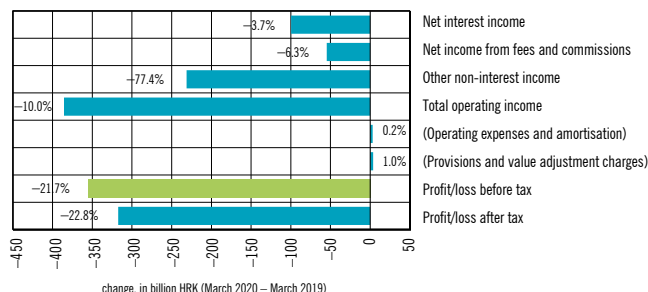
Due to a drop in operating income, coupled with an increase in charges for value adjustments, bank profitability will decrease in 2020. A decrease in operating income in the first quarter caused by realised market losses on financial instruments¹⁶ will by the end of the year be followed by the effect of changes in the portfolio structure: an increase in the share of loans to the government, granted at lower interest rates, and a decrease in household cash loans, which accounted for one third of bank interest income in 2019. Preliminary unrevised data for the first quarter of this year point to a decrease of 22.7% in gross profit relative to the first quarter of 2019 (Figure 6.13). While all operating income components decreased in the observed period, the largest nominal contribution to the decrease came from non-interest income (lower dividend income and realised market losses), which fell by 77.4%. Net interest income decreased by 3.7%, net income from fees and commissions by 6.3%¹⁷, and total net operating income by 10%. As a result of the reclassification of portfolio exposures (Figure 6.10), the cost of provisions and value adjustments for credit risk increased by 1%. Net profit contracted even more in April and May and was almost 40% lower in the first five months of 2020 than in the same period in the previous year, according to preliminary data (Figure 6.14).

Banks were highly profitable at the outbreak of the crisis, partly due to changes in the portfolio structure. The return on average assets (ROAA) was 1.6% and the return on average equity (ROAE) 9.9% (Figure 6.15), with the largest contribution to the record return level coming from an increase in non-interest income from dividends, most of which was recorded in one bank. In addition, profit growth in 2019 also resulted from an increase in interest income, the first after seven years of decline, which, coupled with a decrease in interest expenses, caused net interest income to grow by 6.8%. This can primarily be attributed to developments in the household sector, precisely to an increase in interest income from general-purpose cash loans and a reduction in interest expenses on household time deposits.

¹⁶ Profit or loss on financial assets measured at fair value through other comprehensive income (IFRS 9, paragraph 4.1.2.A) are recognised in other comprehensive income.

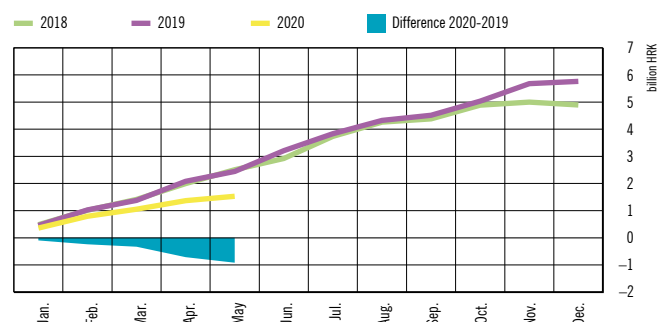
¹⁷ In addition to a reduced volume of payment transactions, the decline in income was also related to the CNB's recommendation to banks to temporarily waive cash withdrawal fees at ATMs outside their own ATM networks.

Figure 6.13 Decrease in operating income, coupled with indications of growing value adjustment charges, resulted in a sharp fall in banking system profit early in the year



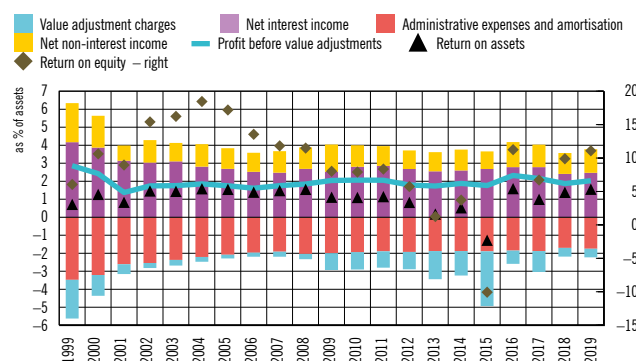
Note: The figures show the percentage change from the first quarter of 2019.
Source: CNB.

Figure 6.14 Developments in net profit of the current year suggest strong negative trends in the generation of operating income



Notes: The position from the credit institutions' balance sheet: Equity. This refers to the amount of net profit or loss made over a calendar year until the last day of the reporting period.
Source: CNB.

Figure 6.15 Rising operating income, coupled with lower value adjustment charges, resulted in profitability growth in the previous years



Source: CNB.

The increased reliance on interest income from non-collateralised general-purpose cash loans is a major source of risk.

Interest income from general-purpose cash loans account for one third of total interest income from banking sector loans (Figure 6.16), which considerably exceeds their share in the credit portfolio (20.6%). In the previous period these risks were also augmented by the fact that some of these loans were granted under relatively lenient criteria and without information from the Croatian Registry of Credit Obligations (HROK)¹⁸.

Despite lower value adjustments for credit risk, increased expenses on provisions for litigation had a negative impact on profitability in 2019.

The number of court actions against banks increased in the previous years, with the increase especially pronounced in 2019: when there were more than 23,000 actions at the end of the year, most of them involving lawsuits filed concerning loans granted in Swiss francs. As a result, banks considerably increased litigation provisions (HRK 1.1.bn in 2019). In the pilot proceedings¹⁹ related to Swiss franc loans, the Supreme Court concluded that the conversion agreement concluded on the basis of the *Act on Amendments to the Consumer Credit Act (Official Gazette 102/2015)* was valid, that is, that it had legal effect, even if the provisions of the basic loan agreement on the variable interest rate and currency clause were null and void. This provided the basis for a uniform case law in the treatment of initiated lawsuits.

Banks can partially compensate for the decrease in profitability resulting from a long period of low interest rates and growing interest rate risk by improving cost efficiency. Although the cost efficiency indicator, measured by the operating cost-to-income ratio, is favourable (46.2% in 2019, Figure 6.17), asset encumbrance has remained high (Box 4, Figure 1), indicating that there is room for the improvement of operational efficiency. Therefore, under conditions of low interest rates and competitive pressures, banks will have to intensify efforts to improve operating profitability by investing in digital technologies (for more details, see Box 4 Digital business transformation: a channel for the preservation of bank profitability in Croatia).

18 HROK suspended the exchange of data on natural persons after May 2018. In August 2019, banks began exchanging data on defaulting clients through an information system on such clients (*DOR system*). In June 2020, data started to be processed and exchanged through the Basic Register System (*OSR system*). The exchange and processing of client data through the Basic Register System is based on the obligation of credit institutions under Article 321, paragraphs (2) to (5) of Credit Institutions Act to exchange data related to their clients for the purpose of assessing creditworthiness or managing credit risk and complies with General Data Protection Regulation (GDPR) and other relevant personal data protection regulations.

19 In March 2020, the Supreme Court resolved the question: *Is the conversion agreement concluded on the basis of the Act on Amendments to the Consumer Credit Act (Official Gazette 102/2015) non-existent or null and void in the case when the provisions of the basic loan agreement on the variable interest rate and the currency clause are null and void?*

Figure 6.16 Decrease in interest income stopped, with income from general-purpose cash loans accounting for the largest share

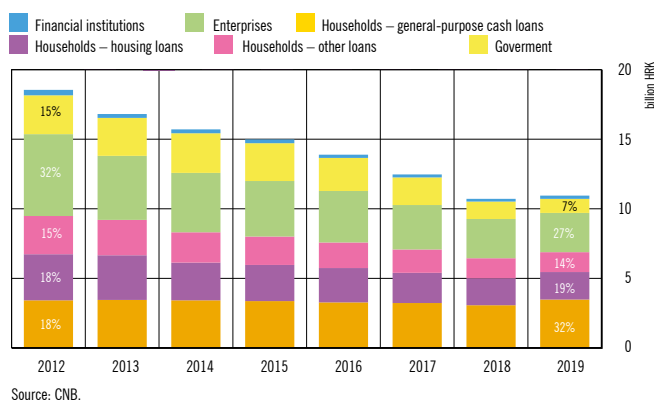


Figure 6.17 Cost efficiency has improved

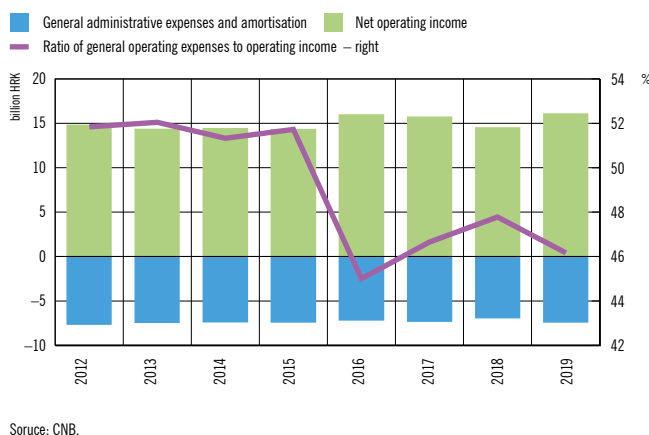
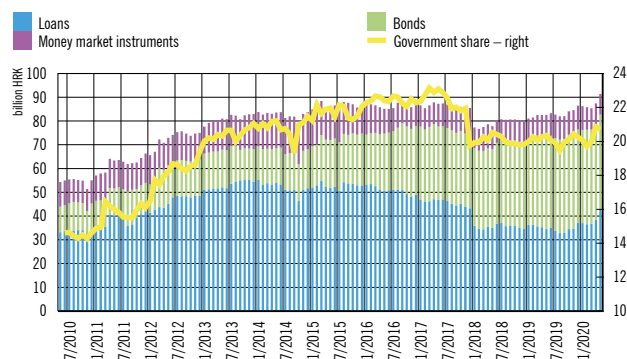
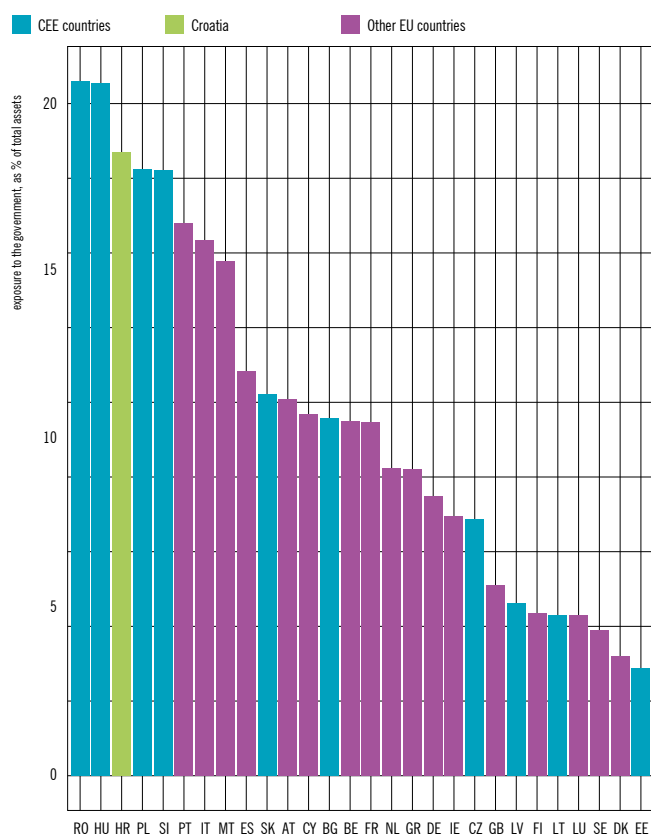


Figure 6.18 Government financing through bonds and loans



Note: The figure shows the share of placements to the government sector in total bank assets.
Source: CNB.

Figure 6.19 Croatia's banking system is among those of EU countries with large government exposures



Note: The height of the columns denotes the share of placements to domestic general government in total bank assets at the end of the third quarter of 2019.
Source: ECB.

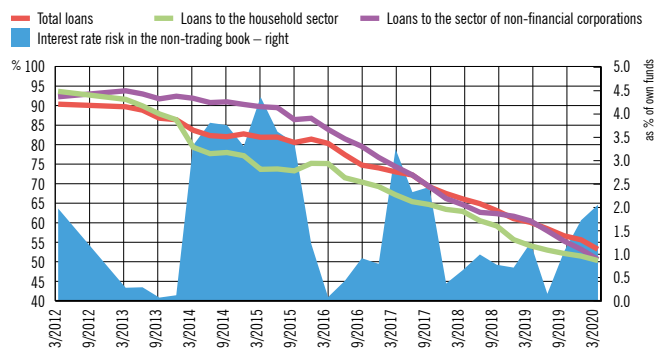
Exposure concentration risks

The risk of concentration of exposures to the government has been growing due to a pandemic-induced increase in government financing needs (for more details, see chapter 2 Government sector). The increase in exposures to the government, as a low-risk way to realise earnings, is driven by lending and bond purchases (Figure 6.18). The strong growth of placements to the government increases exposure risk, which is already considerable in comparison with other EU countries (Figure 6.19), a trend that can be expected to continue.

Currency and interest rate risks

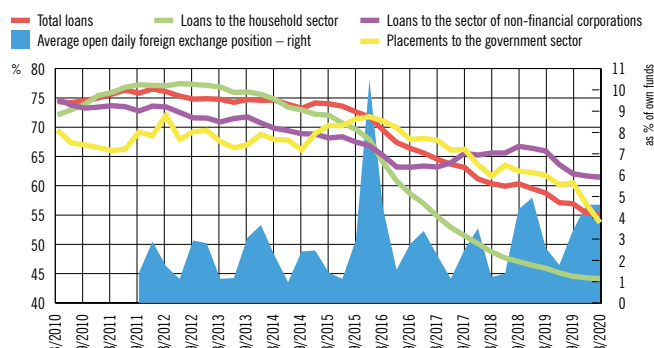
Although continuing to fall, indirect interest rate risk has remained elevated. The share of loans with a variable interest rate

Figure 6.20 Continued decrease in banks' exposure to interest rate-induced credit risk



Note: The lines mark banks' exposure to interest rate-induced credit risk, which is measured by the share of loans with a variable interest rate in total loans.
Source: CNB.

Figure 6.21 Declining share of foreign currency loans in total loans



Note: The lines mark banks' exposure to currency-induced credit risk, which is measured by the share of foreign currency loans in total loans, with placements shown for the government sector.
Source: CNB.

in total loans stood at 55% at the end of March in 2020, down by 7 percentage points from the end of 2018 (Figure 6.20). Direct bank exposure to interest rate risk measured by the interest rate risk in the non-trading book has remained low²⁰.

The decrease in interest rate risk was coupled by decreases, even if they have decelerated, in the shares of foreign currency loans to the household and non-financial corporate sectors as well as of foreign currency placements to the government sector (Figure 6.21). Due to a rise in the kuna sources of funds resulting from the growth of balances in transaction accounts, most of which are kuna denominated, the supply of kuna loans has increased, thereby reducing indirect currency risk. However, as currency-induced credit risk for banks is still considerable, a sharp depreciation of the domestic currency

²⁰ Pursuant to the Credit Institutions Act (Official Gazette 47/2020), where a credit institution's interest rate risk in the non-trading book exceeds 20% of its own funds, the CNB is obliged to impose supervisory measures on that credit institution.

would lead to an increase in banks' credit risk as part of their claims would not be able to be recovered.

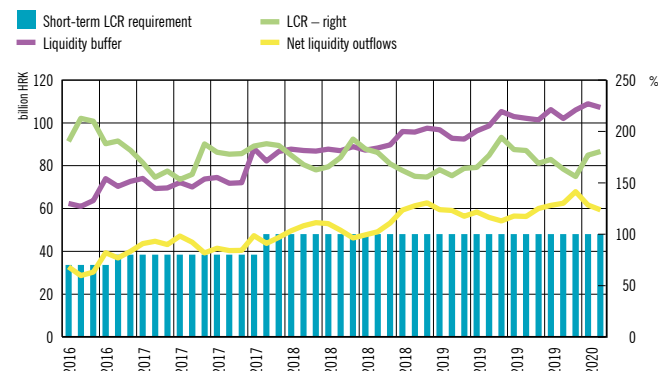
Liquidity risk

Despite financial market volatilities, banks liquidity levels remained high at the outbreak of the COVID-19 crisis. This was also facilitated by a series of the CNB's monetary policy measures (see Box 1 Overview of the measures to help the economy hit by the coronavirus pandemic), which additionally increased the already high liquidity levels in the system (Figure 1.11). Liquidity measured by the liquidity coverage ratio (LCR²¹) grew to 180% at the end of April as a result of investments in central government bonds (Figure 6.22) and in no bank has it fallen below 100%. As regards the structure of liquid assets, exposure to the government grew in the first four months of 2020 (Figure 6.23), with banks continuing to maintain almost total liquidity buffers in the form of cash, claims against the central bank (42.4%) and government bonds (about 56.4%) to which impairments do not apply.

Banks have continued to rely on stable sources of funding.

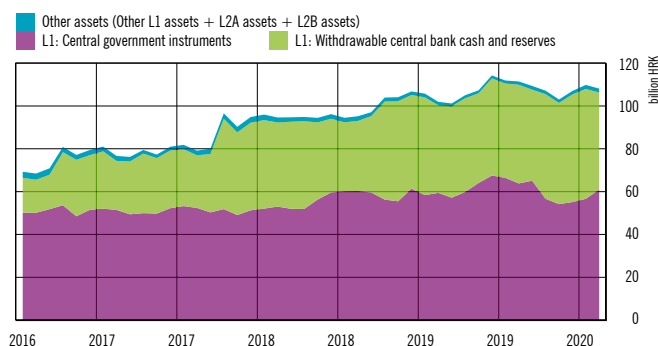
The net stable funding ratio (NSFR²²) was 153% (Figure 6.24). The positive NSFR trends are due to a strong client base and solid capitalisation of the system. In addition, the concentration of funding sources has fallen in the last few years, and the high share of clients accounting for over 1% in total liabilities (with top ten clients) decreasing from 19.2% in mid-2016 to 13.8% at the end of May 2020.

Figure 6.22 Liquidity coverage ratio (LCR) remains considerably above the regulatory minimum



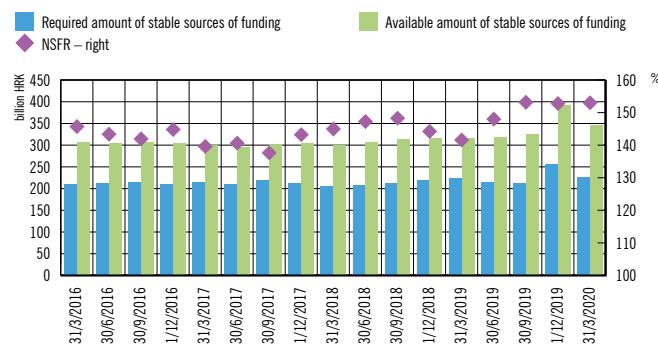
Source: CNB.

Figure 6.23 Increased investments in central government instruments are reflected in the structure of the short-term liquidity buffer



Source: CNB.

Figure 6.24 Household deposit growth has added to NSFR growth



Note: The figure shows a NSFR estimate, calculated using the weight of the Basel Committee on Banking Supervision.
Source: CNB.

21 The liquidity coverage requirement (LCR) was defined over a 30 calendar-day stress period.

22 The obligation to comply with the net stable funding ratio (NSFR) requirement comes into effect in June 2021.

Capitalisation

Banking system capital levels were high when the crisis broke out. The total capital ratio was 23.4% at the end of the first quarter (Figure 6.25). Due to an increase in risk exposure and a decline in own funds, the bank total capital ratio at the system level fell from 24.8% to 23.4% in the first quarter (Figure 6.25). Specifically, having increased by a high HRK 4.4bn in late 2019 due to a decision to retain net profit from 2019, total own funds decreased in 2020 as a result of a drop in other comprehensive income, caused by declining security prices. Changes in risk weights and increases in credit and operational risk exposures negatively affected the amount of the total capital ratio. However, the high resilience of the system is evident from the fact that the total capital ratio at the end of March exceeded the regulatory requirement in all banks²³, on average by a large margin. The capital surplus in systemically important institutions averaged 7.6 percentage points at the end of March and in other institutions 2.9 percentage points (Figure 6.26).

The high resilience to shocks was confirmed by the ECB's comprehensive assessment of five Croatian banks.²⁴ The assessment was carried out following Croatia's request to establish close cooperation between the ECB and CNB. The exercise comprised a prudential asset quality review and a stress test. The comprehensive assessment established that none of the five banks had capital shortfalls as their capital ratios did not fall below the thresholds²⁵ used in the asset quality review and the stress test. The positive assessment score was a precondition for establishing close cooperation²⁶ between the CNB and the ECB.

In order to ensure sufficient capital to support the smooth flow of credit to the real sector amid uncertainty surrounding the impact of COVID-19 on banks in the system, in the second half of March 2020 the CNB required banks to retain their profits from the previous year. This decision ([COVID-19 Circular Letter](#)) was adopted together with relaxed regulations on the classification of non-performing placements, which alleviated the negative impact of the pandemic on the capital. The decision meant the discontinuation of the practice of paying increasing shares of profit through dividends, which had in recent years on average amounted to almost 100% of profit re-

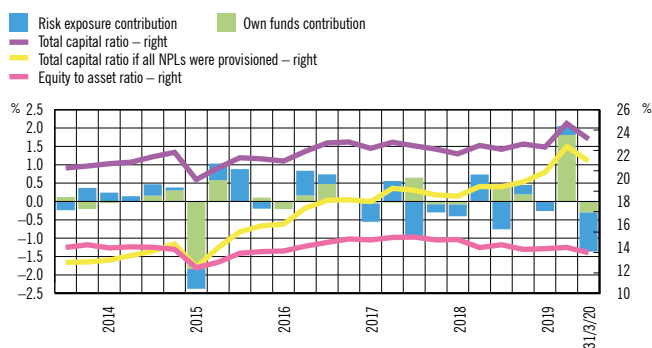
23 In late March 2020, the average capital requirement ranged around 16.1%, consisting of the minimum Pillar I own funds (8%), macroprudential requirement (an average of 5.3%) and Pillar II requirement (an average of 2.8%).

24 The comprehensive assessment covered Zagrebačka banka, Privredna banka Zagreb, Erste & Steiermärkische Bank, OTP banka Hrvatska and Hrvatska poštanska banka.

25 The common equity tier 1 (CET1) ratio of 8% for the asset quality review and the stress test's baseline scenario, and the CET1 ratio of 5.5% for the stress test's adverse scenario. For more details, see [ECB](#).

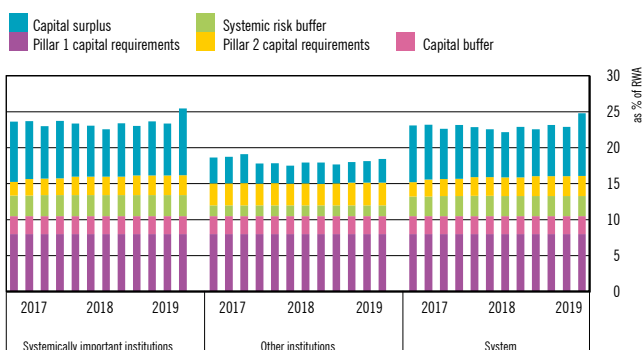
26 After the establishment of close cooperation with the ECB, Croatia becomes a member of the Single Supervisory Mechanism (SSM, the first pillar of the Banking Union) and a full member of the Single Resolution Mechanism, pursuant to Regulation (EU) No 806/20.

Figure 6.25 Capital adequacy remains high in the crisis



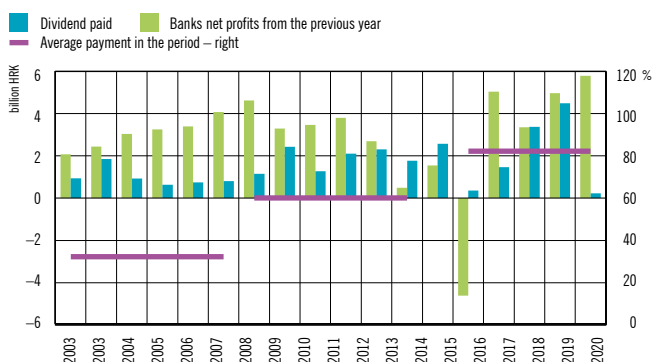
Notes: A decrease in own funds (the numerator of the indicator) results in a fall in the total capital ratio and an increase in own funds in its rise. And vice versa, an increase in the risk exposure component-RWA (the denominator of the indicator) results in a fall, and its increase in a rise of the total capital ratio. Source: CNB.

Figure 6.26 Capital surplus is an indication of the domestic banking system's favourable capital position



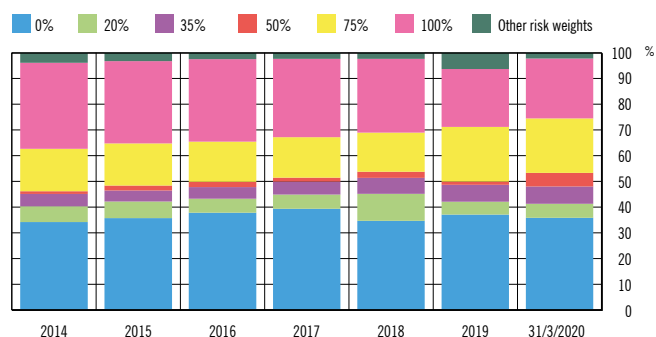
Source: CNB.

Figure 6.27 Growing dividend payment trend stopped



Note: The average payments do not include those made in 2015 because of a sharp decrease in bank profit due to the conversion effect. Source: CNB.

Figure 6.28 Structure of bank exposures according to credit risk weights (standardised approach)



Source: CNB.

alised in the preceding year (Figure 6.27). The ECB acted in a similar manner, adopting, in late March, a recommendation on the suspension of dividend payments and share buy-backs for 2019 and 2020 at least until the beginning of October 2020²⁷, after which the situation will be further evaluated and it will be assessed whether further suspension of dividend payments is advisable. The European Systemic Risk Board, in late May 2020, adopted [Recommendation](#) (ESRB/2020/7) to financial institutions and their supervisory authorities.

Total risk exposure has increased by HRK 16.2bn (5.3%) in the last fifteen months, primarily under the influence of

credit risk. The largest nominal change in credit risk exposure measured by the standardised approach results from the reduction of risk weights assigned to non-collateralized exposures to households from 100% to 75%. The change of treatment of exposures to the central government in euro²⁸ in 2019 can be observed in the replacement of the 20% risk weight by the 25% risk weight, included in other risk weights, and in 2020 in the growing share of the 50% risk weight (Figure 6.28). Due to changes in risk weights, coupled with a stronger growth of loans to non-financial corporations and households in the first quarter (increase in credit risk exposure), the average risk weight grew from 47.5% to 49.2%.

Risks associated with the banking sector

The coronavirus pandemic brought about adverse economic developments, with the result that a more significant materialisation of credit risk is expected in the forthcoming period. In the short term it will be alleviated by the relaxation of supervisory rules on the classification of exposures. The negative effect resulting from a lower generation of income and an increase in value adjustments for expected losses will have a strong effect on profitability. Although current trends are unfavourable, high capital and liquidity levels ensure sufficient room for the amortisation of the expected shocks. The deteriorating profitability will hinder the implementation of structural changes to digitalise business operation, but they are necessary to ensure sustainable bank operations after the pandemic.

27 Recommendation of the European Central Bank of 27 March 2020 on dividend distributions during the COVID-19 pandemic and repealing Recommendation ECB/2020/1 (ECB/2020/19) (2020/C 102 I/01).

28 In 2018, the 20% weight was applied (20% of the risk weight depending on the sovereign risk weight, which was 100% at the time). In the first half of 2019, two agencies upgraded the RC's credit rating from speculative to investment grade, which enabled the application of the 25% weight (50% of 50%) to exposures denominated, and with sources, in the currency of another EU member state. Since January 2020, the whole amount of the valid risk weight according to the degree of sovereign credit quality of 50% (100% of 50%) has been applied. Kuna (domestic currency) exposures have constantly been treated as non-risk exposures (risk weight of 0%).

Box 4 Digital business transformation: a channel for the preservation of bank profitability in Croatia

In the last few years banks in Croatia have made some advances in using digital technology. Despite the expected recession-induced fall in profitability, which will limit bank investment activity, digitalisation should not be postponed on account of temporary difficulties, especially because customers affected by the COVID-19 crisis will need fast and flexible banks that are focused on customers and digital business channels.

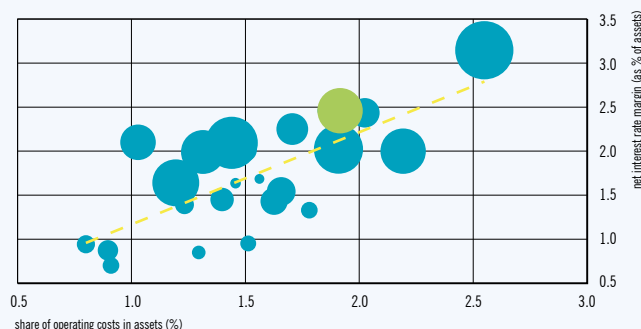
Despite their efforts to rationalise costs, at the outbreak of the 2020 crisis banks in Croatia still had relatively high unit costs (operating cost per unit of assets). The relatively high average operating costs of domestic banks in the previous period used to be offset by relatively stable and high interest margins. The positive correlation between unit costs and net interest rate margins is also indicated by an international comparison of the banking systems of EU countries (Figure 1). However, due to a constantly low time premium and continued financial integration with the euro area margins could decrease, which makes increasing operational efficiency key for generating adequate bank profitability. Because of the reliance on a widespread branch network the productivity of labour and fixed assets is currently low.

The improvement of efficiency of the banking sector in Croatia will to a large extent depend on the potential to downsize the operating network and associated labour force in order to rationalise business operations. Given that branch networks are affected by a series of factors, such as the level of economic development, urban density, population preferences and many other sociological factors, a broad-based definition of an “optimal” size of a branch network is difficult to give. The importance of a careful redefinition of the branch network stems from the fact that the branches remain an important channel for forming a customer base and collecting additional information on them, which enables the formation of a bank offer of products. Furthermore, as far as the propensity to use physical branches is concerned, the banks’ need to have a wide branch network suggests their insufficient reliance on new technologies, which partly stems from a relatively low share of internet banking users in the population. Comparable data by EU countries show a positive correlation between a rationalised branch structure and higher penetration of internet banking (Figure 2).

A channel that could prove very useful for the rationalisation of bank operation is an increase in the overall digitalisation of society. Data on the share of customers using internet banking and data on Croatia’s position in the Digital Economy and Society Index (DESI)¹ suggest that they are strongly interconnected and that Croatia has room to boost efficiency by technological innovations (Figure 3). In addition, the latest data on digital progress show that Croatia, although its weighted score

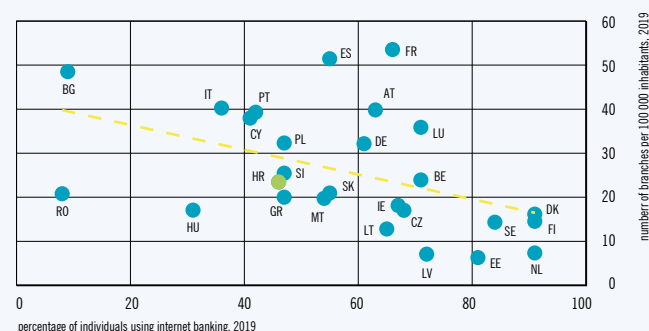
1 The Digital Economy and Society Index (DESI) is calculated as the weighted average of five dimensions: Connectivity (25%), Human Capital (25%), Use of Internet Services (15%), Integration of Digital Technology (20%) and Digital Public Services (15%). It was developed by the European Commission to assess the development of digital economy and society in EU countries.

Figure 1 High operating costs per unit of assets are offset by high net interest rate margin



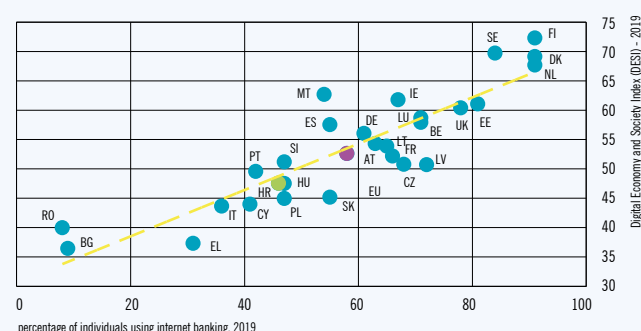
Notes: Data refer to September 2019. The size of the circle denotes ROA. Croatia is marked green. Source: ECB.

Figure 2 Internet banking facilitated branch network rationalisation in some countries



Note: The share of internet banking users is measured by the percentage of individuals aged between 16 and 74 years. Sources: ECB and Eurostat (Information and Communication Technology (ICT) Usage Survey in Households/by Individuals).

Figure 3 Penetration of online banking is closely correlated with the degree of digitalisation in society



Sources: European Commission and Eurostat.

(1 do 100) improved, ranked twentieth among twenty eight EU member states (including the UK), stagnating on an annual level (Figure 4).

According to DESI components, Croatia is in the European average in the categories of human capital and the integration of digital technologies. The use of internet services ranks it slightly below the EU average. The current COVID-19 crisis has a significant impact on key societal indicators related to the use of internet services at the time of social distancing. Data from the Information and Communication Technology (ICT) Usage Survey in Households/by Individuals suggest that in some segments of internet service usage, such as arranging transport services and accommodation booking, Croatia compares well with the EU average, but that it falls behind considerably precisely in the usage of internet banking services. As regards DESI sub-components, Croatia falls behind the EU average in connectivity and digital public services (Figure 5).

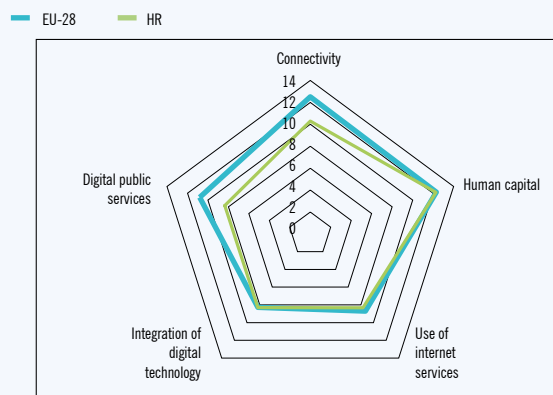
A detailed analysis of the DESI for 2020 shows that Croatia's level of digital literacy is low: only 53% of individuals aged between 16 to 74 years have basic digital skills. In addition, the percentage of ICT experts in the total labour force in Croatia (3.5%) is lower than the EU average (3.9%). However, although the number of ICT graduates has increased (currently 5.5% of all graduates), enterprises still find it difficult to meet their demands for such specialists.

The pandemic-induced crisis and restricted social contact have necessitated a quick switch to using an increased scope of digital technologies. Institutions that wish to advance in the digital age should take measures to respond to the competitive digital environment and develop digital maturity² through the digital transformation process (introduction and implementation of state-of-the-art technologies). The longer an organisation takes to digitally mature, the higher are the expenses related to the unavoidable transition, which is sometimes very costly.

Although digitalisation can enable banks to significantly rationalise costs, the technological transformation from a business model with a large branch network into a more agile institution of the digital age calls for large investments in IT systems. As such investments weaken profitability in the short run, they may be suspended or slowed down under adverse economic circumstances, such as these in 2020. However, in order to preserve the sustainability of operations in the long run, banks would be well advised not to lose pace with the competition of high-technology participants, as the tempo of changes depends both on the period of time customers need to adopt new technologies and on advances made by competitors.

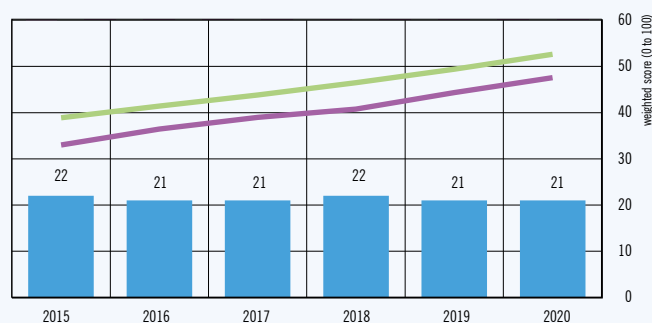
2 Digital maturity is the readiness of an organisation to adapt consistently to new technologies, that is, a continuous process of adaptation to the changing digital age. The term "digital maturity" builds on the psychological definition of maturity as a learned ability to respond appropriately to changes in the environment.

Figure 4 Sub-components of DESI for 2020



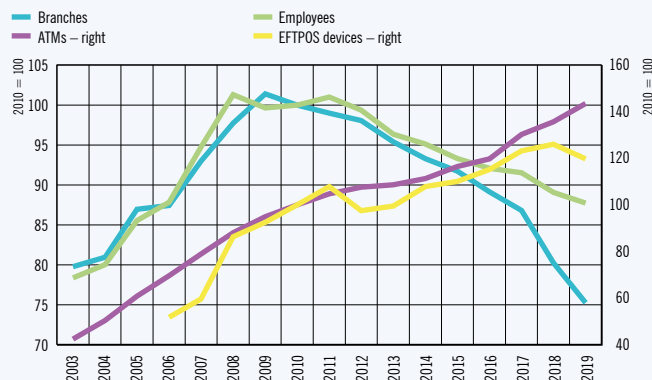
Source: European Commission.

Figure 5 Digital Economy and Society Index (DESI)



Source: European Commission.

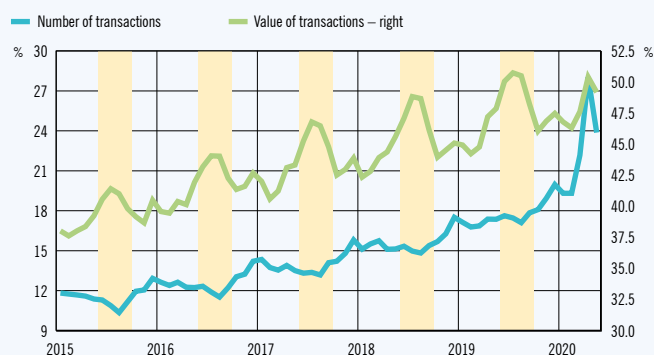
Figure 6 Decline in the number of employees and branches and widening ATM and EFTPOS networks



Source: CNB.

While there is a lack of explicit indicators on technological innovations and the transformation process, implicit data suggest that banks have indeed stepped up their efforts towards the digitalisation of operations. The number of employees and branches has been declining (Figure 6), the share of employees directly engaged in IT tasks has been growing and the loan granting process is already partly accessible through the web interfaces of a large number of institutions. The ongoing increase in the number of ATMs, however, continues to indicate an intensive use of cash, although its share has declined in the last few years. The weakening of the role of cash in payment transactions could be yet another effect of digitalisation, with the latest data showing a sharp increase in cashless payments in April in the period when most service facilities were closed (Figure 7).

Figure 7 Tax administration data on fiscalised accounts show an increase in the share of cashless transactions in total



Note: The yellow-shaded columns show the peak tourist season in the June to September period.
Source: Tax Administration.

Box 5 NPL investors in Croatia

NPL investors have been increasingly present both in Croatia and in the EU as a result of the concerted efforts of banks, their owners and the regulators to reduce non-performing loans. Although the share of non-performing loans in the EU has been considerably reduced, work on the regulatory framework to tackle the issue of non-performing loans has not lost momentum. Included in this in addition to the Action Plan¹ of the European Commission are the EBA Guidelines on loan origination and monitoring, with a directive on secondary markets, credit servicers and credit purchasers and a directive on accelerated extrajudicial collateral enforcement in preparation. These regulations are expected to jointly facilitate the resolution of non-performing loans in the forthcoming period.

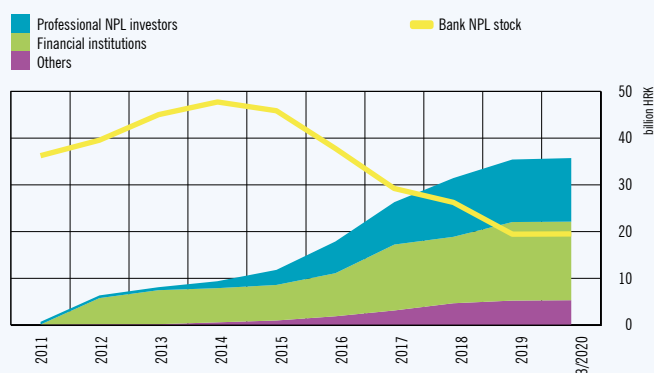
The monitoring of loan portfolios once they have been sold and left banks' balance sheets is important for financial stability for several reasons. First, as the debtor's obligations do not cease when a loan is sold to another creditor they should continue to be monitored in order to assess the debtor's indebtedness. Second, an analysis of the NPL investors' operation enables the collection of additional information on the functioning of the financial market, including banks – the sellers. Third, non-performing loans are likely to increase in the near future due to the coronavirus pandemic, and so are their potential sales, which is one more reason to include them in the analyses of financial stability.

In the period between 2011 and the end of March 2020, banks in Croatia sold around HRK 35bn of non-performing loans, considerably reducing the proportion of them in credit portfolios and streamlining operations as they no longer needed the special skills and resources for administering NPL portfolios. Out of this amount, about HRK 16bn was sold to financial institutions, HRK 13bn to professional NPL investors operating in Croatia², and about HRK 6bn to legal persons whose main activity is not the purchase of claims (such as law firms, real sector enterprises) or to natural persons (Figure 1).

The sales to financial institutions mainly involve several large transactions related to affiliated undertakings and cannot be considered as market transactions. Other enterprises form a very heterogeneous group and do not primarily engage in financial activities. This analysis is therefore concentrated on professional NPL investors, registered in Croatia. Based on CNB data on the sale of placements and FINA data on enterprise operation, it shows the prices, structure and profitability of NPL portfolios purchased by professional investors.³

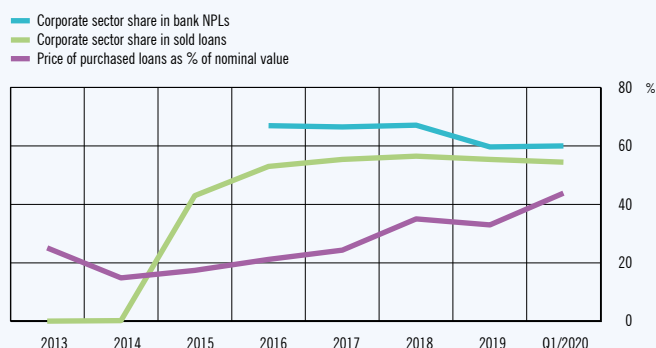
Data on sales transactions show that non-performing loans were sold to professional NPL investors at an average price of 25% of the nominal value, with the price rising gradually from 17% in 2015 to 33% in 2019, primarily because the quality of the purchased claims increased as bank first sold loans of poorer quality. The price rise also reflected

Figure 1 Sales of non-performing loans to individual categories of buyers in Croatia, shown cumulatively and according to the remaining stock of non-performing loans in banks' balance



Source: CNB.

Figure 2 NPLs purchased by NPL investors by price and debtor sector



Sources: FINA and CNB.

favourable international market developments, as a decrease in interest rates boosted asset prices in general. As regards the structure of the purchased placements, about 60% of them relate to the corporate sector, which corresponds roughly to this sector's share in banks' non-performing loan portfolios (Figure 2).

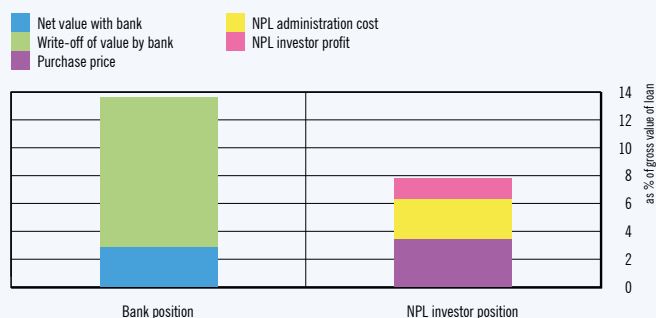
In addition to the credit risk, which they knowingly assume, NPL investors also have to take into account other risks. The claims they buy are often subject to enforcement proceedings, and sometimes also to civil proceedings, so that litigation costs (e.g. of lawsuits filed about Swiss

1 <https://www.consiliium.europa.eu/en/press/press-releases/2017/07/11/conclusions-non-performing-loans/>

2 Professional NPL investors in Croatia most often buy non-performing loans on the basis of an agreement on assignment of claims – cession.

3 Professional NPL investors in Croatia are registered as limited liability companies and the largest ones of them are foreign-owned. Data of sufficient quality for the analysis of their business performance are available for seven of these companies, owning about 90% of the purchased placements: B2 KAPITAL d.o.o., CEI financijski servisi d.o.o., EOS MATRIX d.o.o., KREDYT INKASO d.o.o., Prima Solvent d.o.o., RETURN TO BUSINESS d.o.o. and SVEA EKONOMI d.o.o.

Figure 3 Structure of sold claims (2014–2018)



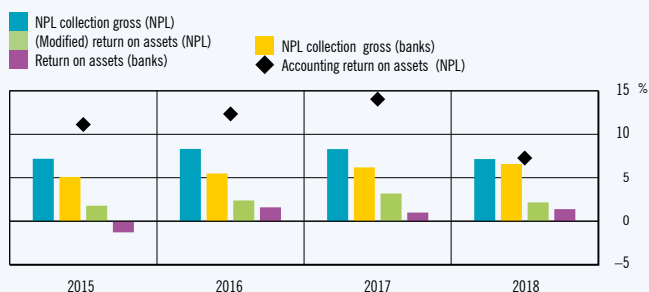
Notes: The calculation refers only to the 2014–2018 period. A purchased NPL portfolio is assumed to be collected over a four-year period.
Sources: FINA and CNB.

Table 1 Comparison of selected indicators of banks and NPL investors, 2018

Indicator	Banks	NPL investors	Description
Equity to asset ratio	14%	22%	Unweighted equity to asset ratio
Cost of equity	12%	15%	Owner's required yield
Cost of liabilities	0.5%	5.3%	Implicit rate on debts
Weighted cost of liabilities	2.1%	7.4%	Weighted cost of equity and debt
Price of labour	191	138	Annual gross cost per employee in 000 HRK

Note: The price of labour is not completely comparable because NPL administration is just one of banks' numerous activities.
Sources: FINA and CNB.

Figure 4 NPL investors' performance



Notes: The collection of NPLs is calculated as income per NPL portfolio/ NPL portfolio gross value. The modification of ROA for NPL investors is performed as follows:

$$ROA^* = \frac{\text{Earnings}}{\text{Assets}} \div \frac{\text{Average price}}{\text{Assets}}$$

Sources: FINA and CNB.

franc loans) can potentially reduce the collection of claims. Legislative changes may also pose a risk for these intermediaries.

Despite certain similarities between NPL investors and banks, these legal persons' business models considerably differ when it comes to the collection of claims. First of all, NPL investors are not original creditors and therefore have much less information at their disposal. What is more, these investors get to know their "clients" when they are already in default. This lack of information heightens the risk to NPL investors' operation, which requires increased caution when setting the purchase price for placements (Figure 3).

Another significant operational difference in relation to banks concerns the structure of liabilities. NPL investors, not being credit institutions, do not collect deposits, but raise their financing from owners and in the financial market, which significantly increases their financing cost. The discount rate used for determining the price of an NPL portfolio at purchase is therefore higher. However, NPL investors' regulatory costs are much lower than those of banks and so are their operating costs (Table 1).

The initial estimate shows that the NPL investors' income per unit of NPL gross value was on average 7.7% in the period between 2015 and 2018. Banks collected an average of 5.8% in the same period, with NPLs that remained in their portfolios being on average of somewhat better quality. In addition, the NPL investors' ROA is much higher, primarily because their assets are reported in net amount, while their clients are charged a gross amount. Excluding the price effect, the ROA of NPL investors was on average 2.6% and that of banks 1.3% (Figure 4).

NPL investors' performance indicators are at the moment better, due to several facts. First, banks in Croatia are not specialised in the collection of NPLs, and the sales of NPLs became regulated in 2014.⁴ Second, the corporate governance of NPL investors is simpler, while banks often lack coordination between sales and potential collection, especially when they rely on law firm services. In contrast, NPL investors incorporate their high costs of capital into the price, which results in large discounts.

The difference between the current performance of NPL investors and that of banks becomes even more significant if it is taken into account that banks initially sold older/poorer quality NPLs to investors, which is to some extent evident from the growth of banks' collection of NPLs that remained in their portfolios. However, data on the currently better collection and higher profitability of professional NPL investors in relation to banks should be interpreted with some caution because NPL investors have been operating in Croatia only for a couple of years so that their portfolios are relatively "young". The ageing of the portfolios considerably reduces the potential for collection, putting pressure on investors to continue with purchases. However, although bad loans should be expected to grow in 2020, COVID-19 has caused a stoppage in the European market for NPL loans, and supervisory measures to alleviate the effects of the pandemic will enable banks to keep them in their balance sheets without value impairment expenses.

4 Decision on the sale of placements by credit institutions.

7 Macroprudential policy instruments

The crisis brought about by the coronavirus pandemic led to a sudden and sharp increase in systemic risks in the Croatian financial system. Nevertheless, thus far there has been no need to change the macroprudential instruments in use, most of which aim to increase bank resilience in the case of materialisation of these risks. In early 2020, in the framework of alignment of Croatian legislation with the obligations assumed under the letter of intent to join the European Exchange Rate Mechanism (ERM II) and the banking union, the legislative framework for the implementation of macroprudential policy of the CNB was also amended.

In response to the sudden increase in exposure to systemic risks due to the shock caused by the COVID-19 pandemic, the CNB took a number of monetary and supervisory measures. The high overall capitalisation and liquidity of credit institutions were additionally boosted by the imposed measure of withholding net profit from operations in 2019 and the adjusted approach to supervision (see Box 1 Overview of the measures to help the economy hit by the coronavirus pandemic and chapter 6 Banking sector). In this way the CNB made it possible for the banks, among other things, to temporarily postpone the reclassification of exposures following deferral or restructuring of credit obligations of otherwise orderly clients who had been hit by the coronavirus pandemic and thus made it possible for the banks to partly defer loss recognition and the consequential burdening of the bank capital.

There was no need to change the instruments of macroprudential policy owing to the supervisory measures taken and a relatively high capital surplus in relation to regulatory requirements. In addition, the capital buffers in use (capital

conservation buffer and systemic risk buffer) are by definition intended to resolve systemic risks by increasing bank resilience; their decline should therefore be associated with a fall in these risks. By contrast, the countercyclical capital buffer that is gradually built up during the periods of fast credit growth and high cyclical pressures and is envisaged as being released in the downward phase of the financial cycle, amounted to 0% in Croatia before the crisis.

In addition to capital buffers, the CNB also uses macroprudential measures to address the risks associated with the real estate and household sectors, which also remained unchanged during the observed period (Table 8.1). Thus, still in force are not only the more restrictive definition of the use of the preferential risk weight for exposures secured by residential real estate and a higher risk weight for exposures secured by commercial real estate but also two recommendations: that of 2017 aimed at mitigating the interest rate risk for consumers and interest rate-induced credit risk for banks and the 2019 recommendation on credit risk mitigation in the case of non-housing consumer credit (for effects of the recommendation and the dynamics of general-purpose cash loans, see Box 6 Recent developments in general-purpose cash loans).

The systemic risk buffer stands at 1.5% or 3% of the total amount of risk exposure, depending on the size of the credit

Table 7.1 Macroprudential policy instruments in Croatia

Measure	Year of adoption	Required rate
Macroprudential measures envisaged under the CRD and the CRR		
Capital conservation buffer	2014	2.50%
Systemic risk buffer	2014	1.5% or 3%
O-SII buffer	2015	0.5%, 1% or 2%
Countercyclical capital buffer	2015	0%
Risk weights for exposures secured by residential real estate	2014	Stricter definition of residential real estate for preferential risk weighting
Risk weights for exposures secured by commercial real estate	2016	100%
Other measures of macroprudential interest		
Additional criteria for consumer creditworthiness assessment when granting consumer housing loans	2017	Taking into account the minimum costs of living in accordance with the Foreclosure Act
Recommendation to mitigate interest rate and interest rate-induced credit risk	2017	
Recommendation on actions when granting non-housing consumer loans	2019	

Source: CNB.

institution. The systemic risk buffer rate that is reviewed at least once in two years in accordance with the provisions of the [Decision on the application of the structural systemic risk buffer](#) (OG 78/2017) was last reviewed in August 2019 ([Announcement of the application of systemic risk buffer, 6 September 2019](#)). Analysis of the structural elements of financial stability and systemic risk in the economy has shown that structural vulnerabilities of the system and exposure to systemic risk have held steady at a moderately high level, with Croatia, as a small and open economy, amid unfavourable demographic and migration trends, being extremely sensitive to developments in the international macroeconomic and financial environment. A relatively high level of debt, of both the public and the private sectors makes the domestic economy vulnerable to the possible changes in financing conditions on the international markets, while high banking sector concentration stresses the danger of contagion in the case of systemic risks materialisation. Two sub-groups of credit institutions to which the systemic risk buffer rates apply continue to be determined on the basis of a three-year average share of assets of a credit institution or a group of credit institutions in total assets of the national financial sector. Credit institutions with shares higher than or equaling 5% apply the systemic risk buffer rate of 3%, and others a rate of 1.5%.

The identification of other systemically important credit institutions (O-SIIs) and the capital buffers needed for these institutions, carried out by the Croatian National Bank once a year, was conducted towards the end of 2019. As in the year before, [seven O-SII credit institutions](#) were identified to which a buffer ranging from 0% to 2% of the total risk exposure amount, depending on the individual credit institution's estimated systemic importance (Table 8.2.) is applied.

However, this buffer is currently not effectively applied. Since the systemic risk buffer is also used for all exposures, in accord-

Table 7.2 Other systemically important credit institutions

O-SII credit institution	Buffer rate	
	for O-SII credit institution	for structural systemic risk
Zagrebačka banka d.d.	2.0%	3.0%
Privredna banka Zagreb d.d.	2.0%	3.0%
Erste&Steiermärkische Bank d.d.	2.0%	3.0%
Raiffeisenbank Austria d.d.	2.0%	3.0%
OTP banka Hrvatska d.d.	2.0%	3.0%
Addiko Bank d.d.	1.0%	1.5%
Hrvatska poštanska banka d.d.	0.5%	1.5%

Source: CNB.

ance with the Credit Institutions Act, credit institutions are required to maintain only the higher of the buffers. This provision will be changed towards the end of 2020 with the entry into force of the new CRD5 and the transposition of its provisions into the Credit Institutions Act, which will make it possible to sum up these two buffers. Therefore, towards the end of 2020, a review will be made of the required level of the buffer for systemically important institutions in parallel with a review of the systemic risk buffer (e.g. before the expiry of the regular two year period) so as to avoid double coverage of the same risks relating to large, systemically important credit institutions.

The countercyclical capital buffer continues to be applied at the rate of 0%. Despite a slow acceleration in the credit activities of banks and growth in real estate prices in the previous year (see chapter 3 Household sector and chapter 4 Real estate), the regular quarterly analytical assessments of the evolution of cyclical systemic risks show that there are no cyclical pressures that would require corrective action by the CNB and an announcement of rate increase. Since overall economic and financial developments this year will largely depend on the developments associated with the coronavirus pandemic, which have a negative impact on the global and domestic economy, the countercyclical buffer rate for the following year (until the end of the third quarter of 2021) will remain 0%.

In addition to the described instruments, in 2020, the possibility of the use of legally binding borrower-based measures was introduced into Croatian legislation. Under amendments to the [Credit Institutions Act](#), which entered into force in April 2020, incorporating the adjustments needed for entering into a close cooperation with the ECB, the CNB's powers have been defined for the adoption of legally binding borrower-based measures and instruments, such as restrictions on the loan-to-value ratio, loan-to-income ratio, loan service-to-income ratio, debt-to-income ratio and debt-service-to-income ratio and the maximum maturity and loan repayment dynamics and other similar restrictions. The borrower-based measures are used in cases where it is necessary to reduce the risks associated with excessive credit activity. Restrictions on new lending enhance the resilience of borrowers because by limiting their indebtedness, their debt servicing capacity increases, which then reduces potential losses for credit institutions related to the risk of borrowers defaulting on their loans.

To increase the scope of data needed for analysing and monitoring systemic and credit risk, calibrating macroprudential borrower-based measures and, where, necessary, for monitoring credit institutions in their application of the adopted measures, the CNB is setting up a new reporting requirement for credit institutions. The Decision on collecting data on standards on lending to consumers ([Official Gazette 36/2020](#)) adopted in March this year envisages monthly collection of individual data on all newly-granted loans to consumers at the individual loan level and annual collection of data on all individual loan balances. The data that will be collected pursuant to this Decision will provide the analytical basis for the implementation of the borrower-based measures and will ensure align-

ment with a portion of the requirements under the European Systemic Risk Board recommendations on closing real estate data gaps ([ESRB 2016/14](#) and [ESRB 2019/3](#)), used on an EU level to align data needed for the assessment and monitoring of the risks to financial stability associated with the real estate market. The first monthly reports are expected for the reporting month September 2020 and the annual reports for end-December 2020.

In addition to pursuing the national macroprudential policy, the Croatian National Bank also acted in accordance with the recommendations of the European Systemic Risk Board on the reciprocation of macroprudential policy measures adopted by other EU member states. In 2019, the CNB reciprocated a measure adopted by the macroprudential authority of Belgium ([Official Gazette 41/2019](#)) and amended a previously adopted decision on the reciprocation of the Estonian measure ([Official Gazette 66/2019](#)). However, taking into account the recent increase in the number of recommendations for reciprocation and the very low exposures of domestic credit institutions to the countries that requested it, the CNB has abandoned the system of automatic reciprocation of macroprudential measures of other countries. Thus, from mid-2019, the recommendations on reciprocation are considered on a case-by-case basis, depending on the importance of an individual measure for Croatian banking system exposure. Specifically, the CNB will reciprocate only the recommended macroprudential policy measures of countries to which domestic credit institutions have material exposures (above the materiality threshold prescribed for the application of the *de minimis* principle). Such an approach is in line with the practice of the majority of other EU member states and complies with ESRB Recommendation ([ESRB/2015/2](#)) provided that, once a year, exposures to other countries are reviewed and that relevant measures are reciprocated where the recommended materiality threshold is exceeded. Accordingly, the recommended macroprudential measures of [Sweden](#) and [France](#) have not been reciprocated.

The Act on Amendments to the Credit Institutions Act and the Act on Amendments to the Act on the Croatian National Bank ([Official Gazette 47/2020](#)), which entered into force in April 2020, are a part of the efforts to align the Croatian legislative framework with the obligations assumed under the letter of intent to join the European Exchange Rate Mechanism (ERM II) and the banking union. These changes provided the legal framework for close cooperation with the ECB in the context of the Single Supervisory Mechanism, one of the preconditions for ERM II entry. As the national competent authority, the CNB has undertaken to comply with the guidelines, instructions or requirements issued by the ECB and provide all information on credit institutions that the ECB may request for a comprehensive assessment of these institutions. The important adjustments of the Credit Institutions Act include those in the area of macroprudential policy, which will allow the ECB to intervene if it assesses that a Croatian macroprudential measure, which is based on harmonised European rules and aimed at credit institutions (capital buffer for O-SIIs, for systemic risks, countercyclical capital buffer, stricter national measures due to

changes in the intensity of risk in the financial system), is not strict enough. They also include further definition of the powers of the Croatian National Bank to participate in the adoption and implementation of macroprudential measures and instruments with the aim of preserving overall financial system stability, as well as an explicit definition, for the first time, of the borrower-based measures. The adjustment of the competent legal framework for the purpose of enabling the establishing of close cooperation with the ECB also includes the appropriate

provisions of the Act on the Croatian National Bank. In parallel with the adoption of the package of legislative changes, also adopted was the [Act on Amendments to the Act on the Resolution of Credit Institutions and Investment Firms](#), since with the establishment of close cooperation with the ECB and joining the Single Supervisory Mechanism, the Republic of Croatia becomes a full member of the Single Resolution Mechanism that provides a centralised mechanism for the resolution of all credit institutions in participating member states.

Box 6 Analytical overview: Recent developments in general-purpose cash loans

A fast growth in general-purpose cash loans, granted under relatively lenient creditworthiness assessment criteria, which marked 2018 and a greater part of 2019, led to an increase in household vulnerability and credit risk on banks' balance sheets. The crisis that emerged in the wake of the outbreak of the coronavirus pandemic as a result of a fall in employment and disposable income of households largely increased the probability of the materialisation of risks accumulated during the period of accelerated growth in cash loans.

Household general-purpose cash loans started to grow faster in Croatia in 2015, in parallel with economic recovery. The rise in income and consumer optimism spurred the consumer propensity for borrowing, while faster lending was also driven by the several-year-long fall in interest rates. General-purpose cash loans were also particularly interesting for banks because of their relatively higher interest rates compared to longer-term, safer forms of lending, and they provided the banks with the means to preserve interest rate margins amid falling interest rates. Apart from Croatia, this trend was also observed in the past few years in other EU countries, particularly in Central and Eastern Europe and the neighbouring countries.

Between 2016 and 2019, the growth in general-purpose cash loans was not equally distributed in Croatia (Figure 2). Nominally, the biggest growth was recorded in large cities (Zagreb, Split, Rijeka, and Osijek), however, in terms of GDP to population ratio, the County of Varaždin and the County of Krapina-Zagorje recorded the most considerable amounts of transactions. The geographic distribution of growth in general-purpose cash loans also reflects the strong regional presences of individual banks.

The growth in general-purpose cash loans accelerated particularly after the introduction in January 2018 of stricter provisions on creditworthiness assessment for housing loans (Figure 1) when banks turned more to non-housing loans, the high level of risk of which was due primarily to more lenient credit standards and the absence of instruments of collateral (for more information see [Macprudential Diagnostics 7, Box 1](#)). In addition, most general-purpose cash loans were granted at an original maturity of over 5 years (Figure 3), which in the case of a debtor's poorer creditworthiness may increase uncertainty regarding the debtor's further ability to service the debt.

The CNB responded to the increase in systemic risks associated with general-purpose cash loans in February 2019 with the [Recommendation on actions in granting non-housing consumer loans](#). The purpose of the recommendation was to ensure compliance with creditworthiness assessment criteria for housing and non-housing consumer credit with longer initial maturity, encourage prudent borrowing and thus strengthen household and bank resilience to possible unfavourable economic and financial developments. The banks gradually started to comply with the CNB recommendation and there was a slight slowdown in the growth in cash loans (Figure 1 and Figure 3).

In addition to the contraction in economic activity after March 2020, the outbreak of the crisis caused by the coronavirus pandemic also led

Figure 1 The growth in cash loans slowed down following the recommendation and ultimately came to a halt following the outbreak of the COVID-19 pandemic

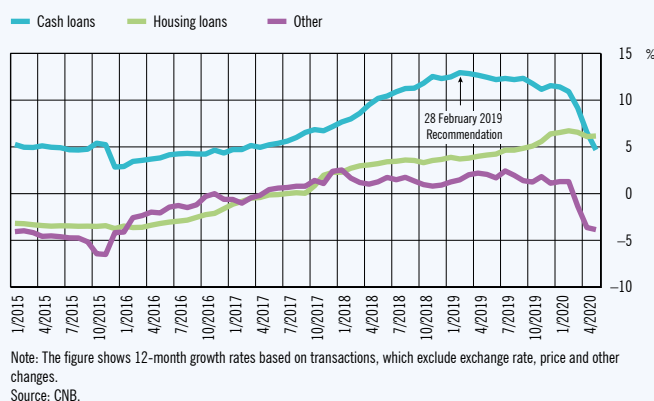


Figure 2 Positive transactions in general-purpose cash loans were recorded in all counties

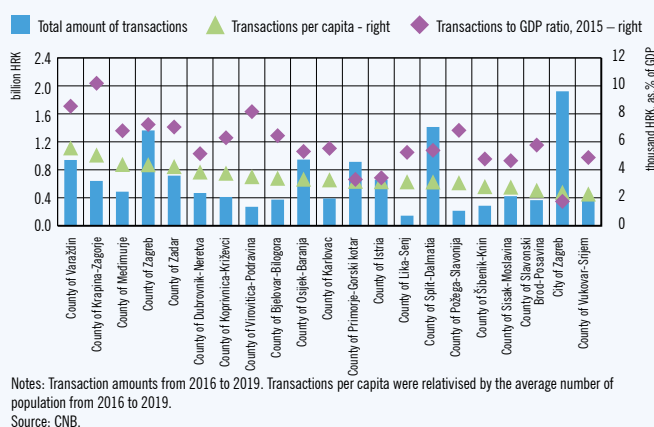
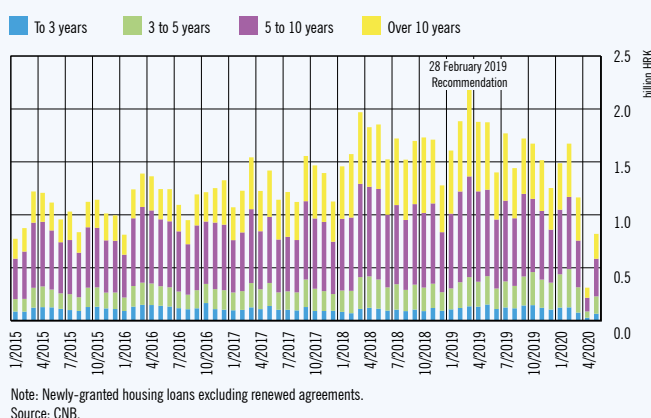


Figure 3 Most general-purpose cash loans are granted with original maturity of over 5 years



to a fall in cash loans since they are strongly influenced by consumer sentiment. Renewed agreements excluded, the amount of newly-granted cash loans in April and May accounted for only a little less than one third of the cash loans newly granted in the same period of 2019 (Figure 3). This resulted also in a strong deceleration in the annual growth rate (based on transactions, Figure 1) and a small fall in the balance of these loans. By contrast, subsidised housing loans continued to rise.

Such developments can partly be attributed to the manner of granting loans. While cash loans are granted relatively quickly, often within 24 hours from the application, the granting of housing loans takes longer. It commonly takes several months to negotiate a real estate purchase and sales transaction, assess client creditworthiness and where necessary obtain a subsidy so as a result housing loans are slower to react to changes in the macro environment. However, since the banks announced in the first quarter of 2020 their intention to tighten household lending conditions (Figure 4), credit activity for both instruments might be subdued in the forthcoming period.

The probability of risk materialisation associated with cash loans is currently heightened due to the crisis caused by the coronavirus. The increase in renewed agreements in April and May (see chapter 3 Household sector) suggests that households expect to see difficulties in debt repayment, and it is possible that some households are already in difficulty. As the rise in unemployment is currently mitigated by measures that are temporary and the increase in non-performing loans is only postponed by moratoriums, the process of risk materialisation in the segment of general-purpose cash loans is only beginning.

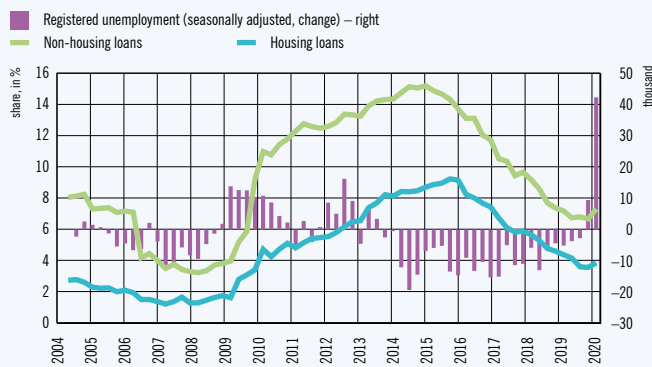
A similar dynamics was seen towards the end of the last decade when the global financial crisis started spilling over to the domestic economy. While unemployment started rising as early as in the first quarter of 2009, the increase in non-performing loans during that period was still moderate and only intensified towards the end of 2009 and in early 2010 (Figure 5). The increase in the share of non-performing loans was particularly pronounced in the segment of non-housing loans, ultimately reaching a very high level, in contrast with a more gradual rise in the share of non-performing housing loans. The fall in economic activity in the wake of the COVID-19 pandemic, coupled with an ensuing rise in unemployment, might lead to a significant increase in the share of non-performing loans in the segment of general-purpose cash loans in the forthcoming period.

Figure 4 Banks announce the tightening of household credit standards



Notes: The expected change in the tightening of household credit standards in the next quarter is presented. A positive value indicates the tightening of credit standards and a negative value indicates their relaxation. Source: CNB (Bank lending survey).

Figure 5 In crisis periods, the share of B and C category loans grows faster in the non-housing loans segment



Source: CNB.

List of figures and tables

Figure 1 Risk map, May 2020	5	Figure 3.2 Banks foresee a slump in demand for consumer loans	17
Figure 1.1 Most global economies will record a sharp annual fall in economic activity in 2020	7	Figure 3.3 Upward trend in total household debt to credit institutions was interrupted by the outbreak of the COVID-19 pandemic	18
Figure 1.2 Global economic climate deteriorated	7	Figure 3.4 Annual increase in household loans was interrupted in the first half of 2020	18
Figure 1.3 Leading central banks provided thus far unparalleled liquidity support to the economies	8	Figure 3.5 Fall in cash loans coincided with the COVID-19 pandemic	18
Figure 1.4 Very strong increase in economic and political uncertainties and capital market volatility	8	Figure 3.6 Share of long-term financing in newly-granted loans continued to increase	19
Figure 1.5 Rising risk aversion and great uncertainty regarding future developments in the pandemic strongly affect the financial markets	8	Figure 3.7 Growth in the share of renewed agreements in newly-granted long-term household loans	19
Figure 1.6 The spread between 10-year and 2-year bonds is very low	9	Figure 3.8 Upward trend in the share of kuna loans came to an end	19
Figure 1.7 The search for safe, highly-liquid assets following the outbreak of the pandemic increased the demand for the American dollar	9	Figure 3.9 Fall in the share of variable interest rate loans lost momentum	19
Figure 1.8 The coronavirus pandemic quickly influenced expectations regarding future economic developments, which plummeted	9	Figure 3.10 Interest rates that are fixed over a period shorter than loan maturity are dominant in newly-granted housing loans	19
Figure 1.9 Contraction of exports, investments and personal consumption is the biggest contributing factor to the expected fall in GDP in 2020	10	Figure 3.11 Interest rate risk is limited by the structure of reference parameters to which interest rates are linked	19
Figure 1.10 Macroeconomic shocks also spilled over to the financial sector causing an increase in the financial stress index	11	Figure 3.12 Continued downward trend in interest rates on newly-granted loans	20
Figure 1.11 CNB measures preserved high financial system liquidity	11	Figure 3.13 Share of interest expenses in total debt burden at a historical low	20
Figure 1.12 Active measures in the pandemic changed the structure of CNB assets	11	Figure 3.14 Household debt burden did not change much in 2019	20
Figure 1.13 The CROBEX index hits record lows, similar to the level recorded during the global financial crisis in 2009	11	Figure 3.15 Systemic vulnerabilities of the household sector were at moderate levels on the eve of the COVID-19 pandemic	20
Figure 2.1 After several years of public finance consolidation, a large deficit is expected in 2020 due to the pandemic	14	Figure 3.16 Deposits with credit institutions and pension fund shares are the dominant forms of household financial assets	21
Figure 2.2 Rise in public debt due to larger financing needs will cancel out the several-year downward trend in public debt	14	Figure 3.17 Credit expansion was much weaker in recent years than in the pre-financial crisis period	21
Figure 2.3 Expansionary monetary policy prevented a substantial increase in the risk premium	15	Figure 4.1 Recovery in the residential real estate market in Croatia lagged behind that in the EU, but real estate prices almost reached pre-crisis levels in late 2019	22
Figure 2.4 Persistently high interconnectedness between the banking sector and the government	15	Figure 4.2 Average prices of real estate in Zagreb and on the Adriatic coast hit pre-crisis levels	22
Figure 2.5 Public debt remains sensitive to sudden changes in the kuna exchange rate	15	Figure 4.3 Residential real estate prices above the level based on fundamentals	23
Figure 2.6 Maturity structure of public debt is favourable and contributes to the maintenance of financial stability		Figure 4.4 Real estate market activity in Croatia halved from the period before the global financial crisis	23
Figure 3.1 COVID-19 pandemic led to a sharp fall in employment	17	Figure 4.5 Number of transactions grew sharply in recent years at the time of the APN's programme implementation	23

Figure 4.6 Subsidy programme continued into 2020	24	Figure 5.8 Large share of total corporate debt in foreign currency falling slowly since the second half of 2019 as interest rate risk continues to decrease	32
Figure 4.7 Costs of labour and construction materials grew more slowly than real estate prices	24	Figure 5.9 Improved business performance and lower costs of interest payments reduce the debt repayment burden and overall riskiness	32
Figure 4.8 Developments in the labour market and consumer confidence will be the key determinants of real estate price developments in the future	24	Figure 5.10 Indebtedness of the corporate sector continued to fall in 2019	33
Figure 4.9 Business optimism in construction took a dive	24	Figure 5.11 In international comparison, Croatian corporations have larger net financial debt and lower liquidity	33
Figure 4.10 Housing lending intensified in 2019	24	Figure 5.12 Interest rates on newly-granted corporate loans in Croatia continued to decrease	33
Figure 4.11 Interest rates on housing loans hit record lows	25	Figure 5.13 Interest rates on long-term corporate loans have grown in 2020 due to renewed agreements	34
Figure 4.12 Price growth slightly lowered the financial availability of real estate	25	Box 3	
Box 2		Figure 1 Statistics of CES measures for March and April	35
Figure 1 Credit institutions' exposures secured by commercial real estate are much smaller than those secured by residential real estate	26	Figure 2 Rate of approved measures by activity and size	35
Figures 2.a and 2.b Construction activity in the segment of non-residential real estate remained much below that before the preceding crisis	27	Figure 3 Loans to enterprises that applied for grants, by activity and size	36
Figure 3 Estimated annual amounts of purchase and sale transactions in the commercial real estate market suggest growing activity in the hotel segment	27	Figure 4 Distribution of loans to enterprises – grant recipients in total loans and interest income	36
Figure 4 There is relatively little available office space in Zagreb and its surroundings	27	Table 1 Probit analysis results, marginal effects on averages, total and by size	37
Figure 5 Rents in the office space market on the rise regardless of the office space class	28	Figure 6.1 Growth of lending to the household and non-financial corporate sectors stopped in April	38
Figure 6 Available retail rental space steadily falling since 2015	28	Figure 6.2 Decrease in loans to the private sector offset by an uptick in lending to the government	38
Figure 7 Rents in the retail space market growing gradually, while returns remain stable	28	Figure 6.3 Strong annual growth of bank assets resulting from lending activity	39
Figure 8 Occupancy rate of logistics space is very high due to a limited supply of new projects	28	Figure 6.4 Record-high resident deposit growth	39
Figure 9 Insufficient supply of logistics space is the reason for rising rental prices	28	Figure 6.5 Deposit euroisation	
Figure 10 Share of employed persons in Croatia who sometimes or usually work from home in the total number of employed persons was relatively low in 2019	28	Figure 1 Most applications were submitted by households, while the majority of the amount is accounted for by legal entities	40
Figure 5.1 Turnover of non-financial corporations plunged in April and May	30	Figure 2 Shares of application-based exposures differ significantly across banks	40
Figure 5.2 Share of corporations covered by the measures is the largest in activities involving social contact	30	Figure 6.6 Continued decline in lending and deposit interest rates	41
Figure 5.3 Tourism activity predominates in requested and granted loans, deferrals and rescheduling of existing obligations	31	Figure 6.7 Continued improvement of credit quality	41
Figure 5.4 COVID score by activities and measures	31	Table 1 One-year rating migration matrix of non-financial corporation loans in 2019	42
Figure 5.5 Reversal in demand for loans	31	Figure 1 Decomposition of changes in NPLs, 31 December 2018-31 December 2019	42
Figure 5.6 Net transactions falling after the outbreak of the COVID-19 pandemic	32	Figure 6.8 Although credit quality in Croatia is somewhat weaker than the EU average, the pressure on capital is moderate	43
Figure 5.7 Sharp spike in credit demand in early 2020 was accompanied by the tightening of credit standards for corporate loans	32	Figure 6.9 Claims of non-financial corporations make up the largest share of sold claims	43
		Figure 6.10 Increase in the reclassification of exposures indicates a rise in credit risk in the system	43
		Figure 6.11 Trend of improvement of the composite credit quality indicator is slowing down	43

Figure 6.12 Forbearance measures differ across sectors (balance)	43
Figure 6.13 Decrease in operating income, coupled with indications of growing value adjustment charges, resulted in a sharp fall in banking system profit early in the year	44
Figure 6.14 Developments in net profit of the current year suggest strong negative trends in the generation of operating income	44
Figure 6.15 Rising operating income, coupled with lower value adjustment charges, resulted in profitability growth in the previous years	44
Figure 6.16 Decrease in interest income stopped, with income from general-purpose cash loans accounting for the largest share	45
Figure 6.17 Cost efficiency has improved	45
Figure 6.18 Government financing through bonds and loans	45
Figure 6.19 Croatia's banking system is among those of EU countries with large government exposures	46
Figure 6.20 Continued decrease in banks' exposure to interest rate-induced credit risk	46
Figure 6.21 Declining share of foreign currency loans in total loans	46
Figure 6.22 Liquidity coverage ratio (LCR) remains considerably above the regulatory minimum	47
Figure 6.23 Increased investments in central government instruments are reflected in the structure of the short-term liquidity buffer	47
Figure 6.24 Household deposit growth has added to NSFR growth	47
Figure 6.25 Capital adequacy remains high in the crisis	48
Figure 6.26 Capital surplus is an indication of the domestic banking system's favourable capital position	48
Figure 6.27 Growing dividend payment trend stopped	48
Figure 6.28 Structure of bank exposures according to credit risk weights (standardised approach)	49
Box 4	
Figure 1 High operating costs per unit of assets are offset by high net interest rate margin	50

Figure 2 Internet banking facilitated branch network rationalisation in some countries	50
Figure 3 Penetration of online banking is closely correlated with the degree of digitalisation in society	51
Figure 4 Sub-components of DESI for 2020	51
Figure 5 Digital Economy and Society Index (DESI)	51
Figure 6 Decline in the number of employees and branches and widening ATM and EFTPOS networks	51
Figure 7 Tax administration data on fiscalised accounts show an increase in the share of cashless transactions in total transactions	52

Box 5

Figure 1 Sales of non-performing loans to individual categories of buyers in Croatia, shown cumulatively and according to the remaining stock of non-performing loans in banks' balance sheets	53
Figure 2 NPLs purchased by NPL investors by price and debtor sector	53
Figure 3 Structure of sold claims (2014–2018)	54
Figure 4 NPL investors' performance	54
Table 1 Comparison of selected indicators of banks and NPL investors, 2018	54
Table 7.1 Macroprudential policy instruments in Croatia	56
Table 7.2 Other systemically important credit institutions	56

Box 6

Figure 1 The growth in cash loans slowed down following the recommendation and ultimately came to a halt following the outbreak of the COVID-19 pandemic	59
Figure 2 Positive transactions in general-purpose cash loans were recorded in all counties	59
Figure 3 Most general-purpose cash loans are granted with original maturity of over 5 years	59
Figure 4 Banks announce the tightening of household credit standards	60
Figure 5 In crisis periods, the share of B and C category loans grows faster in the non-housing loans segment	60

Abbreviations and symbols

Abbreviations

bn	– billion
CAR	– capital adequacy ratio
CBS	– Central Bureau of Statistics
CCE	– Croatian Chamber of Economy
CDCC	– Central Depository & Clearing Company
CDS	– credit default swap
CEE	– Central and Eastern European
CES	– Croatian Employment Service
CICR	– currency-induced credit risk
CIHI	– Croatian Institute for Health Insurance
CIs	– credit institutions
CM	– Croatian Motorways
CNB	– Croatian National Bank
CPII	– Croatian Pension Insurance Institute
DAB	– State Agency for Deposit Insurance and Bank Resolution
EAD	– exposure at default
EBA	– European Banking Authority
EBITDA	– earnings before interest, taxes, depreciation and amortisation
EC	– European Commission
ECB	– European Central Bank
EFSE	– European Financial Stability Facility
EIZG	– Institute of Economics, Zagreb
EMBI	– Emerging Market Bond Index
EMU	– Economic and Monetary Union
EONIA	– Euro Overnight Index Average
ERM	– Exchange Rate Mechanism
ESM	– European Stability Mechanism
EU	– European Union
EULIBOR	– Euro London Interbank Offered Rate
EUR	– euro
EURIBOR	– Euro Interbank Offered Rate
f/c	– foreign currency
FDI	– foreign direct investment
Fed	– Federal Reserve System
FINA	– Financial Agency
FRA	– Fiscal Responsibility Act
FSI	– financial soundness indicators
GDP	– gross domestic product
GFS	– Government Finance Statistics
HANFA	– Croatian Financial Services Supervisory Agency
HBS	– Household Budget Survey
HH	– households
HREPI	– hedonic real estate price index
HRK	– Croatian kuna
IBIR	– interbank interest rates
ILO	– International Labour Organization
IMF	– International Monetary Fund
IR	– interest rate
LTIR	– long-term interest rates
m	– million
MoF	– Ministry of Finance
MRR	– marginal reserve requirements
NFC	– non-financial corporations

NPLR	– ratio of non-performing loans to total loans
OECD	– Organisation for Economic Co-operation and Development
OF	– own funds
ON USLIBOR	– overnight US dollar London Interbank Offered Rate
pp	– percentage points
RC	– Republic of Croatia
ROAA	– return on average assets
ROAE	– return on average equity
RR	– reserve requirements
RWA	– risk-weighted assets
SDR	– special drawing rights
TTIP	– Transatlantic Trade and Investment Partnership
yoy	– year-on-year
ZIBOR	– Zagreb Interbank Offered Rate
ZSE	– Zagreb Stock Exchange

Two-letter country codes

AT	– Austria
BA	– Bosnia and Herzegovina
BE	– Belgium
BG	– Bulgaria
CY	– Cyprus
CZ	– Czech Republic
DE	– Germany
DK	– Denmark
EE	– Estonia
ES	– Spain
FR	– France
GB	– Great Britain
GR	– Greece
HR	– Croatia
HU	– Hungary
IE	– Ireland
IT	– Italy
LT	– Lithuania
LV	– Latvia
MK	– North Macedonia
MT	– Malta
NL	– Netherlands
PL	– Poland
PT	– Portugal
RO	– Romania
SI	– Slovenia
SK	– Slovak Republic
UK	– United Kingdom

Symbols

–	– no entry
....	– data not available
0	– value is less than 0.5 of the unit of measure being used
Ø	– average
a, b, c,...	– indicates a note beneath the table and figure
*	– corrected data
()	– incomplete or insufficiently verified data

