



2020

ANNUAL REPORT

CROATIAN NATIONAL BANK



YEARS OF
THE CROATIAN
NATIONAL
BANK

ANNUAL REPORT 2020

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FOREWORD BY THE GOVERNOR OF THE CNB

The year 2019 was one of the best years in terms of the economy: growth was slightly accelerated, employment and wages rose, and external and internal macroeconomic imbalances decreased. In contrast, 2020 was more demanding than any other year in recent times, an extremely difficult year. The dynamics of economies changed overnight. In addition to the pandemic, there were also earthquakes in Croatia, taking place at the same time as intensive preparations for joining the European Exchange Rate Mechanism, close cooperation, and the Single Resolution Mechanism.

Croatia, as a member state whose currency is not the euro, can participate in the Single Supervisory Mechanism only if it establishes close cooperation with the European Central Bank. In close cooperation, the ECB supervises credit institutions with head offices in Croatia, while providing instructions to the Croatian National Bank. The establishment of close cooperation automatically entails Croatia's participation in the Single Resolution Mechanism, all of which was achieved on 10 July 2020, in accordance with the plan.

Faced with extraordinary circumstances, the CNB has had to adapt quickly to the new working conditions. We have developed brand new methods for monitoring current economic developments and have continuously communicated our expectations and knowledge to markets and the public. We have ensured new modes of operation and the continuity of key functions, such as payment operations or the supply of cash to citizens and business. We have maintained the functioning of the market and financing conditions of all entities.



Due to strong and coordinated moves in the area of monetary policy, we have ensured the liquidity and security of the financial system. Through foreign exchange interventions, we have preserved the exchange rate stability and foreign exchange liquidity, thus preventing the pandemic from triggering the realisation of exchange rate risks and inflicting heavy losses on business and the financial system.

These monetary policy measures have proven to be extraordinarily effective in stabilising the financial markets and have helped to combat the serious risks posed by the pandemic, in particular by maintaining price stability. Supervisory measures were crucial for alleviating the effects of the pandemic on citizens and enterprises.

By cooperating with the fiscal authorities and purchasing government securities on the secondary market, we ensured the stability of the government securities market. In this manner, the government was able to ensure the preservation

Boris Vujčić,
Governor of
the Croatian
National
Bank

of jobs and the normal functioning of vital public systems, especially health care.

In addition, through a series of direct measures, we have sought to make it easier for citizens to do business on a regular basis. We waived the fee for withdrawing cash at ATMs from the network of other banks, enabled the urgent issuance of cards for protected accounts, as well as increased the limit for contactless payments without entering a PIN to HRK 250.00, etc., and we paid special attention to consumer protection. Regarding the moratoriums on consumer loans, we stipulated that new conditions and repayment deadlines must not infringe upon existing consumer rights and that consumers should be informed about their rights in a timely and clear manner.

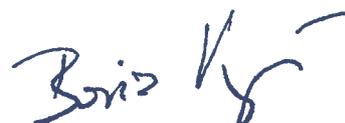
Despite the pandemic, there was no need to implement all of the measures available to us because we have made the financial system resilient enough to withstand a shock of this magnitude through the prudent policies of previous years.

Although significant resources were focused on joining the Exchange Rate Mechanism and the banking union, as well as other regular and extraordinary tasks, we did not neglect other important activities and projects. We have continued to cooperate and support new or existing companies that are developing an innovative technology-based banking or payment service via the Innovation Hub; we participated in the provision of technical assistance to the central banks of EU candidate countries, and we began to consider the impact of climate change on the achievement of the central bank's goals and tasks and identified possible activities in this

area. In addition, activities related to the Regional Programme for Strengthening the Central Bank Capacities in Six Western Balkans Countries with a View to the Integration to the European System of Central Banks continued, the CNB participating together with 19 other central banks of EU member states and the ECB.

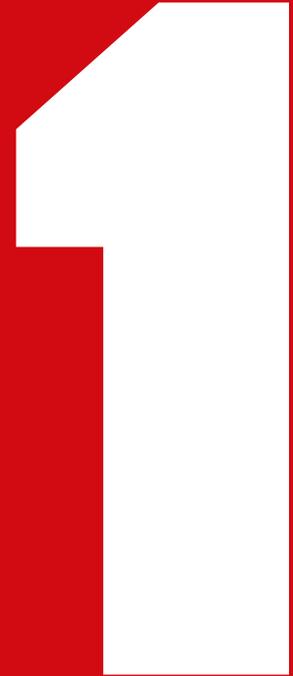
Finally, the Croatian National Bank ended 2020 with a profit of HRK 265.9m, of which HRK 53.2m was allocated to general reserves and HRK 212.8m to the state budget.

Although the consequences of this devastating pandemic are still very uncertain, positive economic trends can be seen from the end of 2020, which we expect to continue in 2021 and 2022. Many sectors are already showing signs of recovery, and a strong driver of investment activity in the upcoming period could be government investment, as well as increased financing through EU funds. The most severe part of the crisis is behind us, but we are facing no less of a challenge regarding recovery, exceeding pre-pandemic economic growth, increasing competitiveness, channelling European funds for recovery and resilience, as well as other challenges. The Croatian National Bank will, as before, be actively involved in achieving these goals within its mandate and in accordance with its goal and tasks.



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COVID-19 PANDEMIC: EFFECT ON ECONOMIC ACTIVITY AND CNB MEASURES

The COVID-19 pandemic caused a global health crisis that subsequently caused an economic and social crisis. Central banks, including the CNB, acted promptly and decisively, and through regular and extraordinary measures alleviated the consequences for citizens and companies both directly and, through measures aimed at financial institutions and the government indirectly.

A LOOK AT 2020: EFFECT OF THE PANDEMIC AND CNB MEASURES

1**DECREASE IN
REAL GDP****8.0%**

Real gross domestic product decreased by 8% in 2020, which is the strongest annual decrease since there is a comparable time series of GDP trends for Croatia.

MORE ON PAGE 3**2****SALE OF FOREIGN
CURRENCY IN THE
FOREIGN EXCHANGE
MARKET****5.3% of GDP^a**

The CNB placed significant foreign currency in the first half of the year to meet the demand caused by growing uncertainty.

MORE ON PAGE 3**3****SWAP LINE
AGREEMENT****EUR 2bn**

The swap line agreement that the CNB entered into with the European Central Bank also had a favourable effect on calming the exchange rate.

MORE ON PAGE 6**4****DIRECT PURCHASE OF
FOREIGN CURRENCY
FROM THE GOVERNMENT****5.7% of GDP**

By purchasing foreign currency from the government, the CNB managed to boost international reserves to their levels before the crisis broke out.

MORE ON PAGE 6**5****LOANS MORATORIUM****14.9% of GDP**

An arrangement has been agreed with banks to enable the clients a moratorium on their credit obligations and the execution of all forced collection measures has been suspended.

MORE ON PAGE 7**6****PURCHASE
OF GOVERNMENT
SECURITIES****5.5% of GDP**

For the first time, the CNB has implemented a large-scale government securities purchase programme for a wide range of counterparties.

MORE ON PAGE 4

COVID-19 PANDEMIC: THE EFFECT ON ECONOMIC ACTIVITY AND CNB MEASURES

The COVID-19 pandemic caused a global crisis in all segments of society and marked 2020 in a crucial manner. Although this crisis had no origin in the economy, there is no economic segment that has remained intact – from oil prices and inflation to personal consumption, supply chains, output and employment. The key consequence of the pandemic is certainly the sudden halt in economic and social activities, accompanied by turbulence in international financial markets.

The financial markets, international and domestic, were the first to react to the disturbance, and they did so immediately and strongly. With large price fluctuations in almost all forms of assets, certain segments of the financial markets were almost frozen in the period immediately after the outbreak of the pandemic, and a significant rise in demand for currency and highly liquid assets was recorded. In Croatia, due to the growth of uncertainty, the demand for foreign currencies rose sharply. Following the turbulence in the financial markets, investment funds have faced significant withdrawals. To pay off investors, they sold assets, mostly government securities, which led to falling prices and rising yields, and due to weak demand, posed the risk of a halt in trade in that segment of the financial market and worsening financing conditions for all domestic sectors. In addition, as with most of the payments related to euro deposits, the demand for foreign currencies, which were mainly deposited in banks in the form of foreign currency deposits, increased further. These shocks were intertwined with and mutually intensified each other, so without central

bank intervention the exchange rate would have depreciated with worsening financing conditions (for more on the monetary policy response, see chapter 3 Monetary policy, macroprudential policy and international reserves management).

Employment fell sharply in the first half of the year, when strict measures to restrict movement and business operations were in place, especially in activities involving close contact, such as accommodation and food service, and unemployment rose. The pandemic caused a sharp deterioration in the business expectations of consumers and enterprises. Unfavourable trends in the labour market, reduced disposable income and high uncertainty, as well as the physical inability to consume certain goods, and especially services, has decreased household consumption. At the same time, there was an increase in savings, which citizens channelled to the safest and the most liquid forms of assets, such as deposits with credit institutions, as well as repayment of loans. The growth of housing loans, driven by subsidies (see Box 1 Real estate market in

The growth of housing loans driven by subsidies did not compensate for the decline in consumer loans, so total lending to households slowed down markedly.

Croatia in 2020) did not compensate for the decline in consumer loans, so total lending to households slowed down markedly. In contrast, neither relatively substantial state aid measures and moratoriums on financial commitments, nor cost-cutting measures have been able to curb the decline in revenues of enterprises, which at the start of the pandemic resorted to new loans to preserve liquidity and finance working capital.

The spread of the pandemic had an impact on the decrease in inflationary pressures in general, in particular in tourism-related services because of the significant drop in the number of travellers and in durable consumer goods because of the fall in investments. The sharp fall in energy product prices, especially oil, which was due to a large decline in demand for motor fuels exerted the most significant impact on inflation. Inflation thus remained largely negative during the year. In the conditions of weakened demand, core inflation slowed down, and the annual rate of change in the prices of industrial products also decreased.

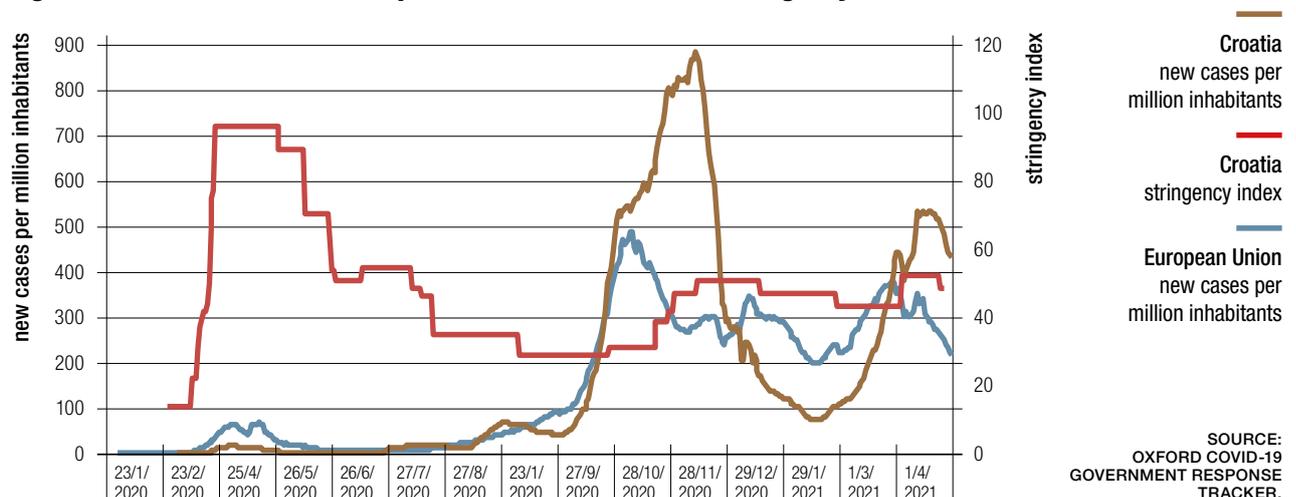
The pandemic also affected the dynamics of economic relations with foreign countries. The current and capital account surplus on the balance of payments decreased, to which the decline in tourism receipts made a particular contribution, although the final results exceeded the very pessimistic

initial forecasts. Unfavourable trends were partially mitigated by a decline in exports that was smaller than the decline in imports, as well as greater utilisation of EU funds and other trends with opposite impacts.

Although the combination of fiscal, monetary and supervisory measures taken has mitigated the adverse effects of the pandemic, the contraction in economic activity combined with the Government's countercyclical measures has inevitably led to declining general government revenues and expenditures and strong growth in the government's needs for funding. After three consecutive years of budget surpluses and five years of declining public debt-to-GDP ratios, in 2020, due to declining revenues and rising pandemic-related costs, there was a marked budget deficit, and public debt rose.

Despite this, the Republic of Croatia maintained its investment grade rating. The government risk premium remains relatively low, as a result of favourable global financing conditions. In addition, the available grants and loans from the European Union can significantly ease the burden of financing the costs of the crisis in the coming years. The extent of the consequences of the crisis in the economy is not yet fully visible and will largely depend on further development of the epidemiological situation and the duration of the related extraordinary economic and social circumstances at the domestic and the global level.

Figure 1.1 Number of new cases per million inhabitants and stringency index



CNB MEASURES AIMED AT ALLEVIATING THE CONSEQUENCES OF THE PANDEMIC

The CNB responded promptly to disruptions in the financial system caused by the pandemic. In doing so, it adapted regular measures to the new circumstances and applied them to an unprecedented extent, and also introduced new measures in order to preserve exchange rate stability and favourable financing conditions for citizens, enterprises and the government. Although each regulator acted independently within its own competence, the CNB, the Government of the Republic of Croatia and HANFA implemented continuous mutual coordination and acted in cooperation with European regulators, the European Central Bank, the European Banking Authority and the European Systemic Risk Board.

CNB monetary policy measures

During 2020, CNB pursued an extremely expansionary monetary policy, which allowed financing conditions in the country to remain favourable despite the outbreak of the crisis, with high liquidity surpluses and interest rates that generally continued to decline, while maintaining a stable kuna/euro exchange rate.

In the first half of the year, the CNB placed significant foreign currency funds to banks through foreign exchange interventions and bilateral foreign exchange transactions in order to meet the demand of citizens and enterprises for foreign currency resulting from the growth of uncertainty. In order to prevent foreign exchange interventions from reducing kuna liquidity and adversely affecting financing conditions, the

CNB simultaneously increased and maintained sufficient kuna liquidity through structural and regular operations and a reduction in reserve requirements. Furthermore, for the first time, the bank implemented a programme for the purchase of government securities, since their sale at low prices threatened to freeze the government securities market, which would have adversely affected the stability of the financial system and financing conditions for all. The scale of purchase was relatively large, and CNB included a wide range of counterparties in the purchase in order that additional kuna liquidity could reach those entities that needed it the most. Overall, monetary policy has maintained the stability of the exchange rate and the government securities market, as well as favourable financing conditions for all sectors thanks to high and growing kuna liquidity.

Overall, monetary policy has maintained the stability of the exchange rate and the government securities market, as well as favourable financing conditions for all sectors thanks to high and growing kuna liquidity.

The swap line agreement that the CNB entered into with the European Central Bank on 15 April, which made another EUR 2bn available to Croatia, also had a favourable effect on stabilising the exchange rate. The term of the agreement has been extended twice and, according to the current arrangement, the agreement will be in force until March 2022.

LINK NO.



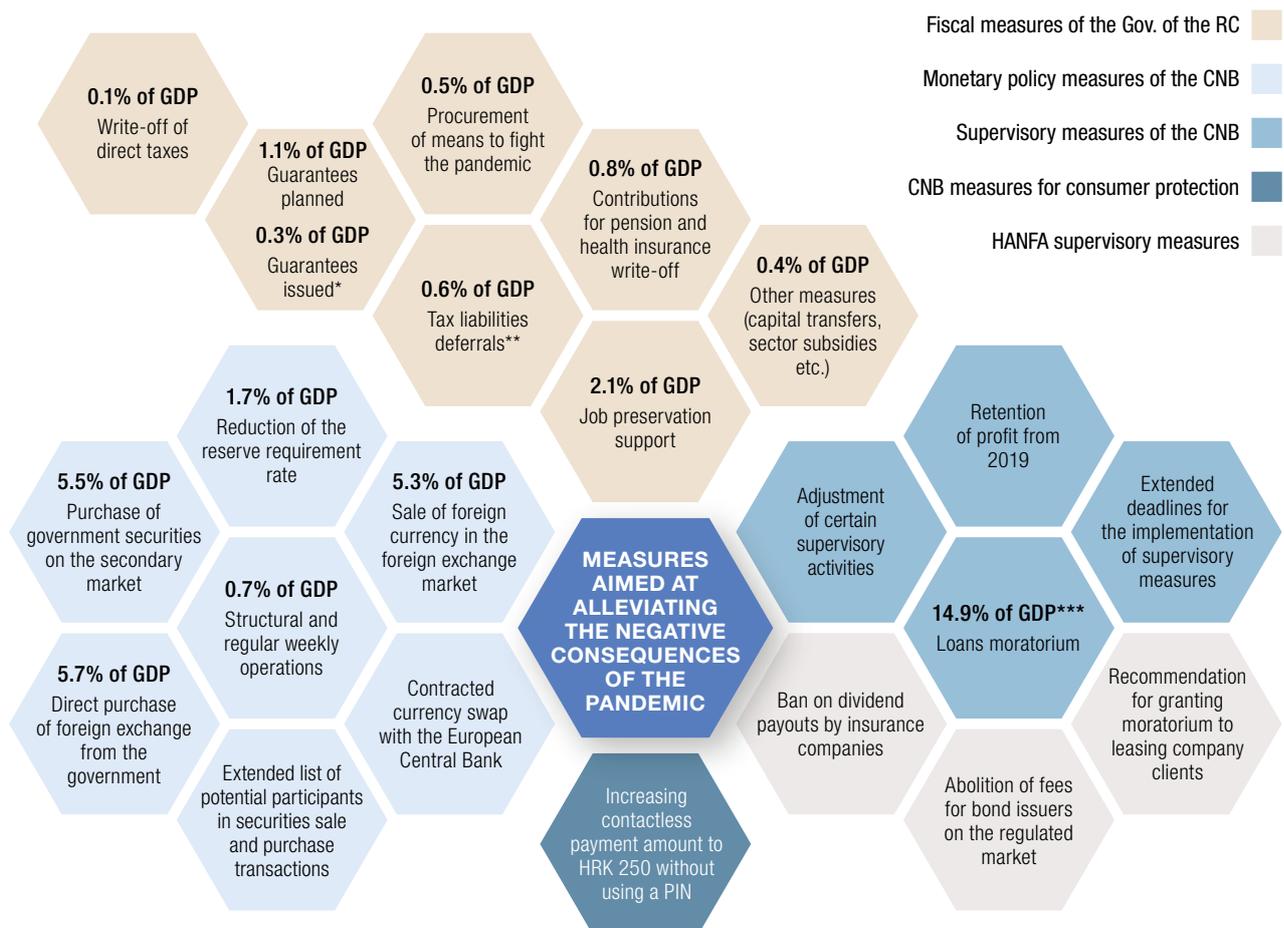
Despite selling a high total amount of foreign currency to banks at the beginning of the crisis, the CNB had sufficient room for manoeuvre to respond to possible further disturbances during the year. In

addition, in the second half of the year the situation stabilised, so the central bank managed to boost international reserves to the levels of before the crisis broke out by buying foreign currency from the government.

CNB supervisory measures

In accordance with monetary policy measures aimed at stabilising the exchange rate, within seven days of the declaration of the **global pandemic** ¹ of COVID-19, the CNB supervision adjusted the regulatory framework on 19 March 2020 for the

Figure 1.2 Response to the coronavirus crisis in Croatia during 2020: the Government of the Republic of Croatia, CNB and HANFA



Notes:

* Situation at the end of 2020

** Tax deferrals were granted mainly during the second quarter. By year's end, most tax deferrals had been settled or converted into write-offs.

*** Situation in September 2020 when the situation with the active moratoriums reached its peak

SOURCES: CONVERGENCE PROGRAMME, CNB, HANFA AND CBRD (THE LAST THREE INSTITUTIONS FOR MORATORIUMS).

period up to 31 March 2021, thus providing an important contribution to alleviating the social and economic consequences of the pandemic and creating business certainty for credit institutions in a time of extreme uncertainty. This adjustment made it possible to maintain credit activity aimed at business and citizens with an adjusted creditworthiness evaluation for debtors with good rating, by approving a moratorium until 31 March 2021, restructuring existing and approving new loans without regulatory costs. The possibility of creating additional liquidity was opened up by the approval for credit institutions operating below the required liquidity coverage ratio (LCR) of 100% for 12 months. The seven circulars sent to credit institutions, which were harmonised with the subsequently published positions of the European Banking Authority, the European Central Bank and the European Securities and Capital Markets Authority, described supervisors' expectations regarding the application of regulations in the conditions of the pandemic. The treatment of clients who suffered the consequences of two devastating earthquakes that occurred in the areas of Zagreb and Sisak in 2020 is regulated in two separate circulars. Due to the need to clarify these new regulatory rules, the supervision published 98 interpretations of the adjusted regulatory framework between March and May 2020.

Credit institutions were allowed to postpone the measurement of losses until the conditions for a more accurate assessment of them were met regarding the part of the portfolio that was considered timely at the end of 2019. Due to the uncertain duration and final effects of the crisis on enterprises and citizens, and in turn on credit institutions, credit institutions were instructed at the same time to retain net profits generated in 2019 and to adjust payments of variable remuneration payments such as bonuses, severance pay and the like. A similar approach was taken by the European Banking Authority (EBA), which in early April 2020,

i.e. later than the CNB, issued the initial [Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis and issued a recommendation to retain dividends](#) ² (available only in Croatian).

In order to make it easier for credit institutions to focus on performing key tasks, many supervisory activities have been postponed, such as stress testing, on-site examination, and compliance with certain supervisory measures. In the context of implementing the Supervisory Review and Evaluation Process (SREP), the CNB has applied a prudent approach and has maintained supervisory capital requirements at the level established in the previous cycle. Due to the high level of capital, the use of capital buffers was not required during 2020. Nevertheless, all credit institutions were ordered through micro-prudential measures to retain profits generated in 2019, and after joining the Single Supervisory Mechanism, credit institutions were ordered to retain the profits generated in 2020 in 2021 through a macroprudential measure.

The CNB subsequently allowed credit institutions also to apply the flexible treatment in connection with the identification of bad loans to exposures to debtors affected by the earthquakes that occurred in Zagreb and Pokuplje in March and December 2020. In line with the European Banking Authority's response to the second wave of the pandemic, in early December the CNB confirmed the possibility of applying a tailor-made treatment to moratoriums that were approved for clients affected by the COVID-19 pandemic after 1 October 2020. A similar approach is applied to earthquake-affected clients.

The supervisor also allowed banks to use the liquidity buffer, i.e. the liquidity coverage ratio (LCR) in the crisis conditions of stress, although the liquidity of the system was extraordinarily high due to the extraordinarily expansionary monetary policy, so no credit institution utilised this measure.

LINK NO. ²



The aim of the moratorium was to stop forced collection by suspending or restructuring due liabilities, in order to mitigate the negative effects of the COVID-19 crisis on citizens and enterprises.

The government, HANFA and the Croatian National Bank are taking concerted action to mitigate the negative economic consequences of the pandemic.

Activities of other institutions to mitigate the effects of the pandemic and preserve financial stability

The Croatian Government has taken a number of economic policy measures aimed at facilitating operations in the sectors of the economy affected by the crisis. Among those that have significant effects on financial stability is the deferral or write-off of tax liabilities and social benefits, as well as the direct assumption of part of employee expenses for enterprises affected by anti-pandemic measures. Through the Croatian Bank for Reconstruction and Development (HBOR), the Government provided guarantees for the tourism sector, exporters and economic entities that operate as indirect exporters or as suppliers of direct exporters that are financed, and HBOR also provided deferral and rescheduling of loan liabilities to its clients. In addition, HBOR and government agencies that finance enterprises are providing special credit lines for enterprises affected by the crisis.

The Croatian Financial Services Supervisory Agency has also adopted a set of measures and published recommendations to support the business continuity of the financial services sector. The measure with the most significant potential effect on financial stability is the ban on the payment of dividends to insurance companies, which ensures the retention of their profits in Croatia. HANFA has also provided leasing companies with a flexible approach to actions regarding clients affected by the pandemic to facilitate the approval of moratoriums.



2

TOWARDS THE EURO AND THE BANKING UNION

The banking union is crucial for achieving comprehensive economic and monetary union. In the area of resolution and supervision, the CNB has already participated in the banking union since becoming a member of the Single Resolution Mechanism and a member of the Single Supervisory Mechanism. This fulfilled important preconditions in the process of adopting the euro.

A LOOK AT 2020: TOWARDS THE EURO AND THE BANKING UNION

1

**AREAS OF
MEASURES UPON
JOINING ERM II**

4

Croatia has committed to implementing a total of eight measures in four areas upon joining ERM II.

MORE ON PAGE 12

2

**FLUCTUATION
BAND**

15%

It was agreed that a central rate of 7.53450 to the euro with a standard fluctuation band of 15 percent would be observed.

MORE ON PAGE 11

3

**DIRECT
RESPONSIBILITY
(SUPERVISION STATUS)**

8

ECB is directly responsible for eight credit institutions by means of close cooperation.

MORE ON PAGE 17

4

**DIRECT
RESPONSIBILITY
(RESOLUTION STATUS)**

9

In the Single Resolution Mechanism, the Single Resolution Board is directly responsible for nine credit institutions.

MORE ON PAGE 17

5

**PARTICIPATION IN
DECISION-MAKING**

2

Representatives of the CNB participate in the management structures of two European institutions: ECB and the Single Resolution Mechanism.

MORE ON PAGE 16

6

**AMENDMENTS
TO ACTS**

3

In order to establish close cooperation and enter into the Single Resolution Mechanism, it was necessary to adopt amendments to three acts.

MORE ON PAGE 19

PREPARATIONS FOR ADOPTION OF THE EURO

On 10 July 2020, the Croatian kuna was included in the Exchange Rate Mechanism (ERM II). The currency must participate in the Exchange Rate Mechanism for at least two years, observing the central rate of HRK 7.53450 for EUR 1 with a standard fluctuation band of 15 percent. Upon joining ERM II, Croatia committed itself to implementing additional reform measures and further implementation of sound economic policy, and adopted the National Euro Changeover Plan, which elaborates a number of practical activities that need to be implemented to ensure a successful transition to the new currency.

Joining ERM II

Following the completion of the implementation of reform measures that Croatia undertook to implement in the letter of intent concerning the entry of Croatia into ERM II, in early June 2020 the Minister of Finance and the Governor of the CNB submitted a letter to the euro area member states, Denmark and EU institutions informing them that Croatia has fully met the obligations, and at the same time they requested that the ECB and the European Commission formally evaluate the implementation of these measures. A positive assessment by the ECB and the European Commission was necessary in order for Croatia to be able to officially request entry into ERM II. The procedure of evaluating measures related to the establishment of close cooperation with the ECB took place separately from the procedure of assessing measures in the remaining five areas, but it also ended in June with a positive assessment.

The Croatian kuna was included in the ERM II exchange rate mechanism on 10 July 2020. The decision was

adopted jointly by the finance ministers of the euro area member states, the President of the ECB and the finance ministers and central bank governors of Denmark and Croatia. The European Commission and the Economic and Financial Committee of the Council of the European Union were also included in the decision process. It was determined that the central rate¹ to be applied during the participation of the Croatian kuna in the Exchange Rate Mechanism is HRK 7.53450 for EUR 1, which corresponds to the market exchange rate² on the day of entry into ERM II, and it was agreed that the standard fluctuation band of 15 percent around the central rate would be observed.

The exchange rate stability criterion will be met if, during at least two years of participation in the Exchange Rate Mechanism, the exchange rate does not deviate significantly from the central rate and no devaluation of the central rate occurs. In most of the countries participating in the Exchange Rate Mechanism, the exchange rate

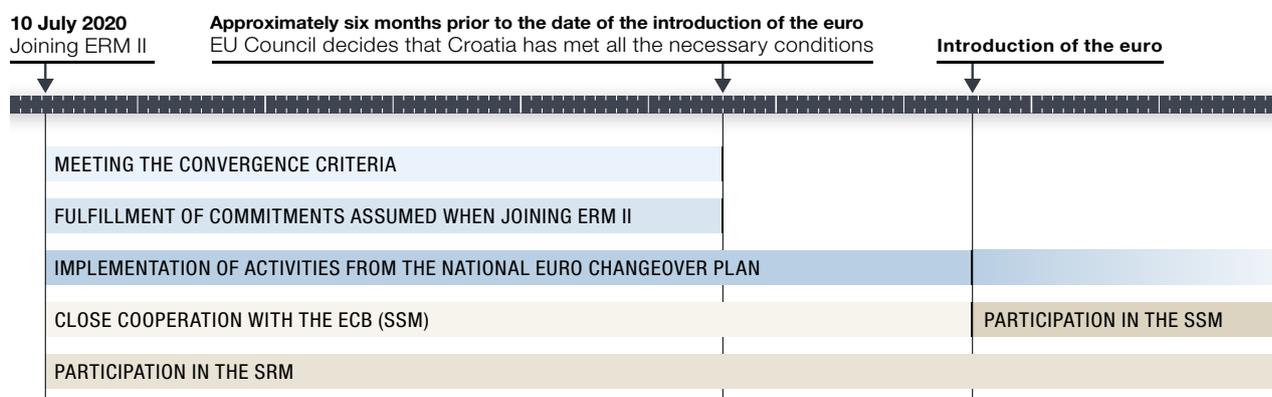
**Central rate
of the kuna
was set at**

7.53450

to the euro
on the day of
entering ERM II.

¹ The central rate is the level of the exchange rate that will be used to evaluate whether Croatia meets the criterion of exchange rate stability as one of the four criteria of nominal convergence.

² Analyses by the CNB and the ECB have confirmed that at the current level of the nominal exchange rate, the real exchange rate of the kuna is in line with the macroeconomic values and characteristics of the Croatian economy.

Figure 2.1 Adoption of the euro, close cooperation with the ECB and joining the Single Supervisory Mechanism

SOURCE: CNB.

established as the central rate was later applied as a fixed conversion rate at which the changeover from the national currency to the euro takes place.

Reform measures and next steps

According to common practice when ERM II is joined, Croatia has committed itself to implementing additional reform measures until the adoption of the euro. There are eight measures in total, in the following four areas: strengthening of the anti-money laundering framework, reducing the financial and administrative burden on the economy by further simplifying administrative procedures and reducing parafiscal and non-tax charges, improving corporate governance in state-owned enterprises and strengthening the national insolvency framework. These measures are largely a follow-up to the measures implemented in the second half of 2019 and early 2020, which were a precondition for Croatia's entry into ERM II. All eight measures are planned to be implemented by March 2022 at the latest. In addition, the agreement on the participation of the Croatian kuna in the ERM II exchange rate mechanism was further accompanied by a firm commitment by the Croatian authorities to implement sound economic policy aimed at preserving economic and financial stability and achieving a high degree of sustainable economic convergence. After a key step towards the adoption of the euro in Croatia was taken, joining the ERM II mechanism, in December the Government of the Republic of Croatia adopted the National Euro Changeover Plan. This strategic document, which

was jointly drafted by the Government and the CNB, elaborates a series of practical activities that need to be carried out by the date of adoption of the euro. The National Euro Changeover Plan regulates, for example, the manner and deadlines for the changeover of cash and conversion of kuna deposits and loans, it sets out rules for recalculating prices and other monetary statements of value, describes a number of adjustments to be made by business entities and explains which measures the competent authorities will use to protect citizens from unjustified price increases. Given that the replacement of the kuna by the euro is extremely complex, efficient cooperation between a large number of stakeholders from the public and private sectors will be needed to prepare all segments of society, in legal, logistic and administrative terms, for the transition to the new currency. The National Euro Changeover Plan therefore elaborates the structure of the coordination bodies together with their responsibilities in the changeover process. In addition to the previously established National Council for the Introduction of the Euro, which plays a central role in the process, a Steering Committee and six coordination committees have been established – for the cash changeover, for legislative adjustments, for the adjustment of the general government, for the adjustment of the financial system, for the adjustment of the economy and consumer protection, and for communication – which will organise and supervise at the operational level the implementation of activities envisaged under the National Euro Changeover Plan.

JOINING THE SINGLE SUPERVISORY AND SINGLE RESOLUTION MECHANISM

By establishing close cooperation with the European Central Bank and joining the Single Resolution Mechanism in October 2020, the Republic of Croatia became a full member of the banking union, thus fulfilling one of the most important and complex conditions in the procedure of adopting the euro as the national currency.

Joining the banking union

The banking union implies a centralised system of bank supervision (the Single Supervisory Mechanism, SSM) and a common system of bank resolution (the Single Resolution Mechanism, SRM).

It also provides for a common deposit insurance scheme (EDIS). However, EU member states remain individually responsible for establishing a deposit insurance scheme at the national level, as negotiations regarding the common scheme are still ongoing. The banking union comprises euro area member states and is open to member states that have not yet adopted the euro.

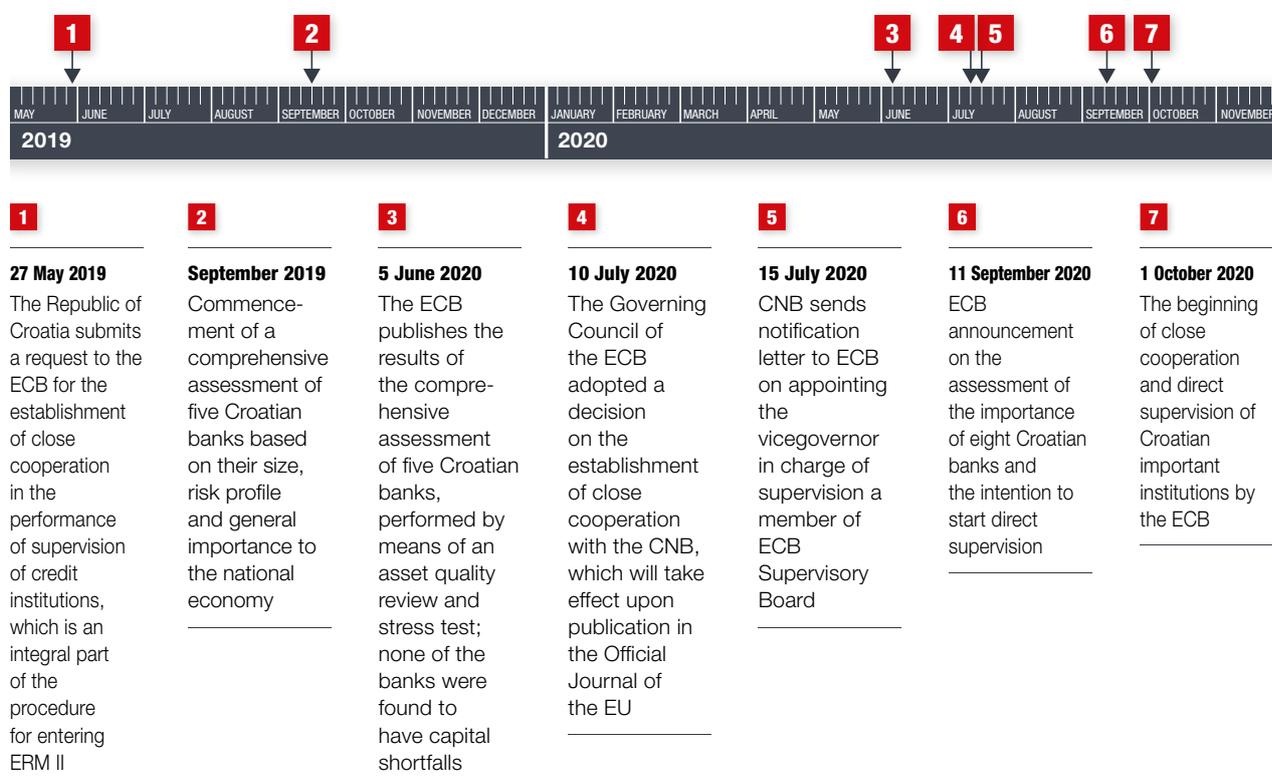
The first real step towards the realisation of the banking union was taken in 2012 with the

development of a specific plan for achieving economic and monetary union (EMU), one of the most important parts of which is the creation of a comprehensive financial regulatory framework for banks in the European Union.

In this sense, the most important regulations in this area were adopted in the following years, primarily the SSM Regulation¹ and the SRM Regulation², which defined the basic rules for the functioning of the Single Supervisory and the Single Resolution Mechanism. These rules include, inter alia, the delegation of prudential supervision powers in connection with euro area banks to the joint supervisor, the European Central Bank, and the transfer of resolution powers to the central

¹ Regulation (EU) No. 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions (OJ L 287, 29.10.2013)

² Regulation (EU) No. 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No. 1093/2010 (OJ L 225, 30.7.2014)

Figure 2.2 Establishing close cooperation

SOURCE: CNB.

resolution authority in the banking union, the Single Resolution Board.

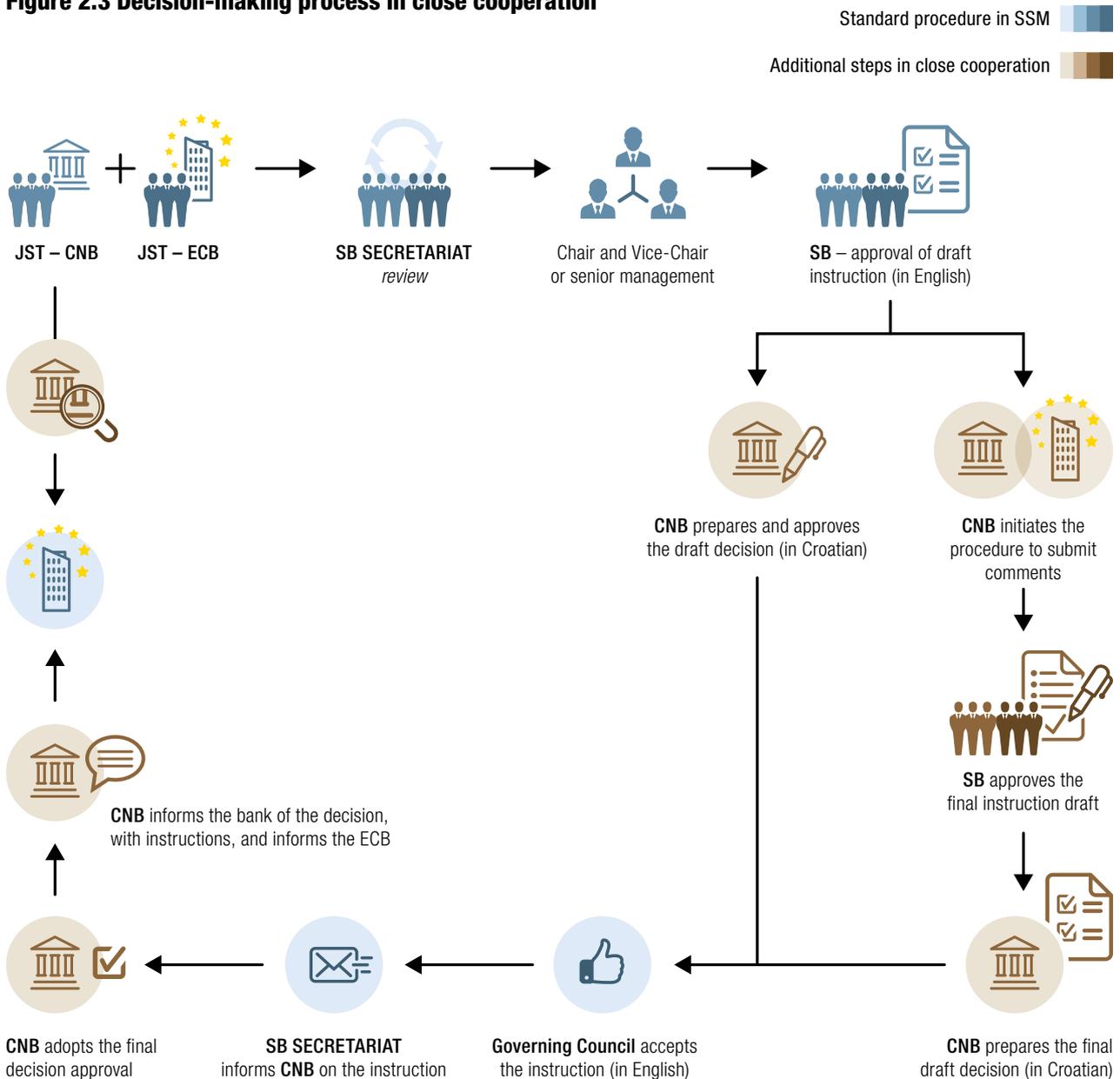
Every member state that decides to adopt the euro as its national currency, i.e. to adopt a common monetary policy in the monetary union must join the banking union, as well as meet a number of other preconditions, which the Republic of Croatia successfully achieved on 1 October 2020.

Participation of representatives of the Republic of Croatia in decision-making

Since the Single Supervisory and the Single Resolution Mechanism are based on joint management of the European Central Bank, i.e. of the Single Resolution Board on the one hand, and the national competent authorities and resolution authorities on the other hand, this means that from 1 October 2020 representatives of the Croatian National Bank are involved in the

work of both institutions. The representative of the Republic of Croatia makes decisions on an equal footing with the representatives of other member states regarding all issues that are important for the operations of credit institutions and thus can directly influence and protect the interests of Croatian banks and citizens.

In close cooperation, the representative of the Republic of Croatia is involved on an equal footing in the work of the highest decision-making body in the European Central Bank – the Supervisory Board – having the same rights and obligations as all other members, including voting rights. In the Single Resolution Mechanism, the representative of the Republic of Croatia participates in all plenary and executive meetings of the Single Resolution Board and thus decides on all decisions that are important for resolution planning and for the management of the Single Resolution Fund.

Figure 2.3 Decision-making process in close cooperation

SOURCE: CNB.

In addition to the representatives at the highest management level, the Republic of Croatia today has its representatives at all relevant technical levels in the European Central Bank and the Single Resolution Board. In this way, it is ensured that all decisions related to the supervision and resolution of Croatian banks are adopted on the basis of the same rules and in cooperation

with other competent authorities and resolution authorities from those participating member states in which a particular banking group operates. At the same time, in this way Croatian banks have been provided with unambiguous access and the application of the same rules that are applied to all other members of the groups from the participating member states.

The decision of the European Central Bank to establish close cooperation with the Croatian National Bank did not cause significant changes in the method of communication and exchange of information between the Croatian National Bank and banks.

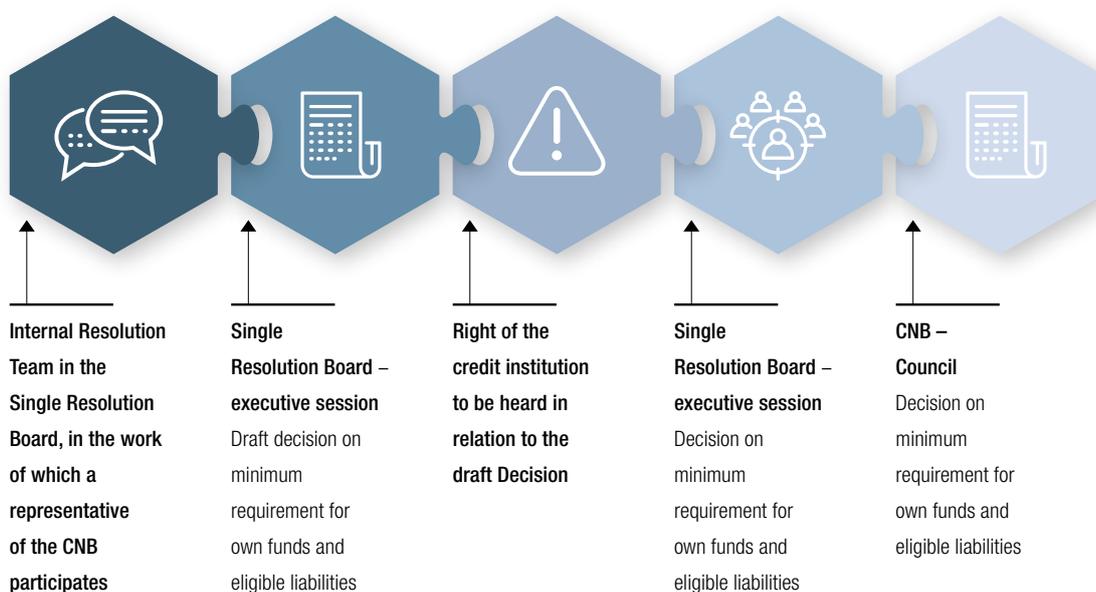
The decision of the European Central Bank to establish close cooperation with the Croatian National Bank did not cause significant changes in the method of communication and exchange of information between the Croatian National Bank and banks. Moreover, the entry of Croatia into the Single Supervisory Mechanism and the Single Resolution Mechanism resulted in an improvement in the aforementioned cooperation.

The decision-making process in close cooperation is more complex than in the standard procedure of the members of the Single Supervisory Mechanism. The most significant difference lies in the fact that no decision of the European Central Bank is directly applicable to Croatian banks, but only through the Croatian National Bank, which adopts the final decisions for credit institutions in accordance with the instructions of the European Central Bank.

Furthermore, the right to be heard (RTBH) of credit institutions and other parties regarding the decisions of the European Central Bank and the Croatian National Bank is elaborated in detail in the context of close cooperation, especially in cases where the European Central Bank and the Croatian National Bank jointly make decisions that could have an adverse impact on the legal interests of credit institutions or other parties, such as rejection of requests, shortening of terms of office and the like.

The decision-making process in the Single Resolution Mechanism is also complex and time-consuming. Like the decisions of the European Central Bank, the decisions of the Single Resolution Board are not directly applicable in the Republic of Croatia, but entail the adoption of a decision by the Croatian National Bank.

Figure 2.4 Decision-making in the Single Resolution Board



SOURCE: CNB.

In addition, access to the Single Resolution Fund was achieved through entry of the Republic of Croatia into the Single Resolution Mechanism. It is a fund managed by the Single Resolution Board that can be used under specific conditions to ensure the efficient application of resolution instruments and the exercise of resolution powers. Contributions to this fund are paid by all credit institutions from the participating member states, and from 2021 by Croatian banks as well.

Changes in responsibility regarding Croatian banks

In order for the European Central Bank and the Single Resolution Board to be able to carry out their supervisory activities and exercise their resolution powers without hindrance, each of these institutions has assumed direct responsibility for certain credit institutions operating in the Republic of Croatia.

Table 2.1 Responsibility regarding credit institutions at the end of 2020

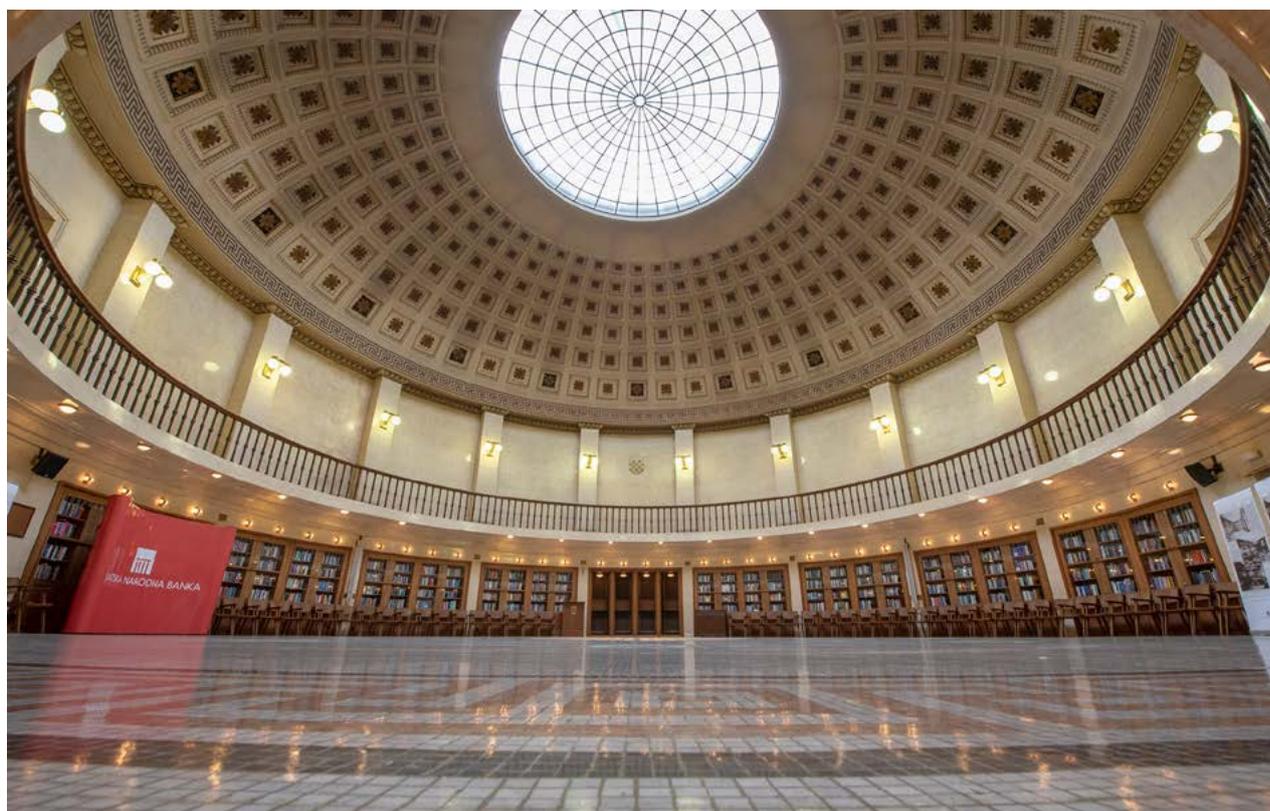
Name of the institution	Total assets in thousands of kuna	Share in total assets, %	Direct responsibility (supervisory status)	Direct responsibility (resolution status)
1 Addiko Bank d.d.	17,659,611	3.82	ECB	SRB
2 Agram banka d.d.	3,800,810	0.82	CNB	CNB
3 Banka Kovanica d.d.	1,366,624	0.30	CNB	CNB
4 Croatia banka d.d.	1,926,128	0.42	CNB	CNB
5 Erste&Steiermärkische Bank d.d.	73,215,871	15.83	ECB	SRB
6 Hrvatska poštanska banka d.d.	25,475,158	5.51	CNB	CNB
7 Imex banka d.d.	1,431,360	0.31	CNB	CNB
8 Istarska kreditna banka Umag d.d.	3,855,623	0.83	CNB	CNB
9 J&T banka d.d.	1,046,581	0.23	CNB (European college)	CNB (European college)
10 Karlovačka banka d.d.	2,646,251	0.57	CNB	CNB
11 KentBank d.d.	2,917,584	0.63	CNB	CNB
12 OTP banka d.d.	45,144,957	9.76	CNB (European college)	CNB (European college)
13 Partner banka d.d.	2,048,998	0.44	CNB	CNB
14 PBZ stambena štedionica d.d.	1,957,001	0.42	ECB	SRB
15 Podravska banka d.d.	3,939,457	0.85	CNB	CNB
16 Privredna banka Zagreb d.d.	95,967,944	20.75	ECB	SRB
17 Raiffeisen stambena štedionica d.d.	1,217,904	0.26	ECB	SRB
18 Raiffeisenbank Austria d.d.	37,170,059	8.04	ECB	SRB
19 Samoborska banka d.d.	534,157	0.12	CNB	CNB
20 Sberbank d.d.	11,058,451	2.39	ECB	SRB
21 Slatinska banka d.d.	1,502,307	0.32	CNB	CNB
22 Wüstenrot stambena štedionica d.d.	2,038,690	0.44	CNB	SRB
23 Zagrebačka banka d.d.	124,529,305	26.93	ECB	SRB
Total for all credit institutions	462,450,831	100.00		

The ECB and the Single Resolution Board rely on the CNB as the national supervisory and resolution authority in the performance of their supervisory activities and the exercise of their resolution powers in relation to banks, within the context of which they are authorised to give it instructions concerning the way in which it operates.

The criteria on the basis of which the European Central Bank and the Single Resolution Board take responsibility for individual credit institutions in individual member states are stipulated in detail and applied consistently in all participating member states.

The European Central Bank and the Single Resolution Board rely on the Croatian National Bank as the national supervisory and resolution authority in the performance of their supervisory activities and the exercise of their resolution powers in relation to the banks for which they are directly responsible, and in doing so they are authorised to provide instructions for its operations.

The Croatian National Bank remains directly responsible for performing its supervisory activities and exercising its resolution powers in relation to other, less significant credit institutions, and also continues to participate in cross-border colleges of competent authorities and resolution authorities for those credit institutions whose parent companies are located within the EU, but outside the euro area.



HARMONISATION WITH THE LEGAL FRAMEWORK OF THE BANKING UNION

During 2020, the existing national laws were amended to harmonise them with European regulations in order to enable the operation of the European Central Bank and the Single Resolution Board in the Republic of Croatia after the establishment of close cooperation. It was crucial to amend the Act on the Croatian National Bank, the Credit Institutions Act and the Act on the Resolution of Credit Institutions and Investment Firms, as well as to harmonise a number of by-laws with these amendments.

After the Eurogroup welcomed the Official Letter of Intent concerning the Entry of the Republic of Croatia into the European Exchange Rate Mechanism (ERM II) of 4 July 2019 in Brussels on 8 July 2019, along with the attached Action Plan, the CNB continued to implement legislative and regulatory measures, which were initiated in 2019, in the first quarter of 2020. In order to establish close cooperation between the CNB and the European Central Bank and join the Single Resolution Mechanism, it was necessary to enable the implementation of the following EU regulations in the legal system of the Republic of Croatia:

- Council Regulation (EU) No. 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions (OJ L 287, 29.10.2013; hereinafter: Council Regulation (EU) No. 1024/2013)
- Regulation (EU) No. 468/2014 of the European Central Bank of 16 April 2014 establishing the framework for cooperation within the Single

Supervisory Mechanism between the European Central Bank and national competent authorities and with national designated authorities (SSM Framework Regulation) (OJ L 141/1, 14.5.2014; hereinafter: Regulation (EU) No. 468/2014), and

- Regulation (EU) No. 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No. 1093/2010 (OJ L 225, 30.7.2014, hereinafter: Regulation (EU) No. 806/2014).

This included the adoption of amendments to the Act on the Croatian National Bank, the Credit Institutions Act and the Act on the Resolution of Credit Institutions and Investment Firms, so in early 2020 proposals for amendments to these acts were submitted to the Government of the RC. The required opinions of the European Central Bank were previously obtained, as

A new responsibility of the CNB is to conduct the procedure for imposing administrative sanctions, which replaces the current system of determining misdemeanour liability and imposing sanctions in proceedings before misdemeanour courts.

was, at their request, the opinion of an independent law firm that assessed that the national legislation of the Republic of Croatia allows the exercise of the powers of the European Central Bank under Council Regulation (EU) No. 1024/2013.

The new responsibility of the Croatian National Bank is to conduct the procedure for imposing administrative sanctions on grounds of violations of the provisions of Regulation (EU) No. 575/2013, the provisions of directly applicable legal acts of the European Central Bank and the provisions of the Credit Institutions Act, which replaces the current system of determining misdemeanour liability and imposing sanctions in proceedings before misdemeanour courts. The administrative sanctions provided for by the Credit Institutions Act are fines, warnings and periodic penalty payments, and the competence of the Council of the Croatian National Bank has been determined for imposing administrative sanctions.

With the entry into force of the Act on Amendments to the Act on the Croatian National Bank (Official Gazette 47/2020), the conditions were met for the Croatian National Bank to start applying Guideline (EU) 2016/2249 of the European Central Bank of 3 November 2016 on the legal framework for accounting and financial reporting in the European System of Central Banks (ECB/2016/34) from 1 January 2021, and from 2021 onwards the financial reporting of the CNB will be completely identical to that applied by the central banks that are members of the Eurosystem.

**From
2021
financial
reporting of
the CNB**

will be identical to that applied by Eurosystem member central banks.

In the last quarter of 2020, additional legislative and regulatory activities were undertaken related to the transposition into national legislation of the Republic of Croatia of the following EU directives:

- Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the

prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC (OJ L 176, 27.6.2013) as last amended by Directive (EU) 2019/2034 of the European Parliament and of the Council of 27 November 2019 on the prudential supervision of investment firms and amending Directives 2002/87/EC, 2009/65/EC, 2011/61/EU, 2013/36/EU, 2014/59/EU and 2014/65/EU (OJ L 314, 5.12.2019) and

- Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No. 1093/2010 and (EU) No. 648/2012 of the European Parliament and of the Council (OJ L 173, 12.6.2014) as last amended by Directive (EU) 2019/879 of the European Parliament and of the Council of 20 May 2019 as regards the loss-absorbing and recapitalisation capacity of credit institutions and investment firms and Directive 98/26/EC (OJ L 150, 7.6.2019).

The aforementioned directives were transposed into the national legislation of the Republic of Croatia by the adoption of the Act on Amendments to the Credit Institutions Act and the Act on the Resolution of Credit Institutions and Investment Firms, which were published in the Official Gazette 146/2020, the former entering into force on 29 December 2020, and the latter on 1 January 2021.

This has fulfilled the obligation to harmonise the national legislation of the Republic of Croatia, for which the CNB is responsible, with the *acquis communautaire* for 2020.

3

MONETARY POLICY, MACROPRUDENTIAL POLICY AND INTERNATIONAL RESERVES MANAGEMENT

Monetary policy was focused on alleviating the negative effects of the pandemic. Although the risks to financial stability were increased, given the monetary and supervisory measures taken and the sizeable capital reserves, there was no need to take macroprudential policy measures.

Despite negative euro yields and historically low dollar yields, investments in net international reserves in 2020 generated revenue of EUR 74.1m or HRK 556.3m.

A LOOK AT 2020: MONETARY POLICY, MACROPRUDENTIAL POLICY AND INTERNATIONAL RESERVES MANAGEMENT

1**CONSUMER PRICE
INFLATION****0.1%**

The average annual inflation of consumer prices slowed down to 0.1% in 2020.

MORE ON PAGE 25**2****CONTINUED DECREASE
IN INTEREST RATES****2.5%**

The interest rate on new kuna housing loans fell from 2.9% in 2019 to 2.5%.

MORE ON PAGE 30**3****UNPARALLELED
LIQUIDITY****HRK 54.7bn**

The average daily liquidity surplus of the domestic banking market increased from HRK 34.1bn at the end of 2019 to HRK 54.7bn at the end of 2020 and thus reached almost 15% of GDP.

MORE ON PAGE 29**4****GROWTH OF
INTERNATIONAL
RESERVES****EUR 18.9bn**

CNB's international reserves continued to trend up, reaching a record high of EUR 18.9bn on 31 December 2020.

MORE ON PAGE 47**5****INCREASED
ENTERPRISE
LENDING****5.6%**

Enterprises were mostly financed through working capital loans, while there were significantly fewer new loans for investment activities.

MORE ON PAGE 31**6****COUNTERCYCLICAL
CAPITAL BUFFER
REQUIREMENT****0%**

The rate of countercyclical capital buffer to be applied in 2021 was maintained at 0%.

MORE ON PAGE 36

MONETARY POLICY AND ECONOMIC DEVELOPMENTS

Real gross domestic product decreased by 8% in 2020, reflecting the shock of aggregate supply and demand due to the pandemic. Average annual consumer price inflation slowed down, mainly due to falling energy prices and lower prices of petroleum products. The current and capital account surplus on Croatia's balance of payments decreased as a result of declining tourism revenues, while negative trends were mitigated by a reduction in the foreign trade deficit, enhanced utilisation of EU funds and lower profits of foreign-owned banks and enterprises. The CNB reacted strongly to the unfavourable trends caused by the pandemic with monetary policy measures, and the Government of the Republic of Croatia with fiscal policy measures. The contraction in economic activity and the measures to alleviate the negative effects of the pandemic on employees have contributed to the deterioration of the general government budget balance in 2020.

Sharp decline in real economic activity in 2020

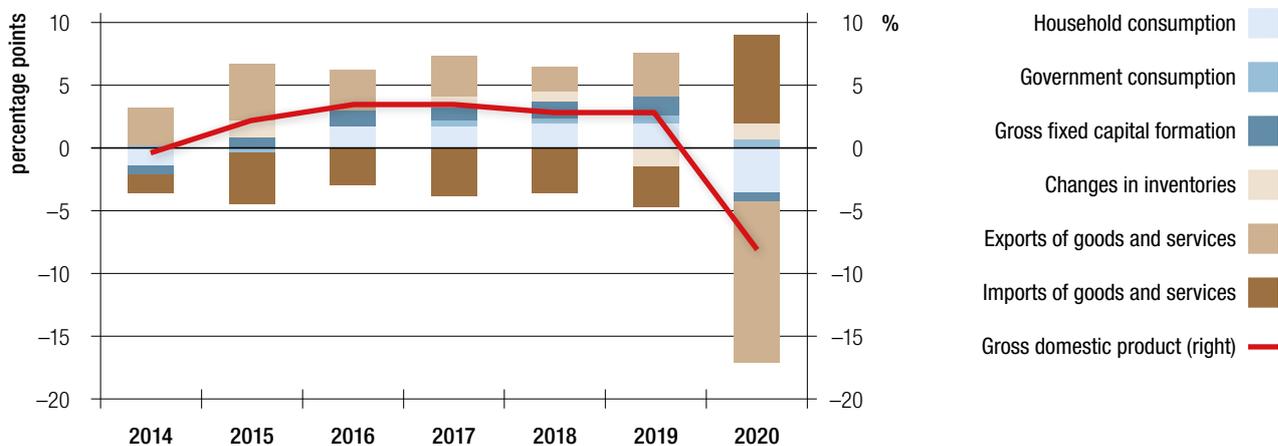
Real gross domestic product decreased by 8% in 2020 compared to 2019, when its growth rate was 2.9%, which is the strongest annual decrease since there has been a comparable time series of GDP trends for Croatia. The contraction in economic activity is the result of the COVID-19 pandemic in early 2020 and the restrictive measures introduced to combat it. In the first quarter of 2020, economic activity continued to grow compared to the same quarter of the previous year. However, the outbreak of the pandemic led to a sharp decline in economic activity in the second quarter. The recovery began as early as the end of the second quarter, shortly after the end of the first wave of the epidemic, but was slowed by a weaker performance in the tourism sector. Despite this, results in tourism exceeded initial expectations, which were very pessimistic. The economic recovery continued for the rest of the year, despite a further deterioration of the epidemiological situation.

The decline in economic activity was also partly due to domestic and foreign demand. Supply chains have shown great resilience during the pandemic, so with a shift in the structure of consumption from services to goods, trade in goods at the level of the whole year decreased only slightly. On the other hand, the decline in trade in services, especially in the export of tourist services, is significant, although the final results still significantly exceeded the extremely pessimistic expectations from the beginning of the pandemic. Household consumption fell due to the unavailability of certain goods and services, as well as due to increased caution in the face of growing uncertainty about job security and income, so a record low level was recorded for consumer confidence in the first half of last year. Investments recovered very quickly, and by the end of the year they exceeded the pre-pandemic level, and at the

The deterioration in the labour market in 2020 is relatively mild in relation to the intensity of the decline in economic activity.

Figure 3.1 Contraction of real GDP in 2020

contributions by GDP components



SOURCE: CBS.

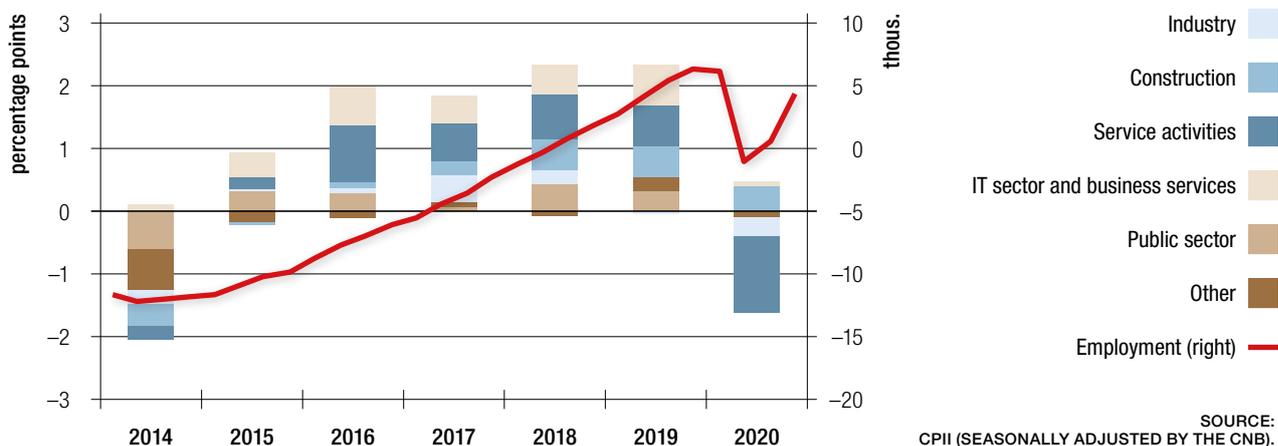
level of the whole of the year they decreased only slightly. Government consumption, which was also affected by new pandemic-related expenditures, is the only category of domestic demand that increased in 2020. The marked contraction in exports of services and household consumption in 2020 was reflected in a significant decline in total imports, so a high positive contribution of net foreign demand to growth was recorded.

The adverse effects of the decline in economic activity on the labour market were mitigated by a coordinated

package of economic policy measures, most notably by measures taken by the Government of the Republic of Croatia to preserve jobs. Total employment thus decreased by 1.2% in 2020, with the largest decline recorded in tourism-related services (Figure 3.2). At the same time, the internationally comparable unemployment rate rose to 7.5% of the labour force (from 6.6% in 2019). Wage growth slowed down simultaneously, so nominal gross wages rose by 2.5% (3.8% in 2019) primarily due to higher wages in the public sector. Payments of non-taxable compensations, which in previous years

Figure 3.2 Subdued reaction of the labour market to the sharp decline in economic activity

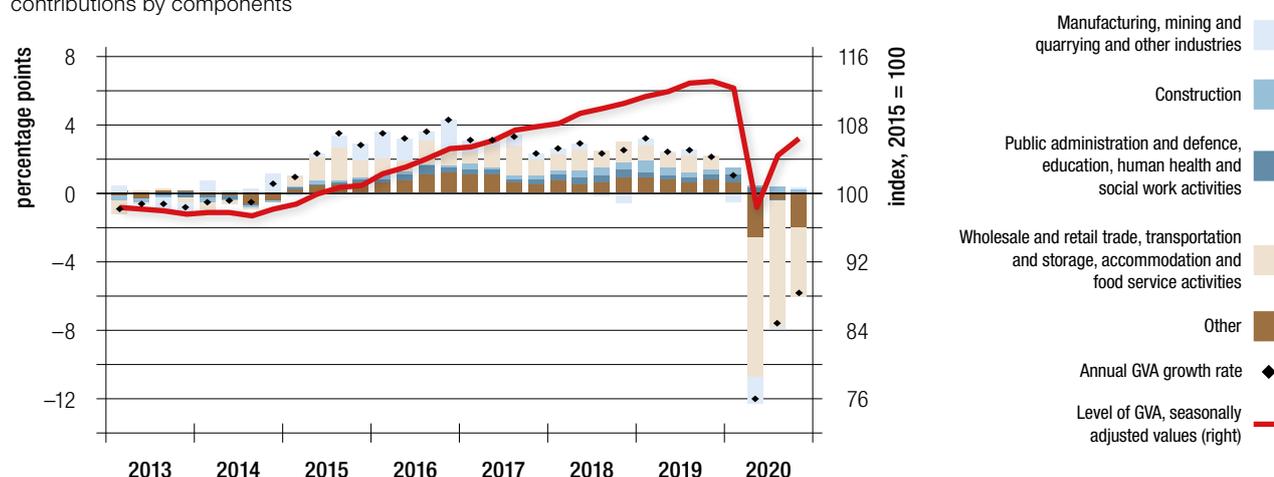
seasonally adjusted data, contributions to the annual rate of change



SOURCE: CPII (SEASONALLY ADJUSTED BY THE CNB).

Figure 3.3 The largest decrease in GVA was recorded in activities where physical contact is most common

contributions by components



SOURCE: CBS.

significantly affected the disposable income of employees, were almost completely absent in 2020. If non-taxable compensations were added to net wages, which increased by 2.8%, the incomes of employees expressed in such a manner would be reduced by 3.5% in 2020.

The decline in economic activity measured by gross value added was slightly less pronounced than the decline in GDP due to the substantial fiscal aid to enterprises, which is a deduction from GDP. The impact of the pandemic on certain activities was extremely asymmetrical. Information and communication activities, as well as construction were largely spared adverse effects, while manufacturing was relatively mildly affected and recovered quickly. The greatest contribution to the fall in GDP came from activities in which there is the most physical contact, in other words, the wholesale and retail trades, transportation and warehousing, accommodation and food preparation and service (Figure 3.3).

Deceleration of inflation due to a sharp decline in crude oil prices

The disturbance caused by the COVID-19 pandemic adversely affected both aggregate

supply and aggregate demand, so its impact on inflation could not be clearly assessed in advance. However, it soon turned out that the prevailing impact was that of weaker demand, which slowed inflation down significantly. This is mainly related to the impact of the decline in energy prices, i.e. cheaper crude oil on the world market, and then of petroleum products, which was mainly the result of the decline in demand due to the deteriorating outlook for global economic growth. The subdued inflationary pressures from the external environment also contributed to low inflation, taking into account low inflation in the countries that are the most important foreign trade partners. Furthermore, inflationary pressures in the segment of tourism-related services and durable consumer goods decreased as well. Interruptions in supply chains and an increase in unit labour costs and costs associated with the implementation of epidemiological measures acted in the opposite direction, but their impact was weaker. For all these reasons, the average annual consumer price inflation slowed down to 0.1% in 2020 (from 0.8% in 2019).¹

¹ Due to the pandemic and the implementation of epidemiological measures that included the closure of shops, cafes and restaurants, etc., during 2020 it was occasionally not possible to make field price collections, so statistical monitoring and analysis of consumer prices were difficult due to the greater need for estimation (imputation) of prices. Measurement of the inflation rate was also hampered by a significant change in the structure of personal consumption.

Analysed by components, the slowdown in overall consumer price inflation in 2020 is primarily the result of a reduction in the annual rate of change in energy prices from 1.8% in 2019 to –5.3% in 2020. In addition, in 2020, pressures to reduce the prices of industrial non-food products (excluding energy) prevailed, so that the average annual rate of change of these prices decreased slightly to –0.3% (from –0.2% in 2019). On the other hand, the average annual growth rate of food prices (including alcoholic beverages and tobacco) accelerated in 2020 to 2.2% (from 0.5% in 2019). The acceleration of the annual growth of food prices was recorded in early 2020, due to the effect of the base period (i.e. the disappearance of the effect that a reduction in the VAT rate in early 2019 had had on the annual rate of change in prices), and in March and April due to increased demand to create household stocks and disruptions in supply chains caused by the pandemic. In addition, excise duties on tobacco and sugary and alcoholic beverages were increased in April. In the remainder of 2020, normalisation of the flow of goods at the borders, reduction in pork and fruit prices on the EU market and the negative effect of the base period (due to a strong rise in meat prices in December 2019) gradually slowed

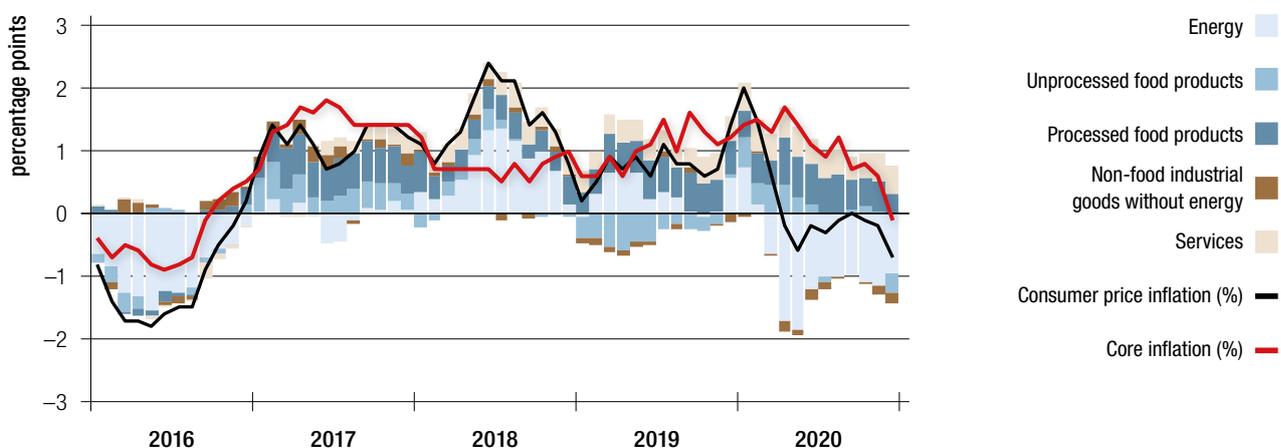
down the annual rise in food prices. The growth of service prices accelerated in 2020 to 1.7% (from 1.3% in 2019), specifically in the segment of phone services, personal care and insurance services, which was mitigated by lower contributions of prices of tourism-related services (restaurants and hotels, package holidays, cultural services and air passenger transport services). Core inflation (which excludes agricultural product prices, energy prices and administered prices) remained unchanged in 2020, at the level of 1.0%.

Declining surplus in the current and capital account, coupled with a further decrease in net external indebtedness

The sharp decline in net exports of services, primarily tourism, worsened the current and capital account balance in 2020, reducing the surplus from 4.9% of GDP in 2019 to 1.9% of GDP (Figure 3.5). The COVID-19 pandemic, the concomitant epidemiological measures to limit travel and physical distancing measures, deteriorating economic conditions, fear of the infection spreading and avoidance of exposure to infection have hit tourism hard. However, the decline in tourist activity in Croatia was somewhat smaller than in most

Figure 3.4 Consumer price inflation slowed down

contributions to annual inflation



Notes: Core inflation does not include agricultural product prices, energy prices and administered prices. Processed food includes alcoholic beverages and tobacco.

SOURCES: CBS AND CNB CALCULATIONS.

Mediterranean countries, which is largely the result of the main structural characteristics of Croatian tourism, i.e. high seasonality in the summer months, which coincided with the improvement of the epidemiological situation and the predominant use of road transport as a means of arrival in Croatia due to the proximity of the main tourist-generating markets. Ultimately, revenues from tourist consumption of foreign guests were less than half of those of the pre-crisis record of 2019.

Unfavourable trends in the current and capital account were mitigated by the decline in the foreign trade deficit due to a sharp decline in imports. While exports of goods proved to be relatively resilient because, according to the balance of payments data expressed in euro, an annual decline of 5.4% was recorded, imports of goods decreased by 10.7% as a result of contraction in domestic personal and investment demand, dependence of exports on imports, which includes tourism, as well as cheaper petroleum products. The greatest contribution to the reduction of goods deficit was made by trade of energy products, primarily oil and petroleum products, road vehicles and food products.

The balance on the primary income account also improved due to lower profits of domestic banks and enterprises (primarily in the activities of providing accommodation, and to a lesser extent in real estate operations) in foreign ownership. The total surplus on secondary income and capital transactions accounts also increased due to improved utilisation of EU funds. Thus, in 2020, the surplus of funds allocated to beneficiaries over total payments to the common European budget amounted to 4.2% of GDP, which is 1.6 percentage point more than in 2019.

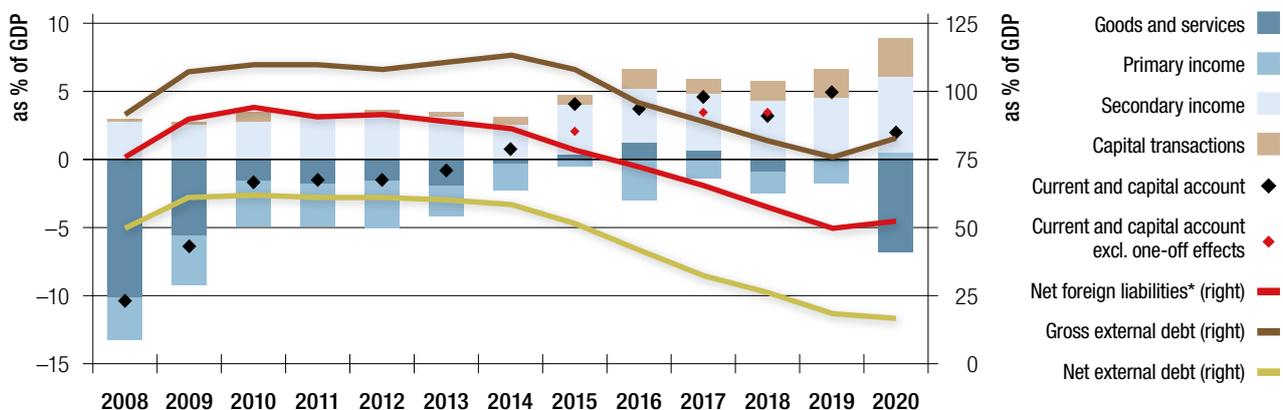
**4.2%
of GDP**

was the net amount of payments from EU funds to end beneficiaries in Croatia

Despite the instabilities that marked global financial markets and spurred capital outflows, the reduction in current and capital account surplus has slowed down the net deleveraging of the domestic economy. The moderate net outflow of capital was a result of the continued decline in net debt liabilities, primarily of other domestic sectors. In addition, international reserves have risen markedly. The increase in uncertainty following the outbreak of the pandemic at the end of the first and in the second quarter of 2020 resulted in depreciation pressures on the domestic currency, to which the central bank responded with interventions in

Figure 3.5 Reduction of the surplus in the current and capital account in 2020

current and capital account of the balance of payments and the balance of foreign liabilities



Note: One-off effects include conversion of CHF-linked loans in 2015 and bank provisions for loans to the Agrokor Group in 2017 and 2018.

* Net foreign liabilities are defined as the difference between total foreign liabilities and total foreign assets (based on debt instruments, financial derivatives, equity investments and similar), which is equal to the negative value of the net international investment position (-52.0% of GDP at the end of 2020).

SOURCE: CNB.

The decline in tourist activity was somewhat smaller than in most Mediterranean countries, due to the improvement of the epidemiological situation during the summer months and the predominant use of road transport as a means of arrival in Croatia.

the foreign exchange market. Due to a significant amount of foreign currency sales, international reserves temporarily decreased, but this decline was more than offset by the growth of reserves in the second half of the year, which contributed to the growth of foreign currency deposits placed with the CNB by the government and foreign currency sales to the CNB, as well as due to government foreign borrowing. Unlike net debt liabilities, net equity liabilities of domestic sectors increased due to direct equity investments in Croatia and retained earnings of domestic banks and foreign-owned enterprises, but this increase was lower than that in the previous year.

The sharp decline in nominal GDP adversely affected the relative indicators of foreign liabilities. Thus, despite the nominal reduction in gross external debt, its relative indicator deteriorated from 75.3% of GDP at the end of 2019 to 82.4% of GDP at the end

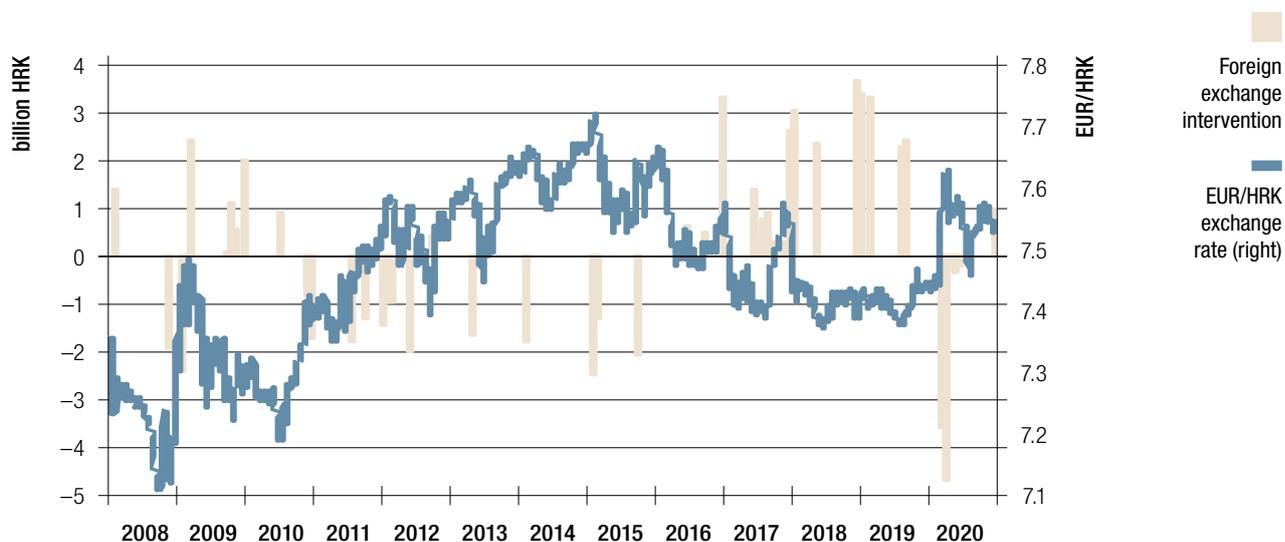
of 2020. Similarly, the net international investment position improved in absolute terms, but the relative indicator deteriorated from -49.8% of GDP to -52.0% of GDP. At the same time, despite the decline in GDP, the relative indicator of net external debt improved from 17.9% of GDP to 16.6% of GDP.

Highly expansionary monetary policy in response to the crisis caused by the pandemic

The CNB promptly and effectively responded to adverse economic developments and financial market disruptions caused by the pandemic by initiating a series of monetary policy measures to stabilise the exchange rate and the government securities market, preserve favourable financing conditions and stimulate credit flows to the economy, citizens and the government. The programme of purchasing government securities on the domestic financial market, which was implemented for the first time,

Figure 3.6 Selling euro to the banks prevented excessive weakening of the kuna

amounts of foreign exchange interventions and EUR/HRK exchange rate



SOURCE: CNB.

was particularly significant, and the amounts of the interventions on the foreign exchange market were large. Liquidity increased through both structural and regular operations, and the reserve requirement rate also decreased.

In 2020, the CNB vigorously intervened in the foreign exchange market, selling a total of EUR 2.7bn to banks, mainly in March and early April, when strong depreciation pressures on the kuna exchange rate emerged. These pressures were due to the adjustment of the domestic sector portfolio triggered by changes in expectations regarding future exchange rate trends, influenced by uncertainty about the possible effects of the pandemic (Figure 3.6). The transfer of significant amounts of funds from investment funds to credit institutions to be held there in the form of foreign currency deposits increased yields on government securities and threatened to freeze the market due to the sale of securities at reduced prices, which investment funds utilised to try to raise funds to pay investors. Strong depreciation pressures arose due to a sudden surge in the demand of bank clients for foreign currency and due to the deterioration of the currency position of credit institutions. In addition to the CNB's foreign exchange interventions, these pressures on the foreign exchange market were relieved by the swap line agreement concluded with the ECB in April, which enables the exchange of kuna for euro in the amount of EUR 2bn. At the end of the year, somewhat more pronounced appreciation pressures briefly emerged, which the CNB mitigated by purchasing EUR 130m from banks. On the other hand, a total of EUR 3.0bn was purchased from the central government, so foreign exchange transactions in 2020 generated

HRK 2.9bn of reserve money. The daily exchange rate of the kuna against the euro moved within a rather narrow range around the average exchange rate of EUR/HRK 7.53, which also corresponds to the central parity determined at the time of Croatia's entry into the ERM II exchange rate mechanism in July 2020.

In order to stabilise the bond market, the CNB expanded the circle of its direct clients to other financial institutions, and on the secondary market it purchased Croatian government securities with a total market value of HRK 20.3bn at two auctions held in March, one auction held in April and two auctions held in June. The CNB also took other monetary policy measures in order to maintain favourable financing conditions for domestic sectors, so it placed HRK 3.8bn to banks, as part of a structural operation in March, for a period of five years with an interest rate of 0.25%, which is the largest amount placed so far in these operations. In addition, banks ensured kuna liquidity via regular weekly operations, for the first time since 2017. Finally, in March, the CNB lowered the reserve requirement rate from 12% to 9%, releasing to banks HRK 6.34bn of the funds previously allocated to a special statutory reserve account held with the CNB.

As a result of the extremely expansionary monetary policy, banks' free reserves in 2020 were at their highest levels to date. Thus, the average daily surplus liquidity of the domestic banking market increased from HRK 34.1bn at the end of 2019 to HRK 54.7bn at the end of 2020, and reached almost 15% of GDP (Figure 3.7). Under such conditions, the overnight interest rate on banks' demand deposit trading was very low throughout the year, between 0.00% and

The cost of financing domestic sectors remained relatively favourable, but was accompanied by a tightening of credit standards for granting loans, especially for enterprises. Conditions remained favourable for government financing on the foreign market.

0.07%, while the implicit interest rates derived from banks' trading in currency swap agreements were slightly negative.

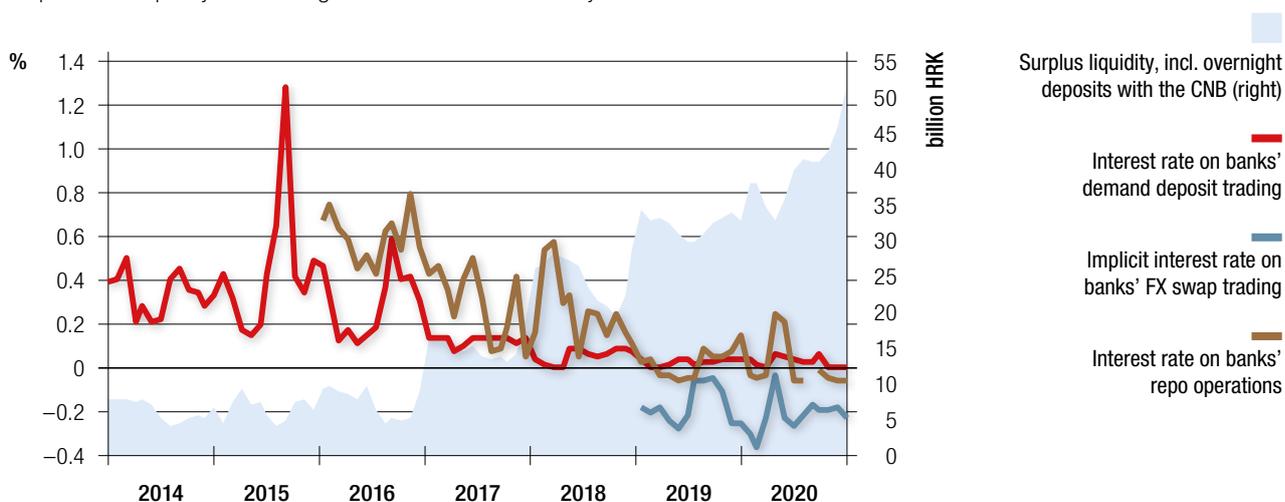
The substantial liquidity of the system has contributed to the maintenance of favourable financing conditions for domestic sectors. Government borrowing costs fell to the level of the end of the previous year, or even slightly below that level, after a slight increase in the first half of the year. The interest rate on one-year T-bills in kuna remained at 0.06%, i.e. at the level reached in October 2019, while the interest rate on one-year T-bills in euro in December 2020 dropped to -0.05%. In terms of long-term borrowing, the government issued several long-term securities during the first half of the year to refinance liabilities and finance measures aimed at assisting the economy after the outbreak of the pandemic. Financing costs, despite the disturbances in the financial markets caused by the pandemic,

remained very favourable as yields on issue ranged from 0.37% for a five-year kuna security to 1.28% for a kuna security with a currency clause in euro, and a maturity of 20 years, which is the issue with the longest maturity so far. Favourable conditions were also maintained for government financing on the foreign market.

Interest rates on new loans to enterprises and households, which include pure new and renegotiated loans, generally continued to decline. Thus, for example, the interest rate on new housing loans in kuna decreased from 2.9% at the end of 2019 to 2.5% at the end of 2020, and the interest rate on new consumer loans in kuna decreased from 6.1% to 5.7%. As regards corporate lending, interest rates on short-term corporate loans decreased from 2.5% to 2.3%, while interest rates for long-term loans increased from 2.1% to 2.5%, mainly as a result of higher amounts of contracted moratoriums on loans;

Figure 3.7 The central bank ensured unparalleled liquidity for the economy

surplus kuna liquidity and overnight interest rate in the money market



Note: Interest rate on banks' demand deposit trading by the end of 2015 refers to overnight interbank interest rate.

SOURCE: CNB.

Consumer lending declined amid uncertainty due to the pandemic-induced crisis, while housing loans growth continued to accelerate as a result of subsidy programmes.

loan moratoriums are also recorded in interest rate statistics at the initially contracted rates which are generally slightly higher than the current market interest rates. This effect was strongest during the second quarter, when moratoriums were mostly approved.

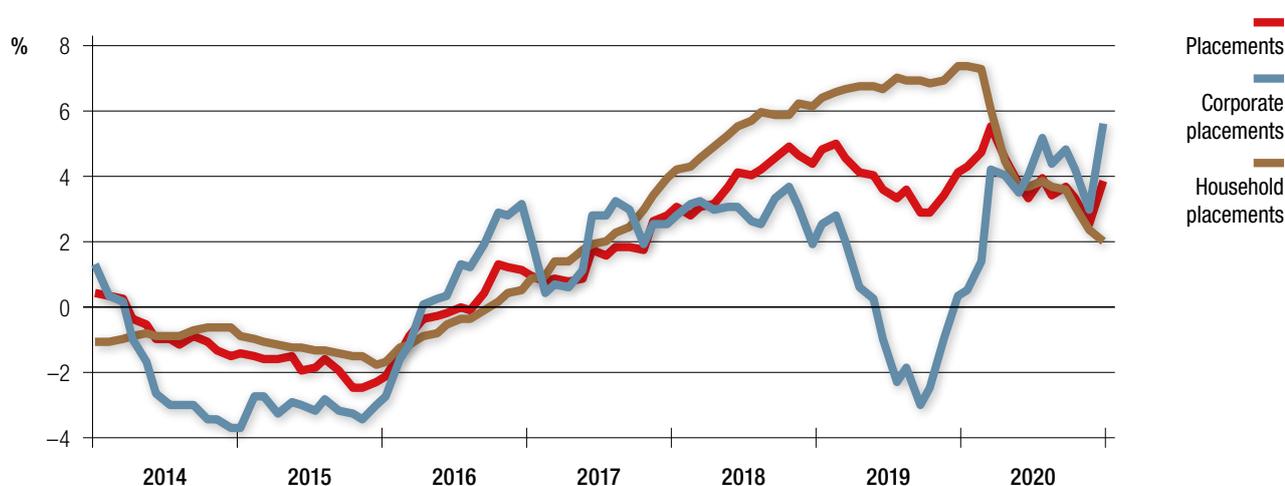
The weakening of economic activity after the initial wave of borrowing was reflected in a decline in demand for loans, with a particular reduction in the need to finance fixed capital formation, while the need for debt restructuring and working capital financing mitigated the decline in demand. At the same time, the increase in credit risk led to a marked tightening of corporate lending standards. When it comes to households, after tightening the standards for granting loans in the first half of the year, banks relaxed them later in the year. However, in parallel with the decline in consumer optimism, household demand for consumer loans declined, while demand

for housing loans remained high due to subsidy programme support.

Growth in total bank placements to domestic sectors, excluding the government, slowed down slightly in 2020, to 3.9%, from 4.2% in 2019 (based on transactions, Figure 3.8). When analysing the situation sector by sector, increased lending to companies is noticeable, the annual growth of which at the end of 2020 reached 5.6%. In light of the increased uncertainty, enterprises were predominantly financed by working capital loans, while there were significantly fewer new loans for investment activities. The growth of household loans slowed down significantly; after an increase of 7.4% in 2019, household loans in 2020 increased by only 2.1%. Consumer lending declined amid uncertainty due to the pandemic-induced crisis, while housing loans growth continued to accelerate as a result of subsidy programmes.

Figure 3.8 Credit activity slowed down slightly

year-on-year rate of change, transaction-based*



* The transactions show changes net of the changes in the exchange rate, reclassifications, price adjustments of securities and loan write-offs, including the sale of placements to the amount of their value adjustments.

SOURCE: CNB.

Declining budget revenues and rising costs associated with the pandemic have significantly worsened fiscal indicators. General government deficit reached 7.4% of GDP, while the public debt to GDP ratio rose to 88.7% at the end of 2020.

The growth trend of lending in kuna after the outbreak of the pandemic slowed down slightly, mainly due to slightly higher corporate borrowing with a currency clause. Lending in kuna is still more pronounced in the household sector, and at the end of the year kuna loans accounted for 55% of all loans to households. The continued strong growth of kuna sources in banks' liabilities, especially funds in transaction accounts, the annual increase of which was 19%, continued to stimulate lending in kuna.

The crisis caused by the pandemic also had an adverse effect on public finance indicators

Declining budget revenues and rising costs associated with the pandemic have significantly worsened fiscal indicators. General government deficit reached 7.4% of GDP, while the public debt to GDP ratio rose to 88.7% (Figure 3.9) at the end of 2020. Thus, fiscal trends were reversed after three consecutive years of general government surplus according to the internationally

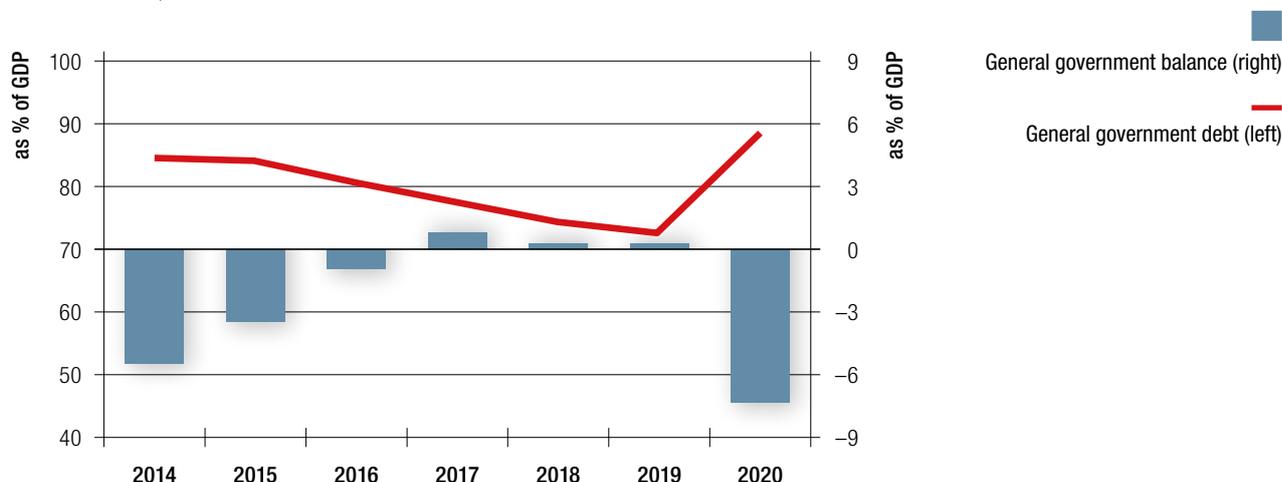
comparable methodology of the European System of National and Regional Accounts (ESA 2010), after five years in which the public debt-to-GDP ratio was reduced.

The deterioration of the balance is due to the decline in economic activity, which reduced budget revenues, as well as to economic measures aimed at alleviating the crisis caused by the pandemic, which resulted in an increase in budget expenditures. Total revenues in 2020 were thus 6.5% lower on an annual basis, while expenditures increased by approximately 8.6%.

Unfavourable budgetary performance and the decline in nominal GDP resulted in an increase in the general government debt-to-GDP ratio. The relative public debt indicator at the end of 2020, which amounted to 88.7% of GDP, was thus 15.9 percentage points higher than at the end of 2019.

Figure 3.9 Worsening of fiscal indicators

fiscal indicators, as % of GDP



SOURCES: CBS AND CNB.

FINANCIAL STABILITY AND MACROPRUDENTIAL POLICY

Due to the macroeconomic and financial shock caused by the COVID-19 pandemic, it is estimated that systemic risks increased at the beginning of the year and reached a high level. In addition to the risks arising from the growing mismatch between rising real estate prices and the economic variables that should determine them, structural risks related to public and private sector debt have increased over the past year. In 2020, the CNB, together with other economic policy makers, took a number of coordinated measures to mitigate the adverse effects of the pandemic and help preserve the stability of the financial system as a whole. Following the adjustment to the new legal framework, and taking into account the increased level of risk to financial stability, at the end of the year the prescribed level of capital buffers increased very slightly, and then solely for the largest credit institutions.

Overall assessment of the main risks and challenges to financial stability

The COVID-19 pandemic and the introduction of epidemiological measures led to a sudden halt in economic and social activities, and consequently to a sharp decline in gross domestic product.

The contraction of the economy and the marked deterioration of the economic environment have significantly increased the overall exposure of the financial system to systemic risks, which has remained high since early 2020.

In such circumstances, the Government of the Republic of Croatia, the Croatian National Bank and the Croatian Financial Services Supervisory Agency mitigated the adverse effects on the economy through a series of coordinated measures and contributed to preserving the

stability of the financial system.¹ However, the cost of these measures and the declining revenues due to unfavourable macroeconomic trends resulted in a sudden increase in public debt, which had been a pronounced structural risk even before the pandemic.

Risks in the non-financial private sector also increased as enterprises increased debt to bridge the period of declining revenues. This decline in revenue was extremely sharp and very unevenly distributed among individual activities, depending on the sensitivity of each individual activity to the epidemiological measures. On the other hand, it was easier to surmount the difficulties because of the relatively high level of profits from previous years, which was also channelled into strengthening capital, by significant fiscal grants

¹ Over the year, the CNB has collected and published relevant data on measures taken from all competent institutions (Ministry of Finance, Tax Administration, Croatian Employment Service, HBOR, Croatian Agency for SMEs, Innovations and Investments (HAMAG-BICRO) and banks, in cooperation with HANFA and non-bank financial institutions), informing European institutions upon request.

After rising sharply with the outbreak of the pandemic, the volatility of the domestic financial market quickly diminished and remained less pronounced until the end of the year.

to, mainly, job preservation programmes and the contracted moratoriums on the repayment of loans. Although the vulnerability of the household sector has not increased significantly, largely due to **government support measures for job preservation** ¹ (available only in Croatian), growing uncertainty about future wage and employment trends has undermined consumer optimism, which has also led to a decline in household demand for consumer loans. On the other hand, the growth of housing loans accelerated, to which the government subsidy programme contributed.

Risks arising from real estate market developments have also increased due to the growing mismatch between rising residential property prices and key economic determinants.

Although the number of transactions on the Croatian residential property market decreased slightly, residential property prices continued to grow, but at a more moderate pace than in the previous year. The rise in prices, in addition to the

government's housing loan subsidy programme, was also supported by favourable financing conditions. On the other hand, the pace of price growth was limited not only by unfavourable macroeconomic trends and restrained consumer optimism, but also by a reduced number of tourists. As in the previous year, market activity was focused on Zagreb and the Adriatic coast, although after the outbreak of the pandemic and earthquakes, changes in demand were noticeable, which could reflect the growing propensity to live outside the larger urban cores. The pandemic has reduced the demand for certain types of commercial real estate, such as offices, which is linked to the belief that working from home will continue to a certain extent after the end of the pandemic.

After rising sharply with the outbreak of the pandemic, the volatility of the domestic financial market quickly diminished and remained subdued until the end of the year. The foreign exchange and

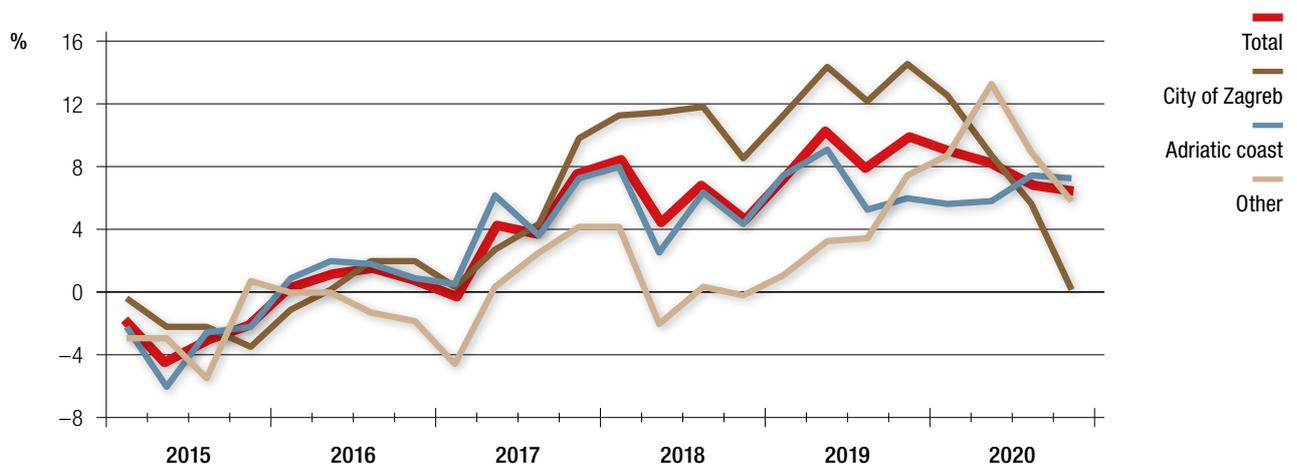
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Figure 3.10 Residential property prices

year-on-year rate of change



SOURCE: CBS.

bond markets reacted the most to the uncertainty posed by the pandemic, followed to a lesser extent by the capital market. The CNB responded to depreciation pressures caused by the change in the currency structure of domestic portfolios with a series of interventions that cumulatively reached record levels, which stabilised the exchange rate. Pressures on the bond market were noticeable in the growth of the spread between yields on bonds of the Republic of Croatia and bonds of other countries, i.e. in the decline in the value of CROBIS, while in the capital market there was a decline in the value of CROBEX and a rise of its volatility. In order to avoid the danger of “freezing” the government securities market and preserving favourable financing conditions for all sectors of the economy, the CNB launched for the first time the direct purchase of government securities from an expanded set of financial institutions (see chapter 1 COVID-19 pandemic: effect on economic activity and CNB measures). The rapid response in the form of a series of monetary policy

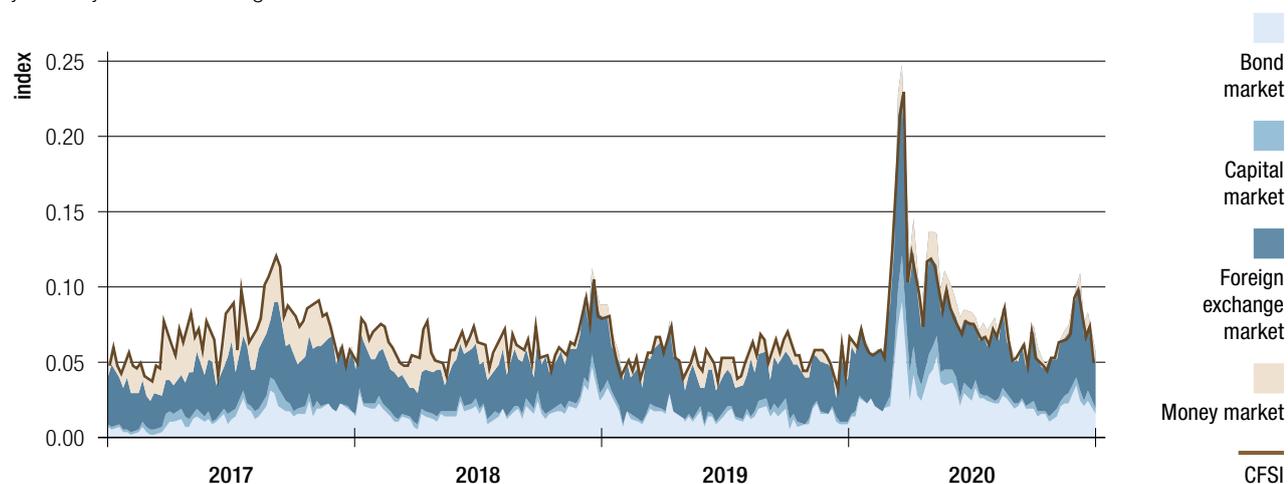
measures has reduced uncertainty in financial markets.

The domestic banking sector is highly liquid and capitalised despite the described adverse trends caused by the COVID-19 pandemic. Under the influence of the CNB's expansionary monetary policy, kuna and foreign currency liquidity of the banking system increased further, which, together with favourable trends in international financial markets, enabled domestic financing conditions to remain very favourable. Encouraged by the CNB's order to retain the previous year's profit, as well as by temporary relaxation of supervisory rules and regulatory changes (see chapter 4 Supervision, resolution and business operations of credit institutions), the already high capitalisation of the banking sector increased further in 2020.

Interim supervision measures and economic policy measures aimed at alleviating the effects of the pandemic have postponed the day

Figure 3.11 Croatian financial stress index and contribution of individual markets

year-on-year rate of change



SOURCE: CNB.

when the banking sector will have to face the consequences of increased risks. While the share of non-performing loans in total loans did not change significantly, performing exposures increased their credit risk in 2020. In addition to growing credit risk, banks' earnings are burdened by a long period of low interest rates, which reduces the net interest margins, as well as by sluggishness in the accomplishment of business savings. The identified increase in credit risk significantly reduced profitability indicators, and high uncertainty regarding the impact of unfavourable trends on banks' balance sheets continued.

Macprudential activities of the CNB in 2020

In 2020, the response to the crisis related to the COVID-19 pandemic did not include the use of macroprudential instruments. The countercyclical capital buffer, which builds an additional capital buffer at banks on the upturn of the financial cycle, was not effectively applied at the time of the crisis in Croatia (its rate is 0%). Namely, the crisis did not follow the usual upturn of the credit cycle in which this protective buffer is accumulated, but it occurred as an external shock on account of health concerns. On the other hand, structural systemic risks have increased with the outbreak of the crisis, so the buffers for these risks have been maintained at appropriate levels.

The adoption of the Act on Amendments to the Credit Institutions Act in December 2020 completed the transposition of the provisions of Regulation (EU) 2019/878 into the Croatian legislative framework, which brought into force significant changes related to the application of capital buffers, primarily the structural systemic risk buffer and the buffer for other systemically important (O-SII) credit institutions. As a result of harmonisation with these legislative changes at the European level, the total capital requirements

arising from capital buffers have increased very slightly for the largest credit institutions.

a) Capital buffers

The primary purpose of capital buffers is to increase the resilience of the banking system to possible sudden shocks. With the entry into force of the amended regulatory framework in December 2020, the combined buffer requirement comprises the sum of: a) capital conservation buffer, b) structural systemic risk buffer, c) O-SII credit institutions buffer, and d) countercyclical buffer. Regulatory changes introduced the additivity of the O-SII credit institutions buffer and the structural systemic risk buffer, which was previously possible only if the structural systemic risk buffer was applied exclusively to domestic exposures, while otherwise, as in Croatia, only the higher of the two aforementioned buffers was applied. Therefore, the amount of the combined buffer requirement increased slightly for all O-SII credit institutions, while it did not change for other credit institutions.

The level of the capital conservation buffer still amounts to 2.5% of the total risk exposures for all credit institutions, as prescribed by the Credit Institutions Act.

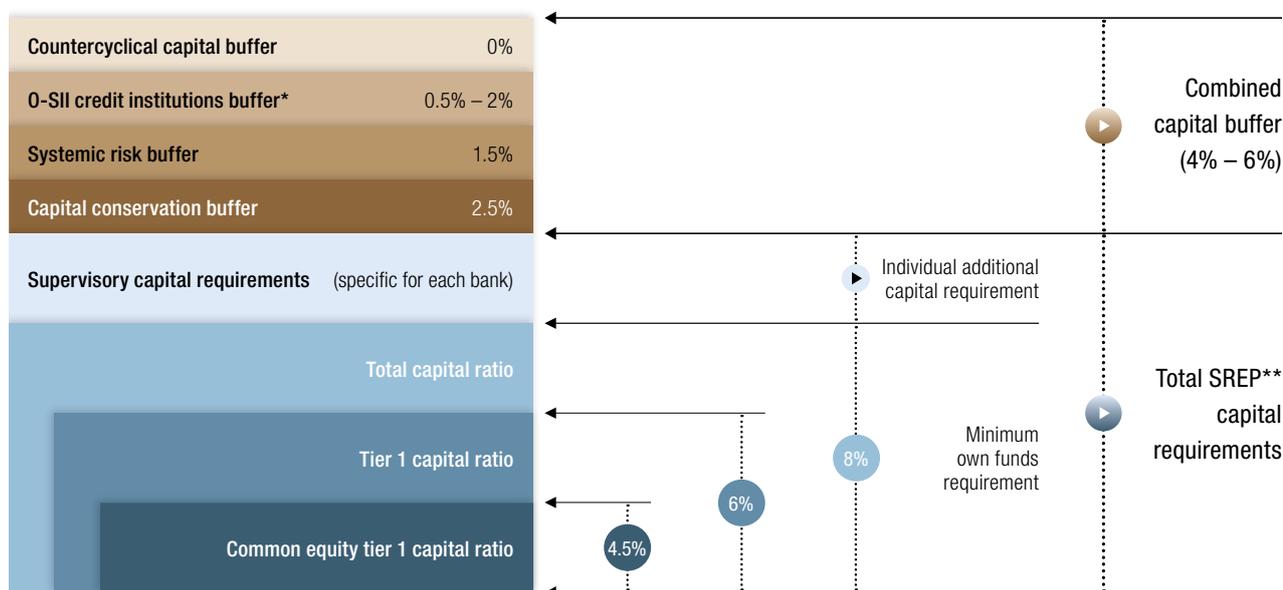
In the light of the amended regulatory framework, in December 2020 the Croatian National Bank adopted a new decision on the application of the structural systemic risk buffer, which prescribes a single capital buffer rate for structural systemic risk for all credit institutions. Based on the [analysis of structural elements of financial stability and systemic risk in the economy](#) ¹, this rate is set at 1.5% of the total amount of risk exposure for all credit institutions with head offices in the Republic of Croatia. By virtue of this decision, the previous two different rates of this capital buffer (1.5% and 3.0%) cease to be applied for two groups of credit institutions, depending on the type, scope and complexity of their operations. As systemic risks arising from the size and complexity of individual

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With the entry into force of the amended regulatory framework, the level of the combined buffer requirement increased slightly for other systemically important credit institutions, while it did not change for other credit institutions.

Figure 3.12 Structure of the capital requirement and applicable rates for the total risk exposure percentage



* Other systemically important
 ** Supervisory Review and Evaluation Process (SREP)

SOURCE: CNB.

credit institutions and the concentration of the banking sector are covered by the O-SII credit institutions buffer, which is now effectively applied under the new regulatory framework, there is no longer a need for a higher rate of structural systemic risk buffer.

In December 2020, the regular annual review of the systemic importance of credit institutions² and the determination of the required capital buffer for institutions identified as systemically important were also carried out. As in the previous year, the analysis identified a total of seven O-SII credit institutions, which, in accordance with their systemic importance, were assigned a capital buffer rate of 0.5% or 2% of the total amount of risk exposure.

The countercyclical capital buffer throughout 2020 accounted for 0% of total risk exposure. In the circumstances of deteriorating economic trends caused by the COVID-19 pandemic, and

due to the need to maintain the continuity of bank lending to the non-financial private sector, the rate of countercyclical capital buffer to be applied in 2021 was maintained at 0%.

In June 2020, the CNB conducted a regular annual review of the importance of credit institutions' exposures to third countries (non-EU countries).¹ Bosnia and Herzegovina and Montenegro have been identified as substantially important third countries for the banking system of the Republic of Croatia due to the exposure of domestic banks to these countries. Taking into account the deterioration of economic trends caused by the COVID-19 pandemic, with the analysis of available historical data on banks' operations in these countries, it was found that there was currently no risk of excessive credit growth that would require regulatory measures for Croatian banks exposed to these markets to be taken.

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1 In accordance with Recommendation ESRB/2015/1³

b) Borrower-based instruments

Amendments to the Credit Institutions Act and the Act on the Croatian National Bank of April 2020, which were implemented with the aim of harmonisation with the commitments undertaken as part of joining the European Exchange Rate Mechanism II (ERM II) and the banking union, introduced into the Croatian legislative framework the possibility of applying legally binding borrower-based measures. This elaborates the powers of the Croatian National Bank to adopt legally binding measures and instruments such as limiting the loan-to-value ratio (LTV), limiting the loan-to-income (LTI) and/or loan-service-to-income (LSTI) ratio, or debt-to-income and debt-service-to-income ratio, prescribing the maximum maturity and dynamics of loan repayment and similar restrictions. The main goal of such measures is to limit excessive lending activity in certain segments of the credit market, mitigating the accumulation of risks in the financial system and increasing the resilience of borrowers of loans in the event of adverse economic and/or financial trends.

In order to increase the range of data required for analysis and monitoring of systemic risk and credit risk, calibration of macroprudential borrower-based measures and, if necessary, monitoring of credit institutions regarding the implementation of adopted measures, the CNB established a new reporting requirement¹ for credit institutions, which has been in effect since the end of the year. The data collected on the basis of this Decision are utilised to create an analytical basis for the calibration of borrower-based measures should there be any need for their use. This also achieves harmonisation with a part of the requirements from the recommendations of the European Systemic Risk Board², which are utilised at the European level to harmonise the data needed to assess and monitor financial stability risks related to the real estate market.

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c) Establishment of close cooperation between the European Central Bank and the Croatian National Bank and joining the Single Supervisory Mechanism

By virtue of the establishment of close cooperation with the European Central Bank (ECB), from 1

October 2020 the Republic of Croatia will be able to participate in the banking union, which further contributes to the security and stability of the country's banking system. In addition to participating in the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism, in the area of implementing macroprudential policy after establishing close cooperation, the Croatian National Bank is cooperating with the ECB in designing macroprudential measures based on common European regulations.

Cooperation in the field of macroprudential policy

Representatives of the CNB participated in the work of the Financial Stability Council, which held two meetings in 2020, chaired by the Governor of the CNB. Presented at the meetings were assessments of the main risks and challenges to financial stability and activities related to the implementation of macroprudential policy, with particular emphasis on economic developments and risks in the conditions of the crisis caused by the COVID-19 pandemic and measures taken to respond to the crisis. Representatives of the CNB took part in the work of the European Systemic Risk Board, specifically in the work of the General Board and the Advisory Technical Committee³, as well in its standing and ad hoc working groups.

Following the establishment of close cooperation with the European Central Bank on 1 October 2020, the CNB continues to formulate and implement macroprudential policy to ensure the stability of the financial system, but will do so in cooperation and coordination with the ECB. This means that financial stability risk assessment, the analysis of macroprudential regulations and policies that are being implemented and the design and monitoring of macroprudential measures will be carried out not only for own needs, but also according to the requirements of the ECB. In doing so, the ECB monitors developments relevant to financial stability and policies that are being implemented in all SSM

1 Decision on collecting data on standards for lending to consumers¹ (available only in Croatian)

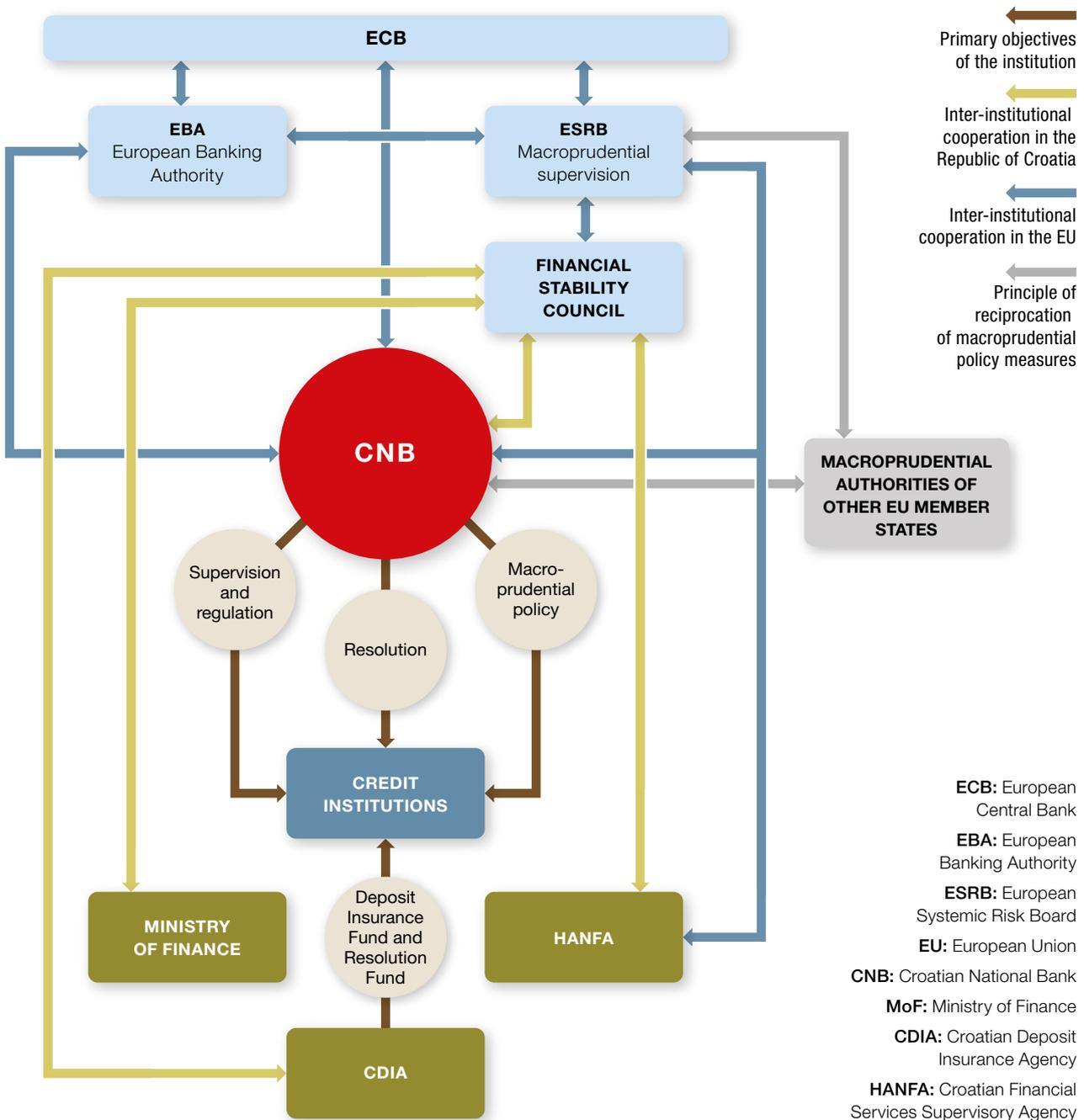
2 Recommendations on closing real estate data gaps (ESRB 2016/14² and ESRB 2019/3³)

3 See chapter 8 CNB in the EU and the international environment for more details.

countries, and in addition to common and harmonised indicators, methods and models, it considers national specifics, taking into account the views and opinions of representatives of all SSM members, to formulate an evaluation of national macroprudential measures based on common European regulations. With the

beginning of close cooperation, representatives of the CNB joined the work of the Financial Stability Committee composed of the representatives from countries participating in the SSM and its standing working groups, in which financial stability risks and macroprudential policy measures are discussed.

Figure 3.13 The role of the CNB in maintaining financial stability



REAL ESTATE MARKET IN CROATIA IN 2020

Despite a record contraction of the domestic economy, residential property prices in Croatia continued to grow in 2020 and reached their historically highest values. Numerous indicators show that the real estate price gap in relation to the “equilibrium level” is increasing, i.e. the prices of residential properties are increasing in relation to income, construction costs and other variables that usually determine them.

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Real estate prices affect household wealth, decisions on current spending and the possibility of obtaining a loan.

Why are real estate prices important to the economy?

Residential properties account for the major portion of the assets of a household, so changes in their prices directly affect household wealth, and can indirectly affect their consumption decisions and, ultimately, aggregate economic activity. Real estate prices can also affect the country’s financial stability, given that real estate is the most common collateral for borrowing from banks and affects the level of credit risk that banks accept. In this context, the higher price level spills over to the higher value of collateral, so in the period of rising real estate prices, lending is facilitated and the demand for loans grows, on

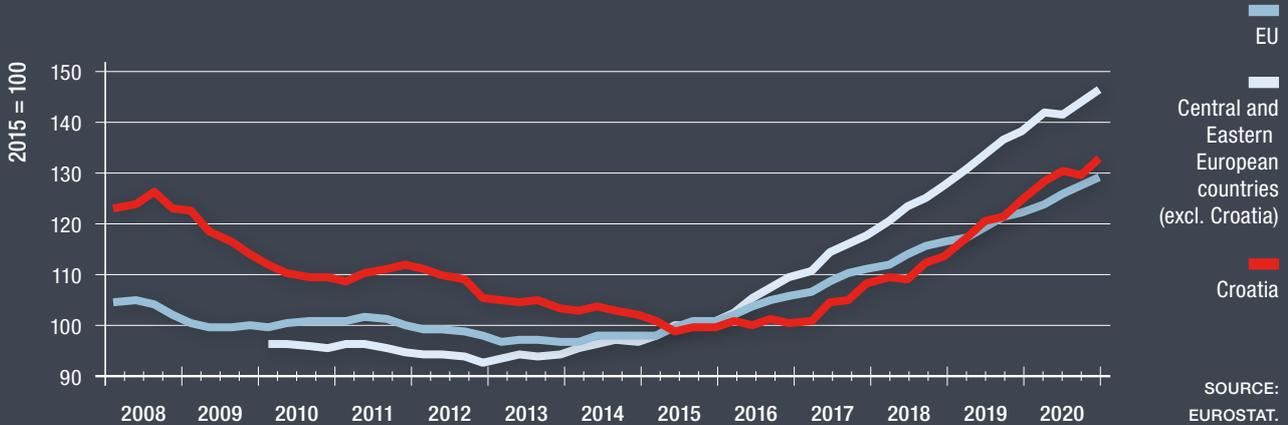
the one hand, but the supply of loans by banks grows as well, on the other. The reverse holds true as well, a decrease in prices affects the decline in the value of collateral, which directly and negatively affects the resilience of the borrower and leads to an increase in the probability of default. Ultimately, this mechanism will result in losses in the financial sector, and if the cost of credit risk increases sufficiently, it can also disrupt the flow of credit to the economy.

Real estate prices and number of transactions in 2020

Despite the record contraction of the domestic economy, real estate prices in 2020 rose at an

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Figure 3.14 Indices of residential property prices – Croatia and the EU

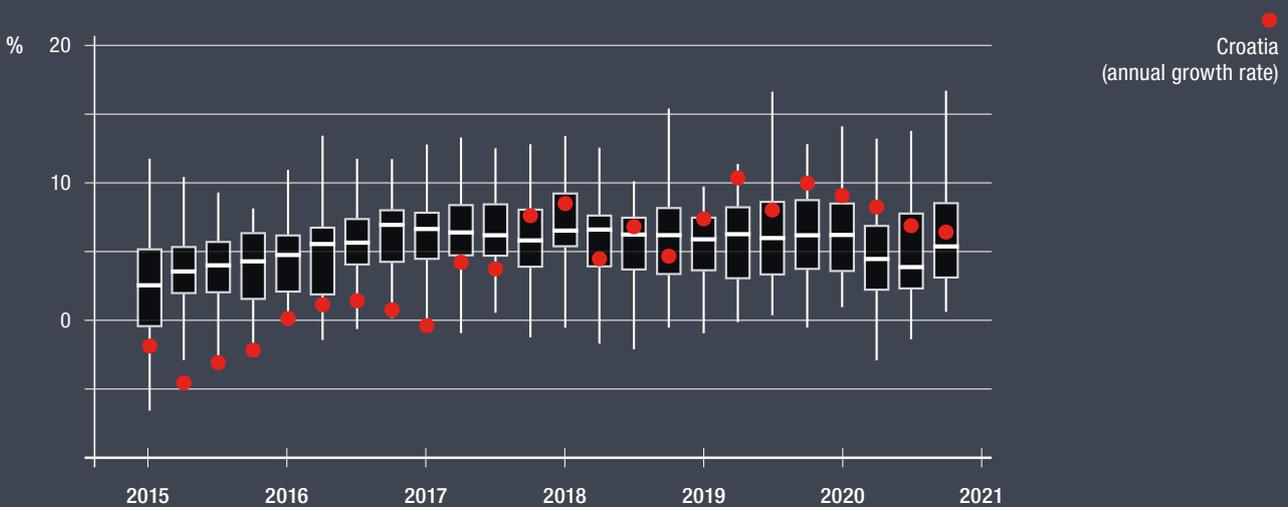


annual rate of 7.7%, which is only slightly lower than in 2019, when prices rose by 9%. The growth of real estate prices in the previous year was not specific to Croatia – they continued to grow in all other EU member states, except Cyprus, under the influence of extremely favourable financing conditions and investors seeking profits (Figure 3.14).

However, it is important to note that in the last two years the growth of real estate prices in Croatia has intensified and in that period, unlike in previous years, it was among the highest in the EU (Figure 3.15).

The composite index on the basis of which the CNB estimates the divergence of residential

Figure 3.15 Distribution of annual growth rates of real estate prices in EU member states



Notes: The *boxplot* diagram in the figure shows the distribution of annual rates of change in real estate prices in the EU. For each period, the following is given: lower and upper quartiles (shown by the lower and upper sides of the rectangle), distribution median (shown by a bold line through the rectangle) and the smallest and largest data (shown by the ends of vertical lines) located within 1.5 times the interquartile range looking from the lower or upper quartiles. Outliers are not given.

SOURCE: EUROSTAT.

The divergence of residential real estate prices from “equilibrium levels” in 2020 signalled a certain overvaluation, and the moderate decline in the number of transactions with a further rise in prices indicates a fairly strong demand relative to supply.

property prices from “equilibrium levels” in 2020 signalled a certain overvaluation of residential properties (Figure 3.16). All individual indicators used in the calculation of the composite index, except for the loan-service-to-income ratio, were above the long-term trend, which, taking into account unfavourable economic trends, indicates too rapid a growth of real estate prices relative to the macroeconomic variables that should determine them.

In the previous year, the number of sales of residential property fell after several years of continuous growth that began in 2016, with short-term stagnation in 2018 (Figure 3.17). The decrease in the number of transactions was 8.6% and was moderate if we take into account the circumstances caused by the pandemic, which hampered sales, and uncertainty in the labour market. The number of transactions along the Adriatic coast decreased the most (18%),

which was also contributed to by the uncertainty related to tourism and to the profitability of real estate investments for the purpose of tourist rentals. In the City of Zagreb, the decline in the number of transactions was 5.7%, and in the rest of Croatia 2.5%. A moderate decline in the number of transactions with a further trend of price growth indicates a fairly strong demand for real estate in relation to the number of available real properties. Furthermore, it is certain that real estate sellers in the past year did not react to the possible lack of interest of buyers by lowering prices, but by postponing the sale, i.e. reducing the offer (“wait and see”).

Last year’s earthquakes, which hit the centre of Zagreb and Sisak-Moslavina County the hardest, caused significant damage to the housing stock in those areas. However, it is important to point out that the areas most affected by the devastating earthquakes account for a relatively small share

Figure 3.16 Composite index of real estate price divergence from the fundamentals



Note: A composite index of divergence is obtained as the first main component of the six indicators given in the figure.

SOURCES: CBS AND CNB CALCULATIONS.

* Standardised cycle

Working from home during the pandemic and anticipation of the possibility of occasional work from home after the pandemic have increased the attractiveness of real estate outside city centres.

in all housing transactions, approximately 3% at the national level, so prices in these areas did not significantly affect aggregate price movements and the total number of transactions, although a certain indirect impact on price growth in surrounding areas due to reduced real estate supply cannot be ruled out. [The impact of the earthquake from March 2020 on the real estate market is analysed at HNBlog ¹](#).

The importance of subsidising housing loans and foreign nationals for real estate demand

Real estate prices rose last year under the influence of strong demand for real estate driven by historically low interest rates on housing loans and the propensity to allocate savings to real estate in conditions of relatively stable incomes and employment due to the Government’s measures aimed at assisting the economy. The structure of demand was also affected by new

lifestyle trends caused by the pandemic, such as physical distancing and working from home, which encouraged the purchase of larger apartments and increased the attractiveness of living outside the city centre. Demand for residential properties in 2020, the year of the pandemic, was stimulated by two specific factors – the purchase of real estate by non-residents and the subsidising of housing loans. Demand from non-residents was mainly concentrated in coastal counties where tourism has a higher importance, while inland, where real estate is mainly purchased for residential purposes, the effect of housing loan subsidies had a more important effect on the demand for real properties.

Transactions of foreign nationals in the period from 2017 to 2020 accounted for approximately a quarter of all residential property purchases in coastal counties. Residents of Germany, Austria and Slovenia bought the most real properties, and their transactions were most frequent on the part



Figure 3.17 Number of residential property sales



Note: The Adriatic Coast region is defined as consisting of 139 municipalities/cities (for more details, see Kunovac, D., and K. Kotarac, *Residential Property Prices in Croatia*, CNB Surveys, S-37).

SOURCE: TAX ADMINISTRATION DATABASE.

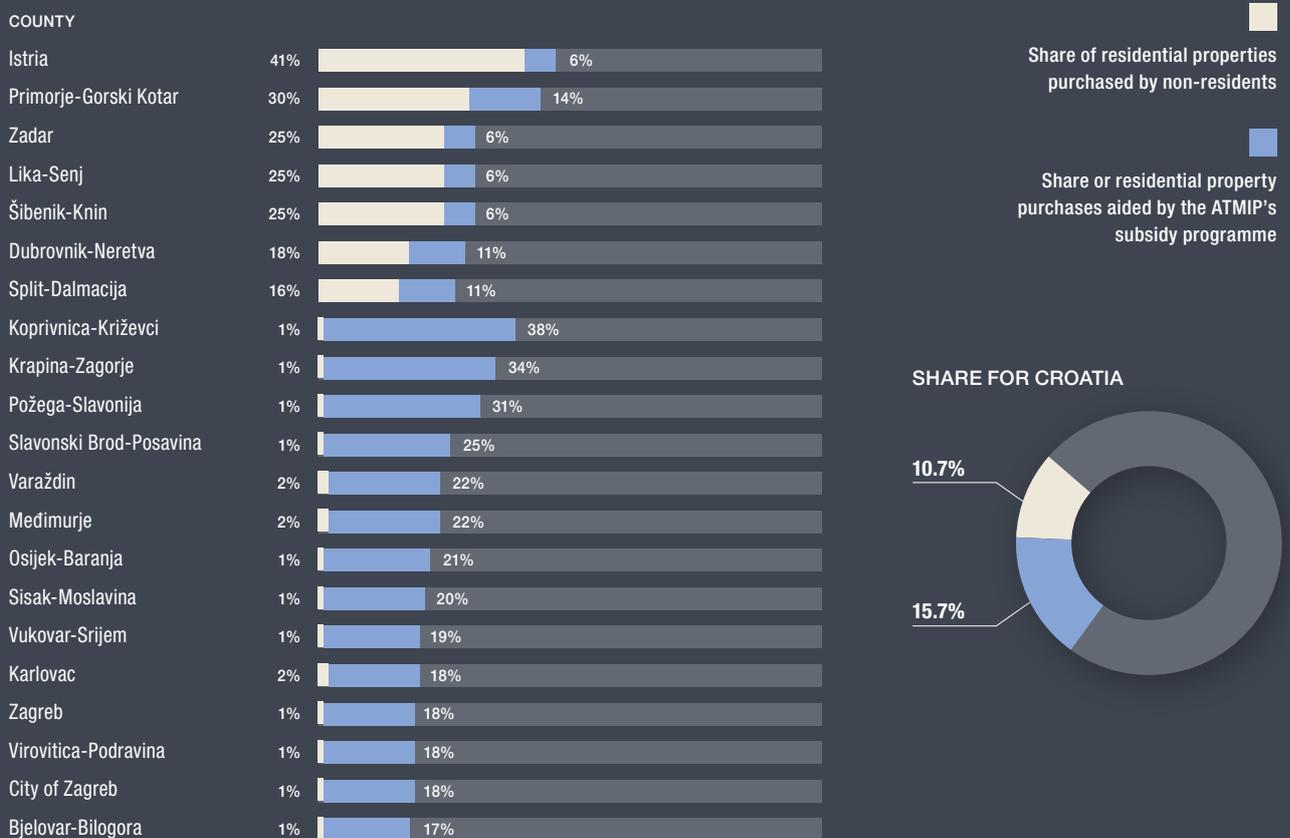
of the Adriatic coast that is geographically closer to their countries, and which can be reached relatively quickly by car. Despite the difficulty of cross-border movement and the process of purchasing and selling real estate in the previous year, the share of non-residents in the number of residential property transactions in coastal counties decreased only slightly, from 28% to 25%. Transactions of non-residents remained an important support to real estate demand on the Adriatic coast. Had they reacted more strongly to the pandemic, the decline in the number of transactions in this region in 2020 would have been significantly higher and would probably have tended to bring about a fall in prices.

Purchases of residential property with the assistance of subsidies provided by the Agency for Transactions and Mediation in Immovable Properties (APN) are

most prevalent in continental counties, where, since the introduction of subsidies, approximately 20% of all real estate has been purchased under this programme. In the previous year, two cycles of housing loan subsidies were completed for the first time, in March and September, and 8150 new applications were approved (Figure 3.19). The number of approved subsidy applications has increased significantly from previous years, so it is estimated that approximately a quarter of the transactions on the market last year were finalised under this programme. This year, APN subsidies continue to support demand, but to a lesser extent due to the limitation of the total amount of funds available for subsidies.

Analysis of the impact of housing loan subsidies on the real estate market, which was conducted in

Figure 3.18 Structure residential property sales in the period 2017-2020



SOURCE:
TAX ADMINISTRATION DATABASE.

The number of approved applications for subsidies has increased significantly from previous years, and it is estimated that approximately a quarter of the transactions on the market were realised under this programme last year.

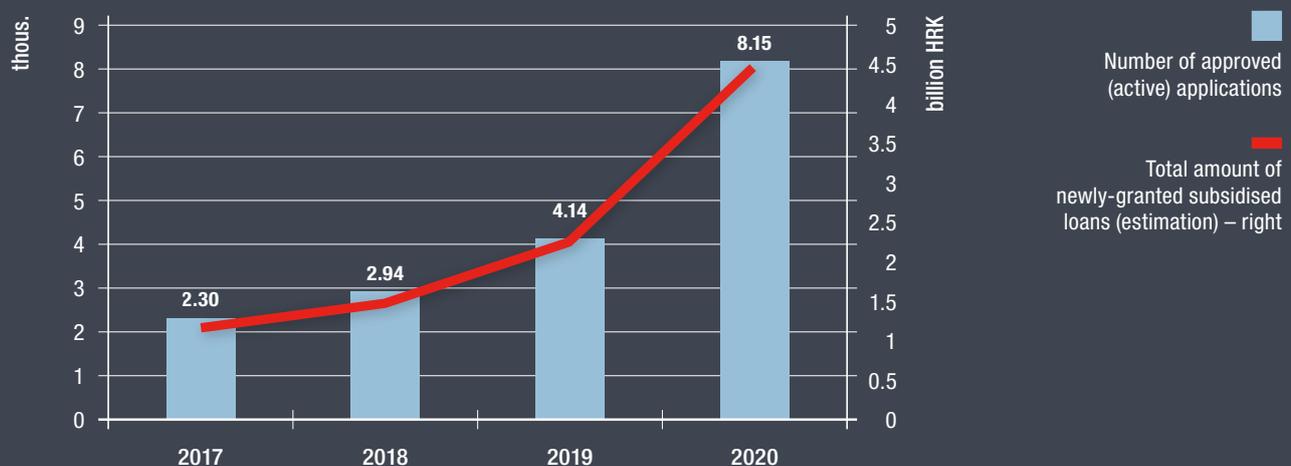
the form of a joint study by analysts of the CNB and the Institute of Economics, Zagreb (Kunovac, D., and I. Žilić (2020): *Home sweet home: The effects of housing loan subsidies on the housing market in Croatia*, CNB Working Papers, W-60), finds that subsidies in the period 2017–2019 had a somewhat pro-cyclical effect and further accelerated the existing price growth, but were not the dominant generator of growth. However, in conditions of reduced demand for real estate during a pandemic, subsidies can have a stabilising effect on the real estate market because they contribute to mitigating the decline in demand and a possible significant decline in the number of transactions.

Despite the stabilising effect not only of subsidies, but also of non-residents on the real estate market in crisis, it is important to note that in the case of a prolonged period of rapid growth in prices, they can deviate too far from “equilibrium” values (Figure 3.14) and further increase financial stability risks.

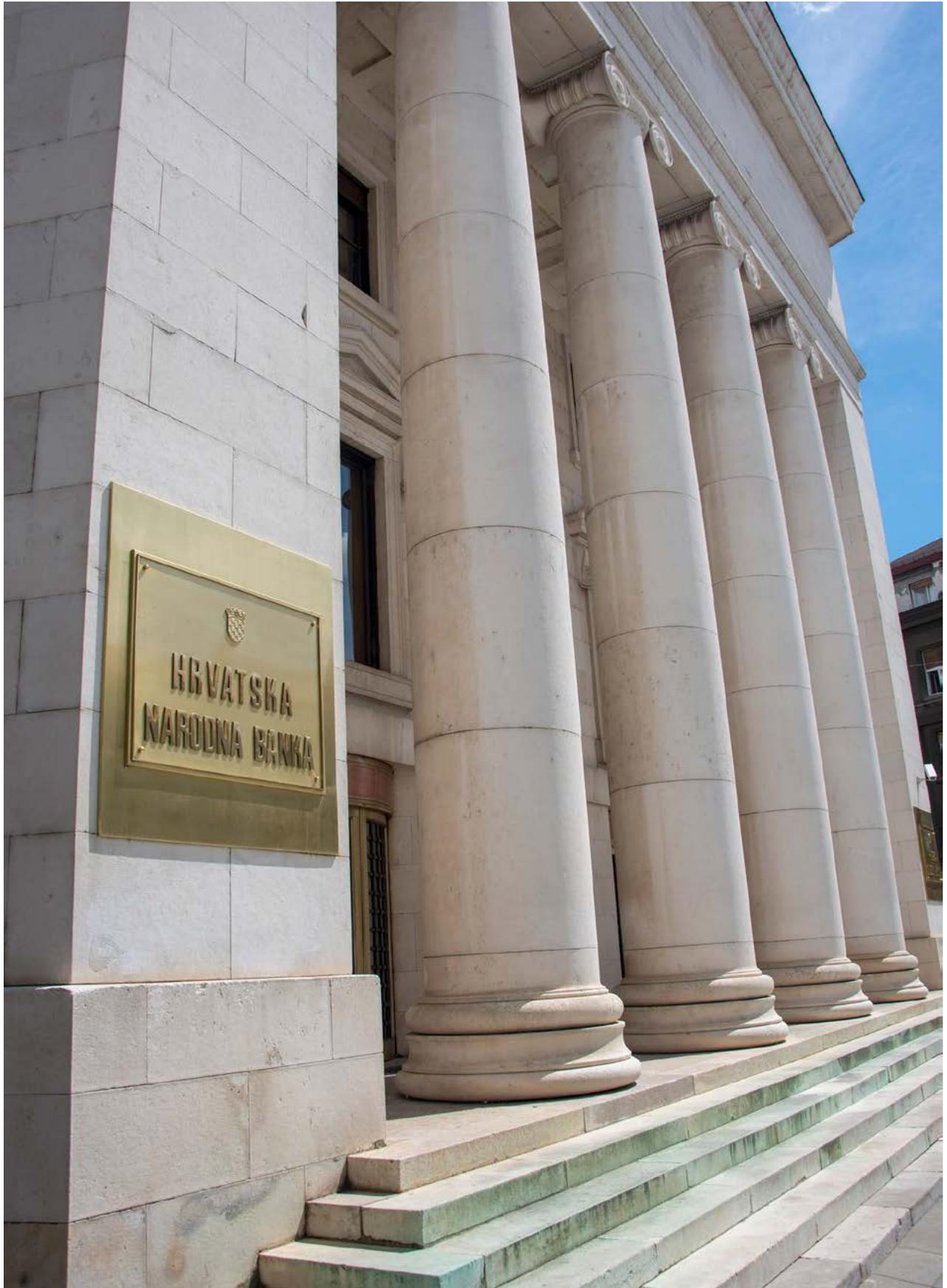
- A** More information about the impact of APN subsidies on the real estate market in Croatia: [Home sweet home: The effects of housing loan subsidies on the housing market in Croatia](#)
- B** More information about the impact of the March 2020 earthquake on the real estate market: [The impact of the pandemic and the earthquake on the real estate market in Zagreb in the first half of 2020](#)
- C** More information about real estate and financial stability, the residential and commercial real estate market, as well as financing and risks related to the real estate market: [Financial Stability No. 22, chapter 4, Real estate](#)



Figure 3.19 Number of approved applications and evaluation of the total amount of newly-granted subsidised loans



SOURCES: AGENCY FOR TRANSACTIONS AND MEDIATION IN IMMOVABLE PROPERTIES AND CNB CALCULATIONS.



INTERNATIONAL RESERVES MANAGEMENT

In the year marked by the pandemic, the international reserves of the Croatian National Bank were the basis for maintaining the stability of the domestic currency exchange rate, and their growth trend continued. In the conditions of significant market fluctuations, disrupted liquidity and increased uncertainty with record outflows due to foreign exchange interventions in March and April, followed by a noticeable growth of reserves in the rest of the year, reserves management during 2020 was particularly challenging and operationally demanding. In such an environment, the primary objective of international reserves management, namely to ensure liquidity and security, was successfully achieved.

CNB's international reserves in 2020

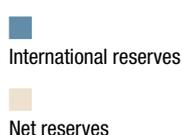
At the end of 2020, the CNB's international reserves amounted to EUR 18,944.4m, up by EUR 382.1m or 2.1% from the end of 2019 (Figure 3.20). During the same period, net reserves, excluding the funds of the Ministry of Finance, the European Commission, special drawing rights in the IMF, and investments in

repo operations, increased by EUR 322.3m, or 1.9%, and reached EUR 17,692.0m.

The growth of international reserves in 2020 was mostly due to the inflow of foreign currency to the account of the Ministry of Finance due to increased foreign borrowing and inflows from EU funds, and

Figure 3.20 In the year marked by the pandemic, the CNB's international and net reserves continued to grow despite large fluctuations

end of period, in million EUR



SOURCE: CNB.

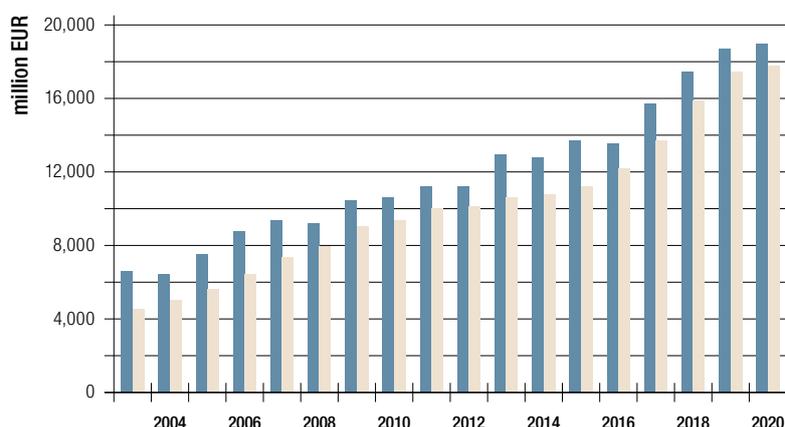
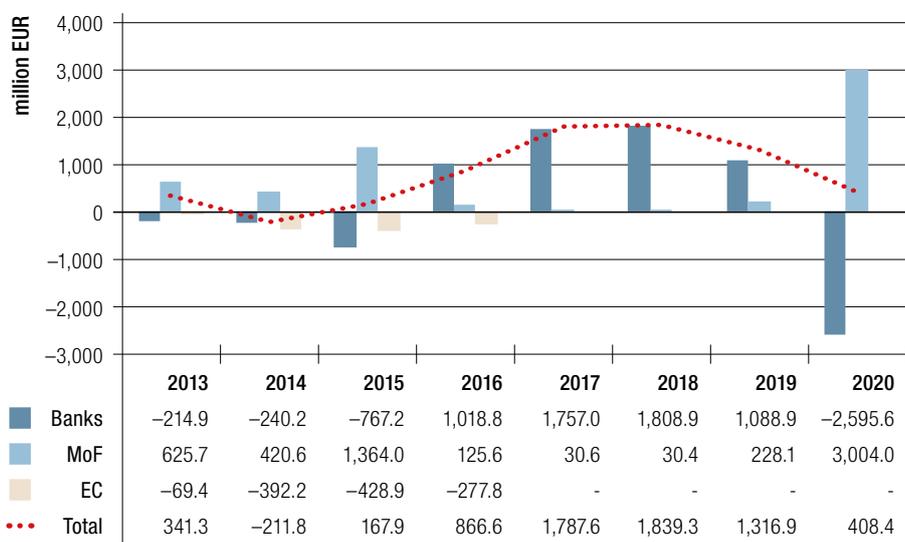


Figure 3.21
By purchasing foreign
currency from the MoF,
the CNB compensated
for large sales of foreign
currency to banks

CNB foreign currency
 purchase in net amounts,
 from 2013 to 2020,
 in million EUR

Note:
 Positive values refer to the CNB's
 foreign currency purchases and
 negative to foreign currency sales.

SOURCE: CNB.



the decrease in reserves was mostly due to foreign currency sales to banks, via foreign exchange interventions, and a lower level of contracted repo operations at the end of the year.

In 2020, the CNB purchased most of the inflows from the MoF (EUR 3,004.0m), which exceeded the amount of net sales to banks through foreign exchange interventions (EUR 2,595.6m). Thus, the CNB's net purchase of foreign currency on the domestic foreign

exchange market throughout the year amounted to EUR 408.4m, which generated HRK 2,934.0m.

Structure of international reserves investment

International reserves managed by the CNB independently and in line with its own guidelines comprise the held-for-trading portfolios, the investment portfolios, the funds entrusted for management to an international financial institution and foreign cash in

Figure 3.22
Investments in the safest
instruments accounted
for the largest share
in the international
reserves structure

shares in percentages,
 at the end of 2020

SOURCE: CNB.

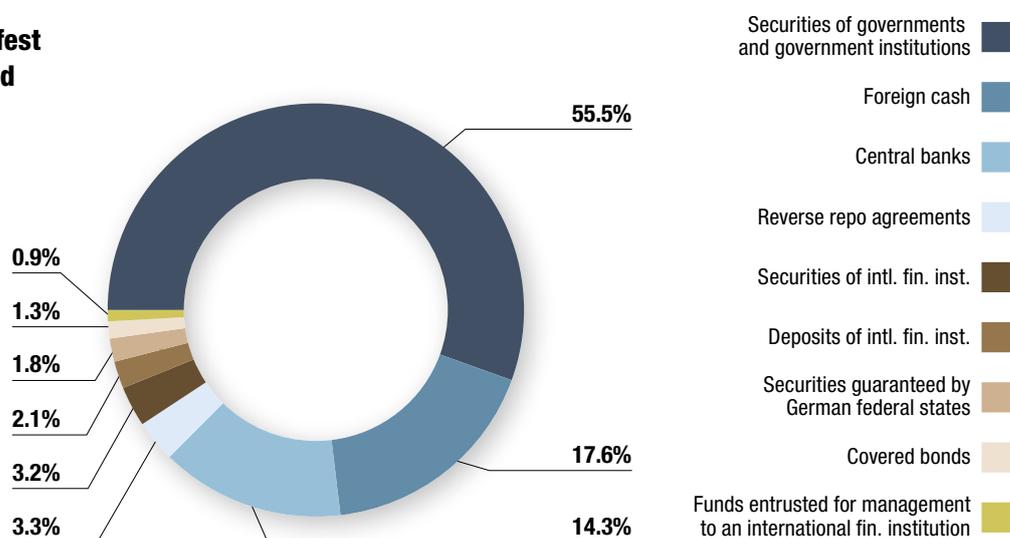
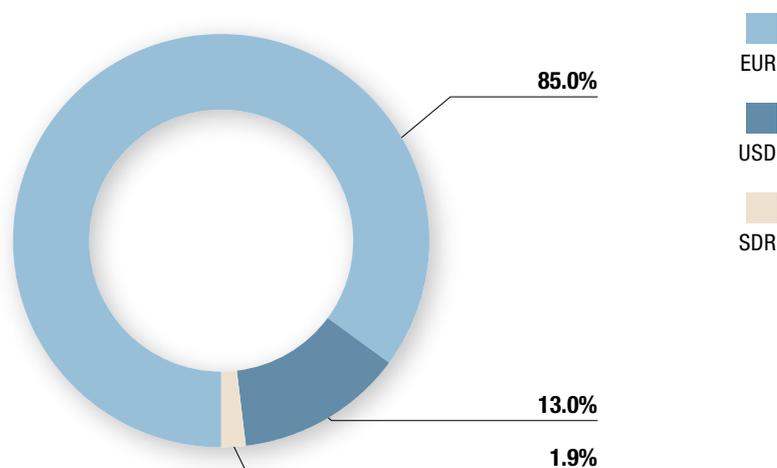


Figure 3.23 The euro dominates the currency structure of international reserves

shares in percentages,
at the end of 2020



SOURCE: CNB.

the vault. Securities of governments and government institutions, foreign cash and deposits with central banks (Figure 3.22) accounted for the largest share in the structure of international reserves investment at the end of 2020. At the end of 2020, a part of international reserves was invested in green bonds (0.4%).

International reserves funds are invested in financial institutions and in countries with an investment grade rating, with investments in individual financial institutions and countries and in individual instruments being limited, which diversifies credit risk. At the end of 2020, approximately 64% of the CNB international reserves were invested in countries, banks and institutions within the two highest credit rating categories or invested in the BIS and the IMF or in foreign cash in the CNB vault.

Currency structure of international reserves

In 2020, the currency structure of international reserves changed in favour of the euro. Thus, the share of the euro in international reserves, which amounted to 82.0% at the end of 2019, increased to 85.0% in 2020, while the share of the US dollar decreased from

15.9% to 13.0% (Figure 3.23). The share of SDRs in international reserves edged down from 2.0% to 1.9%.

In line with such a currency structure and the fact that international reserves account for the majority of the CNB's assets, while the major share of liabilities is kuna-denominated, the CNB, like many central banks in other countries, is significantly exposed to currency risk, while exchange rate differences have a direct impact on the financial result in the CNB's Income Statement¹. Total exchange rate differences regarding international reserves in 2020 were positive and amounted to HRK 11m.

Financial markets and international reserves management results in 2020

In 2020, the COVID-19 pandemic caused the most turbulent global economic and financial movements in modern history. Extreme volatility was recorded in global financial markets, as evident in the rapid fall in stock exchange indices, followed by their recovery, the drop in yields on government securities, substantial volatility of the US dollar against the euro, as well as a noticeable increase in gold prices and a decrease in oil prices. It was not until the end of the year that markets were more

¹ According to International Financial Reporting Standards (IFRS), in accordance with which the CNB compiles its financial statements, exchange rate differences are first recognised in the Income Statement, and then the income is allocated or the loss is covered from the CNB's general reserves.

affected by the more positive mood due to the start of vaccination against COVID-19, the outcome of the US presidential election and the final agreement between the United Kingdom and the EU in the Brexit process.

In such conditions, the ECB introduced a new securities purchase programme in March, increased the amount of the existing programme and introduced new longer-term refinancing operations. The Fed also introduced new securities purchase programmes, but also lowered the range for its benchmark interest rate to the level of 0.00% to 0.25%.

Yields on European government securities decreased in 2020, to the greatest extent for longer maturities, so 75% of government securities of the euro area member states had negative yields. The entire yield curve for German bonds was in negative territory at the end of 2020.

The yield curve for US bonds dropped sharply in 2020, with the average fall for US government securities with maturities up to ten years totalling 132 basis points.

In an environment of prolonged periods of negative euro yields and historically low US dollar yields, continuous strategic decision-making on international reserves management over the last ten years, primarily on the formation of investment portfolios since 2011, followed by tactical decisions and adjustment of existing

guidelines, ensured an adequate level of earnings. In 2020, net international reserves investments generated an income of EUR 74,1m, i.e. HRK 556.3m.

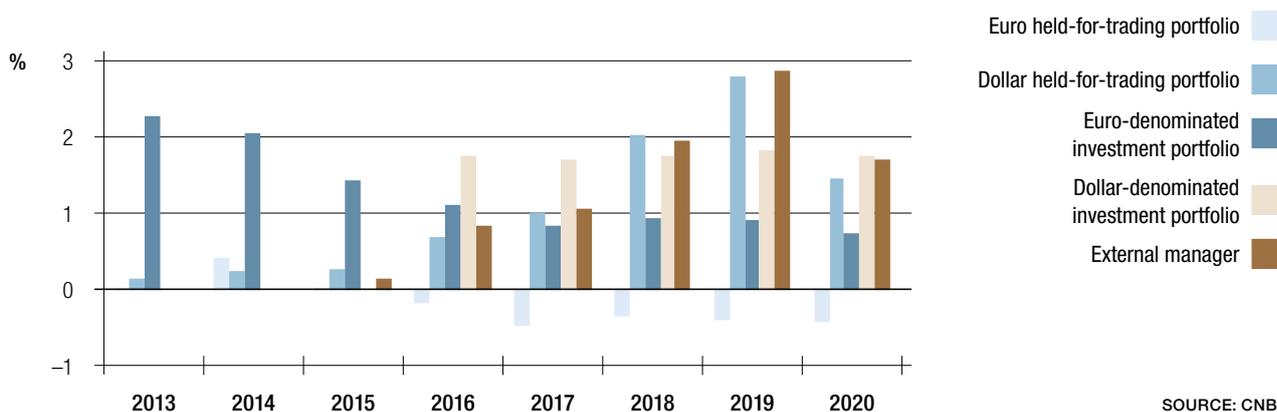
The entire euro portfolio of net reserves generated a rate of return of 0.22% in 2020, while the rate of return on the entire dollar portfolio stood at 1.54%. If held-for-trading and investment portfolios are observed separately, the euro held-for-trading portfolio generated a rate of return of -0.43%, while the dollar held-for-trading portfolio generated a rate of return of 1.45% in 2020. The euro-denominated investment portfolio yielded a return of 0.73%, while the dollar-denominated investment portfolio yielded a return of 1.76% (Figure 3.24).

The held-for-trading portfolios, which account for approximately 33% of net reserves, have short average maturities and are used as a source of liquidity. Investment portfolios, which account for approximately 47% of net reserves, have a longer average maturity and serve as a source of more stable long-term income.

In 2020, the rate of return on the US dollar funds entrusted for management to an international financial institution was 1.70%. The entrusting of funds to an international financial institution enabled additional diversification as well as knowledge-exchange in the field of investment management.

Figure 3.24 International reserve investment portfolios secure adequate rates of return in a prolonged period of historically low yields

year-on-year rates of return, in percentages



SOURCE: CNB.

4

SUPERVISION, RESOLUTION AND BUSINESS OPERATIONS OF CREDIT INSTITUTIONS

The objective of joint supervision and resolution is to ensure the resilience of the banking system so that it is able to withstand financial shocks, to prevent the outflow of taxpayers' funds to banks experiencing difficulties and to create a common regulatory framework so that citizens and enterprises have equal access to financial services and products. In the area of resolution and supervision, the CNB has already become a part of the banking union.

A LOOK AT 2020: SUPERVISION, RESOLUTION AND BUSINESS OPERATIONS OF CREDIT INSTITUTIONS

1**PRUDENTIAL
SUPERVISION****108 and 616**

As part of the supervision and oversight activities, prudential supervision made 108 decisions on supervision measures and answered 616 inquiries from the entities subject to supervision/oversight.

MORE ON PAGE 60**2****PRUDENTIAL
REGULATION****150 and 16**

Number of decisions at the level of EBA and ECB bodies in the adoption of which members of prudential regulation teams participated.

MORE ON PAGE 60**3****GRANTED
MORATORIUMS****80% and 60%**

80% of the total number of moratoriums were granted to the household sector, while the corporate sector, with 61% of the total amount of approved moratoriums, dominated the level of exposure.

MORE ON PAGE 59**4****INTERNAL
RESOLUTION TEAMS****7**

Representatives of the Croatian National Bank participate in the work of seven internal resolution teams.

MORE ON PAGE 63**5****WORK IN
WORKING GROUPS****15**

Representatives of the Croatian National Bank participate in the work of 15 working groups within the Single Resolution Board.

MORE ON PAGE 64**6****UPDATING
RESOLUTION PLANS****23**

During 2020, the resolution plans for all 23 institutions operating in Croatia were updated.

MORE ON PAGE 66

SUPERVISION

Timely adjustment of supervision and the regulatory framework to the circumstances of the COVID-19 pandemic marked the year 2020. Due to persistent supervisory insistence on high levels of capital adequacy, the banking system was ready for the pandemic, and the sensitivity test confirmed that credit institutions can withstand the materialisation of consequent credit risk. By coordinating and acting in solidarity, moratoriums and refinancing have been approved without creating a legal obligation for credit institutions, and according to the needs of their clients. Every crisis is also an opportunity for change, and both clients and credit institutions have successfully adapted to the inevitable digitalisation, which has not only accelerated the technological adjustment of the work of credit institutions, but also increased operational risk.

Despite the challenging conditions of the COVID-19 pandemic, CNB supervisors successfully completed the process of establishing close supervision cooperation with the ECB. Close cooperation began on 1 October 2020, after 18 months of review of Croatian banks and Croatian supervisors and adjusting the framework of work. In June 2020, euro area supervisors evaluated the asset quality of five banks and the CNB's supervisory capacity as adequate; also positively assessed was the adjustment to the regulatory framework for supervision (the necessary reorganisation of supervision was carried out in 2019).

The timely **adjustment of supervision** ¹ marked 2020. Despite the conditions of teleworking and the effects of the earthquakes on workplaces, supervisors

successfully completed the process of establishing close cooperation with the ECB and have been part of the joint teams of banking groups operating in the Republic of Croatia since 1 October.

Due to the persistent supervisory insistence on high levels of capital adequacy, the banking system was ready for the pandemic and the sensitivity test conducted by supervisors confirmed that credit institutions can withstand the materialisation of consequent credit risk. On the other hand, by coordinating and acting in solidarity with credit institutions, moratoriums and refinancing have been approved without creating a legal obligation for credit institutions, and according to the needs of their clients. At the same time, credit institutions were instructed to improve their efforts to prevent money

LINK NO. ¹



By coordinating and acting in solidarity with credit institutions, moratoriums and refinancing have been approved without creating a legal obligation for credit institutions, and according to the needs of their clients.

Credit institutions ended the year 2020 with extremely liquid balance sheets and moderate lending activity, while their profit was halved due increased provisions for expected loan losses.

laundering and terrorist financing through intensive supervisory activities under the new regulations.

Every crisis is an opportunity for change, and both clients and credit institutions have successfully adapted to the introduced digitalisation, which has not only accelerated the technological adjustment of the work of credit institutions, but also increased operational risk. Therefore, supervision actively analysed banks' digitalisation plans and the adequacy of their business continuity plans. If credit institutions begin to compete in fintech approaches and are obliged to adjust information systems to the time- and resource-consuming introduction of the euro, the likelihood of cyber attacks will increase operational risks. Finally, the adoption of court

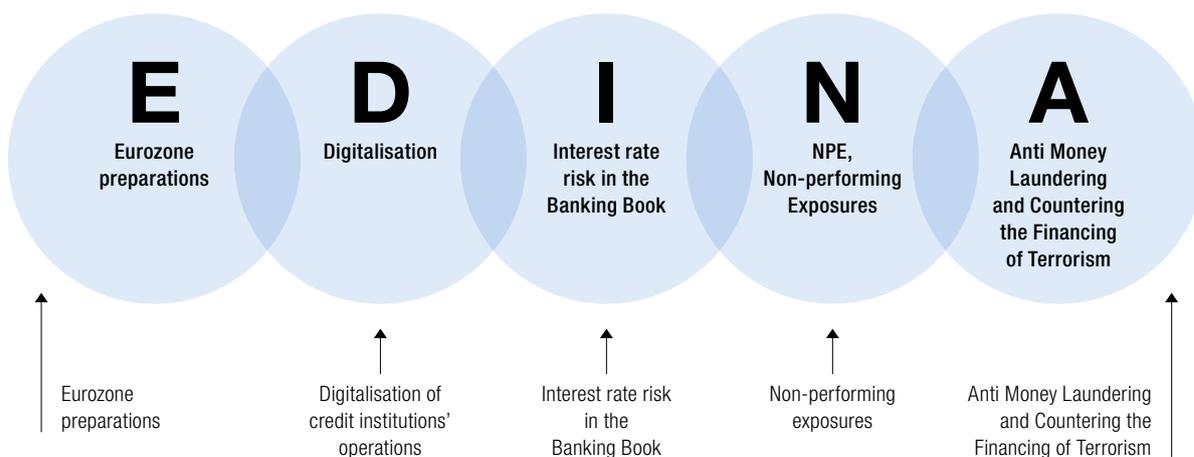
decisions for disputes related to loans in Swiss francs has also increased provisions for litigation.

Credit institutions ended 2020 with extremely liquid balance sheets and moderate lending activity. In 2020, the profit of credit institutions was halved due to the increase in provisions for expected loan losses. At the end of 2021, the final credit risk materialisation resulting from the globally deteriorating macroeconomic business conditions is expected, which is monitored using the Covid score. Until then, credit institutions have been prevented from distributing profits and variable remunerations by a macroprudential measure that will be reviewed by 30 September 2021. Therefore, supervisory priorities in 2021 remain the same: EDINA.

Figure 4.1 Banking supervision

Our mission is to preserve the safety and the stability of bank operations with the aim of maintaining confidence in the banking system.

OUR PRIORITIES IN 2020



OUR COMMUNICATIONS OBJECTIVES

Timely delivery of relevant information appropriately tailored to the other party, fostering friendly atmosphere and active listening

Prudential regulation

During 2020, three acts related to the entry into ERM II were adjusted, and CNB's supervisors worked intensively to improve the regulatory framework of credit institutions in the part related to the calculation of capital requirements and harmonisation with European supervisory standards.

Representatives of the CNB at the European Banking Authority participated in working group meetings on the topic of transposing EU regulations into the Croatian legal system. In the first half of 2020, the Republic of Croatia held the presidency of the Council of the European Union, and in that period the representatives worked intensively on two active dossiers in the field of the Working Party on Financial Services of the Council of the European Union: on the amendments to the Capital Requirements Regulation, the so-called CRR Quick fix, and on the regulation on a framework for the recovery and resolution of central counterparties. The CNB supervisors also participated in working groups and activities of the European Commission.

For the purpose of assessing adequate legal frameworks in 2020, three regulatory analyses were made: two driven by institutional responses to the COVID-19 pandemic (analysis of guarantees from public sources in the Republic of Croatia and a quantitative analysis of exposure to central governments and central banks) and an analysis of system preparedness and current levels of compliance with the EBA's Guidelines on loan origination and monitoring.

Prudential risk modelling

The focus of the work of risk modelling experts was on the credit risks caused by the COVID-19 pandemic. On a monthly basis from April 2020, data were collected on loans to clients whose business operations were affected by the pandemic, and expert support was provided in the preparation of the **Covid score** ¹, as a unique rating of the risk to their liquidity, developed by the Croatian Financial Agency (FINA).

During 2020, supervisory stress testing was conducted for two systemically important institutions, direct supervision of the only bank applying internal models for regulatory calculation of capital adequacy was completed, and six ad hoc analyses in the field of risk modelling were conducted. These analyses relate to claims relating to Swiss franc loans (simulations and effects), banks' sensitivity to deterioration of a portfolio encompassed by the anti-coronavirus measures, bank lending determinants for a loan portfolio under moratoriums, comparison of proposed concentration risk calculation methods for exposure to central governments, and NPL projections. As part of one of the aforementioned analyses, a macroeconomic model to estimate banks' net interest margins has been developed. At the same time, preparations have begun for assessing the adequacy of the adjustment of the calculation model for expected loan losses regarding loans that deteriorated due to macroeconomic business conditions. This has been the subject of extensive supervisory dialogues with credit institutions and the external auditors of their financial statements.

LINK NO. ¹



During 2020, the CNB's supervisors worked vigorously on improving the regulatory framework of credit institutions, and the emphasis of the work of risk modelling experts was on credit risks arising from the pandemic.

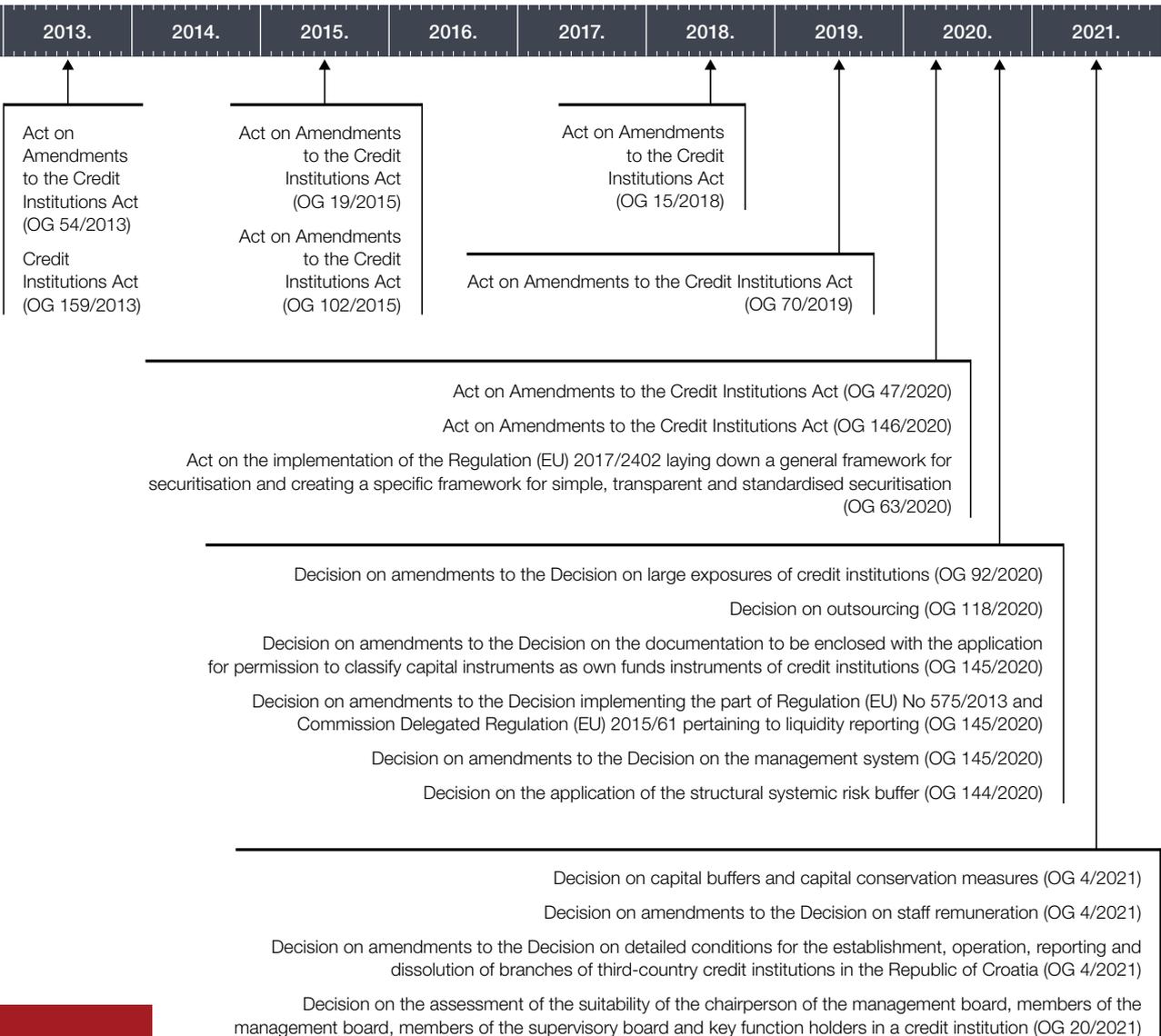
Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC

Implementation of another part of Basel III associated with capital requirements

Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures

CRD IV

CRD V



Reporting and methodology

In order to enter into close cooperation with the ECB, the CNB made several significant reporting and methodological adjustments to the supervision support process in 2020.

In terms of reporting, application development has been completed, which enables the CNB to meet its obligations to the ECB. The most important of these is the submission of all supervisory reports to the ECB, and the others relate to the maintenance of credit institutions' registers and the collection of additional data for the purposes of euro area supervision. The CNB's IT infrastructure fully supported the supervisory reporting system despite the Zagreb earthquakes and the pandemic.

Drawing on supervisory reports, supervisors continuously assessed and analysed all risks to which the banking system in the Republic of Croatia is exposed, as well as the risk at the level of the euro area and the EU. In addition to regular analyses of the system on a quarterly basis, supervisory reporting experts compiled seven prudential analyses for the needs of supervisory decision-making with the topic of credit institutions' business operations in terms of credit risk (and especially the impact of the epidemic on loan quality), cost efficiency of business operations and the status of the consolidated credit institutions system.

LINK NO.

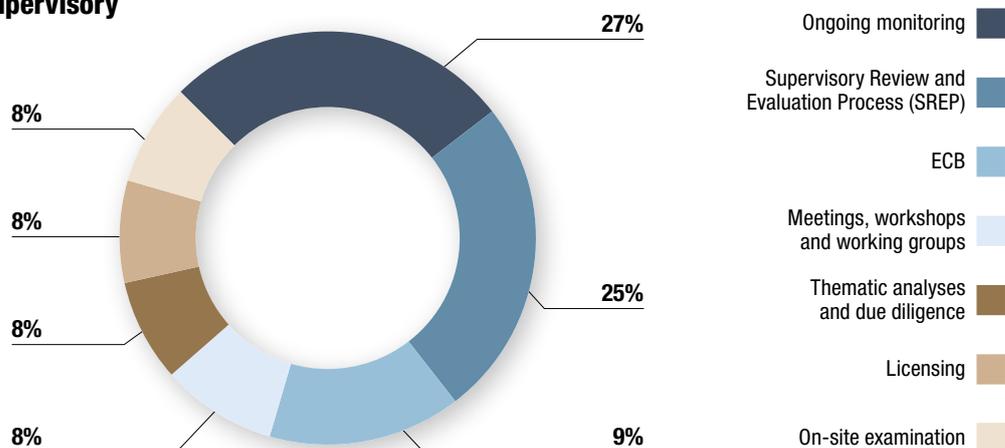


Having entered into close cooperation with the ECB, CNB representatives actively participate in the creation and further improvement of the **joint Supervisory Review and Evaluation Process** (SREP). According to the Governor's decision, SREP determines supervisory liquidity and capital requirements at the level of individual credit institutions on an annual basis, which upgrades the minimum legal requirements for all credit institutions depending on the riskiness of their operations. Prior to entering into close cooperation, the CNB used the internally developed SREP methodology, harmonised with the relevant EBA guidelines, and since the initiation of close cooperation, the ECB's unique SREP methodology for important institutions has been implemented. Using the data for the end of 2020, the joint ECB teams will determine for the first time in 2021 the minimum supervisory requirements for capital and liquidity that important institutions in the Republic of Croatia will be applying from 2022. Finally, the application of the single framework SREP methodology that is adjusted to less important institutions within the SSM is expected from 2022. On average, SREP added about 400 percentage points of additional total capital adequacy requirements to credit institutions.

Prudential supervisory teams

Prudential supervision activities in 2020 were undertaken to ensure a safe and stable banking system. In the course of supervision, supervisory teams evaluate risks arising from the credit

Figure 4.3 Standard supervisory activities in 2020



SOURCE: CNB.

institution's operations and verify the lawfulness of a credit institution's operations. Should they identify weaknesses or deficiencies in credit institutions' operations, and related unlawfulness, the supervisors suggest that the Governor imposes measures aimed at eliminating established illegalities and irregularities.

Almost all credit institutions were covered by at least one of the six standard supervisory activities in 2020 (Figure 4.3).

Starting from the end of the first quarter of 2020, the monitoring of the impact of the COVID-19 pandemic on the actions of credit institutions in terms of both liquidity and credit risk, as well as the adjustment of business processes to closing conditions was intensified. Approved moratoriums accounted for 80% of total approved measures, and according to the numbers of clients granted moratoriums, the household sector has the largest share (80% of the total number of approved moratoriums), while according to the level of exposure, the non-financial corporate sector has the largest share (61% of total amount of approved moratoriums). Given the provided measures at the level of the banking system, the burden of total exposure and capital was more pronounced in less significant credit institutions.

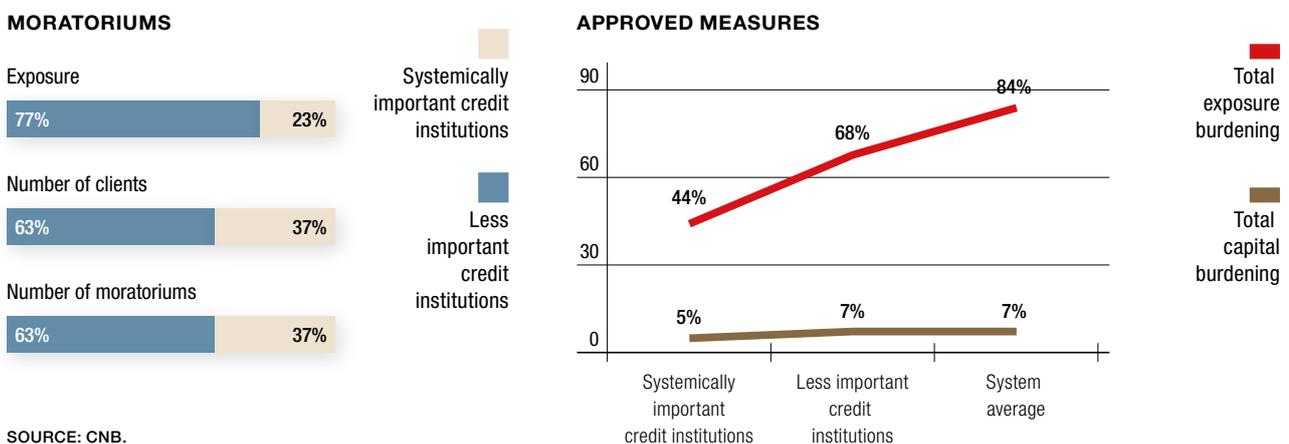
During 2020, prudential supervision received a total of 54 requests from credit institutions for licensing, more than 80% of which related to the assessment

of the suitability of 75 candidates for members of management boards and supervisory boards, 25 of whom were new candidates, with others requesting renewals of their terms of office, so the reassessment covered slightly more than a quarter of active licenses from the end of 2019. The purpose of the assessments is to license candidates who will ensure the safe and stable operation of the credit institution. Since the establishment of close cooperation, the ECB has been involved in the licensing process for important credit institutions.

The prudential supervision was also focused on monitoring and assessing the adequacy of internal management, which was under pressure from rapid and unplanned business changes. Credit institutions managed to organise the necessary human and technological resources in a short period of time and in a satisfactory manner in order to ensure the uninterrupted provision of services to their clients and business continuity. Taking into account the specific circumstances caused by the COVID-19 pandemic, the supervisory assessment cycle of credit institutions in 2020 was carried out using a pragmatic approach that is consistent with the **Pragmatic approach of the ECB** ², to ensure effective business risk assessment, especially taking into account the most significant risks and reducing the burden on credit institutions in this process. Finally, in 2020, prudential supervision paid special attention to monitoring the impact of potential Swiss franc borrower complaints regarding



Figure 4.4 Moratoriums and approved measures



the operations of credit institutions and the adequacy of established systems for managing this risk.

In the area of supervising the operations of credit unions in 2020, prudential supervision conducted regular quarterly monitoring of legal restrictions for all 17 credit unions on the basis of data submitted.

Specialist ICT risk supervision

Due to the consequences of the COVID-19 pandemic and the earthquakes, banks had to hastily adjust their information systems in 2020 to ensure continuous and reliable customer service. Major adjustments included supporting teleworking for most employees and significantly increasing users' reliance on direct channels (mobile and internet banking, ATMs and POS terminals). Therefore, in close monitoring of credit institutions, supervisors focused on maintaining

information and communication technology (ICT) risks at an acceptable level. Despite all the challenges in 2020, no incidents with significant negative consequences were registered in the information systems of banks, nor were there any significant interruptions in the provision of essential services.

As part of the SREP process, supervisors assessed the ICT risk (the so-called IT SREP) in the 11 largest banks in 2020. The compliance of seven systemically important banks with the Act on Cybersecurity of Operators of Essential Services and Digital Service Providers was also monitored, given that these institutions are designated as operators of essential services in the banking sector. In doing so, the supervisions in question were particularly focused on fulfilling measures to achieve a high level of cybersecurity.

Table 4.1 Supervision and oversight activities in 2020

	Prudential regulation	Prudential supervision	ICT risk supervision	AML supervision	Coordination Office
Number of employees in teams	34.2	57	5	8	3
Decisions on supervisory measures	2	108	2	2	
Decisions on authorisations for work		62			
Agreements on sanctions		3		2	
Misdemeanour and criminal charges		1			
Cooperation agreements		2		2	2
Circular letters on the subject of entities actions	21	1	8	8	
Responses to inquiries from entities subject to supervision/oversight	146	616	116	204	
Responses to bank customers' complaints		152		60	
Responses to public inquiries	84	43		50	
Decisions at an EBA body level	150	0			258
Decisions at an ECB body level	16	35			461
Decisions at the level of national authorities	28	4			
Workshops and meetings with entities subject to supervision	17	210	99	76	170
Workshops and meetings with other supervision and oversight authorities	19	314	41	23	8

Financial institutions need to make greater efforts to manage the risks of money laundering and terrorist financing effectively, to strengthen the position of the authorised person, and to develop the knowledge of staff and information systems.

During 2020, ICT supervisors began to harmonise their ICT risk assessment methodology with the methodology of the Single Supervisory Mechanism. On behalf of the CNB, ICT supervisors have also been involved in drafting the Regulation of the European Parliament and of the Council on digital operational resilience for the financial sector, which aims to establish a comprehensive and detailed framework for digital operational resilience. The regulation governs the requirements for the management of ICT risks and ICT incidents, relations with service providers and digital resilience testing, and will have a significant impact on the management of ICT systems in the financial sector in the medium term.

Specialist supervision of prevention of money laundering and terrorist financing (PMLTF)

The role of the Croatian National Bank in combatting money laundering is to monitor and supervise the compliance of financial institutions with their regulatory obligations. The protection of the banking system from money laundering and terrorist financing is of crucial importance for the security and stability of the financial system of the Republic of Croatia.

In accordance with the supervisory priorities, the supervision of PMLTF based on risk assessment and the continuous raising of awareness of PMLTF risks were among the strategic objectives of supervision in 2020, especially due to the new regulatory framework and preparations of credit institutions for joining the euro area. Through the supervision, the CNB verifies the efficiency and legality of their systems as well as measures put in place to manage that risk. In 2020, the CNB continued to apply risk-based supervision to ensure that supervisory resources and strategies are directed to areas where the risks are greater, i.e. that supervised entities exposed to higher risks from money laundering and terrorist financing are subject to more frequent and comprehensive supervision. Supervisions have shown that financial institutions need to expend greater efforts to efficiently manage

the risks from money laundering and terrorist financing, further strengthen the position of the authorised person, improve the level of knowledge of employees and further develop information systems.

In addition to supervision, the CNB participates in the development of regulations in the field of the prevention of money laundering and terrorist financing and cooperates with other national and international authorities in order to establish an effective system for this.

In working conditions that had to be adapted because of the COVID-19 pandemic, PMLTF supervision covered all entities subject to supervision. The analysis of the collected data was performed to assess the risk of an individual entity subject to supervision and to identify new and existing risks at the level of the entire system. A horizontal review of the actions of entities subject to supervision in the situation of new, pandemic-induced risks was conducted. Supervisory activities also covered the actions of entities subject to supervision in relation to other recognised typologies of money laundering and internationally available information (e.g. FinCEN, Luanda Leaks).

In 2020, supervision of PMLTF in a systemically important bank was completed, and the bank in question agreed to pay the largest fine ever imposed on a credit institution, in the amount of HRK 33m, for the identified deficiencies. Cooperation with international institutions continued through participation in the Expert Group on Money Laundering and Terrorist Financing of the European Commission, and particularly through the preparations for the fifth round of evaluation of the PMLTF system in the Republic of Croatia by the Council of Europe (MONEYVAL), and within the newly established Standing Committee on anti-money laundering and countering terrorist financing (AMLSC), which was established as part of the EBA with the aim of coordinating measures to prevent money laundering and terrorist financing at the level of the European Union.

In order to coordinate and implement joint activities in achieving common and operational objectives in this field, cooperation with other competent authorities continued, especially within the Inter-institutional Working Group for Preventing Money Laundering and Terrorist Financing. CNB supervisors responsible for PMLTF continued to participate in the national PMLTF system, in particular in the preparations for an assessment of the special committee of the Council of Europe – MONEYVAL. This assessment evaluates the efficiency of the PMLTF system in the Republic of Croatia, including the efficiency of the work of supervisory authorities, and it will have an important impact on the international reputation of the RC regarding the overall systemic activities of PMLTF.

Prudential coordination

The Office for Coordination of Prudential Supervision, Oversight and Risk Management Activities, which was established in 2019 as the central contact centre for supervision within and outside the CNB, enabled appropriate coordination of daily cross-sectoral activities between supervision and horizontal functional units in 2020, in line with the challenges posed by the establishment of a mechanism for close cooperation with the ECB **within the Single Supervisory Mechanism.** ¹

A successful comprehensive assessment of the ECB (assessment of the quality of assets of credit institutions, supervisory capacities and the regulatory framework) was one of the main preconditions for entering into close cooperation. The Office coordinated communication with the ECB's project teams in charge of establishing close cooperation, preparing meetings and information exchange.

During 2020, the Office played a key role in coordinating the ECB's comprehensive assessment. A review of and the appropriate distribution of six

thousand documents from the SSM were performed, 25 thematic meetings were organised and 246 presentations, preparations and notes were made, which were within the competence of the Office. During the transition period, the Office coordinated the authorisation of access to the ECB's information systems for more than 130 supervision employees, the involvement of supervisors in 17 working groups within the SSM and the organisation of a total of 66 seminars and 11 workshops in cooperation with ECB experts.

The Office took over the tasks of the secretariat for the Supervisory Board within the Single Supervisory Mechanism and the application of special instructions of the ECB with the decision-making bodies of the CNB. This process was supposed to be created for the first time in cooperation with colleagues from the ECB, given that the decision-making process in close cooperation is more complex than in the standard procedure of SSM members. Based on the above, 442 written procedures of the ECB were analysed and materials were prepared for six meetings of the Board at which 51 topics were discussed, and 12 instructions of the ECB were applied.

Representatives of the CNB supported the decision-making of the Board of Supervisors at the EBA during 2020 by analysing 249 written procedures and coordinating the preparation of materials for 14 meetings of the Board with 122 topics.

In addition to the above, the Office has prepared for adoption two agreements on supervisory cooperation with supervisors from the United Kingdom and the Federation of Bosnia and Herzegovina, and has regularly updated the single passport register, which contains data on EU institutions that directly provide services in Croatia.

LINK NO.

1



RESOLUTION

With the entry of the Republic of Croatia into the Single Resolution Mechanism in October 2020, the Single Resolution Board became directly responsible for the exercise of resolution powers over credit institutions that are members of a group of credit institutions with head offices in another participating member state. The Croatian National Bank remains directly responsible for the exercise of resolution powers over the remaining credit institutions. In addition, the amendments to the regulatory framework expanded the resolution powers of the Croatian National Bank related to the implementation of resolution over credit institutions.

Joining the Single Resolution Mechanism

Following the Decision of the European Central Bank of July 2020, which established close cooperation with the Croatian National Bank, in October 2020 the Republic of Croatia became a full member of the Single Resolution Mechanism, along with 19 euro area countries and Bulgaria. In doing so, the multi-year preparations for this step were completed and one of the more complex goals on the path towards the adoption of the euro as a legal tender was met.

With the entry of the Republic of Croatia into the Single Resolution Mechanism, the Single Resolution Board has become directly responsible for those credit institutions that are members of

a group of credit institutions with head offices in another participating member state¹, and the Croatian National Bank remains directly responsible for the exercise of resolution powers over the remaining credit institutions.

Representatives of the Croatian National Bank have been participating in the work of the Single Resolution Board since the Republic of Croatia joined the Single Resolution Mechanism. In this sense, representatives of the Croatian National Bank are involved in the work of seven internal resolution teams operating within the Single Resolution Board and, together with representatives of other participating member states, they are developing and updating resolution plans for credit institutions.

In October 2020 the Republic of Croatia became a full member of the Single Resolution Mechanism.

¹ At the end of 2020, credit institutions operating and having their head office in the Republic of Croatia, but which belong to a group the parent company of which has its head office in another participating member state, are the following: Zagrebačka banka d.d., Privredna banka Zagreb d.d., Erste&Steiermärkische Bank d.d., Raiffeisenbank Austria d.d., Addiko Bank d.d., Sberbank d.d., Wüstenrot stambena štedionica d.d., PBZ stambena štedionica d.d. and Raiffeisen stambena štedionica d.d.

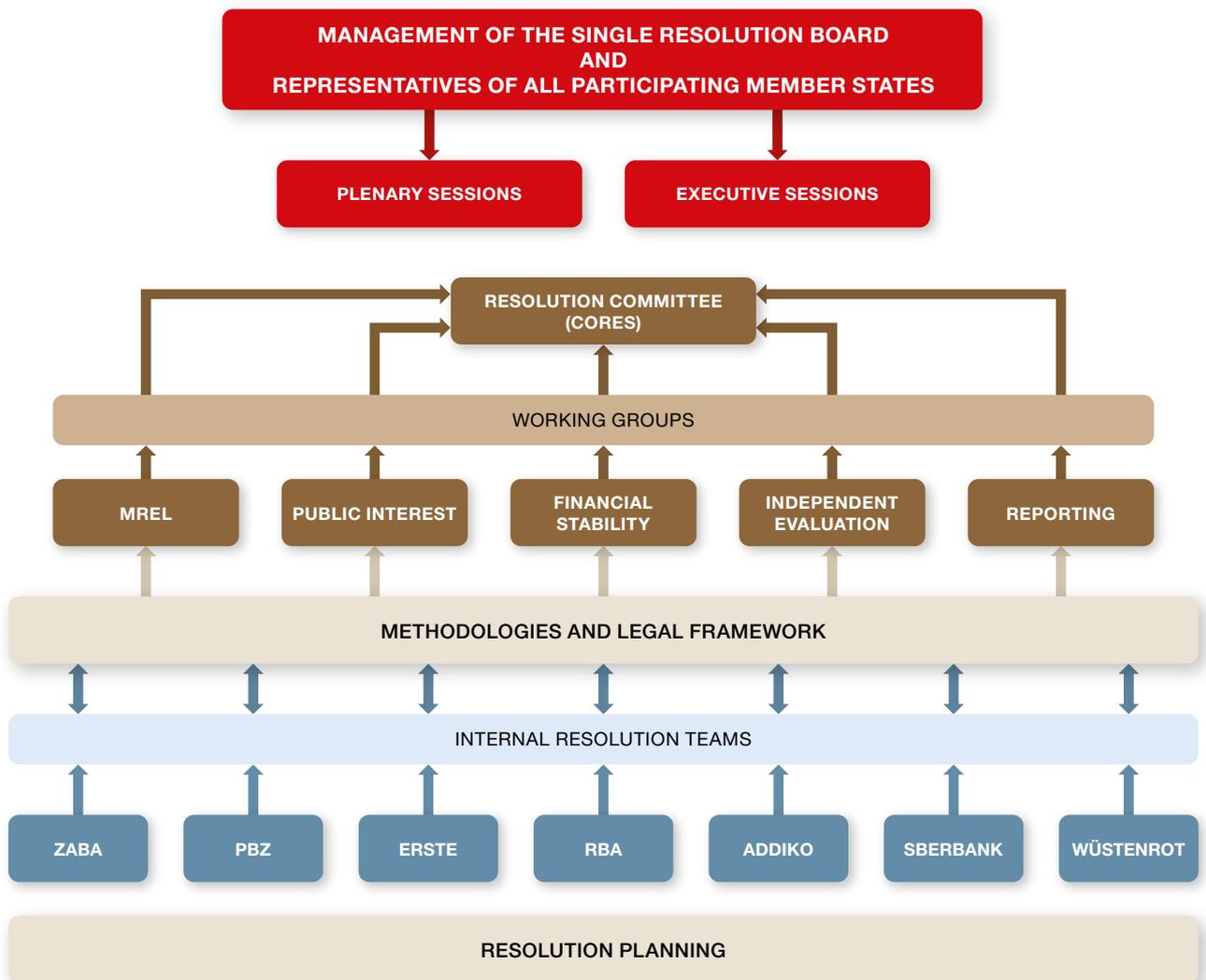
Representatives of the Croatian National Bank also participate in the work of 15 different committees and working groups operating within the Single Resolution Board, thus contributing to the development of policies, procedures and rules applicable to resolution planning for credit institutions. By their work in these committees and working groups, the representatives of the Croatian National Bank actively participate in the preparation of all decisions related to the functioning of the Single Resolution Board as an institution and the operation of the entire Single Resolution Mechanism.

Finally, representatives of the Croatian National Bank are involved in the highest, management level of the Single Resolution Mechanism because they participate in all plenary and executive sessions of the Single Resolution Board and thus take part in all decisions that are important for resolution planning and management of the Single Resolution Fund.

Extension of resolution powers

In order to enable the Croatian National Bank to operate as a resolution authority even after joining

Figure 4.5 Participation of representatives of the Croatian National Bank in the work of the Single Resolution Board



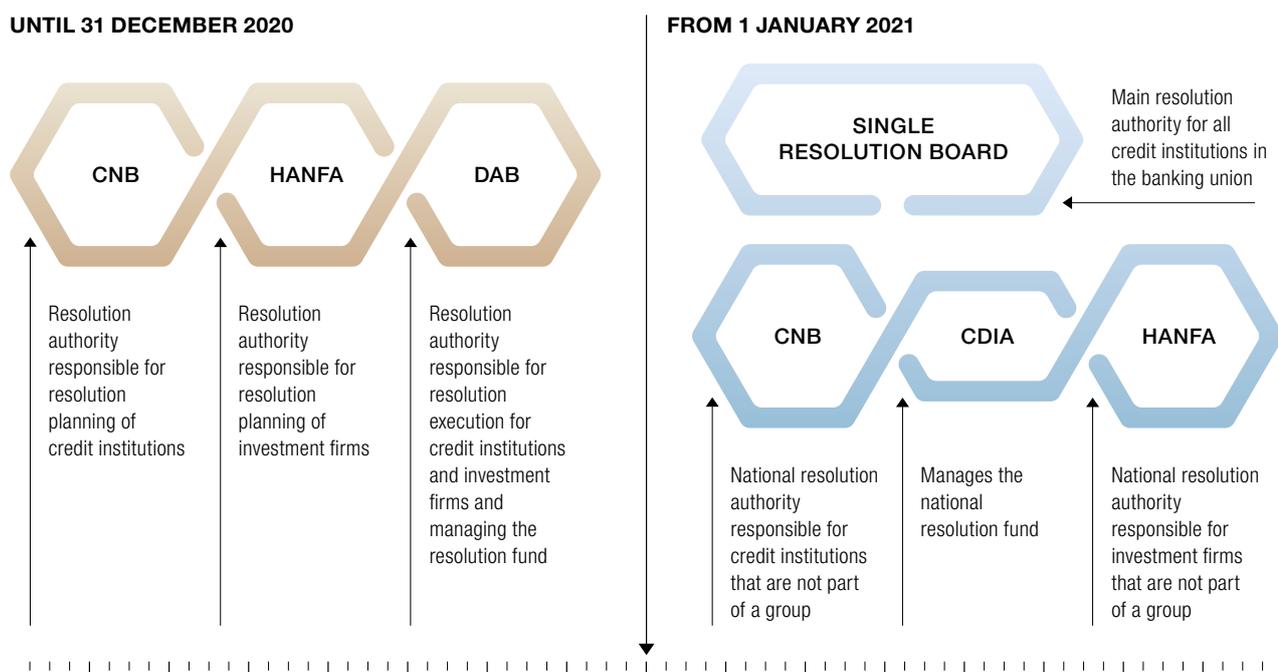
With the new Act on the Resolution of Credit Institutions and Investment Firms, all resolution powers related to the implementation of resolution of credit institutions have been transferred to the jurisdiction of the Croatian National Bank.

the Single Resolution Mechanism, in 2020 it was necessary, among other preparations, to adjust the existing regulatory framework. At the very beginning of the year, the Act on the Resolution of Credit Institutions and Investment Firms was amended. The first part of the amendments was implemented through the Act on Amendments to the Act on the Resolution of Credit Institutions and Investment Firms, which entered into force in July 2020, and the second, larger part of the amendments is covered by the new Act on the Resolution of Credit Institutions and Investment Firms, which entered into force on 1 January 2021.

Namely, in order to facilitate more efficient functioning of the Croatian National Bank as

a resolution authority after joining the Single Resolution Mechanism, the new Act on the Resolution of Credit Institutions and Investment Firms (Official Gazette 146/2020), transferred all resolution powers related to the implementation of resolution of credit institutions from the State Agency for Deposit Insurance and Bank Resolution to the Croatian National Bank. In this way, the resolution powers of the Croatian National Bank were expanded and the Croatian National Bank became the only national resolution authority for credit institutions. The state agency, which has been operating under the name of Croatian Deposit Insurance Agency since 1 January 2021, has remained responsible for managing the national resolution fund.

Figure 4.6 New division of resolution powers



CDIA: Croatian Deposit Insurance Agency
 HANFA: Croatian Financial Services Supervisory Agency
 DAB: State Agency for Deposit Insurance and Bank Rehabilitation

The Croatian National Bank maintains its readiness to act in crisis situations by regularly reviewing and updating resolution plans for all Croatian banks.

In addition to the above changes, the provisions of the new Act on the Resolution of Credit Institutions and Investment Firms have transposed the Risk Reduction Measures Package into national legislation, which regulates the minimum requirement for own funds and eligible liabilities. This step satisfied the legal preconditions for the procedure of imposing a binding minimum requirement on credit institutions operating and having their head office in the Republic of Croatia.

Resolution planning

During 2020, a regular annual update of resolution plans was conducted for all 23 credit institutions with head offices in the Republic of Croatia. For the needs of those credit institutions that are members of a group of credit institutions in the European Union, representatives of the Croatian National Bank participated in resolution colleges organised for

that purpose. In this way, resolution strategies and all other relevant information in the resolution plans have been updated to enable the rapid and efficient implementation of these strategies should any credit institution encounter more serious financial adversities.



BUSINESS OPERATIONS OF CREDIT INSTITUTIONS

The safety and stability of business operations of credit institutions in 2020 are primarily the result of the high liquidity and capitalisation of the banking system, despite the adverse impacts and uncertainty created by the COVID-19 pandemic.

System structure

At the end of 2020, there were 23 credit institutions operating in the Republic of Croatia: 20 banks and three housing savings banks, the same number as at the end of 2019. Of the total assets of credit institutions, 98.9% referred to the assets of banks, and the share of housing savings banks' assets continued to decrease and amounted to the remaining 1.1%.

The years-long decline in the number of employees in credit institutions continued, and a decrease by 2.4%, to 18,885, was recorded. The continuation of this trend together with the increase in assets contributes to the further improvement of the efficiency of operations measured by assets per employee, and at the end of 2020 an average of HRK 24.5m of assets referred to one employee.

In addition, there was one branch of an EU credit institution operating in the country, that of BKS Bank AG, Main Branch Croatia, while around 170 institutions from the EU and the European Economic Area had notified the CNB of the intention to directly provide mutually recognised services in the territory of the Republic of Croatia.

Indicators of bank operations

The total capital ratio of all credit institutions, the level of which is 24.9%, is among the highest among EU member states. The micro-prudential supervisory measure, according to which the credit institutions were obliged to retain profit generated in 2019 (they were not allowed to distribute it to shareholders), also helped to maintain this level. The assets of credit institutions increased to a record high value of HRK

The long-term growth of cash loans has stopped, and housing loans are the only important form of household lending that has continued to increase, supported by a programme to subsidise these loans.

462.5bn HRK, primarily on the basis of an increase in the deposits of non-financial corporations and households. Credit institutions invested the largest share of the increase in assets in highly liquid assets in settlement accounts with the CNB, cash and deposits, which was reflected in the high liquidity coverage ratio indicator, which was 181.9%, i.e. significantly higher than the prescribed minimum of 100%.

Lending activity was predominantly directed to financing the needs of government units, and it was more restrained towards non-financial corporations and households, so the total increase in loans amounted to a solid 5.7%. However, debtors affected by the epidemic and earthquakes were supported by credit institutions with moratorium measures to facilitate repayment, which at the end of 2020 they applied to 6.3% of total loans, which accounted for 5.0% of total assets of credit institutions.

The quality of credit institutions' assets has declined. Non-performing loans increased, although due to the impact of new lending activity, the ratio of non-performing loans to total loans decreased slightly, to 5.4%. The increase in non-performing loans is predominantly the consequence of the reduced capacity of households to settle liabilities based on general-purpose cash loans, so the non-performing loans ratio in that sector increased to 7.1%.

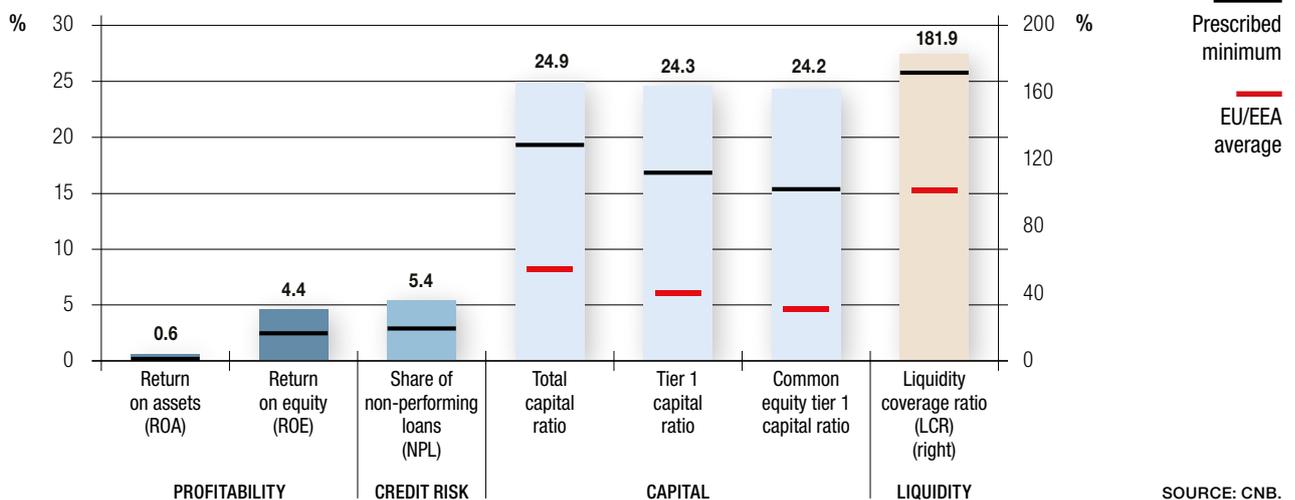
The long-term growth of general-purpose cash loans has stopped, and housing loans are the only important form of household lending that has continued to increase, supported by the participation of credit institutions in the government programme for subsidising these loans. The increase in loans to non-financial corporations and the sale of receivables led to a decrease in the non-performing loans ratio in this sector to 12.5%. The relative quality of total loans is worse than the EU average.

Impairment losses incurred in recognising increased credit risk and decreased operating income more than halved the profit, to HRK 2.7bn. With the decrease in profit, the profitability indicators decreased as well – return on assets (ROA) decreased to 0.6%, and return on equity (ROE) decreased to 4.4%. At the same time, the cost-to-income ratio (CIR) increased to 55%.

Business operations of credit unions

At the end of 2020, 17 credit unions had assets of HRK 612.9m at their disposal. The system of credit unions had experienced a contraction from the end of 2019, in four unions and by 9.5% of assets, so its significance was further reduced because the total assets of the system amounted to only 0.1% of total assets of credit institutions.

Figure 4.7 Key banking system indicators, as at 31 December 2020



5

STATISTICS AND RESEARCH

Statistics and statistical surveys are the basis for decision-making and economic analyses. The work of employees and external associates is a scientific and professional basis for the conduct of the monetary and other policies of the CNB. Participation in the ECB's expert networks has given additional impetus to the conduct of new statistical surveys and increased the comparability of Croatian research results with similar EU countries.

A LOOK AT 2020: STATISTICS AND RESEARCH

1

STATISTICAL REGISTERS AND GRANULAR DATABASES

2

The ECB-RIAD Register and the Credit Exposures and Risks Database (AnaCredit) are two key infrastructure statistical projects.

MORE ON PAGE 73

2

NATIONAL REFERENCE RATEA

24

4 currencies, 3 scopes of bank creditors and 3 period durations constitute 24 NRR indices.

MORE ON PAGE 75

3

PRIORITY AREAS OF CNB'S RESEARCH

4

Monetary, exchange rate and macroprudential policy with financial stability, followed by payment operations, technological development and climate change, as well as economic growth, business cycles and fiscal policy are areas of CNB's research.

MORE ON PAGE 80

4

HOUSEHOLD FINANCE AND CONSUMPTION SURVEY

3 and 4

The results of the third survey wave were published and research was conducted within the fourth survey wave.

MORE ON PAGE 76

5

PAPERS PUBLISHED BY EMPLOYEES AND ASSOCIATES

9

During 2020, six Working Papers, two Surveys and one Statistical and Methodological Paper were published.

MORE ON PAGE 81

6

CONFERENCES AND WORKSHOPS

2 and 4

The Dubrovnik Economic Conference, the 26th in the series, the 3rd CNB Research Conference and four workshops were held.

MORE ON PAGE 81

STATISTICS

In the CNB's Statistics Area, over the course of 2020, existing statistical tools were improved and new statistical tools were developed that are, inter alia, necessary for the successful implementation of the complex integration of CNB statistics into the statistical function of the Eurosystem. The development of registers and granular databases continued, and the results of recent CNB statistical surveys were published. Furthermore, the CNB participated in conducting the fourth survey wave within the ECB's research network on household finance and consumption.

Strengthening the capacities of the Statistics Area of the Croatian National Bank

The Statistics Area collects data from statistical reporting entities and administrative data holders and processes them to produce and publish indicators of official statistics of the Republic of Croatia within its area of competence. In order to improve the content, the level of detail, the comprehensiveness and the accessibility of statistical indicators, methods of collection, processing, analysis and publication of data that are used in the calculation of indicators must be continuously upgraded. Therefore, 2020 saw the improvement of existing and the development of new statistical tools, necessary, inter alia, for the successful implementation of the complex integration of CNB statistics into the statistical function of the Eurosystem.

Continuation of the development of registers and granular databases

As early as the entry of the CNB into the SSM, as of 1 October 2020, the statistical function of the CNB assumed additional obligations in relation to the European Central Bank. Thus, the CNB began sending reports to the ECB's Register of Institutions and Affiliates Data in the Republic of Croatia (ECB-RIAD) and those data on credit institutions in the Republic of Croatia that were not previously subject to the obligation to report. This continued the development of the key infrastructural statistical project CNB-RIAD4, the completion of which will create the basis for the introduction in the Republic of Croatia of the future so-called Integrated Reporting Framework (IReF) for the needs of the statistical function of the

The Statistics Area of the CNB collects data from statistical reporting entities and administrative data holders and processes them to produce and publish indicators of official statistics of the Republic of Croatia within its area of competence.

During 2020, a complex and detailed new reporting system was established for the collection of individual data on the conditions of consumer lending by credit institutions in the Republic of Croatia.

ESCB, which the ECB has been working on for a long time.

Data from the CNB-RIAD4 register are used for reporting and control of reference data of legal entities and for monitoring certain indicators of their business demographics. Further development of the register is a precondition for the future mandatory participation of the CNB in reporting to the ECB's database on credit exposures and risks throughout the EU (the *AnaCredit* database).

During 2020, a new complex and detailed reporting system was established for the collection of individual data on the conditions of consumer lending by credit institutions in the Republic of Croatia (Borrower-Based Measures, BBM). These data are collected in accordance with the recommendation of the European Systemic Risk Board on closing real estate data gaps, with the aim of developing additional statistical indicators for monitoring the stability of the financial system and preparing CNB macroprudential policy measures aimed at individual groups of financial debtors – natural persons (more details can be found in the chapter Financial stability and macroprudential policy).

Published results of recent statistical surveys of the Croatian National Bank

The Household Finance and Consumption Survey¹ is conducted by most national central banks within the ESCB in order to obtain data to better estimate the effects of economic and other policies on particular groups of households. The Croatian National Bank conducted this survey for the first time in 2017, and in 2020 began conducting a new wave of this survey in order to gain new insights in general and specifically to assess the impact of the coronavirus crisis on finances and consumption in Croatian households in 2020.

The ECB's Competitiveness Research Network² (CompNet) analyses the effect of the productivity and competitiveness of firms on exports, employment and economic growth. Within the research network, the database containing microdata on the competitiveness of enterprises in 19 European countries is regularly updated. In June 2020, CompNet published data from the seventh wave of the survey, which collects this data from the countries participating in the CompNet network. Thus, data for 17 of the 19 planned countries were published, and they include data for Croatia for the period 2002–2017, which were jointly collected and processed for this purpose by the Statistics Area and the Research Area of the Croatian National Bank. In addition to the current indicators, starting with the data from the seventh wave, the database now includes information on enterprise sector, form of ownership, geographical location (according to the NUTS2 classification) and the date of its establishment and dissolution. CNB participation in this research network enables a comparison of the competitiveness of Croatian enterprises in relation to similar enterprises in a large number of other European countries.

During 2020, the Statistics Area continued to improve the existing time series of statistical indicators that the CNB regularly publishes and submits to the ECB and Eurostat. In this process, already published time series of statistical data are extended deeper into history and/or are supplemented by additional related series that enable a more detailed analysis of a phenomenon.

Thus, during 2020, the CNB produced and published data organised by the so-called institutional sectors (households, enterprises, etc.), on balances and transactions related to the financial assets and

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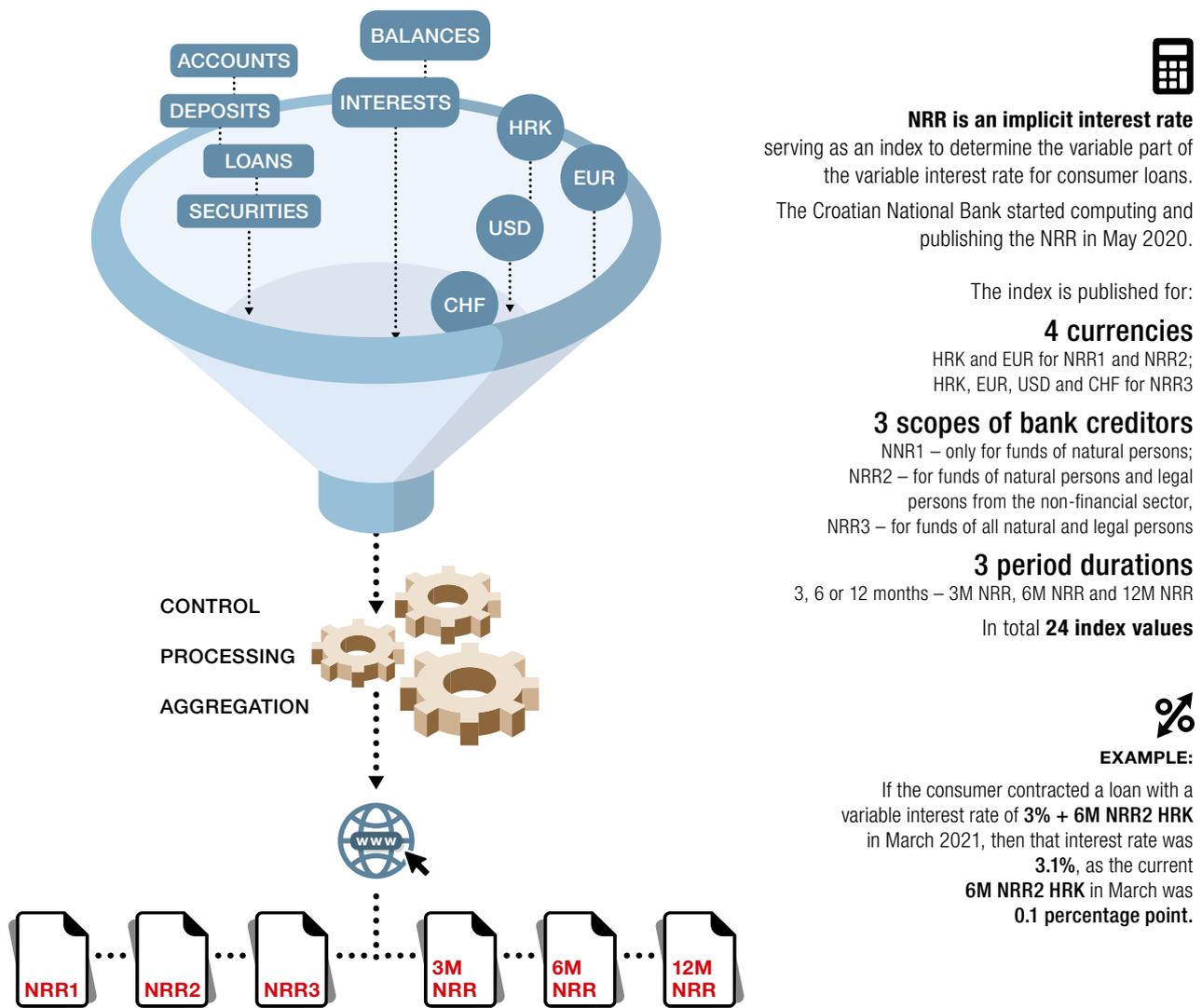
2



1 Household Finance and Consumption Survey¹ (HFCS).

2 Competitiveness Research Network² (CompNet).

Figure 5.1 Calculation of the national reference rate (NRR)



SOURCE: CNB.

liabilities of these sectors for the period 1995–2001. In addition, these data were published in a public database on the Eurostat website. What is more, the collection of data on the exchange of services that are more detailed than has hitherto been the case has begun, in accordance with the new Regulation

on European business statistics. In the present day, these data are collected on a more detailed basis, and include information on the “manner of providing the service”, as well as on the characteristics of the enterprise – service provider, which has not been the case so far.

In 2020, CNB produced and published data on the so-called institutional sectors (households, enterprises, etc.) on balances and transactions related to financial assets and liabilities of these sectors for the period 1995-2001.

HOUSEHOLD FINANCE AND CONSUMPTION SURVEY

In Croatia, 94% of households own a form of real assets, and 81.9% of households own a form of financial assets. However, real assets account for 96.5% of the total assets of this sector, and financial assets account for only 3.5%. Possession of real assets is widely distributed among households, and 85% of households own a household main residence, while financial assets and liabilities are concentrated among wealthier households.

This survey presents the methodology and results of the statistical survey on household finance and consumption in the Republic of Croatia conducted by the Croatian National Bank in 2017, within the third wave of the harmonised survey defined by the **Household Finance and Consumption Network (HFCN)** at the European Central Bank. The survey is conducted due to the importance of household finance and consumption for monetary policy and financial stability, understanding and predicting household economic decisions, and estimating the effects of monetary policy

or, more broadly, other economic policies on household assets and liabilities.

The most important results of the research reveal that 94% of households in Croatia own real assets, which mainly refers to the household main residence, and 81.9% of households own financial assets. Real assets predominate and account for 96.5% of household assets, and financial assets account for only 3.5%. The main component of real assets is the household main residence (the value of which accounts for 75.4% of

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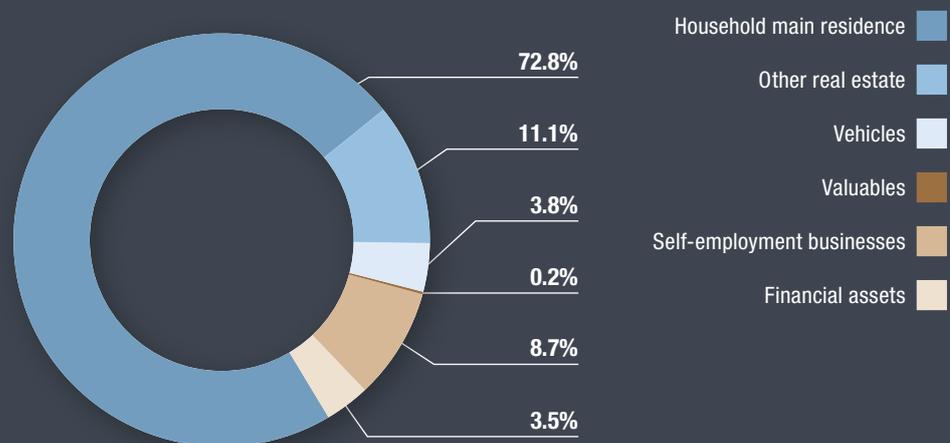
the total value of real assets), while the main component of financial assets is deposits (which account for 68.0% of the value of financial assets). By comparison, the average euro area household holds fewer deposits (43.7% of financial assets) and more other forms of financial assets, meaning that their households diversify their financial assets portfolios more than households in Croatia do. When interpreting the results, it is important to keep in mind that the value of non-financial assets is based on the subjective estimation of the respondents, which may differ significantly from the actual market value. This phenomenon of underestimation of own non-financial assets is common in statistical surveys of household finances. Financial assets are also markedly underestimated, compared to the highly reliable reporting of financial institutions. This is due to the under-representation of the wealthiest households in the sample and the reluctance of

respondents to “reveal” the true values of any categories of assets in their possession.

Real assets are widely distributed among households, and 85% of households own a household main residence, with a median value of 66 thousand euro, while financial assets and liabilities are concentrated among wealthier households. Inequality in the distribution of net assets among households in Croatia is moderate compared to the average of EU member states, with inequality in the ownership of financial assets being more pronounced than in the ownership of real assets, given that only some households own financial assets with any significant value, the median value of financial assets for households being EUR 500. Nevertheless, the value of total net assets varies markedly among households, depending on their sociodemographic characteristics, income, real estate ownership,

94%
of households
in Croatia
own real
assets, which
mainly refers to
household main
residence

Figure 5.2 The structure of assets of Croatian households



SOURCE: HOUSEHOLD FINANCE AND CONSUMPTION SURVEY.

Inequality in the distribution of net assets among households in the Republic of Croatia is moderate compared to the average of EU member states, with inequality in the ownership of financial assets being more pronounced than in the ownership of real assets.

and the geographical location within which the household resides.

Furthermore, the results of the research related to household indebtedness show that the share of household mortgage debt in the Republic of Croatia (the collateral of which is the household main residence and/or other real estate) is four times lower than the share of non-mortgage debt (credit lines, overdraft facilities, credit card debt and other non-mortgage debt), while, at the same time, the value of the remaining amount of mortgage debt covers two-thirds of the value of total debt. The level of indebtedness of Croatian households is relatively low, given that 59.3% of households do not have any debt, and the debt burden of Croatian households is below the euro area average.

The gross income of Croatian households (with an estimated median of EUR 8,400) is

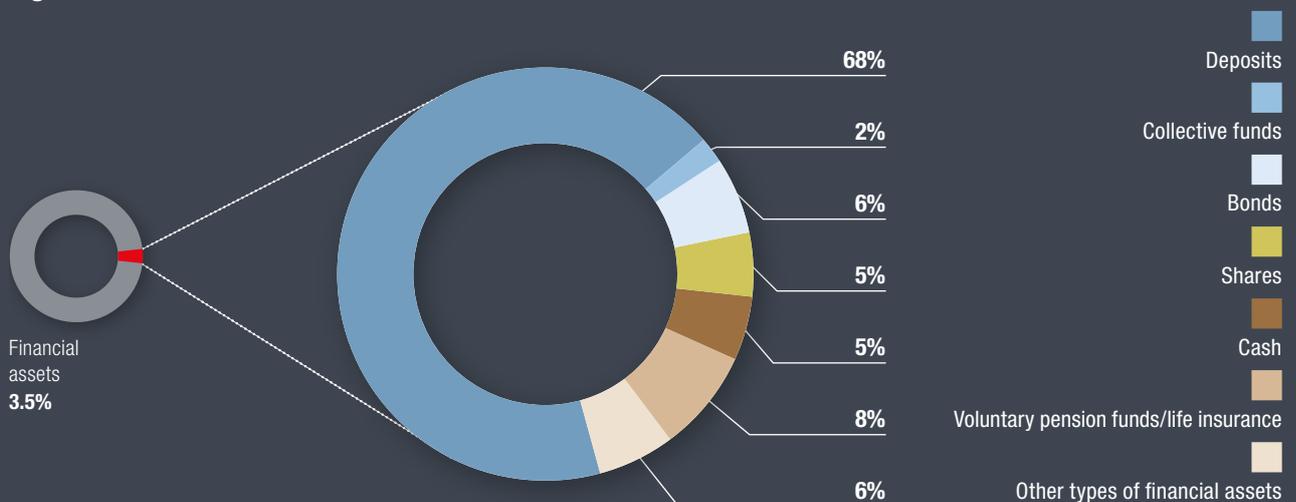
approximately a third of the same figure for the euro area. Considering the sources that generate income, the share of employment income is the largest (realised by 53.1% of households), followed by the share of income from financial investments (12.7% of households), while income from renting real estate is the smallest (only 6.2% of households).

Total consumption consists of three categories of expenditures: expenditure on goods and services, expenditure on utilities and expenditure on food at home and outside the home. According to the estimation of value of the median household, and according to the estimation of the arithmetic mean, the expenditure on goods and services is about twice as high as the expenditure on food, and about three times higher than the expenditure on utilities. The median estimates of all three components of expenditure are lower than

The gross income of Croatian households

is approximately one third of that of the euro area.

Figure 5.3 The structure of financial assets of Croatian households



SOURCE: HOUSEHOLD FINANCE AND CONSUMPTION SURVEY.

those for the euro area and range from 60% of the estimate for the euro area for expenditure on food at home and outside the home, to 75% of the estimate for the euro area for expenditure on utilities.

In 2020, two working papers were published based on the results of the Household Finance and Consumption Survey. The analysis of the structure of indebtedness of Croatian households identified several characteristics of households with regard to their share in three types of debt: collateralised loans, uncollateralised loans and overdraft facilities and/or credit card debt. The results obtained indicate that households headed by middle-aged persons generally participate in a larger number and with amounts that are more significant in all three types of indebtedness. Households with noticeable visible credit constraints do not have access to low-interest credit instruments, such as mortgages, so they resort more often to uncollateralised loans. The inability to finance spending and the propensity to take risks when making decisions on savings and investments contribute to reliance on overdraft facilities and/or credit card debt.

The statistical survey on the finances and consumption of Croatian households enables a comparison with selected EU countries in which the same survey is conducted. Furthermore, as the survey is intended to be conducted continuously in the future, it will be possible to monitor changes in the finances and consumption of Croatian households over time.

The level of indebtedness of Croatian households is relatively low, given that almost 60% of households do not have any debt, and the debt burden of Croatian households is below the euro area average.

A More information about the Household Finance and Consumption Survey:

[Jemrić, I., and I. Vrbanc \(2020\): Republic of Croatia: Household Finance and Consumption Survey 2017, Statistical and Methodological Papers, M-1](#)

B More information about the distribution of household assets:

[Kunovac, M. \(2020\): Households' wealth distribution in Croatia, CNB Working Papers, I-57](#)

C More information on household debt:

[Rosan, M., and K. Zauder \(2020\): Which Loans do We Take? A Micro-Level Analysis of Croatian Households' Debt Participation; CNB Working Papers, W-61](#)

LINK **A**



LINK **B**



LINK **C**



RESEARCH

CNB's research activities in 2020 focused on analysing the effects of the pandemic, but research in other areas has continued as well – areas such as the introduction of the euro, international financial relations, indebtedness of Croatian citizens and enterprises, public finances, new technologies and climate change.

Research objectives of the CNB

The Croatian National Bank conducts research primarily to support the fulfilment of its objectives and tasks. The bulk of **research** ¹ is focused on the implementation of monetary policy, maintenance of financial stability and performance of payment operations. The conclusions obtained are incorporated into the presentations of the members of CNB management, official announcements and regular publications. Research results are published in analytical articles and papers in regular and occasional CNB publications, academic journals and other professional and scientific publications, the newly established HNBlog, and presentations at professional conferences and meetings.

Research areas in 2020

A significant portion of research activities in 2020 was focused on understanding the economic effects of the pandemic. In particular, monetary and fiscal policy measures aimed at alleviating the effects of the pandemic and their impact on macroeconomic developments were discussed. The impact of the pandemic and measures to combat it on the financial

position of enterprises and on public debt, as well as possible long-term effects on economic trends, i.e. on enterprises and households, were also analysed. Earthquakes and the pandemic also led to new issues related to monitoring price stability, and they also affected the developments in the residential and the commercial real estate market, further analysing the impact of housing subsidies on real estate prices (for more details see Box 1 Real estate market in Croatia in 2020). New indices and tools for assessing the possible effects of the pandemic on the economy have been developed.

Research activities continued to support the introduction of the euro as the official currency. The research conducted by CNB researchers confirmed that the introduction of the euro as the official currency in Bulgaria and Croatia is economically justified, especially the research presented in the paper "The Third Round of the Euro Area Enlargement: Are the Candidates Ready?" by Milan Deskar-Škrbić, Karel Kotarac and Davor Kunovac, which was published in the *Journal of International Money and Finance* ². The issues of real

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convergence and the transmission of exchange rate changes to prices were analysed. Special attention was also paid to international financial relations, such as the increase in exports of Croatian enterprises since joining the EU.

The state of public finances will have a major impact on meeting the conditions for the introduction of the euro. Therefore, CNB employees also researched issues of fiscal policy and public debt sustainability. The paper authored by Milan Deskar-Škrbić and Darjan Milutinović received the award of the Prof. Dr. Marijan Hanžeković Trust, which confirms the quality of research conducted at the CNB.

Important activities were focused on monitoring and analysing the financial condition and indebtedness of Croatian citizens and enterprises. The results of the Household Finance and Consumption Survey provided additional insight into the distribution of assets and indebtedness of Croatian households. The indebtedness of enterprises was also analysed, with an emphasis on issues with loan repayment and the possible impact on the stability of credit institutions.

The CNB is researching digital currencies as well as trends in the application of new technologies in Croatian banks and enterprises. The CNB has also begun to investigate the impact of climate change on the financial system and central banks (for more details, see Box 4 Action against climate change and greening of financial systems – the role of central banks).

The CNB conducts the aforementioned research independently, but also in the context of international cooperation and cooperation with the academic community. Last year, two research projects were conducted with visiting researchers in the field of fiscal policy (Ana Grdović Gnip from the University of Primorska in Slovenia) and the real estate market in Croatia (Ivan Žilić from the Institute of Economics in Zagreb). CNB employees also participated in the research groups of the European System of Central Banks in the areas of productivity, price movements, machine learning, business cycles and climate change.

Conferences and publications

In order to better present the research findings of its employees, in 2020 the CNB, in addition to the existing Working Papers and Surveys, launched two new types of occasional publications: Legal Working Papers and Statistical and Methodological Papers. During 2020, nine new occasional publications were published, of which six were Working Papers, two were Surveys and one was a Statistical and Methodological Working Paper. Five articles were also published on the newly established HNBlog. In addition, CNB employees publish papers in publications of the European Central Bank and other central banks.

Some of the papers by CNB employees were also published in academic journals and other publications. Thus, in 2020, a dozen papers authored by CNB employees were published in scientific

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In order to better present the research findings of its employees, in 2020 the CNB, in addition to the existing Working Papers and Surveys, launched two new types of occasional publications: Legal Working Papers and Statistical and Methodological Papers.

journals and several papers were published in other types of scientific publications.

In 2020, the Croatian National Bank organised two scientific conferences. The traditional Dubrovnik Economic Conference, the 26th in the series, was held in July. The main topic of the conference was the analysis of the effects of the pandemic, but other topics were covered as well, including the role of central banks in the fight against climate change. The 3rd CNB Research

Conference on the topic of the Household Finance and Consumption Survey was held in December. The results of the Survey regarding the euro area and Croatia were presented, as well as research conducted at the CNB on the basis of data obtained from that survey. CNB employees presented their papers at several other scientific meetings and conferences. The CNB's Economic Workshops continued to be held, online since the summer, which increased their attendance. In 2020, four economic workshops were held.

Table 5.1 Selected papers according to priority areas published in 2020

Priority area 1: Monetary and exchange rate policy

- Bukovšak, M., G. Lukinić Čardić, and N. Pavić (2020): *Structure of Capital Flows and Exchange Rate: The Case of Croatia Empirica*, 47(1)
- Bule, M., and A. Čudina (2020): *Foreign Direct Equity Investments and Foreign Ownership Premium: the Case of Croatia*, CNB Working Papers, W-58
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PROTECTION OF FINANCIAL SERVICES CONSUMERS

Protection of financial services consumers is one of the important tasks of the CNB. Intensive activities in this area during 2020 were focused on specific aspects of consumer protection related to the consequences of the pandemic.

A LOOK AT 2020: PROTECTION OF FINANCIAL SERVICES CONSUMERS

1**INCREASING CONTACTLESS
PAYMENT LIMIT****HRK 250**

The CNB requested an increase in the maximum individual amount of a contactless electronic payment transaction without the use of a PIN to HRK 250.

MORE ON PAGE 85**2****COMPLAINTS RECEIVED
BY THE CNB****1,011**

In 2020, the CNB received and processed 1,011 notifications of complaint, of which more than half were complaints related to contracts governing loans and deposits.

MORE ON PAGE 86**3****COMPLAINTS RECEIVED BY
CREDIT INSTITUTIONS****133,476**

In 2020, credit institutions received a total of 133,476 complaints, with the most common complaints related to credit, debit and other cards.

MORE ON PAGE 87**4****CIRCULAR LETTERS TO
CREDIT INSTITUTIONS****4**

Four circular letters were issued in which credit institutions were informed of the CNB's expectations relating to the improvement of business practices.

MORE ON PAGE 88**5****AVERAGE FINANCIAL
LITERACY SCORE****12.3 (59%)**

According to the results of the financial literacy survey, the financial literacy of Croatian citizens was rated at 12.3 out of 21 points (59%).

MORE ON PAGE 89

PROTECTION OF FINANCIAL SERVICES CONSUMERS

The CNB protects financial services consumers by improving the legal framework and supervisory activities, monitoring and processing consumer complaints, and financial education and communication with the public. Protection of consumers of financial services is achieved through continuous communication with credit institutions in order to improve the protection of the rights and interests of their clients and to achieve a greater level of information among consumers about their products and services. The long-term goal of protection of consumers of financial services is to build trust among financial services market participants.

Developments on the market in retail banking products and services

The economic crisis caused by the pandemic resulted in a decline in income and employment, which in turn affected the market in retail banking products and services. Therefore, the regulatory and supervisory activities of the competent authorities of the EU and the CNB were focused on assessing creditworthiness and monitoring the level of indebtedness, with the aim of preventing consumer over-indebtedness. Supervision and consumer protection measures were implemented simultaneously. As part of its supervisory activities and the approval of moratoriums on consumer loans, the CNB asked credit institutions not to violate the existing level of consumer protection by the conditions and deadlines for deferring

loan repayment. Credit institutions were asked to approach lending responsibly, to apply appropriate sales practices, including those related to the digitalisation of operations, as well as appropriate fees and costs of banking products and services.

The CNB requested all credit institutions to waive fees for ATM transactions outside their own ATM network and to issue to citizens debit cards linked to accounts for which they had not been previously issued, which especially refers to accounts protected from seizure of assets. An increase in the maximum individual amount of a contactless electronic payment transaction without the use of a PIN to HRK 250.00 was also requested.

As part of its supervisory activities and the approval of moratoriums on consumer loans, the CNB asked credit institutions not to violate the existing level of consumer protection by the conditions and deadlines for delaying loan repayment.

A few hours after the earthquake in March, a circular letter was issued instructing credit institutions to ensure business continuity, in particular with regard to the maintenance of the ATM network, POS terminals and essential digital channels.

In the second half of 2020, in the conditions of relaxation of epidemiological measures and on the recommendation of the CNB, most of the introduced practices in the operations of credit institutions were retained, with the exception of waived fees for withdrawing cash outside own ATM network.

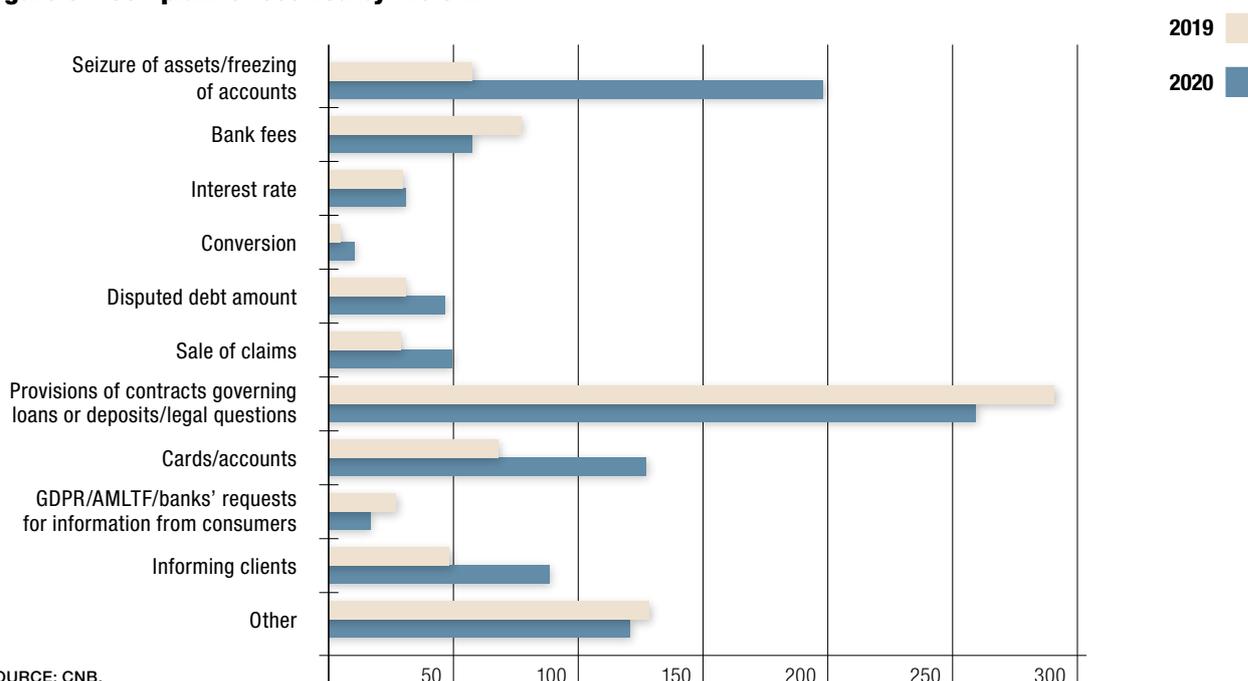
Consumer complaints

Any statement of dissatisfaction that a consumer submits to the institution of which they are a client, and which refers to banking and financial services, contracts governing loans, credit intermediation and the like, is considered a complaint.

Complaints received by the CNB

Pursuant to the Credit Institutions Act, consumers may file a notification of complaint to the CNB if they have not received a response from the credit institution to the lodged complaint or are not satisfied with it. In 2020, the CNB received and processed 1,011 notifications of complaint, which is an increase of 27% compared to the previous year. More than half were complaints related to the provisions of contracts governing loans and deposits concluded with credit institutions (25.7%), followed by complaints related to the freezing of accounts or initiated foreclosure proceedings (19.7%) and complaints related to credit cards and payment accounts (12.7%). The greatest increase compared to the previous year is noticeable in the category of complaints related to freezing of accounts and foreclosure proceedings (an increase from 58 to 199 complaints, or 343%), credit cards and payment

Figure 6.1 Complaints received by the CNB



SOURCE: CNB.

A few hours after the earthquake in March, a circular letter was issued ordering credit institutions to ensure business continuity, in particular with regard to the maintenance of the ATM network, POS terminals and essential digital channels.

accounts (an increase from 68 to 128 complaints, or 88%) and informing clients (an increase from 49 to 89 complaints, or 82%). The decrease in the number of complaints is most pronounced in the category of costs and fees (by 25.6%).

The CNB is not authorised to act as an arbitrator in the exercise of consumer rights that may arise from individual contractual relationships, but it monitors the actions of credit institutions. In 2020, four reports were issued to credit institutions as a result of the processing of received consumer complaints.

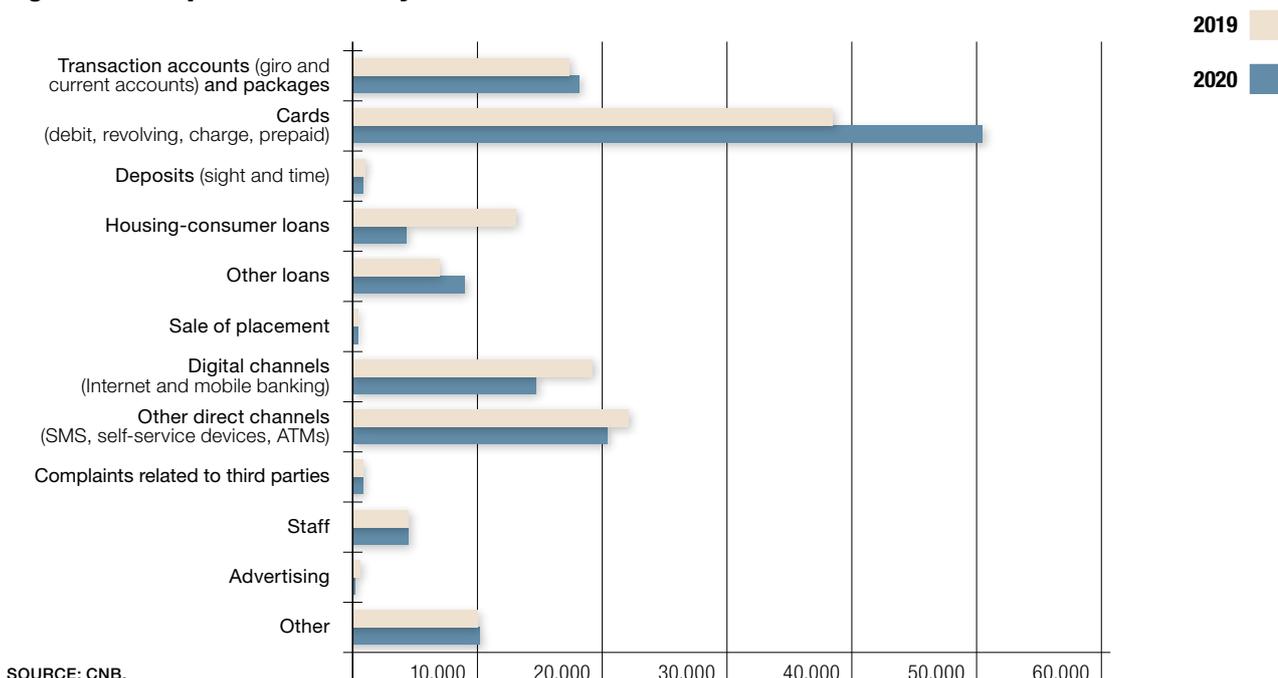
Complaints received by institutions within the CNB's competence

A total of 133,476 complaints were recorded as having been received by credit institutions in 2020, which is approximately at the level of complaints received in the previous year. In the structure of

complaints, the most common complaints are related to credit, debit and other cards (37.6%), followed by complaints related to direct channels such as ATMs, self-service devices, etc. (15.2%) and complaints related to transaction accounts (13.6%). Compared to the previous year, the number of complaints related to cards (by 31.6%) and complaints related to general-purpose cash loans (by 29.4%) increased the most. The majority of other categories of complaints showed a decline, with the largest decrease in complaints related to consumer housing loans (by 7.4%) and complaints related to mobile and internet banking (by 23.4%).

Most of the complaints, especially those related to the functionality of a particular service or technical issues, are resolved by credit institutions independently and mostly to the advantage of consumers.

Figure 6.2 Complaints received by credit institutions



SOURCE: CNB.

In 2020, the CNB began collecting data on complaints to credit unions and credit intermediaries.

Supervisory activities

Due to the circumstances caused by the pandemic, supervisory activities in the field of financial services consumer protection in 2020 were carried out on an off-site basis exclusively, at the CNB premises, based on reports and information provided by entities subject to supervision, content published on their websites and complaints received.

The CNB conducted off-site examinations of all credit institutions in seven areas of their operations: the practices of remunerating staff offering and/or selling banking products and/or services to consumers; practices of approving permissible and/or tacit overdraft facilities to consumers, including the calculation of the effective interest rate; contractual provisions in cases of granting loans with combined interest rates; practices of management and distribution practices of new or significantly modified products; practices for dealing with insurance policies in the case of early loan repayment; loan advertisement content; market behaviour of credit institutions.

In 2020, the CNB issued a total of six reports due to established illegalities, of which four refer to the content of individual consumer complaints, one report refers to non-compliance of a credit institution with applicable regulations, and one report is the result of an on-site examination of a credit institution that was conducted in 2019. Four circular letters were also issued, which conveyed the CNB's expectations to credit institutions regarding the correction of business practices related to

the content of loan advertisements, the method of contracting the combined interest rate, dealing with early loan repayment insurance policies and adjusting debit card issuance operations linked to accounts of consumers who have opened protected accounts due to freezing of accounts.

Credit intermediaries

A significant portion of the CNB's supervisory activities in 2020 referred to the operations of credit intermediaries in consumer housing loans.

Concerning the part of activities related to licensing, in 2020 the CNB issued 12 decisions on the provision of credit intermediation services and eight decisions on the revocation of the decision on the issuance of authorisations to provide credit intermediation services.

In addition, as at 31 December 2020, 20 authorisations to provide credit intermediation services for credit intermediaries with head offices in the United Kingdom were revoked under the Brexit Agreement.

Regulatory activities

Regulatory activities of the CNB ¹ are carried out by continuously improving the legal framework, adopting new or amending existing regulations and ensuring uniform application of applicable laws and other forms of regulations by all institutions within the competence of the CNB, as well as providing opinions and answers to inquiries related to certain provisions.

In 2020, the CNB issued ten opinions on the application of certain legal and other provisions,

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As at 31 December 2020, 20 authorisations to provide credit intermediation services for credit intermediaries with head offices in the United Kingdom were revoked under the Brexit Agreement.

The CNB has published the results of a survey on the level of financial literacy of the OECD, according to which the Croatian National Bank is the institution that our citizens trust the most in terms of financial literacy.

mostly in the field of enforcement of the Credit Institutions Act and the Act on Consumer Housing Loans. One third of the total number of issued opinions referred to the obligation to calculate the effective interest rate on loans or time deposits and the methods to be used.

Financial education

Raising the level of financial literacy of consumers is considered one of the key contributions that could have a long-term impact on reducing risks for consumers, so the CNB pays special attention to the education of young people and children as future participants in the financial market.

Educational activities

Due to the situation caused by the pandemic, a large number of planned activities were cancelled, including a large student debate as part of the Global and European Money Week, and a large part of educational lectures and activities as part of the World Consumer Rights Day. Lectures on the topic of "Financial Education" were held, and in cooperation with the Croatian Catholic Radio, the cycle of short educational radio shows "Financial ABC" continued, in the context of which 28 episodes were broadcast.

The CNB has published the results of a [survey on the level of financial literacy](#) ² in Croatia, according to which the average score of financial literacy of Croatian citizens in 2019 was 12.3 points out of a total of 21 (59%), and in 2015 it was 11.7 points (56%). A better result was recorded in financial knowledge and behaviour, while a worse result was recorded in financial attitudes. According to this survey, the Croatian National Bank is the institution

that our citizens trust the most in terms of financial literacy.

Representatives of the CNB regularly participated in virtual forums, round tables, workshops, educational meetings and seminars on financial literacy.

Inter-institutional cooperation

The CNB is a member of the National Council for Consumer Protection, and regularly reports on consumer rights through the [Central Consumer Portal – All for consumers](#) ³. During 2020, 33 complaints received through the Central Information System for Consumer Protection were processed.

As part of the project of providing technical assistance in financial education organised by the OECD/INFE and the Ministry of Finance of the Netherlands, the CNB participated in the preparation of the documents *Financial Literacy of Adults in South East Europe* and *Financial Education Mapping of Croatia*, and numerous virtual meets were held with the aim of improving the financial literacy of participating countries.

The CNB also improves consumer protection by participating in the work of the European Banking Authority (EBA), by being a member of the [Standing Committee on Consumer Protection and Financial Innovation](#) ⁴. The main topics during 2020 in the field of consumer protection were the harmonisation of supervisory practices of national competent authorities in the field of remuneration for sales staff in credit institutions, management and distribution of products intended for consumers and mystery shopping activities. In addition, the CNB participates in the work of the

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The CNB also improves consumer protection by participating in the work of the European Banking Authority (EBA), by being a member of the Standing Committee on Consumer Protection and Financial Innovation.

The main topics during 2020 in the field of consumer protection were the harmonisation of supervisory practices of national competent authorities in the field of remuneration for sales staff in credit institutions, management and distribution of products intended for consumers and mystery shopping activities.

national working group for the implementation of the Regulation on cooperation between national authorities responsible for the enforcement of consumer protection laws and in the activities of the European Commission regarding the evaluation of the EU Directive (for the field of housing consumer loans).

The CNB actively cooperates with the Croatian Banking Association and the Ombudsperson, and it participates in the activities of the regional working group for financial education and financial

inclusion, as well as in the work of the National Council for Consumer Protection and the work of the Ministry of Finance operational working group responsible for monitoring the implementation of measures and activities in the field of financial education.





PAYMENT OPERATIONS, CURRENCY DEPARTMENT OPERATIONS AND CURRENCY EXCHANGE OFFICES

The CNB manages and supervises payment systems, ensures secure and efficient payment flows and protects the rights of payment service users. In 2020, the introduction of new technologies in payment operations continued intensively. Despite the increasing use of innovative payment methods, cash is still the dominant method of payment and the CNB ensures its manufacturing and distribution, as well as protection against counterfeiting. The CNB issues authorisations to conduct currency exchange transactions and supervises currency exchange offices, and in 2020, approximately 900 entities provided the service of foreign cash exchange.

A LOOK AT 2020: PAYMENT OPERATIONS, CURRENCY DEPARTMENT OPERATIONS AND CURRENCY EXCHANGE OFFICES

1

OPEN TRANSACTION ACCOUNTS IN BANKS

6,954,781

As at 31 December 2020, individuals (consumers) and business entities held a total of 6,954,781 transaction accounts with banks.

[MORE ON PAGE 97](#)

2

MOBILE BANKING CONTRACTS

2,465,073

As at 31 December 2020, mobile banking was contracted by citizens (consumers) for a total of 2,465,073 accounts, which is an increase of 9% from the previous year.

[MORE ON PAGE 98](#)

3

PAYMENT CARDS ISSUED

8,780,256

The most frequently used payment instrument in the Republic of Croatia is the payment card, of which a total of 8,780,256 or 2.15 payment cards per capita were issued in the Republic of Croatia as at 31 December 2020.

[MORE ON PAGE 111](#)

4

CONTACTLESS PAYMENT CARDS ISSUED

5,670,596

There is a significant increase in the number of issued contactless payment cards of almost 60% compared to 2019, which is accompanied by an increase in the number of EFTPOS devices.

[MORE ON PAGE 99](#)

5

CASH IN CIRCULATION

HRK 34.1bn

The trend of the growth of currency outside banks has been recorded since 2011. As at 31 December 2020, HRK 34.1bn was in circulation, which is an increase of 10.2% compared to the end of 2019.

[MORE ON PAGE 100](#)

6

AMOUNT OF BANKNOTES

276 million items

Number of banknotes outside the CNB and cash centres worth HRK 40.11bn.

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PAYMENT OPERATIONS

One of the basic tasks of the Croatian National Bank is to ensure smooth operation of the payment system, which includes payment services providers, payment system infrastructure, payment services users and regulations governing the payment system. The Croatian National Bank plays a central role in ensuring the application of regulations, particularly as regards the protection of the rights of payment system users. It also performs the function of a payment system operator and supervisor of systemically important payment systems and facilitates safe and efficient payment flows. The payment system and the retail payment market are influenced by innovation-led changes and the digitalisation process. The role of the Croatian National Bank is twofold: as a catalyst, it has to encourage the integration of innovation into the existing payment system, while at the same time promoting payment safety.

Development of payment operations: implementation of new legal frameworks, new payment service providers and a new payment system

In order to reduce charges on cross-border payments in euro in the entire EU, Regulation (EU) 2019/5181 was adopted, based on which all banks in the Republic of Croatia, from 15 December 2019¹, levy on their customers the same charges for national payments and cross-border payments in euro.

The equality of charges refers to payment transactions in euro and in kuna. Consumers can access information on current fees charged by banks and compare them via the CNB's website, as well as via the mHNB smartphone app, free of charge, where it is possible to find a comparison of the most commonly used payment services.

Misdemeanour provisions related to the aforementioned Regulation were prescribed as part

of the Act on the Implementation of EU Regulations Governing Payment Systems in February 2020.

In addition to misdemeanour provisions, the aforementioned Act also stipulates the authority responsible for supervising its application, as well as out-of-court complaint procedures.

The list of payment service providers and electronic money issuers, the type of services provided and the EU member states in which they operate is publicly available in the [register of payment service providers and electronic money issuers](#) ¹ on the CNB's website. The set-up of the register was based on the CNB's [decision](#) ² prescribing the manner of keeping the register and its content.

In 2020, the CNB issued two authorisations to registered providers of Account Information Service (AIS), which are also the first providers in the Republic of Croatia to receive authorisation to provide this

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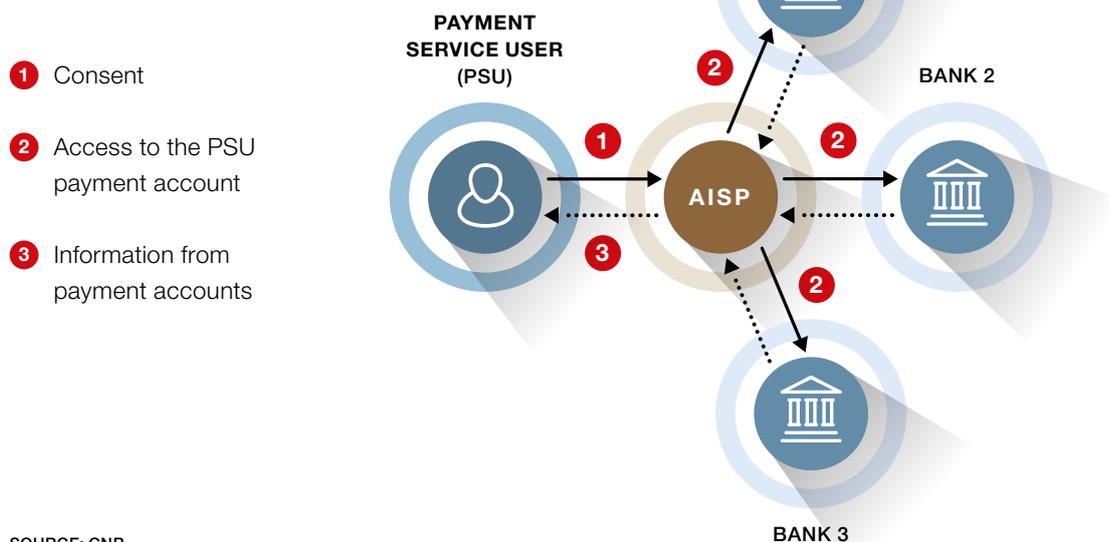


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¹ See [Notice on the commencement of application of new EU regulations on the equality of charges for payments in euro and kuna](#). ³ (available only in Croatian)

Figure 7.1 Use of the AIS service to obtain information from all accounts of payment services users from multiple banks



type of payment service. The Account Information Service is a service that enables a payment service user to receive in one place the information from their payment accounts, which are available online and are open with one or more banks, via the Internet or a mobile app. The aforementioned service covers the whole spectrum of services based on information on the user's payment transactions, account balances, payment habits, etc. and enables the user to better analyse the information related to their account or, for example, aggregate data from multiple accounts held with one or more banks.

The application of new technologies and user requirements for ever faster execution of payment transactions have resulted in the emergence of instant payments throughout the world. As published in the EU Retail Payments Strategy, the European Commission is committed to an integrated EU

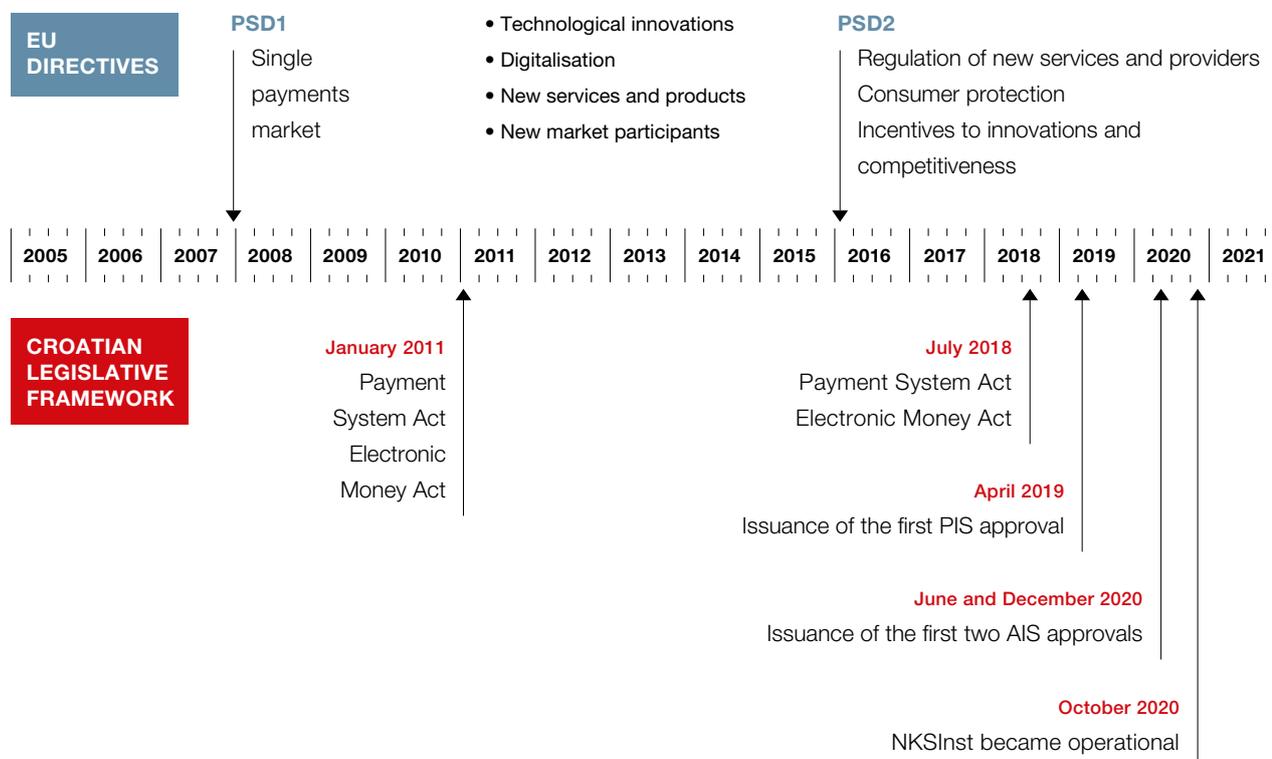
instant payment system to reduce the risks and vulnerabilities of the Retail Payment System and increase the autonomy of existing payment solutions, with the aim of full integration of instant payments in the EU by the end of 2021.

Since October 2020, NKSInst, a new payment system in the Republic of Croatia, enables banks participating in this payment system to make instant interbank payments in kuna.

NKSInst is a payment system for which the Croatian National Bank, in accordance with the provisions of the Payment System Act, has issued authorisation. NKSInst ensures the execution of payment transactions in accordance with the standards of the SEPA instant credit transfer scheme, which is applied to euro payments in EU member states. As of the date of introduction of

NKSInst, a new payment system in the Republic of Croatia, ensures the execution of payment transactions in accordance with the standards of the SEPA instant credit transfer scheme, which is applied to euro payments in EU member states.

Figure 7.2 Selected EU payment system regulations and transposition into the Croatian legislative framework



the euro as the official currency in the Republic of Croatia, the aforementioned payment system will be harmonised with all standards for payments in euro. The establishment of the NKSInst payment system enables the monitoring of current trends in the development of modern payment services in the territory of the Republic of Croatia.

Payment infrastructure – payment systems

The payment infrastructure allows financial market participants to settle their financial liabilities by providing the services of clearing and settlement of payment transactions in a safe and standardised manner.

Payment systems, as payment infrastructure, are the key component of any financial system since they provide the services necessary for a smooth and efficient functioning of payment operations. Payment systems function according to regulations, operational procedures, business processes and technical

solutions that enable the transfer of cash among system participants. Payment infrastructure in the Republic of Croatia comprises five payment systems: the Croatian Large Value Payment System (CLVPS), the National Clearing System (NCS), NKSInst, TARGET2-HR and EuroNCS systems.

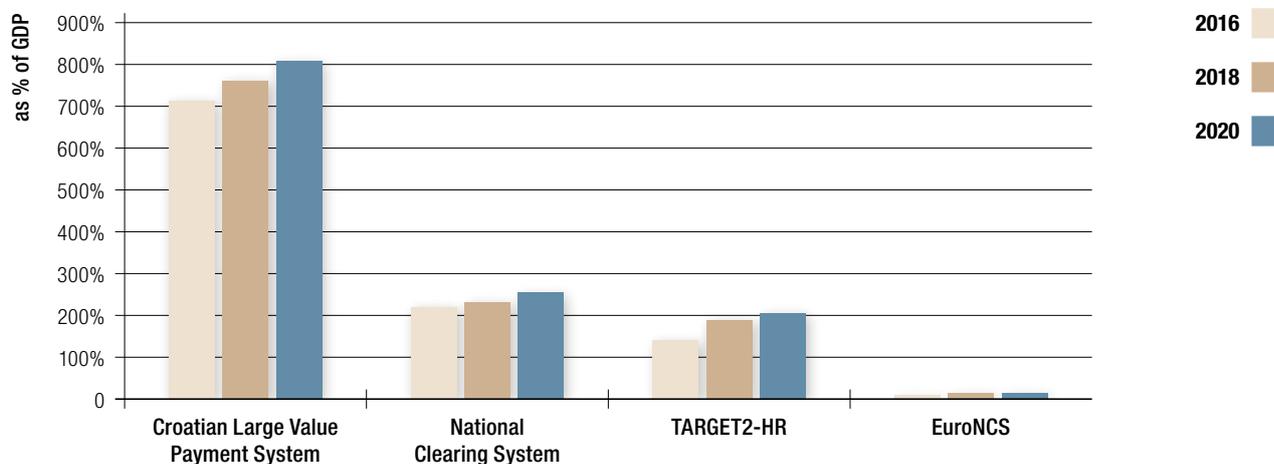
The Croatian Large Value Payment System

(CLVPS) ¹ is a payment system for the settlement of large value payment transactions in kuna among its participants (banks, CNB and the Central Depository and Clearing Company (CDCC)) in which payment transactions are settled in real time on a gross basis. The CLVPS is administered by the CNB. Payment transactions are settled in the CLVPS for the purpose of implementing the monetary policy measures of the CNB, the supply of cash to banks, the final settlement of other payment systems, the execution of payment transactions linked to participation in the capital market and other payment transactions of system participants. In 2020, providing coverage for the

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Figure 7.3 Payment systems in the Republic of Croatia – overview of turnover

Note: The EuroNCS system became operational in May 2016.

SOURCE: CNB.

settlement of instant payment transactions under the HRK SCTInst payment scheme was enabled.

The National Clearing System (NCS) is a payment system for the clearing of a large number of credit transfer and direct debit payment transactions in kuna that are of relatively low value, based on a multilateral net principle, processed in accordance with the national scheme that adheres to SEPA standards. The Financial Agency (FINA) is the operating manager of the NCS, and the CNB has a special role of a bank – settlement agent in the NCS, since the settlement of clearings from the NCS is carried out in the CLVPS.

NKSInst is a payment system that enables the execution of the so-called instant payment transactions that are executed in almost real time, i.e. within a standard period of no more than ten seconds. The maximum amount of an individual instant payment transaction is set at HRK 100,000. NKSInst enables the execution of payment transactions 24 hours a day, 7 days a week and 365 days a year (24/7/365). The NKSInst payment system is administered by the Financial Agency.

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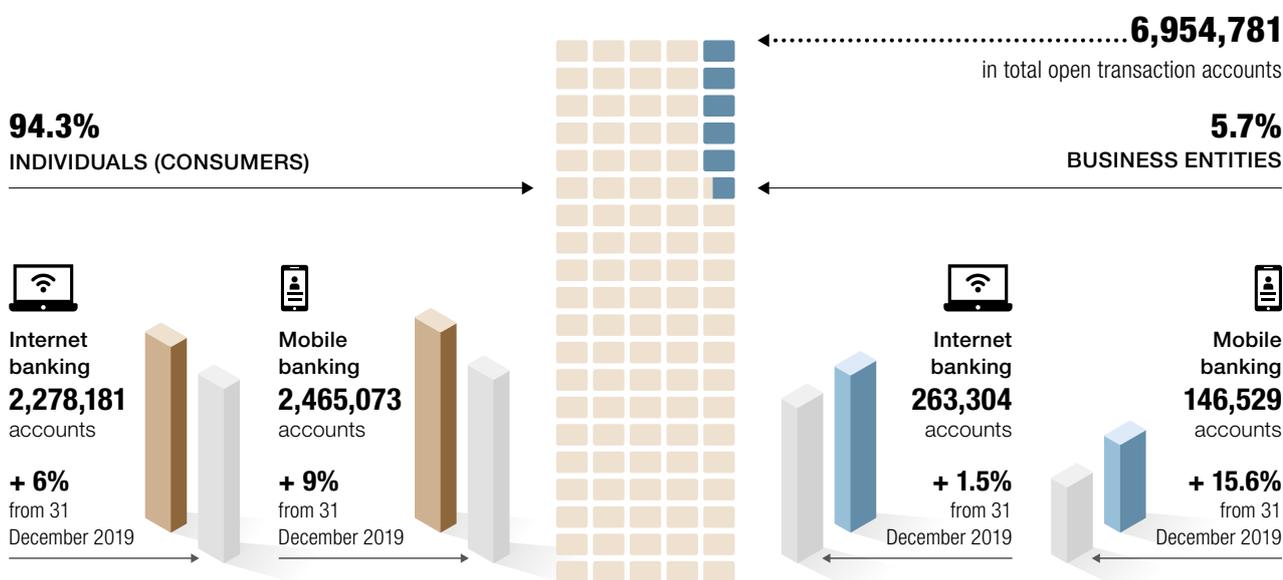


TARGET2-HR¹ is a component of the TARGET2¹ payment system that serves for the settlement of payment transactions of large amounts in euro in real time on a gross basis, consisting of national components operated by the central banks of the EU member states with a single technical platform that offers the same level of service to all participants. The CNB is the TARGET2-HR operator. In 2020, all participants in the TARGET2-HR system, including the CNB, continued with the preparations for the launch of the T2-T2S consolidated platform that will replace the existing TARGET2 payment system and the TARGET2-Securities platform (T2S) with the aim of offering enhanced services of payment transaction and securities settlement, as well as liquidity management to its participants. In 2020, as a result of the impact of the COVID-19 pandemic, and by the decision of the Governing Council of the ECB, the launch of the new platform was postponed until November 2022, and participants in the existing TARGET2-HR system will continue their work, i.e. preparations for the launch of the new platform.

¹ Trans-European Automated Real-time Gross Settlement Express Transfer System

Figure 7.4 Open transaction accounts and use of payment services in 2020

Data does not include blocked transaction accounts



SOURCE: CNB.

TIPS² is a service, available from 30 November 2018 within TARGET2-HR, enabling its participants to settle instant transactions, i.e. payment transactions in euro settled within seconds, at any time of the day, throughout the year (24/7/365). So far, no Croatian bank is a participant in the TIPS service.

The EuroNCS² is a payment system that processes SEPA credit transfer payment transactions of relatively low value in euro. The Financial Agency is the operating manager of the EuroNCS. The CNB has a special role of the bank – settlement agent in the EuroNCS, since the settlement of clearings from the EuroNCS is carried out in TARGET2-HR.

In 2020, the CNB, together with the CDCC, has begun cooperating with the ECB regarding the necessary activities to be carried out with a view to the entry of the CNB and the CDCC into T2S. T2S is a support service for central securities depositories for the purpose of providing a central and neutral securities

settlement service, which will be consolidated together with the TARGET2 payment system into a single T2-T2S platform in November 2022.

Payment statistics reports

In accordance with the [Decision on the obligation to submit data on the payment system and electronic money](#)³, the Croatian National Bank collects, processes and publishes statistical data in the area of payment operations from payment service providers.

As at 31 December 2020, payment service providers had a total of 916 business units or branches, most of which related to bank branches. They accepted payment transactions at 107,654 EFTPOS terminals and 4,896 ATMs. At the same time, at the end of 2020, individuals (consumers) and business entities held a total of 6,954,781 transaction accounts with banks³. Of the total number of accounts, 94.3% were held by individuals (consumers), while the remaining 5.7% were held by business entities.

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² TARGET Instant Payment Settlement

³ Not including frozen transaction accounts.

Table 7.1 Channels and methods of initiation of payment transactions of individuals (consumers) for 2020

Channel/method	Number of transactions	Share	Value of transactions (in HRK billion)	Value of transactions (as % of GDP)	Share
Over-the-counter*	62,003,764	27	50.322	15	34
Mobile banking	85,852,760	37	60.875	12	26
Internet banking	25,354,440	11	25.513	7	17
Direct debits	19,735,231	9	12.237	5	12
Standing orders	23,777,011	10	14.905	4	8
Bill-paying service	15,156,596	6	4.761	1	3
Total of	231,879,802	100	168.613	45	100

* Paper-based payment orders initiated over-the-counter at credit institutions or other persons that, on the basis of a contract, are acting on behalf of and for the account of credit institutions (e.g. FINA, HP, etc.)
Note: GDP in current prices for 2020 stood at HRK 371.5bn.

SOURCES: CBS AND CNB.

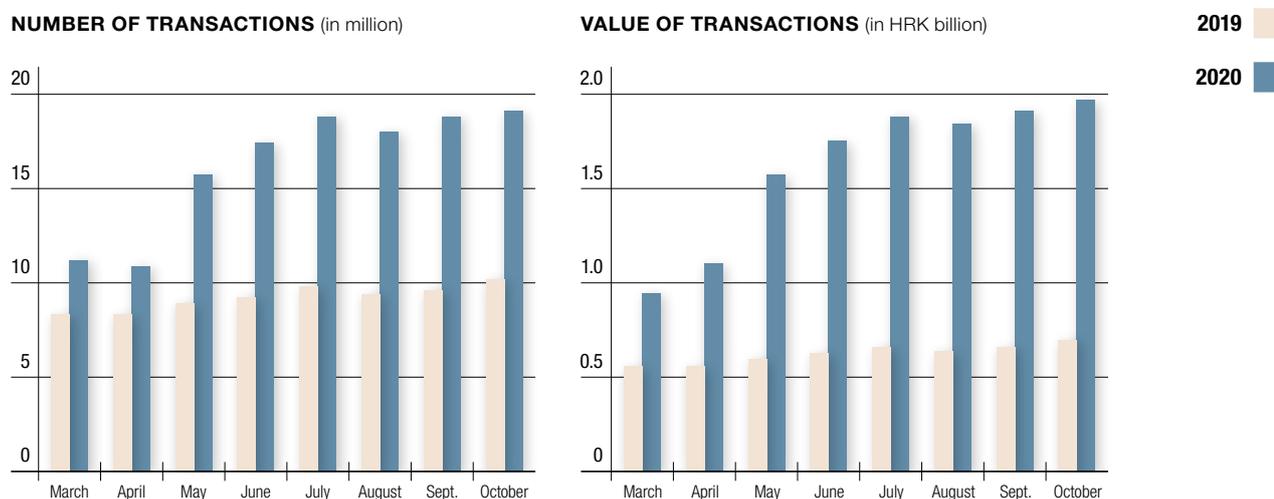
With regard to the habits of payment service users when making payments, we can conclude that in the Republic of Croatia there has been a continuous growth in the number and value of cashless payments in recent years. The development of internet and mobile banking, as well as the development of card payments has greatly contributed to the increase in cashless payment transactions.

However, the dynamics of development within the aforementioned cashless payment channels are also changing. Thus, in the last few years, the number of internet banking users has grown more slowly than the number of mobile banking users. This is supported by the data as at 31 December 2020, according to which individuals (consumers) had contracted internet banking for 2,278,181 accounts, which is an increase of 6% compared to 31 December 2019, while mobile banking had been contracted for 2,465,073 accounts, an increase of 9% compared to the situation as at 31 December 2019. Business entities had contracted internet banking for 263,304 accounts (an increase of 1.5% compared to 31 December 2019), and mobile banking for 146,529 accounts (an increase of 15.6% compared to 31 December 2019).

Along with the increase in the number of mobile banking users, the number of payment transactions executed by this channel also grew, so in 2020 individuals in the Republic of Croatia used mobile banking to initiate 37% of the total number and 36% of the total value of all cashless transactions in the Republic of Croatia.

The second most represented channel in initiating transactions was the over-the-counter channel, accounting for 27% of the number and 30% of the value of total cashless payment transactions initiated, while internet banking is the third channel accounting for 11% of the number and 15% of the value of total cashless payment transactions initiated.

Business entities in the Republic of Croatia, as well as individuals, use electronic more often than paper-based methods to initiate a payment transaction. Thus, of all payment transactions initiated in 2020, as many as 95% of them in the number and value of transactions were initiated electronically. Internet banking is still the most represented channel for the initiation of transactions, although there is a noticeable trend of growth in the use of mobile

Figure 7.5 Contactless transactions – number and value of transactions

Note: Data are only available for the period from March to October, as they are collected once from card networks and not from reporting entities in payment statistics.

SOURCE: DATA OF CARD NETWORKS PRESENT ON THE MARKET OF THE REPUBLIC OF CROATIA.

banking, which was used in 2020 to initiate 22% more in number and 36% more in the value of transactions than in 2019.

Due to the growing popularity and acceptance of mobile banking, internet banking is used less and less. The most frequently used payment instrument in the Republic of Croatia is certainly the payment card, so it is not surprising that, on 31 December 2020, there were, in all, 8,780,256¹ payment cards in circulation in the Republic of Croatia. Of the total number, 94.78% of payment cards had been issued to individuals (consumers), and the remaining 5.22% to business entities.

However, out of the total number of cards, on 31 December 2020, 3,449,240, or as much as 39.28%, had not been used at all in the past year. With respect to the type of payment cards issued in the Republic of Croatia, the data indicate that debit cards are still the most represented, accounting for 78.86% of the total number of all issued cards in the Republic of Croatia.

It is important to note that the global card market has undergone significant changes in terms of technologies and functionalities in recent years. One of these changes is the increase in the number of contactless payment cards in circulation. Thus, in 2020, compared to 2019, a significant increase in the number of issued contactless payment cards was recorded in the Republic of Croatia, by as much as 59.55%, i.e. on 31 December 2020, 5,670,596 contactless payment cards or 64.58% of the total number of issued payment cards were in circulation on the Croatian market. This change was accompanied by an increase in the number of EFTPOS terminals that enable the initiation of contactless payment transactions, so it is not surprising that payment service users are increasingly choosing the contactless payment method.

A more detailed overview and an analysis of data compiled within the payment statistics are published in the publications [Payment Cards and Card Transactions](#) ¹, [Payment Transactions and Accounts](#) ² and [Cashless Payment Transactions](#) ³.

LINK NO. ¹



LINK NO. ²



LINK NO. ³



¹ Includes used, unused and blocked payment cards in circulation.

CURRENCY DEPARTMENT OPERATIONS

One of the tasks of the CNB is to ensure a smooth supply and an adequate amount of cash in the Republic of Croatia. The CNB is responsible for planning the manufacturing, delivery, storage, processing and organisation of the distribution of cash, its protection against counterfeiting and the destruction of cash unfit for circulation and manages the logistic and strategic cash reserves. In addition, the CNB defines the standards applied in the processing of cash at other institutions and monitors the implementation of regulations governing cash operations, the supply, processing and redistribution of cash, with the aim of ensuring the quality of cash in circulation in accordance with public needs.

Cash issuance and supply

The issuance of banknotes and coins and the supply of banknotes and coins in circulation in the Republic of Croatia is one of the CNB's basic tasks. The supply of banks with cash implies the conduct of activities aimed at ensuring a sufficient amount of cash for banks and their clients (consumers and business entities), and it is based on the [Decision on the supply of banks with cash](#). It is organised through eight cash supply centres, which cover all parts of the Republic of Croatia.

LINK NO.



Currency outside banks

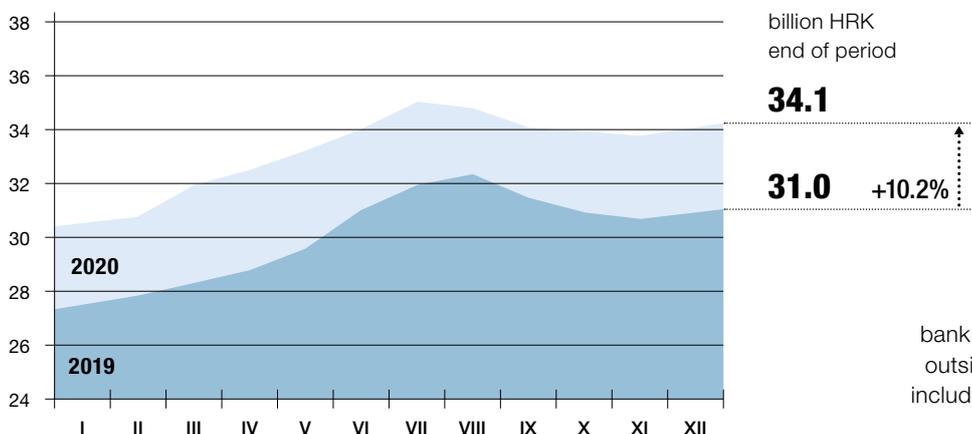
The trend of the growth of currency outside banks has continued since 2011. As at 31 December 2020, currency in circulation amounted to HRK

34.1bn, which is an increase of 10.2% from the end of 2019. From the beginning of 2011 to the end of 2020, cash in circulation doubled. The term circulation refers to the amount of cash outside the CNB vault and cash centres (CC), less the amount of cash in bank cash desks.

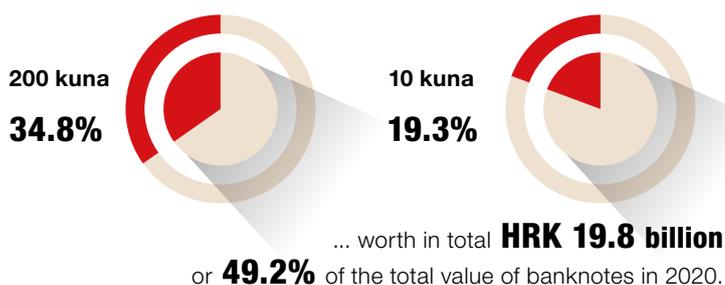
Withdrawal of banknotes and coins

The CNB withdraws banknotes and coins unfit for circulation and replaces them. A total of 29.9 million banknotes were processed in 2020, of which 73.1% or 21.8 million banknotes were destroyed as the banknotes failed to meet the quality standards set for circulation banknotes. In addition, 1.9 million items or 2.7% of the processed banknotes were sorted as damaged, to be destroyed subsequently.

Issuance and supply of banknotes and coins are among the basic tasks of the Croatian National Bank, as well as combatting the counterfeiting of banknotes and coins.

Figure 7.6 Cash in circulation**CASH IN CIRCULATION, END OF PERIOD**

As at 31 December 2020, there were **276 million** banknotes worth **HRK 40.11 billion** outside the CNB and cash centres, including the balance of banks' cash desks and in their vaults

MOST REPRESENTED BANKNOTES IN 2020**MOST REPRESENTED COINS IN 2020****BY QUANTITY:**

10 lipa
23.1%
of the total
number of coins,
or **602.4**
million items

BY VALUE:

5 kuna
38.3%
of the total
value of coins,
or **HRK 645.0**
million

SOURCE: CNB.

If the balance at banks' cash desks and in their vaults is added to the circulation, on 31 December 2020, there were 276.0 million banknotes outside the CNB vault and CCs, worth HRK 40.11bn. From the end of 2019, the number of banknotes outside the CNB vault and CCs rose by 3.9% in 2020, while their total value increased by 8.1%.

Of banknotes outside the CNB vault and CCs, 200 kuna banknotes, with a share of 34.8%, and 10 kuna banknotes, with a share of 19.3%, were the most numerous in 2020 and accounted for HRK 19.8bn, or 49.2% of the total value of banknotes.

The large share of 200 kuna banknotes in total banknotes outside the CNB vault and CCs is due to their widespread use in ATM withdrawals.

Of coins in circulation, the most numerous were 10 lipa coins (602.4 million pieces, or 23.1% of the total number of coins outside the CNB vault and CCs). In terms of value, 5 kuna coins accounted for the largest share (HRK 645.0m, or 38.3% of the total value of coins outside the CNB vault and CCs).

Issues of commemorative coins and numismatic coin sets

In 2020, the CNB issued the 25 kuna commemorative coin in circulation to mark the Croatian Presidency of the Council of the European Union in 2020, an important political event for the Republic of Croatia. In addition to the 25 kuna commemorative coin in circulation, the CNB issued several gold and silver commemorative coins in the same year to mark historical, political, scientific

The 25 kuna commemorative coin in circulation was issued to mark the Croatian presidency of the Council of the European Union, and the Gold Kuna is a new investment gold series

and cultural events of major importance for the Republic of Croatia.

The CNB also issued the Gold Kuna commemorative coin. It is a new series of investment gold with the motif of the 1 kuna coin in circulation. The year 2020 was concluded with the issuance of a numismatic set of Croatian coins in circulation with the year of issue 2020, which contains all kuna and lipa coins.



Counterfeit banknotes and coins and their prevention

In 2020, a total of 157 counterfeit kuna banknotes, worth a total of HRK 59,420.00, were registered, of which 92.4% were counterfeits of poor quality. The number of registered counterfeit kuna banknotes decreased by 69.0% from 2019. Taking it into account that the number of banknotes outside the CNB vault and CCs averaged 276.4m items,

Figure 7.7 Issues of commemorative gold and silver coins to mark historical, political, scientific and cultural events of major importance for the Republic of Croatia

1945-2020
COMMEMORATIVE SILVER COIN OF **150 kuna** marking the 75th anniversary of Victory over Fascism Day



1995-2020
COMMEMORATIVE SILVER COIN OF **150 kuna** marking the 25th anniversary of the military and police operations Flash and Storm

1820-2020
COMMEMORATIVE SILVER COIN OF **200 kuna** marking the 200th anniversary of the founding of the Archaeological Museum in Split



1669-2020
COMMEMORATIVE GOLD COIN OF **500 kuna** AND THE COMMEMORATIVE SILVER COIN OF **150 kuna**, marking the 350th anniversary of the founding of the University of Zagreb

SOURCE: CNB.

0.6 counterfeits were detected per 1 million kuna circulation notes in 2020. In 2019, 1.9 counterfeit banknotes were detected per 1 million kuna circulation banknotes.

In 2020, three copies of counterfeit kuna coins (5 kuna coin) were registered, which was the same as in 2019.

With regard to foreign currencies, in all, 297 counterfeits were registered, of which the largest number (237) were counterfeit euro banknotes, followed by counterfeit US dollar banknotes (40), counterfeit pound sterling banknotes (13), counterfeit Swiss franc banknotes (four), and the remaining three banknotes were counterfeits of the Bosnian convertible mark, the German mark and the Polish zloty. The number of counterfeit euro banknotes decreased by 4,043 items or 94.5% from 2019. The share of counterfeit euro banknotes of poor quality was 38.4%, or 91 items.

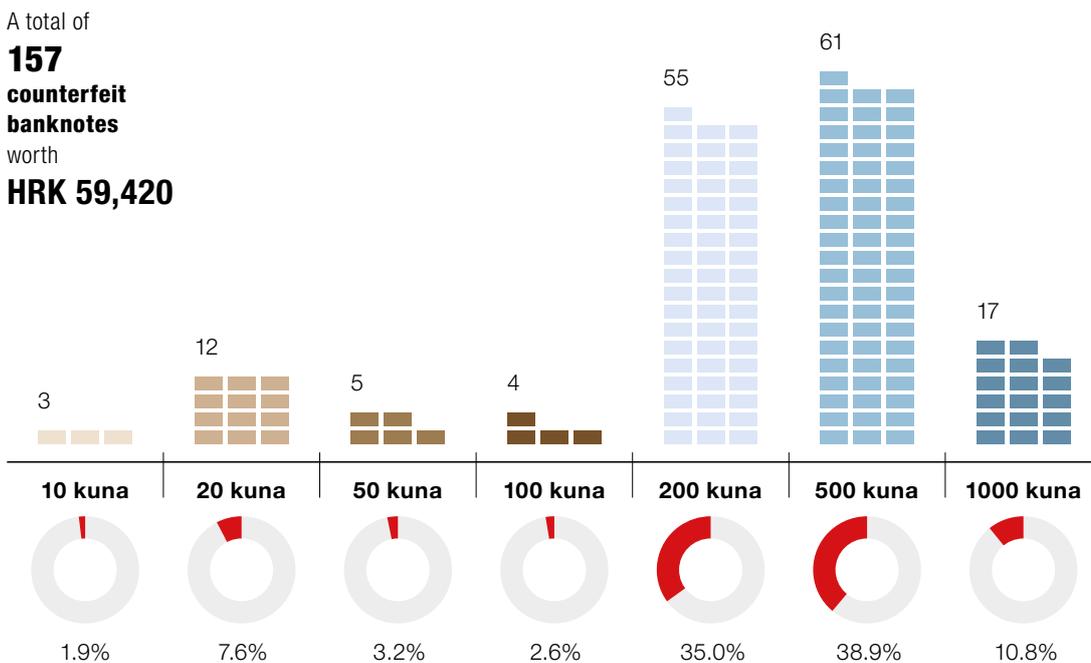
In 2020, 817 counterfeit euro coins were registered, which is an increase of 689 items, or 538.3% compared to 2019.

In order to further familiarise the public with the banknote authenticity checking, the Croatian National Bank released a series of **educational videos on the security features of kuna banknotes** ¹ (available only in Croatian). For each kuna banknote denomination, the CNB has made a video that explains in detail the authenticity checking procedure.



Figure 7.8 Registered counterfeit kuna banknotes in 2020

items per denomination



In 2020, 0.6 counterfeit banknotes were detected per 1 million kuna circulation notes, compared to 1.9 registered in 2019.

SOURCE: CNB.

FINTECH AND CRYPTO-ASSETS – THE ROLE OF CENTRAL BANKS

In the broadest sense of the word, FinTech means innovative technology-based financial products and services. The application of technology changes existing business models, creates new business opportunities, but at the same time introduces new risks into the financial system. The fundamental challenge facing the competent authorities is to find an equilibrium between encouraging innovation and entrepreneurship, on the one hand, and preventing the accumulation of risks, i.e. their timely identification, on the other hand.

The Innovation Hub

was set up with the aim of providing assistance to all new or existing companies that are developing or that have already developed an innovative technology-based banking or payment service.

Innovation Hub

The CNB established an innovation centre called the CNB Innovation Hub in December 2019.

The Innovation Hub is a communication and information platform on which business entities can obtain answers to inquiries and interested companies information, which enables the exchange of opinions and on which clarifications can be obtained in the areas of FinTech within the competence of the CNB. In 2020, in addition to several meetings with companies that applied through the platform, the largest number of inquiries received was related to the provision of payment services and alternative payment methods in the field of traditional currencies or the use of various forms of cryptocurrency.

Inquiries related to creditworthiness assessment and digital account opening using innovative and digitally advanced solutions were also received.

The Innovation Hub was set up with the aim of providing assistance to all new or existing companies that are developing or that have already developed an innovative technology-based banking or payment service. All companies, regardless of whether they have obtained the prior approval of the CNB to provide a certain type of service, are invited to contact the Innovation Hub if they wish to learn more about the regulatory framework applicable to their specific business model.

03

Cryptocurrency regulatory framework

Due to the growing importance of cryptocurrencies, regulators throughout the world have begun to work intensively to develop a legal framework that will include cryptocurrency issuers and cryptocurrency-related service providers. The term crypto-assets means a digital representation of a value or right that is transferred or stored electronically and is based on distributed ledger technology or similar technology.

However, there are significant risks associated with virtual currencies, including the risk of loss of money. If a platform that holds or operates

with virtual currencies fails, there are no loss protection mechanisms. A special challenge for regulators is the dual nature of crypto-assets.

Therefore, the representatives of the European Commission invited all stakeholders (individuals, organisations, member states, etc.) at the end of 2019 to a public debate on the legislative proposal for the regulation of markets in crypto-assets in the European Union. After collecting answers and conducting an expert analysis, the proposal for a **Regulation on markets in crypto-assets** ¹ was published in September 2020, which included issuers and providers

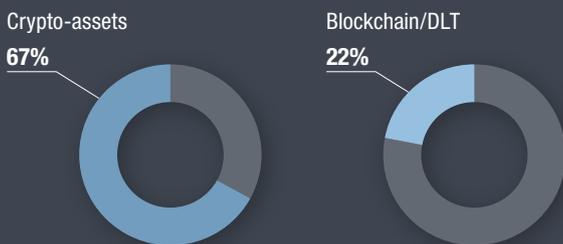
Crypto-assets can be used as means of investment and as means of payment.

LINK NO. **1**

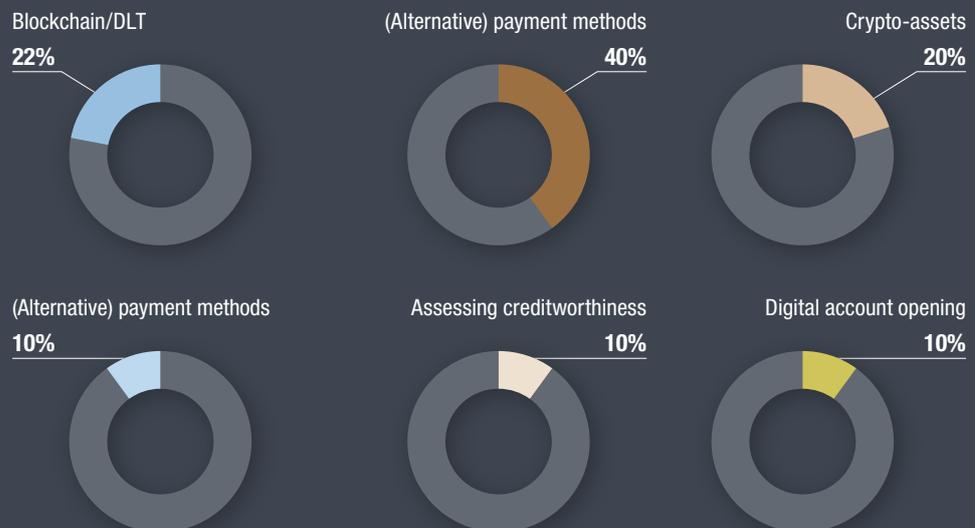


Figure 7.9 The structure of public inquiries from the FinTech area and topics covered as part of the Innovation Hub

STRUCTURE OF PUBLIC INQUIRIES IN 2020



STRUCTURE OF TOPICS COVERED AS PART OF THE INNOVATION HUB



SOURCE: CNB.

The aim of the proposal for a Regulation on markets in crypto-assets is to harmonise the rules for issuers and service providers related to crypto-assets while protecting consumers and to encourage innovation while preventing the accumulation of risk.

of services related to cryptocurrency. However, the above-mentioned proposal for a regulation does not cover the issuance of cryptocurrencies that belong to what is called decentralised finance (Bitcoin, Ether, etc.). However, the legislative proposal covers companies that intend to provide services related to these forms of crypto-assets.

The Council of the European Union is currently discussing a proposal for a regulation that will harmonise rules across the European Union and encourage innovation while at the same time preventing the accumulation of risk, protecting consumers and realising the full potential of the single European market for issuers and providers of FinTech services.

A For more details on the Innovation HUB:
fintechhub.hnb.hr

B For more details on central bank digital currency:
[Central bank digital currency – a new fashion or a need?](#)

C For more details on the public consultation on a digital euro:
[ECB digital euro consultation ends with record level of public feedback](#)

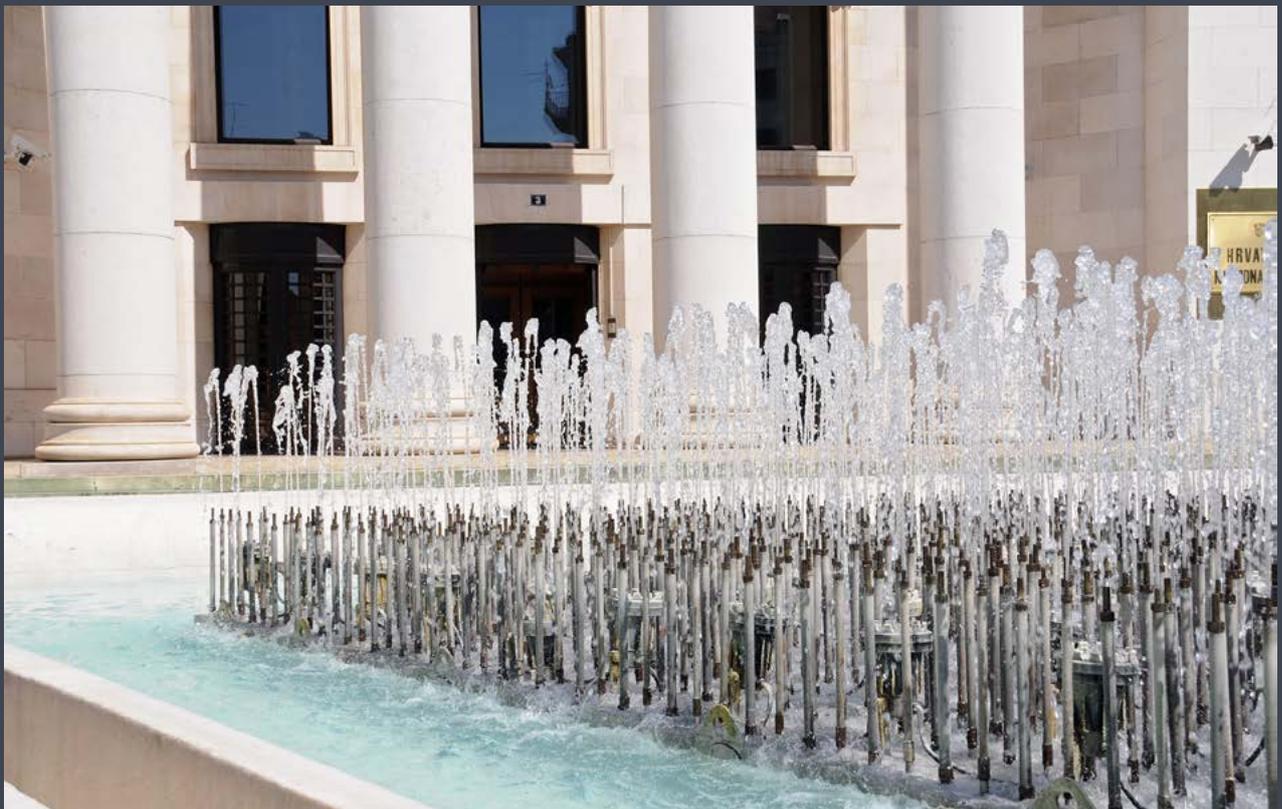
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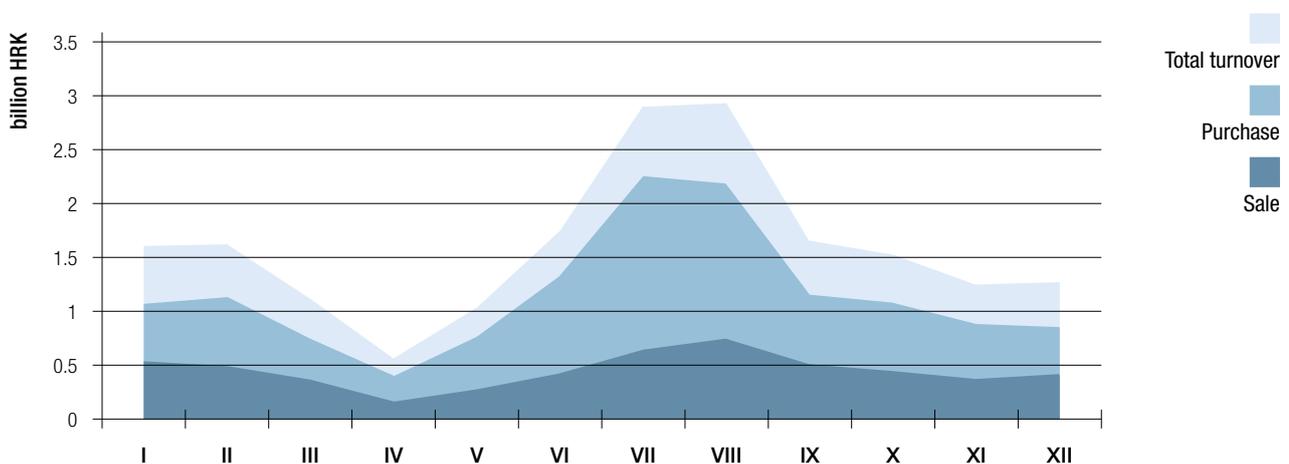
AUTHORISED CURRENCY EXCHANGE OFFICES

Towards the end of 2020, there were approximately 900 authorised currency exchange offices operating in Croatia, which traded in 31 currencies and generated a turnover of HRK 19bn, more than 87% of it in euro.

As at 31 December 2020, a total of 1,188 exchange offices to which the Croatian National Bank had issued authorisations to conduct currency exchange transactions, operated in the Republic of Croatia.

About 900 of them actively provided the service of foreign cash exchange transactions, both throughout the year or seasonally, at about 3,500 exchange locations.

Figure 7.10 Movement of total turnover and purchase and sale of foreign cash in 2020



SOURCE: CNB.

In 2020, the authorised currency exchange offices' turnover in foreign cash purchase and sale transactions with natural persons in their kuna equivalent totalled HRK 19.24bn. Of that amount, purchase accounted for HRK 13.86bn, or 72.02%.

In 2020, the CNB issued a total of 29 authorisations to conduct currency exchange transactions, 20 decisions on the withdrawal of authorisation to conduct currency exchange transactions and also recorded 53 authorisations that ceased to be valid for legal reasons, most frequently because a currency exchange office had been removed from the court register.

In 2020, authorised currency exchange offices traded in 31 currencies and purchased from or sold to natural persons foreign cash in the equivalent of HRK 19.24bn. Of that amount, purchase accounted for HRK 13.86bn, or 72.02%. The euro accounted for the bulk of total authorised currency exchange offices' transactions (87.39%). The kuna equivalent of the authorised currency exchange offices' total turnover in foreign cash was down by HRK 10.53bn (35.38%) from 2019, while the share of the euro in total turnover rose by 1.09 percentage points (an increase from 86.3% to 87.39%).

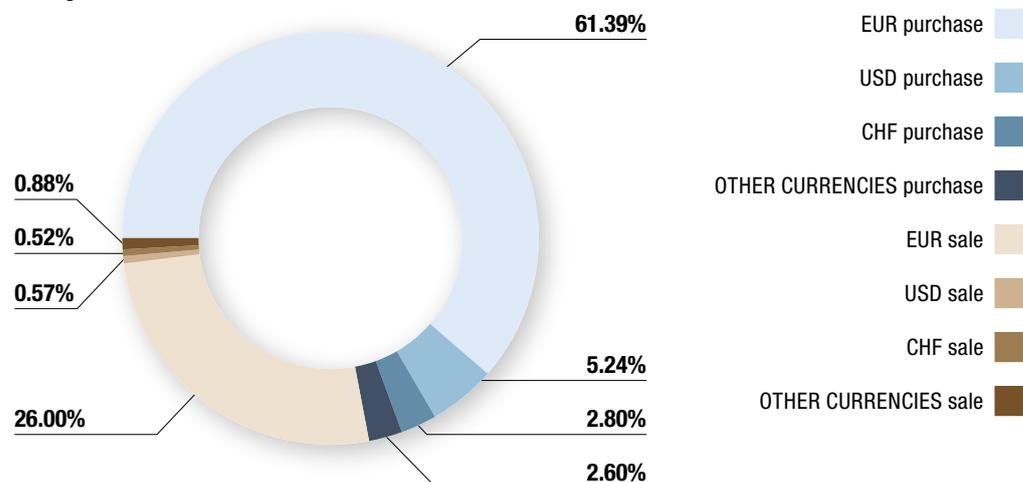
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In September 2020, the CNB adopted a new subordinate regulation amending **the conditions and the manner for the conduct of currency exchange transactions by authorised currency exchange offices** ¹.

In the course of last year, the CNB did not adopt or amend other regulations governing foreign exchange operations.

Figure 7.11 Share of purchase and sale of foreign cash by currency in total turnover in 2020



SOURCE: CNB.



CNB IN THE EU AND THE INTERNATIONAL ENVIRONMENT

The Croatian National Bank is a member of the European System of Central Banks, and representatives of the CNB are also involved in the work of the European Systemic Risk Board, the European Banking Authority, the Single Resolution Board and the working bodies of the Council of the European Union and the European Commission. The cooperation between the Croatian National Bank and the IMF, BIS and other multilateral international financial institutions has been intensive, despite the pandemic. In addition, technical cooperation activities related to twinning projects and the Regional Programme for Strengthening the Central Bank Capacities in the Western Balkans continued in 2020.

A LOOK AT 2020: CNB IN THE EU AND THE INTERNATIONAL ENVIRONMENT

1

GRANTS AND
FAVOURABLE EU LOANS

EUR 9.349bn

The total value of EU financial assistance provided through the Recovery and Resilience Facility is EUR 672.5bn, of which EUR 9.349bn was allocated to Croatia and is available in the period 2021-2023.

MORE ON PAGE 113

2

FINANCIAL ASSISTANCE
FROM THE IMF

USD 102bn

The IMF responded to the pandemic crisis by rapidly granting financial assistance to a number of countries (83 of them, totalling more than USD 102bn over 2020), as well as adjusting its financial instruments.

MORE ON PAGE 115

3

MAIN TECHNICAL
COOPERATION PROGRAMMES

4

CNB was engaged as a twinning partner in three projects for the central banks of the EU candidate countries, and the activities of the Regional Programme for Strengthening the Central Bank Capacities in Six Western Balkans Countries.

MORE ON PAGE 117

4

UNCHANGED QUOTA OF
THE RC IN THE IMF

SDR 717.4m

The quota of the RC in the IMF (717.4 million of special drawing rights), and its voting power remained unchanged in 2020 (0.171% of voting rights in the IMF).

MORE ON PAGE 114

INTERNATIONAL RELATIONS

The Croatian National Bank is a member of the European System of Central Banks and actively participates in the execution of the tasks falling within the competence of the General Council and the Supervisory Board of the European Central Bank. The accession of the Croatian kuna to the ERM II exchange rate mechanism, the establishment of close supervisory cooperation with the ECB and joining the Single Resolution Mechanism are key events in the CNB's European affairs in 2020.¹ Representatives of the CNB are also involved in the work of the European Systemic Risk Board, the European Banking Authority, the Single Resolution Board and the working bodies of the Council of the European Union and the European Commission. Cooperation between the Croatian National Bank and the IMF, BIS and other multilateral international financial institutions continued in 2020 with almost the same intensity as in previous years, although in the context of the COVID-19 pandemic it was largely undertaken in a virtual format.

Activities connected with EU membership European System of Central Banks (ESCB)

The CNB is an integral part of the ESCB, and the Governor of the CNB is a member of the General Council of the ECB. In 2020, the Governor participated in the regular quarterly meetings of the General Council, which dealt with macroeconomic, monetary and financial developments in the EU as well as with monetary policy measures in non-euro area member states. An extraordinary meeting of the General Council was held in July 2020, which, together with the Governing Council of the ECB, considered the requests for the inclusion of the Croatian kuna and the Bulgarian lev in the ERM II exchange rate mechanism.

CNB experts took part in the work of 14 ESCB committees, numerous sub-committees and working groups that provide expert assistance to the General Council, the Supervisory Board and other ECB

decision-making bodies. As a member of the ESCB, the CNB also takes part in the formulation of ECB opinions concerning draft legislation of the EU and individual member states.

Joining the banking union

In parallel with the accession of the Croatian kuna to the ERM II exchange rate mechanism, Croatia also joined the banking union in 2020, a single system of supervision and resolution of banks at the EU level. On 10 July 2020, the ECB adopted the **decision to establish close cooperation with the Croatian National Bank**¹ in the supervision of credit institutions under the Single Supervisory Mechanism. By this decision, the ECB has, as of **1 October 2020, taken over the task of directly supervising eight Croatian banks**², and the vicegovernor of the CNB competent for banking supervision became a member of the Supervisory Board of the ECB with full voting rights.

LINK NO. 1



LINK NO. 2



¹ For more details, see chapter 2 Towards the euro and the banking union.

By joining the banking union, Croatia became a full member of the Single Resolution Mechanism, and the CNB, as one of the resolution authorities in Croatia, participates in the work of the Single Resolution Board.

European System of Financial Supervision

As a participant of the European System of Financial Supervision, the CNB is actively involved in the work of the European Systemic Risk Board (ESRB). The Governor and the vicegovernor competent for banking supervision participated in the regular quarterly meetings of the ESRB General Board, and with the outbreak of the COVID-19 pandemic, several extraordinary meetings of that body were held to respond in a timely manner to emerging challenges. The meetings of the General Board discussed systemic risks to the EU financial system and macroprudential policy measures, and it was assessed that the overall level of systemic risks in 2020 was at an elevated level. One of the main sources of risk is the price of financial assets, which deviates from levels based on fundamentals, and the volatility in the markets caused by the emergence of the pandemic. Reduction in banks' profitability also represents a high risk to the financial system, and there is a danger of a significant increase in non-performing placements, especially after public support measures for businesses facing the pandemic are discontinued.

CNB experts are involved in the work of the European Banking Authority (EBA) and take part in the meetings of EBA committees and working bodies. Competent vicegovernors also actively participate in the meetings of the Board of Supervisors and the Resolution Committee.

EU Council and the European Commission (EC)

In the first half of 2020, Croatia held the Presidency of the Council of the EU for the first time, with CNB experts also participating in the work of certain working groups. The outbreak of the pandemic disrupted the implementation of planned EU initiatives and policies, including the programme of the Croatian Presidency of the Council of the EU (HR PRES), shifting the priorities of the presidency towards combatting the effects of the newly emerged crisis. As part of the EU Economic and Financial Affairs Council (ECOFIN), HR PRES focused on reaching an agreement between EU member states on emergency measures to mitigate the economic consequences of the crisis. Thus, an agreement was reached on a more flexible application of the rules in the banking system by amending the Capital Requirements Regulation (the so-called CRR quick fix), which, inter alia, made it easier for banks to continue lending to enterprises and individuals with a more flexible treatment of non-performing loans.

In the second half of 2020, CNB experts continued with their regular activities in the working bodies of the EU Council and the European Commission. The activities included the discussion of draft legislation and other EU acts and participation in the preparation of the positions of the RC related to topics in the fields of competence of central banks, such as improving the quality of financial services and the resilience of the EU financial system. The designated CNB representatives participated in the work of the Economic and Financial Committee (EFC), which promotes the coordination of national economic policies and discusses EU initiatives, such as completing the

By joining the banking union, Croatia became a full member of the Single Resolution Mechanism, and the CNB, as one of the resolution authorities in Croatia, participates in the work of the Single Resolution Board.

The CNB's experts are involved in the work of the European Banking Authority, and the competent vicegovernors actively participate in the meetings of the Board of Supervisors and the Resolution Committee.

establishment of the banking union, building a capital market union and strengthening the euro's international role. Negotiations continued in the EU Council on a package of measures to reduce risks within the banking system and on the European Deposit Insurance Scheme (EDIS). In late 2020, an agreement was reached on the continuation of the reform of the European Stability Mechanism (ESM) to enable the establishment of a common backstop for potential major disruptions in the euro area banking system by early 2022.

Republic of Croatia and coordination of economic policies within the European Union

In February 2019, within the European Semester, the annual process of coordination of economic policies of EU member states, the EC established that Croatia still had macroeconomic imbalances, as well as that in most areas covered by specific EU Council recommendations for 2019 Croatia had made limited progress.

In mid-2020, the EU Council submitted a new set of economic policy recommendations to all member states, focusing on alleviating the effects of the pandemic and facilitating economic recovery. To this end, the European Commission decided in March 2020 to temporarily derogate from the usual budgetary requirements for member states, providing them more fiscal space to implement measures. The EU Council thus recommended that Croatia improve the resilience of the healthcare system, strengthen labour market measures, continue to provide additional liquidity to SMEs and the self-employed, improve the business environment, enhance the efficiency of public administration and the judiciary, and focus on green

and digital transition. In late 2020, at the beginning of the new European Semester, the EC concluded that in 2021 in-depth reviews of national economies would be conducted for Croatia and 12 other member states.

In the coming period, the European Semester will adapt to the implementation of the new Recovery and Resilience Facility, which will provide member states with substantial financial assistance in the form of grants and soft loans to finance crisis recovery. The total value of the instrument is EUR 672.5bn, of which EUR 9.349bn was allocated to Croatia, which will be available in the period 2021–2023. In the new circumstances, the EU Council will focus its recommendations to member states on improving their fiscal and macroeconomic situation.

Other activities connected with the European Union

The United Kingdom ceased to be an EU member state on 1 February 2020. Under the Withdrawal Agreement, in order to agree on future partnerships, EU law continued to apply for a transitional period until 31 December 2020. Following complex negotiations, the Trade and Cooperation Agreement was reached on 24 December 2020 between the EU and the United Kingdom. The area of financial services is not included in the Agreement, and both parties agreed to reach an agreement by March 2021 on the establishment of a framework for regulatory cooperation in this area. The national central banks were not directly involved in the process of negotiating EU-UK relations, but they had a primarily advisory role. Accordingly, the CNB contributed at the national level to the analysis of

The EU institutions and member states are committed to reaching an agreement on a common response to the pandemic crisis, with the Recovery and Resilience Facility at the centre.

potential effects in the areas of its competence, and within the ESCB it participated in the work of the working group that monitored the Brexit process from the perspective of central banks.

International Monetary Fund (IMF)

The Republic of Croatia is a member of the constituency that is alternately headed by the Netherlands and Belgium. This constituency comprises 16 countries (Andorra, Armenia, Belgium, Bosnia and Herzegovina, Bulgaria, Cyprus, Montenegro, Georgia, Croatia, Israel, Luxembourg, North Macedonia, Moldova, the Netherlands, Romania and Ukraine), with Andorra joining this constituency in October 2020, after it became the 190th member of the IMF in the same month. This constituency, with 5.47% of the total votes in the Fund, has the fourth largest voting power in the IMF Executive Board, which consists of 24 Executive Directors. In October 2020, a new Executive Director of the constituency, Paul Hilbers from the Netherlands, was elected. Due to the increase in the number of countries in this group, from November 2020 Croatia now has the right to the position of permanent advisor in the Executive Director Office, while previously Croatia had the right to appoint its representative every four years for a two-year term. The quota of the RC in the IMF and its voting power remained unchanged in 2020 (SDR 717.4m and 0.171% respectively).

As part of the IMF's supervisory activities, the expert team in charge of Croatia regularly visits the Republic of Croatia at least once a year to conduct Article IV consultations. After Article IV consultations for 2019, concluded in February

2020, a regular visit by members of the IMF mission was held in the second half of November in virtual form. Representatives of the IMF mission to Croatia held talks with the Croatian authorities and representatives of the private sector, and issued a Concluding Statement after the meetings. They emphasised the importance of striking a balance between short-term priorities of support to the economy and medium-term priorities, namely rebuilding the fiscal space and supporting productivity and growth through green public investments and public investments in digitalisation. Mission members expressed their expectation that in 2021 GDP growth would amount to approximately 6%, assuming the cessation of the effects of the pandemic. Emphasis was placed on the importance of implementing a long-standing programme of structural and fiscal reforms to maximise the benefits of the forthcoming introduction of the euro. IMF experts also expressed the view that fiscal incentives would be more effective if they were implemented by increasing spending instead of further reducing taxes, warning that at this stage, further reduction of VAT would not be recommended without appropriate compensatory measures. Regarding monetary policy, the IMF mission to Croatia noted that the CNB had proactively responded to the crisis, and that the banking system had successfully resisted the pressures. Next Article IV consultations are scheduled for spring 2021.

Cooperation with IMF experts and exchange of opinions during 2020 took place through the participation of Croatian representatives in regular Spring Meetings and the meeting of the constituency in April, as well as the IMF and

In a statement on the occasion of the virtual visit to Croatia, the IMF mission supported the proactiveness of the monetary policy response to the crisis and stressed the importance of striking a balance between short- and medium-term fiscal policy goals.

In 2020, the CNB Governor once more took part in the work of the BIS, in which the governors of central banks from BIS member countries discuss current issues in the area of international banking and finance.

World Bank Annual Meeting in October. It was the economic consequences of the pandemic and the increased financial needs of the member states that were discussed the most at these meetings. The IMF responded to this crisis by rapidly granting financial assistance to a number of countries (83 of them, totalling more than USD 102bn over 2020) and adjusting its financial instruments, including a temporary increase in the amount of funds that can be granted to member countries, by introducing a new liquidity instrument and by initiating and participating in repayment moratorium and debt relief programmes for the poorest countries. In addition to short-term financial assistance, in 2020 the IMF also focused on a longer-term perspective in which it emphasises sustainable development, digital transformation, adaptation to climate change and assistance to the most vulnerable social strata.

In 2020, Croatia also collaborated on a project to assess the IMF's advisory role on capital flows conducted by the IMF's independent evaluation office. Croatia was selected as one of the three countries whose experiences of cooperation with the IMF regarding advice on capital flow management and macroprudential policy were analysed in detail. The advisory role of the IMF in Croatia in this area was assessed as successful and mutually beneficial.

The CNB is the fiscal agent of the RC for the IMF and a depository of the IMF. As a result, the CNB is responsible for keeping deposit accounts of the IMF in the RC and for settling obligations of the RC, in its name and for its account, on the basis of its membership in the IMF.

Cooperation with the Bank for International Settlements (BIS) and other international financial institutions

The Governor of the Croatian National Bank also participated in the work of the BIS in 2020, at which current issues in the area of international banking and finance were discussed by central bank governors. In June 2020, the Governor participated in the virtual BIS Annual General Meeting, at which, inter alia, a decision was made not to pay the BIS dividend in 2020 due to extraordinary circumstances caused by the COVID-19 pandemic. The BIS dividend is normally paid to all member central banks, i.e. BIS shareholders, and the CNB owns 2,441 shares or 0.43% of the total number of BIS shares.

In 2020, the Croatian National Bank, within its competence, continued to cooperate with other multilateral international financial institutions and organisations. The cooperation was of lesser intensity and it was carried out in virtual form, the largest part referring to cooperation with multilateral development banks of which the Republic of Croatia is a member.

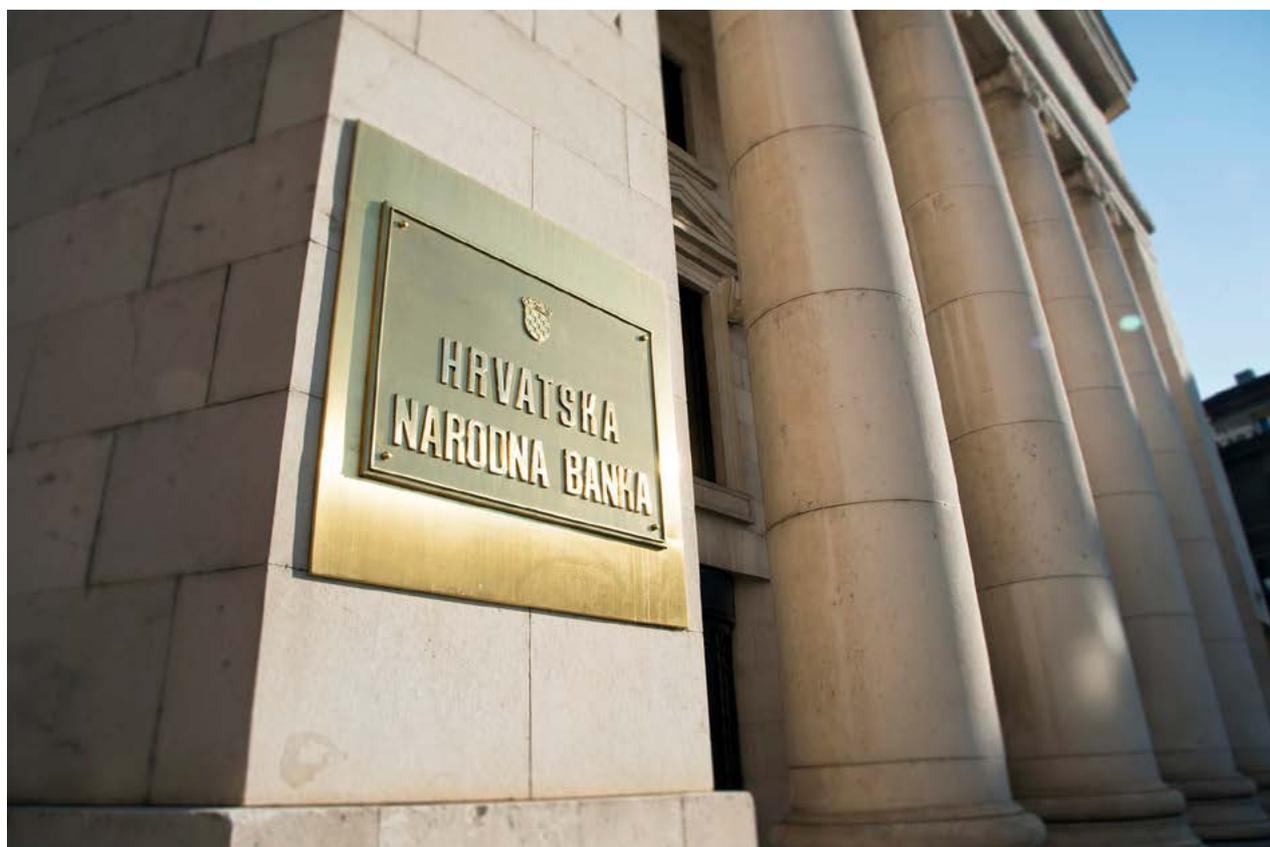
Other activities

The CNB Governor is the chairman of the Vienna Initiative 2.0 Steering Committee. The Vienna Initiative 2.0 is a framework for safeguarding financial stability in the countries of Central, Eastern and Southeastern Europe through the exchange of the experience and opinions of the key stakeholders in these countries' financial systems and private and public sectors. The Initiative brings together international financial

The Croatian National Bank Governor is the chairman of the Vienna Initiative 2.0 Steering Committee, whose goal is contribution to safeguarding financial stability in the countries of Central, Eastern and Southeastern Europe (CESEE).

institutions, home and host country supervisory authorities and the principal cross-border banking groups. The Vienna Initiative was established at the peak of the global financial crisis with the aim of preventing a sudden outflow of capital from the banking systems of the countries of Central and Eastern Europe, and in the post-crisis period, it proved to be a useful platform for cross-border supervisory cooperation.

CNB representatives also participate in the work of an interdepartmental group for the coordination of activities within the 17+1 initiative, which promotes cooperation between 17 Central, Eastern and Southeastern European countries and China.



TECHNICAL COOPERATION PROGRAMMES

In 2020, the CNB participated in three twinning projects for the central banks of EU candidate countries – Montenegro, Serbia and North Macedonia. In addition, activities related to the Regional Programme for Strengthening the Central Bank Capacities in Six Western Balkans Countries with a View to the Integration to the European System of Central Banks continued, in which CNB participates together with 19 other central banks of EU member states and the ECB.

CNB experts continuously participate in the transfer of knowledge and experience to other institutions, primarily the central banks of EU candidate and potential candidate countries. These activities continued in 2020 despite the aggravating circumstances caused by the COVID-19 pandemic. In addition to occasional short-term bilateral activities in the form of transfer of knowledge on the *acquis*, in 2020 the CNB was involved as a participating twinning partner (Junior Partner) in three twinning projects for which bidding consortia led by German institutions were selected:

- Improvement of financial sector regulations in Montenegro – consortium members were institutions from Germany, Croatia and the Netherlands (apart from the CNB, HANFA from Croatia also participated in the project), and the CNB was engaged in further harmonisation of the regulatory framework for the banking system with the *acquis communautaire* and in strengthening the administrative capacities of the Central Bank of Montenegro in activities related to financial stability.
- Strengthening of the institutional capacities of the National Bank of Serbia in the process of EU accession – the consortium members were the central banks of Germany, Croatia and Romania (HANFA was included in one part of the project related to the insurance sector), and the CNB's area of work included development of action plans for monitoring the effects of capital movement liberalisation, optimising the collection of statistical data from banks and harmonising the function of the bank's international relations with ESCB standards.
- Strengthening of the institutional capacity of the National Bank of the Republic of North Macedonia in the process of its accession to the European System of Central Banks – consortium members are the central banks of Germany and Croatia, and CNB experts are engaged in financial accounts statistics and new banking regulations for non-performing loans, and in one part in the evaluation of the procedures for internal liquidity adequacy assessment process (ILAAP) of credit institutions and activities related to payment systems.

In 2020,
CNB
was engaged as a twinning partner (Junior Partner) in three twinning projects.

The first two mentioned projects were completed in 2020, and the completion of the third project is expected in March 2021. Due to the COVID-19 pandemic, most missions in 2020 were held virtually.

The year 2020 saw a continuation of activities related to the Regional Programme for Strengthening the Central Bank Capacities in Six Western Balkans Countries with a View to the Integration to the European System of Central Banks, in which the CNB participates together with 19 other central banks

of EU member states and the ECB. Within the first component of the Programme, a total of 20 three-day seminars on topics in the field of central banking are planned; after two seminars held in 2019, the CNB hosted another seminar on financial stability in February 2020. The CNB is also involved in two bilateral measures under the second component of the Programme, both of which began in 2020. The completion of this Programme is expected in late 2021, and a new Programme is already being prepared, to begin in 2022.

Figure 8.1 Overview of main technical cooperation programmes in which the CNB was involved in 2020

Institutions in beneficiary countries, partners from member states and CNB activities

1 TWINNING: SUPPORT FOR FINANCIAL SERVICES REGULATION

Central Bank of Montenegro (CBM), Capital Market Authority, Insurance Supervision Agency

EU PARTNERS: the central banks of Germany and the Netherlands, the financial services supervisory agencies of Germany and Croatia

ACTIVITIES OF THE CNB: further harmonisation of the regulatory framework for the banking sector with the *acquis communautaire* and strengthening of the CBM's administrative capacity related to financial stability

RESIDENT TWINNING ADVISOR* FROM THE CNB: YES

2 TWINNING: STRENGTHENING OF THE INSTITUTIONAL CAPACITIES OF THE NATIONAL BANK OF SERBIA IN THE PROCESS OF EU ACCESSION

National Bank of Serbia

EU PARTNERS: central banks from Germany and Romania

ACTIVITIES OF THE CNB: development of action plans for monitoring the effects of liberalisation of capital movements and for optimising the collection of statistical data from banks, harmonisation of the function of the bank's international relations with the ESCB standards

RESIDENT TWINNING ADVISOR* FROM THE CNB: NO

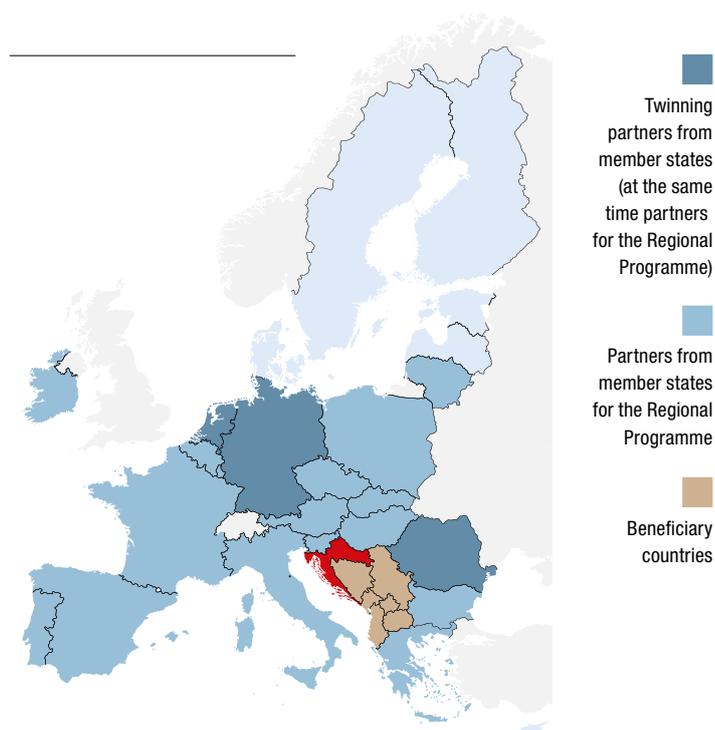
3 TWINNING: STRENGTHENING OF THE INSTITUTIONAL CAPACITY OF THE NATIONAL BANK OF THE REPUBLIC OF NORTH MACEDONIA IN THE PROCESS OF ITS ACCESSION TO THE EUROPEAN SYSTEM OF CENTRAL BANKS

National Bank of the Republic of North Macedonia (NBRNM)

EU PARTNERS: Central bank of Germany

ACTIVITIES OF THE CNB: statistics of financial accounts, part of activities on payment systems, regulations, on the liquidity coverage ratio, the internal liquidity adequacy assessment process**; application of new banking regulations on non-performing loans

RESIDENT TWINNING ADVISOR* FROM THE CNB: YES



4 REGIONAL PROGRAMME: PROGRAMME FOR STRENGTHENING THE CENTRAL BANK CAPACITIES IN THE WESTERN BALKANS WITH A VIEW TO THE INTEGRATION TO THE ESCB

Central banks of BiH, Montenegro, Serbia, Kosovo, North Macedonia and Albania

EU PARTNERS: national central banks of the ESCB and the ECB

ACTIVITIES OF THE CNB: host of three seminars on the following topics: monetary statistics, payment operations, financial stability; bilateral measures for CBM (financial accounts statistics) and NBRNM (harmonisation of the function of the bank's international relations with ESCB standards)

* RTA
** ILAAP

SOURCE: CNB.



PUBLIC RELATIONS

Intensive communication activities in 2020 focused on economic developments caused by the financial and economic crisis, CNB measures to alleviate the consequences of the pandemic for individuals, enterprises and the financial sector, and significant activities were dedicated to providing information about Croatia's entry into the common exchange rate mechanism and the National Euro Changeover Plan.

A LOOK AT 2020: PUBLIC RELATIONS

1**WRITTEN AND ORAL
INQUIRIES TO THE CNB****2,000**

During 2020, the central bank answered more than 2,000 written and oral inquiries sent by individuals, enterprises, media representatives, state institutions, embassies and others.

MORE ON PAGE 122**2****CONFERENCE
PARTICIPANTS****180**

In December, the conference “Finance for Sustainable Growth” was organised by the CNB and the Embassy of Italy in a hybrid format: a small number of the speakers and panelists were present in the CNB’s Round Hall, while all participants, as well as the media, joined online.

MORE ON PAGE 123**3****MEDIA INQUIRIES
TO THE CNB****278**

During 2020, 278 media inquiries were answered, and the most common topics of media interest were the COVID-19 pandemic, specifically CNB measures (38), joining ERM II and close cooperation (33), and the monetary policy projection for 2021 (18).

MORE ON PAGE 123**4****SOCIAL MEDIA POSTS****341**

The CNB used its official profiles on YouTube, Facebook, Twitter, LinkedIn and Flickr for publishing 341 posts during 2020.

MORE ON PAGE 122

PUBLIC RELATIONS

Clear and timely provision of information to the domestic and international public on its operations, objectives and the measures needed to attain them is one of the main tasks of the Croatian National Bank. In 2020, we carried out this task in the challenging conditions of the COVID-19 pandemic and all channels and formats of communication had to be adapted to the new situation. Due to the pandemic, significantly fewer events, conferences and educational programmes were held, but the intensity of communication was significantly increased. A significant portion of the activities was dedicated to Croatia's entry into ERM II and the National Euro Changeover Plan.

In 2020, the CNB continued to inform and educate the public about its activity using various communication channels. There were regular press releases on the decisions of the CNB Council, and special efforts were made to communicate all measures related to COVID-19. In order to inform the professional and general public about the activities of the Croatian National Bank, officials and employees of the central bank appeared in the media and at various thematic, mostly online conferences. The CNB answered questions from journalists covering the finance and banking sectors, in order to familiarise the public with the specific activities of the central bank related to the financial and economic crisis caused by the pandemic and epidemiological measures.

In addition, we informed journalists and the general public about all aspects related to Croatia's entry into ERM II, the National Euro Changeover Plan, the CNB's monetary policy, payment services and other central bank tasks. Throughout the year, communication was intensified by means of all communication channels, including social media. The CNB publishes all news about its activity, regulations and measures from within its activity on its website www.hnb.hr. The website also features regular publications and the research and working papers of the Bank's employees.

In an endeavour to inform the public as fully and clearly as possible about the measures taken by the CNB to implement its objectives and maintain

During 2020, the CNB regularly issued press releases on various decisions of the CNB Council through various communication channels, and special efforts were made to communicate on all measures related to COVID-19.

financial stability in the crisis caused by the COVID-19 epidemic, we have set up a special section of the website ¹ intended for CNB's response to the pandemic crisis.

Prior to joining the European Exchange Rate Mechanism (ERM II), the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM), we published comprehensive "Questions and Answers" in a separate section. We placed emphasis on the further development of the euro.hnb.hr ², website, especially on the section with the most important questions and answers related to the introduction of the euro, and on the promotion of the National Euro Changeover Plan.

We published 78 press releases, 22 of which were related to the CNB's response to the coronavirus crisis, and in 2020 we responded to more than 2,000 written and oral inquiries from members of the public, companies, media representatives, government institutions, embassies and others, requesting information pertaining to all areas of CNB operations. Special attention was paid to communication through official profiles on YouTube, Facebook, Twitter, LinkedIn and Flickr, on which we published 341 posts in 2020. This further strengthened communication with all segments of the public and promoted content from the central bank's competence. Furthermore, the mHNB mobile app, which was launched in 2017, was installed on a total of 13,835 devices from launch until the end of 2020, of which 4,477 installations on devices were recorded in 2020.

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IN CROATIAN



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Great public interest was aroused by Croatia's entering into the European Exchange Rate Mechanism and by that of the CNB into close collaboration with the European Central Bank. The CNB became part of the Single Supervisory Mechanism (SSM) even before joining the euro area. We have informed the media and the public about this on a daily basis, because there were numerous questions regarding these topics. Intensified communication activity on this topic was again recorded in October, when the ECB began to supervise important institutions in the Republic of Croatia directly.

At the end of the year, communication activity intensified due to the fact that after a public consultation, at a session held on 23 December 2020, the Government of the Republic of Croatia adopted the **National Euro Changeover Plan** ³, co-created by the CNB. The National Euro Changeover Plan describes all the main operational measures needed for the smooth replacement of the Croatian kuna by the euro, as well as key elements such as rules for recalculating prices and other values, converting deposits and loans and adjusting variable interest rates. It is therefore not surprising that its publication should have sparked great public interest.

In order to publish current analytical projects of the CNB that are interesting to the public, we launched the **HNBlog** ⁴, within which the employees of the Croatian National Bank publish professional articles. The comments are primarily intended to familiarise the professional and wider public with the original analyses of central bank employees. They may contain summaries of published scientific papers, papers that are being written, and they may also serve as a platform for up-to-date public communication of the results of interesting ad hoc research projects, research, unofficial assessments of the state of the economy or current concepts related to CNB operations.

Thus, we published blog posts that were well received in the media and by the professional public: "Central banking digital money – a new fashion or a need?", "The impact of the pandemic and the earthquake on the real estate market in Zagreb in the first half of 2020", "Is the level of financial literacy improving in Croatia?", "Euroisation at a time of crisis" and "Does Croatia have enough international reserves?".

Despite the pandemic, the traditional **Dubrovnik Economic Conference, the 26th in the series** ⁵, was held in July. The conference was organised in Dubrovnik with a hybrid format – both in the presence of participants and online, which enabled the involvement of participants who could not come to Dubrovnik due to travel restrictions via the video platform. Several papers were presented

at the conference and two panels were held. The central topics of the conference, which was attended by about 50 participants, were papers and discussions dedicated to the modalities of economic recovery in the crisis caused by the coronavirus pandemic, the role of banks in the 2020 crisis, and other current topics such as the attitude of central banks to the challenges of climate change or the accumulation of wealth and its distribution from 1980 to 2020.

The conference organised by the Croatian National Bank and the Italian Embassy "Finance for Sustainable Growth" was held in December, also with a hybrid format. A small number of speakers and panellists were present in the CNB's Round Hall, and other participants, as well as the media, joined online. A total of 180 participants were involved in the conference, and after the introductory address, four specialised panels were held.

In December 2020, the Governor and members of the management held several meetings with members of Deputy Clubs of the Croatian

Parliament and discussed current topics pertaining to the mandate of the central bank. The deputies were introduced to the monetary policy in the conditions of the crisis due to the COVID-19 pandemic, the euro changeover plan and the activities of the Croatian central bank in the field of consumer protection. The Croatian National Bank will continue the practice of organising meetings with the Deputy Clubs of the Croatian Parliament in order to continue and expand mutual information and dialogue between the Croatian Parliament and the Central Bank.

The Innovation Hub, launched in late 2019, responded to user inquiries in 2020, and meetings were held with companies that applied through the platform. Most inquiries were related to the provision of payment services, the use of innovative solutions in the field of traditional currencies or the use of virtual currencies.

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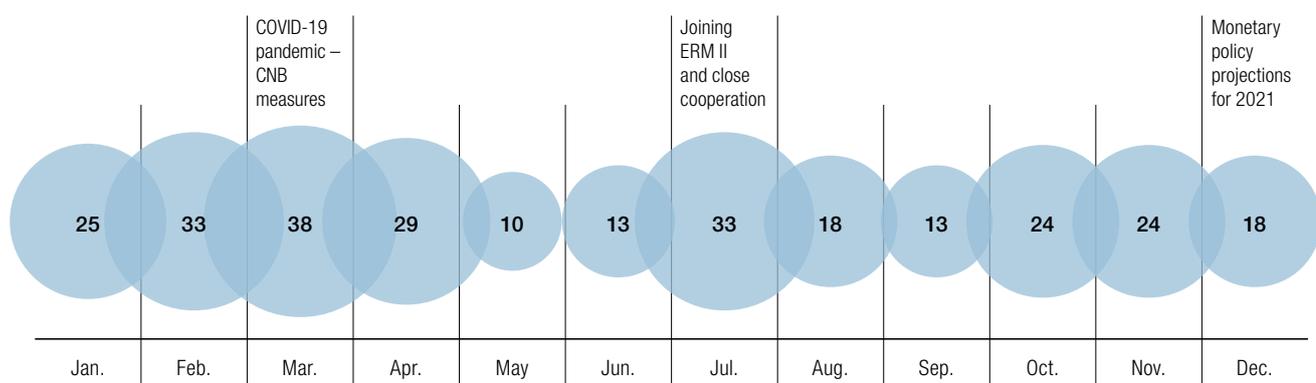


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Figure 9.1 Number and structure of inquiries to the CNB and main topics of media interest in 2020

NUMBER OF JOURNALIST INQUIRIES AND MAIN TOPICS OF MEDIA INTEREST



During 2020, more than **278 media inquiries** were answered, as well as a total of more than **2,000 written and oral inquiries** that were sent to the central bank by individuals, enterprises, media representatives, state institutions, embassies and others.

SOURCE: CNB.

ACTION AGAINST CLIMATE CHANGE AND GREENING OF FINANCIAL SYSTEMS – THE ROLE OF CENTRAL BANKS

In 2020, the CNB began to consider the impact of climate change on the achievement of its objective and tasks, and identified possible activities in this area.

The methods of combatting climate change

In order to halt the trend of global warming, the Paris Agreement was signed in 2015, envisaging a reduction in greenhouse gas emissions in order to limit the rise in temperature to 2 °C above pre-industrial levels and make efforts not to exceed a rise of 1.5 °C at most. The Agreement also calls for adaptation to the effects of climate change and development with low greenhouse gas emissions, for which the necessary funding should be provided.

According to economic theory, excessive greenhouse gas emissions occur because parties responsible for pollution do not pay for the damage they create, i.e. because of what

is called market failure. Therefore, economists advocate the introduction of a carbon tax as the best (market) solution, and as an alternative to it, programmes to limit and trade in greenhouse gas emissions. The European Union introduced the European Union Emissions Trading System in 2005 to create a market for greenhouse gas emissions, and the introduction of a carbon border adjustment mechanism to discourage import from countries with lower environmental standards. However, the current valuation of these emissions is inadequate, and extending the carbon tax base and amount, which would increase transport, housing and food prices, could adversely affect the poorest strata of the population and other measures would be

04

Carbon tax, regulation, financial incentives for new technologies and financing of carbon capture and storage are complementary approaches to combatting climate change.

needed to remove the adverse social impact of such a measure. Another method of reducing greenhouse gas emissions is regulation. It includes a ban on certain activities (e.g. particularly harmful technologies such as some types of industrial gases, coal-fired power plants, etc.) and the introduction of energy efficiency limits and standards (e.g. maximum fuel consumption for passenger cars, energy certificates for buildings and appliances, etc.). Ultimately, it is possible to introduce financial incentives for the introduction of new technologies and the financing of carbon capture and storage activities.

The introduction of new technologies that can reduce greenhouse gas emissions and adapt the economy to climate change is expensive and requires significant investment. Therefore, the Paris Agreement emphasised the need to secure funding for such projects and called on signatory states to mobilise various sources, instruments and funding channels, with public funding playing a special role. Securing the necessary financing is an important part of the **European Green Deal** ¹, according to which a large part of the funds provided for by the

Next Generation fund ² is intended for “green” investments. Development banks have a special role, among which the **European Investment Bank** ³ stands out at the European level. Reliance on public funds is especially important if it provides financial incentives for such investments.

Given the vast amount of investment required, it is necessary to include the entire financial system. Investors should be enabled to achieve other goals in addition to profit, the so-called ESG (environmental, social, governance) goals, so disclosure of information on the structure of their placements from an environmental perspective is required from financial institutions. The so-called EU taxonomy of activities that will make it possible to link financial products to the environmental sustainability assessment of the projects they finance is being developed, and will enable investors to channel their resources to environmentally sustainable financial products. Green bonds, as they are called, for targeted financing of environmentally sustainable projects have been introduced. In addition, the incorporation of climate risks into

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Securing the necessary funding is an important part of the European Green Deal, and given the huge amount of “green” investment required, it is necessary to include the entire financial system.

considerations of the riskiness of individual placements can reduce the attractiveness and return on investment in projects that are environmentally harmful.

The role of central banks

Central banks have approached the Paris Agreement call cautiously so as not to jeopardise price stability and the stability of the financial system. In order to define a common approach, in 2017 they established **Network for Greening of the Financial System** ¹ (NGFS), a group of central banks and regulators united on a voluntary basis to share experiences and good practices, contribute to the development of climate and environmental risk management and support the financial system's contribution to the transition to a sustainable economy. The first step in the work of the NGFS was to investigate how climate change affects economic activity and the financial system. It has been demonstrated that climate change has a negative impact and poses a medium- or long-term risk to the central banks' core objectives. At the same time, the effects of climate change could materialise only after several decades, which lies beyond the usual horizon at which the effects of monetary policy are considered, and therefore monetary policy tends to ignore them, and it is particularly difficult to predict extreme weather conditions and their effects. Therefore, additional models and indicators are being developed to monitor the impact of climate change on the economy and the financial system.

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Climate change risks can be divided into physical risks and transition risks. Physical risks relate to expected damage to health and property, including damage caused by extreme weather events the frequency of which is increasing due to global warming (storms, droughts, etc.), and long-term adverse effects of global warming such as rising sea levels and climate change. A negative impact on price stability is expected due to price increases that could directly result from damage (e.g. damage to agricultural production) and the need for additional investment to adapt to climate change.

The expected damage will have a negative effect on enterprises and investments in the financial sector, so the price of assets is expected to fall or the quality of part of the banks' portfolio is expected to deteriorate. Transition risks relate to the costs of adapting to policies for combatting climate change, such as stronger carbon taxation and higher regulatory standards, which may lead to the disappearance of entire industries (e.g. petroleum industry, airlines, automobile industry, etc.). Transition risks also include risks associated with changing consumer preferences and the transition to new technologies.

The consensus that climate change poses a risk to the financial system has prompted central banks to take climate risks into account in supervision of banks, and to incorporate them into analyses and policies aimed at preserving financial stability. Central banks are gradually

The risks of climate change can be physical (damage caused by extreme weather events and the long-term consequences of global warming) and transitional (increased investment in adapting to policies to combat climate change, changing consumer preferences and switching to new technologies).

In 2017, central banks established the Network for Greening of the Financial System, and in 2021 the Croatian National Bank became a member of the Network.

establishing mechanisms for identifying banks' exposure to climate risks and are encouraging banks to establish high-quality climate risk monitoring systems. Thus, the European Central Bank issued a [document in which it described the procedures to be applied in monitoring climate risks](#) ² in mid-2020. At the level of preserving the stability of the financial system, it is necessary to enhance the understanding of the effects and exposure to climate risks and to incorporate climate risk assessment into regular analyses and stress tests.

Central banks are still considering how microprudential and macroprudential

instruments could be used to encourage financial institutions to adequately monitor climate risks and to finance more strongly the transition to a low-carbon economy. Namely, the reduction of capital requirements for desirable "green" placements could disrupt the capitalisation and stability of financial institutions and lead to unfounded underestimation of the risk of placements.

Similarly, capital requirements for placements in "dirty" industries should be determined according to the actual risk, which must include climate change risks, but these placements do not necessarily have to be assessed as riskier.

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Figure 9.2 Central banks are getting involved in the fight against climate change

ECONOMIC ANALYSIS

Better understanding of the impact of climate shocks on the economy and especially on the financial system
Identifying and integrating climate and environmental shocks into existing models, analyses and projections and risk assessments

MONETARY POLICY

Analysis of measures to promote green investment as part of the ECB's monetary operations, paying particular attention to avoiding market distortions

PRUDENTIAL SUPERVISION

Developing awareness and methodology for climate and environmental risk management as part of bank supervision

RESERVES MANAGEMENT

Identification and classification of climate risks in managed portfolios

FINANCIAL STABILITY

Climate change risk assessment for the financial system

SUSTAINABLE OPERATIONS

Monitoring and reducing own carbon footprint

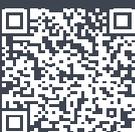


Central banks are gradually getting involved in the fight against climate change, taking care not to jeopardise the achievement of their primary goal, i.e. price stability.

Furthermore, central banks can include climate risks in their reserves and portfolio management policies. This is particularly the case with large central banks, which have conducted large quantitative easing operations in the last ten years and which have significant amounts of private sector securities in their portfolios. Furthermore, central banks can direct resources from funds they are free to dispose of (e.g. the pension funds of employees in central banks that have their own pension funds) into green investments.

The ways of taking climate change into account in the implementation of monetary policy are also being analysed more and more. Therefore, the ECB has included in its [monetary policy strategy review](#) ¹ an assessment of the appropriate way to include climate risks in the ECB's monetary policy framework. The NGFS is also considering options for adjusting the monetary operation to combatting climate change, in terms of bank lending operations, defining eligible collateral and securities repurchase operations. All of these options in the field of monetary policy are in the stage of consideration and gradual introduction. At the same time, most central banks are opposed to direct financing of green investments, which could pose a credit risk and jeopardise the achievement of the primary objective, i.e. price stability.

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Finally, central banks are paying increasing attention to their own contribution to carbon emissions and environmental impact by publishing information on their own carbon

footprint and adopting plans to gradually reduce it until targets are met.

- A** More information about climate change and central banking:
[The Wave Has Risen: Central Banks' Response to Climate Change](#)
- B** More information about climate change and its importance for credit institutions:
[Financial Stability No. 22, Box 5 Climate changes and their importance for credit institutions](#)
- C** More information about the CNB climate conference:
[Adapting to climate change has no alternative](#)

LINK **A**LINK **B**LINK **C**

Central banks are also paying increasing attention to their own contribution to carbon emissions and environmental impact by publishing information on their own carbon footprint and adopting plans to gradually reduce it.

10

ORGANISATION, HUMAN RESOURCES, MANAGEMENT AND INTERNAL ORGANISATION

Human resources and the organisation of business processes have adapted to difficult working conditions and demonstrated resilience and flexibility. Compounding the effects of the pandemic, the CNB's buildings and assets were damaged by the earthquake, and the challenges and urgency of adopting measures to alleviate the consequences of COVID-19, along with regular activities in joining the banking union and the exchange rate mechanism, are extraordinarily demanding.

A LOOK AT 2020: ORGANISATION, HUMAN RESOURCES, MANAGEMENT AND INTERNAL ORGANISATION

1**TOTAL NUMBER OF
EMPLOYED PERSONS****693**

As at 31 December 2020 the CNB had a staff of 693 employees, which is 2% more than at the end of 2019 (680). Of this number, 678 employees were in permanent employment and 15 in fixed-term employment.

MORE ON PAGE 132**2****SHARE OF WOMEN IN
THE TOTAL NUMBER OF
EMPLOYEES****65%**

The majority of total CNB employees are women (448 employees or 65%). CNB is one of the few central banks in the ESCB that has a higher share of women in the structure of employees according to gender.

MORE ON PAGE 132**3****HIGHLY EDUCATED
EMPLOYEES AT THE CNB****78%**

549 employees, or 78% of the total number of employees have higher education qualifications, of which 141 employees have completed doctoral studies, master's studies or another type of postgraduate study.

MORE ON PAGE 134**4****EDUCATIONAL
PROGRAMMES****-43%**

A total of 460 employees participated in various forms of education in 2020. Compared to the number of participants in the previous year, there was a decrease of 43%.

MORE ON PAGE 134

HUMAN RESOURCES MANAGEMENT AND ORGANISATION

The goal of human resource management at the CNB is to attract, select, develop and retain experts of various profiles whose professional approach to work, knowledge, skills and competences coupled with a high level of commitment will contribute to the fulfilment of CNB operational objectives. Last year was challenging and required a quick and adequate adjustment of organisation and human resources to difficult working conditions.

Organisation of operations in the conditions of the pandemic and earthquakes

Due to the COVID-19 pandemic, the CNB undertook a number of activities aimed at preserving the health of employees and ensuring business continuity in 2020. In March, annexes to the employment contracts were prepared, which enabled the performance of regular activities in a separate place of work in extraordinary circumstances (work from home).

The March earthquake was another factor that posed a threat to the lives and health of employees and CNB operations. In order to prevent local transmission of the infection, the Decision on serological testing of CNB employees entered into force in July, prescribing the possibilities of reimbursing the employees for the cost of testing. Furthermore, the Instruction on the

implementation of additional protection measures in order to prevent the spread of possible infection was adopted in order to determine uniform rules of conduct and keep up-to-date records of the developments regarding the infection among employees. These activities kept the situation under control and there was no local transmission, and the epidemiological status of the Bank was sustainable and controlled. This ensured the continuity of key functions in relation to individuals and the economy in unprecedented circumstances.

The Communications Area was reorganised, the Visitors' Centre and the Currency Area were established

The reorganisation of the Communications Area was prompted by the need to modernise and improve the method of conducting communication in accordance with the requirements of the environment and modern

Human resource management in 2020 was marked by the pandemic and the earthquake. Continuity of key functions towards citizens and the economy was ensured, in spite of the unprecedented circumstances.

The most important organisational changes in 2020 were the reorganisation of the Communications Area, the establishment of the Visitors' Centre for providing information due to growing public interest, and the establishment of the Currency Area.

trends. One of the important motives behind the reorganisation is the entry of the RC into the euro area, which has created a need for the general public and individual target groups to be kept consistently informed.

The Visitors' Centre was established to inform the growing public, especially students and school children, about the work of the CNB. In accordance with the best practices of central banks, the Centre is in charge of providing information content, educational programmes and setting up permanent and temporary exhibitions.

Due to the importance of currency, especially in the context of the forthcoming introduction of the euro, it was necessary to restructure the Currency Department into the Currency Area. The tasks of the area are regulations, development and control of currency operations and storage, processing and supply of currency. In addition, the Area brings together national centres for anti-counterfeiting, banknote and coin analysis.

LINK NO. 1



A detailed work plan of the CNB according to organisational units for the current year 2021 is available at its [website](#).

Recruitment and employment relationships

As at 31 December 2020, the Croatian National Bank had a staff of 693 employees, or 2% more than at the end of 2019 (680). Of this number, 678 employees were in permanent employment and 26 in fixed-term employment.

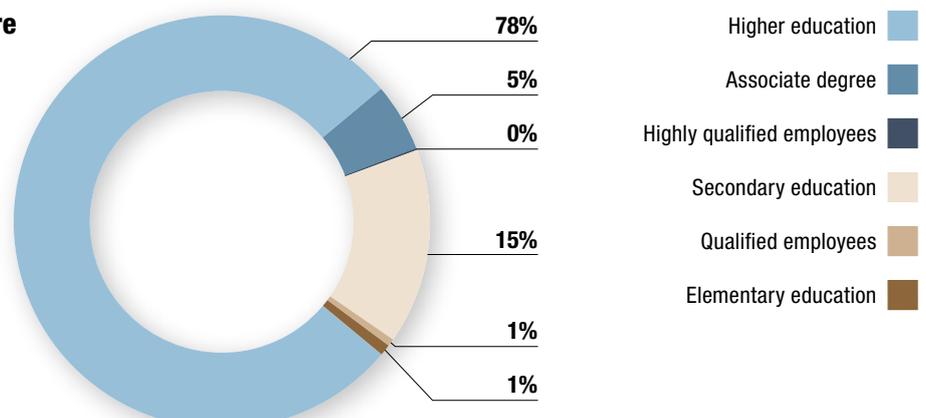
Of the total number of employees at the CNB, the majority are women (448 or 65%). The CNB is one of the few central banks in the ESCB that has a higher share of women in the gender structure of employees.

A high percentage of women also participate in management at all levels, and they work in almost all types of jobs (research, analytical, supervisory, legal, etc.). In 2020, the Croatian Parliament appointed another female vicegovernor, which means that the share of women in the Bank's Council continues to grow.

A total of 47 persons were hired by the CNB in 2020, six of whom were exercising the right to return to work at the Bank; in 31 cases employment was permanent, mostly due to the introduction of new jobs, and the remaining

Figure 10.1 Employee structure by formal education

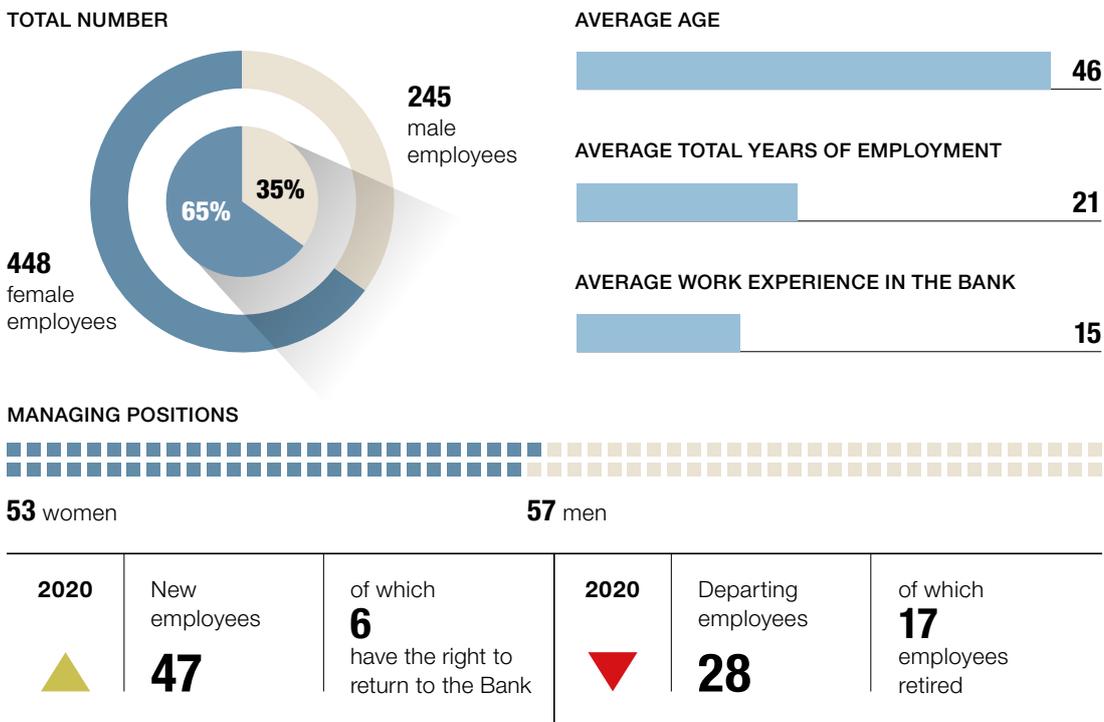
on 31 December 2020



SOURCE: CNB.

Figure 10.2 Employee structure at the Croatian National Bank

on 31 December 2020



10 persons were employed for a fixed term. New employees are mainly assigned to the positions of associates, senior associates and chief associates, and most of them come from the economics profession. An endeavour was made to meet additional needs by internal recruitment, but of the four vacancies announced

internally, only one was filled. In 2020, a total of 28 employees left the CNB, mostly due to retirement.

The average age of CNB employees is 46, and they have an average of 21 years of employment. The average years of work experience in the Bank

Figure 10.3 Share of employees with completed postgraduate studies

on 31 December 2020

141 employees, of a total of 549 employees with higher education qualifications, have completed **doctoral studies, master's studies** or another type of **postgraduate study**

SOURCE: CNB.

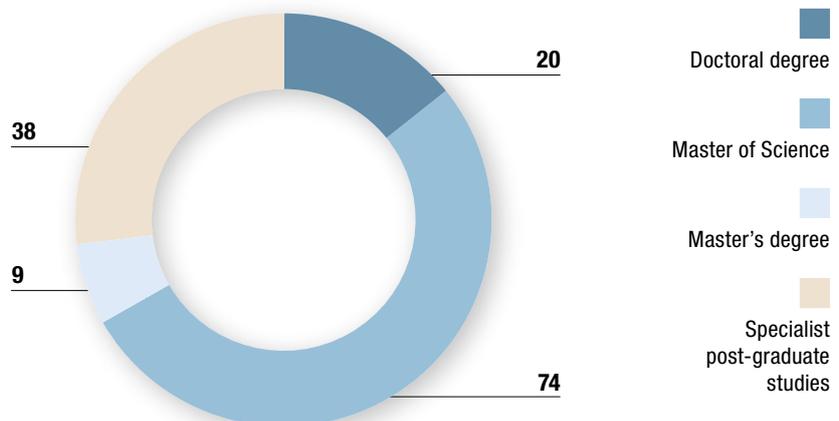
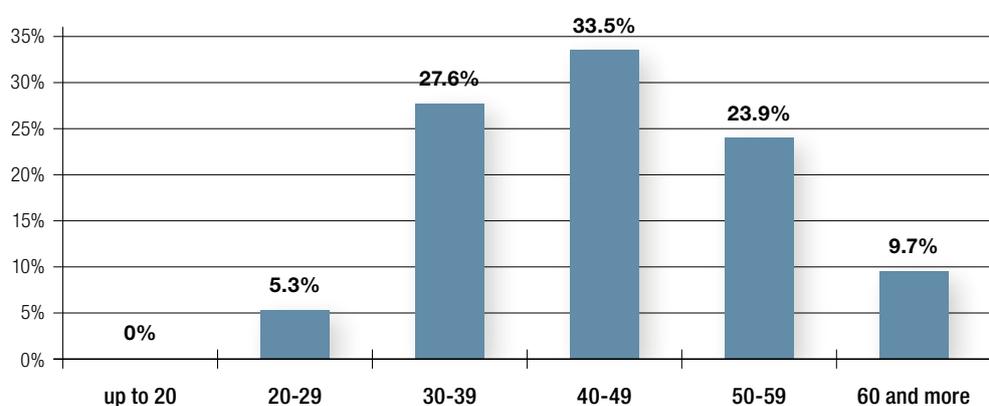


Figure 10.4 Employee structure by age

on 31 December 2020



SOURCE: CNB.

remained unchanged compared to 2019 and amount to 15 years.

Given that the CNB supports, promotes and respects the interdisciplinary approach and perspectives, although most of the employees with higher education qualifications are professionals who come from the economics profession, the Bank employs a relatively large number of professionals from other social, natural, technical and other disciplines.

Out of a total of 549 employees with higher education qualifications, 141 have completed doctoral studies, master's studies or another type of postgraduate study.

Employee development

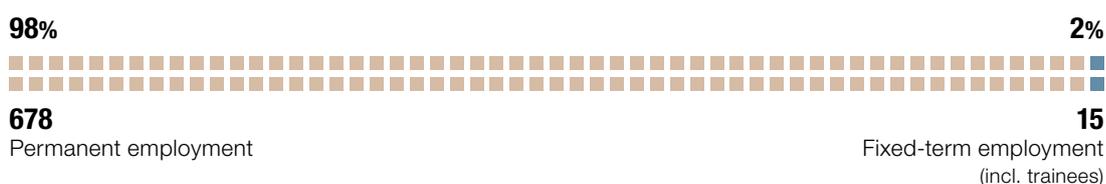
A total of 460 employees participated in various forms of education in 2020. Compared to the number of participants in the previous year, there was a decrease of 43%.

Exceptions are education and compulsory training and professional development as per legal regulations, which increased in 2020.

Almost all participations in educational programmes in 2020 took place by means of virtual platforms. Virtual employee education, although on a smaller scale, has proven to be just as effective as traditional education.

Figure 10.5 Employment status of employees

on 31 December 2020



SOURCE: CNB.

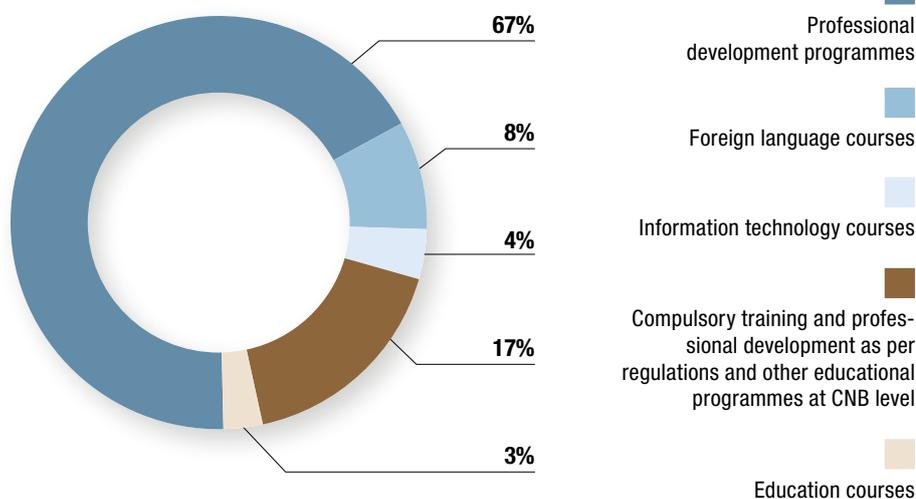
Figure 10.6 Employee development by type of education

on 31 December 2020

2019
814 employees

2020
460 employees

Change: **-43%**



SOURCE: CNB.

The situation was similar with participation in foreign language courses, as well as other types of education, which were mainly conducted online as well.

Student scholarships and internship

Award of CNB scholarships

Student scholarships are one of the most successful ways to obtain the appropriate profile of employees to work at the Bank. The competition for eight scholarships for undergraduate or graduate students (two for economics students, two for mathematics students, two for computer science students, one for law students and one for civil engineering students) attracted 140 applications. Along with two scholarship holders selected through competitions in 2019, we currently have ten scholarship holders. The Bank will continue to award scholarships in 2021, in accordance with the possibilities and business needs.

Performing student internship at the CNB

Regardless of the pandemic, 76 applications were received for the competition for student internships, which is 65% more than the previous year, and eight students were selected. The internship was carried

out in compliance with all necessary epidemiological measures and in most cases it was carried out by virtual means.

Benchmarking

In order to better understand the responsibilities and potential needs for resources after joining the Single Supervisory Mechanism, a study on human resources benchmarking for the field of supervision in the Prudential Regulation and Methodology Area, Prudential Supervision Area, Expert Supervision and Oversight Area and the Office for Coordination of Prudential Supervision, Oversight and Risk Management Activities was prepared for the first time in 2020.

This is standard business practice in central banks to assess the adequacy of human resources in relation to the group of central banks with which, having common characteristics, we can be compared. The aim is to establish a method based on a single approach, which will then be continuously applied to assess the relative availability of human resources at the CNB.

Human resources benchmarking will continue in 2021 for other business areas of the Bank.

In order to better understand the responsibilities and potential needs for resources after entering the Single Supervisory Mechanism, in 2020, a study on human resources benchmarking was conducted for the first time.



THE MANAGEMENT AND INTERNAL ORGANISATION OF THE CROATIAN NATIONAL BANK

Members of the Council of the Croatian National Bank

Boris Vujčić, Governor

Sandra Švaljek, Deputy Governor

Michael Faulend, Vicegovernor

Bojan Fras, Vicegovernor

Martina Drvar, Vicegovernor

Slavko Tešija, Vicegovernor

Roman Šubić, Vicegovernor

Ivana Jakir-Bajo, Vicegovernor (from 1 July 2020)

Chief Economist: **Vedran Šošić**

Chief Operating Officer: **Tomislav Presečan**

Executive directors

Research Area

Controlling and Accounting Area

Information Technology Area

Support Services Area

Central Banking Operations Area

Communications Area

Statistics Area

Prudential Regulation and Methodology Area

Expert Supervision and Oversight Area

Prudential Supervision Area

Legal Area

Payment Operations Area

International Relations Area

Currency Area (1 September 2020)

Ljubinko Jankov

Diana Jakelić

Mario Žgela

Boris Zaninović

Irena Kovačec

Alemka Lisinski

Tomislav Galac

Sanja Petrinić Turković

Damir Blažeković

Renata Samodol

Dražen Odorčić

Ivan Biluš

Sanja Tomičić

Tihomir Mavriček (from 1 September 2020)

Directors of the Offices

Security Office

Internal Audit Office

Foreign Exchange Regulation Office

Compliance Office

Consumer Protection Monitoring Office

Credit Institutions Resolvability Assessment Office

Succession Issues Coordination Office

Office of the Governor

Office for Coordination of Prudential Supervision,

Oversight and Risk Management Activities

Zoran Bogdanović

Boris Bušac

Zoran Jurak

Vjekoslav Kozina

Snježana Levar

Lidija Pranjić

Snježana Raić

Nina Srkalović

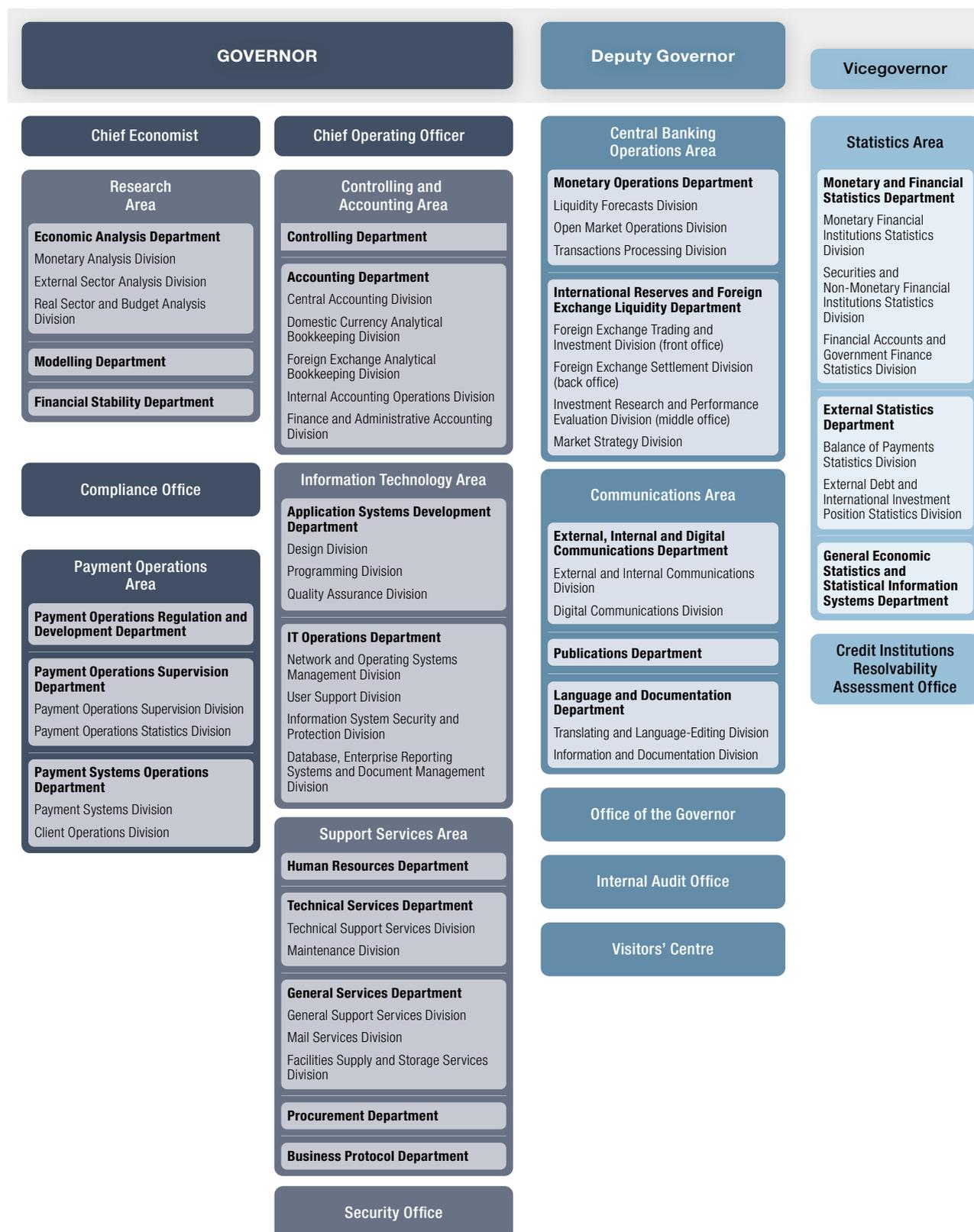
Mario Varjačić (until 31 August 2020)

Director of the Visitors' Centre

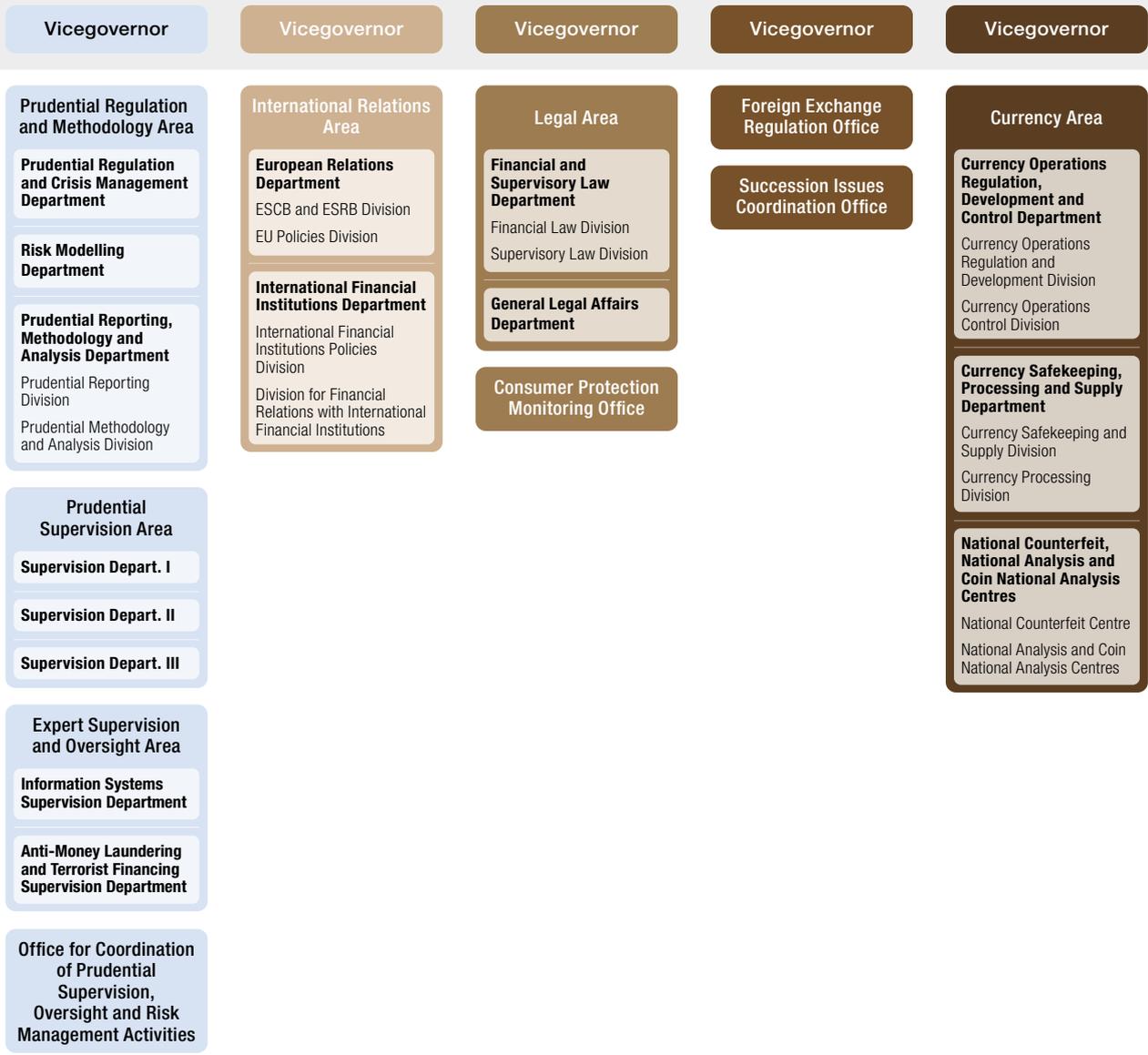
Visitors' Centre (from 1 February 2020)

Dejana Rebernik (from 1 February 2020)

Figure 10.7 Internal organisation of the Croatian National Bank



SOURCE: CNB.





YEARS OF
THE CROATIAN
NATIONAL
BANK

FINANCIAL STATEMENTS

FOR THE YEAR ENDED 31 DECEMBER 2020



Independent Auditors' Report to the Council of the Croatian National Bank

Opinion

We have audited the financial statements of the Croatian National Bank, which comprise the statement of financial position as at 31 December 2020, the income statement, the statements of comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Croatian National Bank as at 31 December 2020, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (EU IFRS).

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Croatian National Bank in accordance with the ethical requirements that are relevant to our audit of the financial statements in Croatia and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of the Council of the Croatian National Bank for the Financial Statements

The Council of the Croatian National Bank is responsible for the preparation of the financial statements that give a true and fair view in accordance with IFRS as adopted by the EU, and for such internal control as the Council of the Croatian National Bank determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Council of the Croatian National Bank is responsible for assessing the Croatian National Bank's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting in accordance with the relevant legislation.

The Council of the Croatian National Bank is responsible for overseeing the Croatian National Bank's financial reporting process.



Independent Auditors' Report to the Council of the Croatian National Bank (continued)

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with International Standards on Auditing, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Croatian National Bank's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Council of the Croatian National Bank.
- Conclude on the appropriateness of the Council of the Croatian National Bank's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Croatian National Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Croatian National Bank to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.



Independent Auditors' Report to the Council of the Croatian National Bank (continued)

Auditors' Responsibilities for the Audit of the Financial Statements (continued)

We communicate with the Council of the Croatian National Bank regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG Croatia d.o.o. za reviziju

Hrvatski ovlaštteni revizori
Eurotower, Ivana Lučića 2a
10000 Zagreb
Hrvatska

KPMG Baltics AS

Vesetas iela 7
Riga, LV 1013
Latvia

For and on behalf of KPMG Croatia d.o.o.:

For and on behalf of KPMG Baltics AS

KPMG Croatia
d.o.o. za reviziju
Eurotower, 17. kat
Ivana Lučića 2a, 10000 Zagreb

Goran Horvat
*President of the Management Board,
Croatian certified auditor*

Armine Movsisjana
Managing Partner

Zagreb, 15 March 2021

Riga, 15 March 2021

INCOME STATEMENT

(All amounts are expressed in thousands of kuna)	Notes	2020	2019
Interest income calculated using the effective interest method	3	632,122	659,380
Other interest income	3	86,240	169,471
Interest expenses	4	(126,660)	(324,986)
Net interest income		591,702	503,865
Fee and commission income	5a	55,889	53,762
Fee and commission expenses	5b	(21,548)	(22,834)
Net fee and commission income	5	34,341	30,928
Dividend income		–	5,419
Net investment result – equity method		10,069	2,119
Net result from financial assets at fair value through profit or loss	6	(51,397)	(116,317)
Net result from debt securities at fair value through other comprehensive income	7	113,699	74,821
Net exchange differences	8	(1,564)	833,626
Other income	9	6,420	11,038
Operating income		703,270	1,345,499
Staff costs	10.1	(203,055)	(186,407)
Materials, services and administrative expenses	10	(104,733)	(104,858)
Costs of production of kuna banknotes and coins	10	(69,808)	(68,002)
Depreciation and amortisation costs	10	(41,880)	(35,984)
Operating expenses	10	(419,476)	(395,251)
Impairment losses on financial instruments	11	(14,894)	(9,519)
Impairment of property	23	–	(590)
Increase in provisions	12	(2,935)	(13,001)
Profit	35	265,965	927,138
– Allocated to general reserves	35	(53,193)	(809,729)
– Allocated to the State Budget	35	(212,772)	(117,409)

The notes on pages 149 to 217 form an integral part of these financial statements.

STATEMENT OF COMPREHENSIVE INCOME

(All amounts are expressed in thousands of kuna)

	Notes	2020	2019
Profit		265,965	927,138
Other comprehensive income		575,630	952,541
<i>Other comprehensive income items that will not be reclassified to profit or loss in subsequent periods</i>		–	23,308
Change in revaluation reserves for fixed assets	23	–	23,308
<i>Other comprehensive income items that have been or will be reclassified to profit or loss in subsequent periods</i>		575,630	929,233
Debt securities at fair value through other comprehensive income:		575,630	929,233
Gains from remeasurement		691,148	1,003,403
Gains from sale transferred to profit or loss	7	(113,699)	(74,821)
Net changes in loss allowances for expected credit losses	37.1.4	(1,819)	651
Total comprehensive income		841,595	1,879,679

The notes on pages 149 to 217 form an integral part of these financial statements.

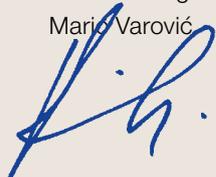
STATEMENT OF FINANCIAL POSITION

(All amounts are expressed in thousands of kuna)	Notes	31/12/2020	31/12/2019
Assets			
Cash and current accounts with other banks	13	33,766,205	7,351,114
Deposits with other banks	14	12,072,191	15,321,900
Financial assets at fair value through profit or loss	15	26,600,419	39,405,122
Loans	16	4,532,045	1,914,408
Reverse repo agreements	17	4,729,644	11,467,170
Debt securities at amortised cost	18	38,243,282	14,365,394
Balances with the International Monetary Fund	19	9,064,146	9,428,524
Debt securities at fair value through other comprehensive income	20	44,646,838	47,439,374
Investments accounted for using the equity method	21	51,076	25,736
Other assets	22	6,347,601	5,066,565
Property, plant, equipment and intangible assets	23	610,168	620,824
TOTAL ASSETS		180,663,615	152,406,131
Liabilities			
Banknotes and coins in circulation	24	41,792,678	38,734,616
Due to banks and other financial institutions	25	90,723,476	74,624,796
Repo agreements	26	3,756,698	5,998,829
Due to the State and State institutions	27	17,722,069	6,712,594
Due to the International Monetary Fund	28	9,049,025	9,414,492
Other liabilities	29	694,437	627,330
Provisions for risks and charges	30	62,702	59,767
Total liabilities		163,801,085	136,172,424
Equity			
Initial capital	31	2,500,000	2,500,000
Reserves	31	14,362,530	13,733,707
Total equity		16,862,530	16,233,707
TOTAL EQUITY AND LIABILITIES		180,663,615	152,406,131

The financial statements set out on pages 144 to 217 were approved on 15 March 2021:

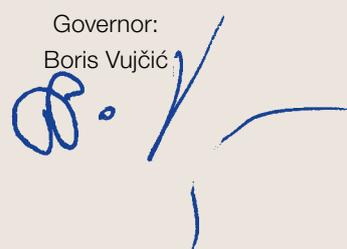
Director of the Accounting Department:

Mario Varović



Governor:

Boris Vujčić



The notes on pages 149 to 217 form an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

(All amounts are expressed in thousands of kuna)

	Initial capital	General reserves	Fair value reserve for debt securities at fair value through other comprehensive income	Revaluation reserves on property	Total reserves	Profit or loss	Total equity
As at 1 January 2019	2,500,000	10,820,897	821,893	328,647	11,971,437	–	14,471,437
Profit	–	–	–	–	–	927,138	927,138
Other comprehensive income	–	–	929,233	23,308	952,541	–	952,541
Total comprehensive income	–	–	929,233	23,308	952,541	927,138	1,879,679
Depreciation of revalued property	–	5,234	–	(5,234)	–	–	–
Profit allocated to general reserves (Note 35)	–	809,729	–	–	809,729	(809,729)	–
Profit allocated to the State Budget (Note 35)	–	–	–	–	–	(117,409)	(117,409)
As at 31 December 2019	2,500,000	11,635,860	1,751,126	346,721	13,733,707	–	16,233,707
As at 1 January 2020	2,500,000	11,635,860	1,751,126	346,721	13,733,707	–	16,233,707
Profit	–	–	–	–	–	265,965	265,965
Other comprehensive income	–	–	575,630	–	575,630	–	575,630
Total comprehensive income	–	–	575,630	–	575,630	265,965	841,595
Depreciation of revalued property	–	4,707	–	(4,707)	–	–	–
Profit allocated to general reserves (Note 35)	–	53,193	–	–	53,193	(53,193)	–
Profit allocated to the State Budget (Note 35)	–	–	–	–	–	(212,772)	(212,772)
As at 31 December 2020	2,500,000	11,693,760	2,326,756	342,014	14,362,530	–	16,862,530

The notes on pages 149 to 217 form an integral part of these financial statements.

STATEMENT OF CASH FLOWS

(All amounts are expressed in thousands of kuna)

	2020	2019
Cash flows from operating activities		
Interest received	1,130,809	959,561
Interest paid	(144,760)	(307,182)
Fees and commissions received	55,682	53,029
Fees and commissions paid	(18,527)	(12,710)
Dividends received and proceeds from share in profit	–	5,419
Other receipts	120,588	91,879
Outflows for staff costs	(201,247)	(184,324)
Outflows for production of kuna banknotes and coins	(81,776)	(117,114)
Payment of other material and administrative expenses and services	(144,595)	(140,251)
Inflows in deposits and reverse repo agreements with other banks	10,247,167	6,220,402
Inflows/(outflows) in loans	(2,635,994)	134,507
Sale of held-for-trading securities	12,673,539	502,715
Inflows in assets under management with international financial institutions	21,719	39,453
Purchase of foreign currency securities at amortised cost	(3,760,594)	(13,677,771)
Purchase of Republic of Croatia bonds at amortised cost	(20,105,394)	–
Sale/(purchase) of securities measured at fair value through other comprehensive income	2,766,590	(2,284,580)
Outflows in other assets	(14,427)	(149,180)
Outflows in amounts due to the International Monetary Fund	(44)	(50)
Issuance of currency in circulation	3,058,062	3,688,456
Inflows/(outflows) in repo agreements and other amounts due to banks and other financial institutions	12,398,736	(942,434)
Inflows in amounts due to the State and State institutions	10,400,916	3,710,334
Inflows in other liabilities	620,860	249,382
Net cash from operating activities	26,387,310	(2,160,459)
Cash flows from investing activities		
Purchase of property, equipment and intangible assets	(38,855)	(30,061)
Acquisition of shareholdings (purchase of shareholding in CMI)	(15,271)	–
(Additional payment)/Repayment of part of paid-up capital to/ from the ECB	(2,783)	1,053
Net cash from investing activities	(56,909)	(29,008)
Cash flows from financing activities		
Payments of allocated profits to the State Budget	(117,409)	–
Outflows in lease liabilities	(2,428)	(992)
Net cash from financing activities	(119,837)	(992)
Effect of changes in exchange rates – positive exchange differences – on cash and cash equivalents	97,367	67,280
Net increase/(decrease) in cash and cash equivalents	26,307,931	(2,123,179)
Cash and cash equivalents at beginning of period	10,155,138	12,278,317
Cash and cash equivalents at end of period (Note 34)	36,463,069	10,155,138

The notes on pages 149 to 217 form an integral part of these financial statements.

Note 1 – General information and accounting standards

1.1 General information

The Croatian National Bank is the central bank of the Republic of Croatia with headquarters in Zagreb, Trg hrvatskih velikana 3. Its status has been defined by the Act on the Croatian National Bank (Official Gazette 75/2008, 54/2013 and 47/2020). The Croatian National Bank forms part of the European System of Central Banks.

The Act on Amendments to the Act on the Croatian National Bank, published in the Official Gazette No. 47 of 17 April 2020, amends the provisions of the Act on the Croatian National Bank, enabling the establishment of close cooperation of the European Central Bank with the Croatian National Bank and the Republic of Croatia's joining the Single Resolution Mechanism and further aligning the provisions entering into force on the date of introduction of the euro as the official currency of the Republic of Croatia. The amendments introduced to the area of monetary policy provide for the use of an instrument not used so far due to restrictions in the domestic legislation. This refers to negative interest rates, which have in the past several years been used by central banks as an important instrument of monetary policy and liquidity management as well as a stimulus for money markets. In the part relating to the preparation of the financial statements of the Croatian National Bank this Act prescribes the mandatory application of Guideline (EU) 2016/2249 of the European Central Bank of 3 November 2016 on the legal framework for accounting and financial reporting in the European System of Central Banks (ECB/2016/34) as of 1 January 2021.

The Republic of Croatia entered the European Exchange Rate Mechanism (ERM II) on 10 July 2020, which is a key step in the process of introducing the euro in the Republic of Croatia. At the same time, the European Central Bank adopted a decision to establish close cooperation with the Croatian National Bank, which made the CNB a part of the Single Supervisory Mechanism (SSM). From the date of entry into force of the decision of the European Central Bank on close cooperation, the Republic of Croatia will also take part in the Single Resolution Mechanism (SRM).

The Croatian National Bank is owned by the Republic of Croatia, which guarantees for all its obligations. The Croatian National Bank is autonomous and independent in fulfilling its objective and carrying out its tasks. The primary objective of the Croatian National Bank is maintaining price stability.

The Croatian National Bank reports to the Croatian Parliament on the financial condition, the degree of price stability and the fulfilment of monetary policy goals, and is represented by the Governor of the Croatian National Bank.

The tasks performed by the Croatian National Bank as provided by the Constitution and the Act include:

- determining and implementing monetary and foreign exchange policies;
- maintaining and managing international reserves of the Republic of Croatia;
- issuing of banknotes and coins;
- issuing and withdrawing authorisations and approvals as well as adopting other decisions in accordance with laws regulating the operations of credit institutions, credit unions, payment service providers, electronic money issuers and payment systems as well as payment operations, electronic money issuance, foreign exchange operations and the operations of authorised foreign exchange offices;
- performing supervision and oversight in accordance with laws regulating the operations of credit institutions, credit unions, payment service providers, electronic money issuers and payment systems as well as payment operations and electronic money issuance;

- exercising resolution powers in accordance with regulations on the resolution of credit institutions;
- maintaining accounts of credit institutions and performing payment transactions on those accounts, issuing loans to and receiving deposit funds from credit institutions;
- the regulation and improvement of payment operations and ensuring their smooth operation;
- performing tasks on behalf of the Republic of Croatia as defined by law;
- promulgating subordinate regulations from its area of competence;
- implementing macroprudential policy to preserve the stability of the whole financial system;
- performing other tasks specified by law.

The bodies of the Croatian National Bank are the Council of the Croatian National Bank and the Governor of the Croatian National Bank.

The Council of the Croatian National Bank comprises eight members: Governor, Deputy Governor and six Vicegovernors of the Croatian National Bank.

The Council of the Croatian National Bank is competent and responsible for the achievement of the objective and for the carrying out of the tasks of the Croatian National Bank and defines policies with respect to the activities of the Croatian National Bank.

Members of the Council of the Croatian National Bank:

- Prof. D. Sc. Boris Vujčić, Governor
- D. Sc. Sandra Švaljek, Deputy Governor
- D. Sc. Michael Faulend, Vicegovernor
- Bojan Fras, Vicegovernor
- M. Sc. Slavko Tešija, Vicegovernor
- D. Sc. Roman Šubić, Vicegovernor
- M. Sc. Martina Drvar, Vicegovernor
- M. Sc. Ivana Jakir Bajo, Vicegovernor (since 1 July 2020).

The financial statements of the Croatian National Bank do not comprise the financial statements of the subsidiary Croatian Monetary Institute because they are not material for the financial statements of the Croatian National Bank.

1.2 Accounting standards

The separate financial statements of the Croatian National Bank have been prepared in accordance with the International Financial Reporting Standards, which comprise the International Accounting Standards (IAS), together with the related Amendments and Interpretations, and the International Financial Reporting Standards (IFRS), together with the related Amendments and Interpretations, as adopted by the European Commission, published in the Official Journal of the European Union. The preparation of the financial statements of the Croatian National Bank in accordance with the International Financial Reporting Standards as adopted in the European Union is regulated by the Act on the Croatian National Bank and the Accounting Act.

1.2.1 Application of new and revised standards

The financial statements for the current reporting period have been prepared in accordance with the same accounting policies applied to the financial statements for the year ended 31 December 2019, applying the standards mandatory in the EU as of 1 January 2020.

In 2019 and 2020 amendments to the existing standards with mandatory application in the EU for annual periods commencing from 1 January 2020 were published, as presented in the following table.

Official Journal of the EU	Standard
OJ L 316, 6.12.2019	Amendments to References to the Conceptual Framework in IFRS Standards (several standards and interpretations)
OJ L 318, 10.12.2019	Definition of the term "material": IAS 1 – Presentation of Financial Statements (amendments) IAS 8 – Accounting Policies, Changes in Accounting Estimates and Errors (amendments)
OJ L 12, 16.1.2020	Reform of reference interest rates IAS 39 – Financial Instruments: Recognition and Measurement (amendments) IFRS 7 – Financial Instruments: Disclosures (amendments) IFRS 9 – Financial Instruments (amendments)
OJ L 127, 22.4.2020	IFRS 3 – Business Combinations (amendments)
OJ L 331, 12.10.2020	Covid-19-Related Rent Concessions IFRS 16 – Leases (amendments)

These standards and interpretation were applied in the compilation of the financial statements for 2020 and did not have a significant impact on the financial statements of the Croatian National Bank. The reform of reference interest rates did not have any impact on the financial statements of the Croatian National Bank in the reporting period.

1.2.2 Standards and interpretations endorsed in the EU which were not applied in the preparation of the financial statements for 2020

In 2020, amendments to the existing standards with mandatory application in the EU for annual periods commencing from 1 January 2021 were published, as presented in the following table.

Official Journal of the EU	Standard
OJ L 425, 16.12.2020	Extension of the temporary exemption from applying IFRS 9: IFRS 4 – Leases (amendments)

The application of these amendments to IFRS standards would not have a significant impact on the financial statements of the Croatian National Bank.

The Croatian National Bank did not early adopt new standards, amendments to standards and their interpretations, adopted by the EU, whose adoption in 2020 is optional (non-binding), given that the commencement of the financial year is set as 1 January.

1.2.3 Standards and interpretations which are not endorsed in the EU

The International Accounting Standards Board (IASB) and the International Financial Reporting Interpretations Committee (IFRIC) issued additional standards and interpretations, which have not yet been endorsed in the EU. It is

estimated that their application would not have a significant impact on the preparation of the financial statements of the Croatian National Bank, had the Croatian National Bank continued to prepare its financial statements in accordance with the International Financial Reporting Standards as adopted in the European Union.

1.3 Basis of preparation

The financial statements have been prepared under the accrual basis of accounting and using the historical cost convention, except for financial assets at fair value through profit or loss, debt securities in financial assets at fair value through other comprehensive income and buildings and land measured at revalued amount, which is their fair value at the revaluation date less subsequent accumulated depreciation of buildings and subsequent accumulated impairment losses.

The functional and presentation currency of the Croatian National Bank is the kuna. The financial statements are expressed in thousands of kunas.

These financial statements are prepared using going concern assumption.

1.4 Use of judgements and estimates

In preparing the financial statements for 2020, the management has made judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities, income and expense. The estimates are based on the management's best estimate of current events and operations, and actual results may differ from these estimates.

The costs of printing banknotes are initially deferred and recognised in the Income Statement over a period of ten years, and the cost of minting coins over a period of twelve years. Deferrals are based on the assessment of the useful life of banknotes and coins, which includes the storage of banknotes and coins in the vault (the logistic cash reserves for regular supply of cash centres and the strategic cash reserves, as well as the storage of banknotes and coins unfit for circulation until they are destroyed) and the average time of their circulation.

The significant judgements made by the management in applying the accounting policies and the key sources of estimation uncertainty differ from those applied in the preparation of the financial statements for 2019 as the impact of the COVID-19 pandemic on the financial statements of the Croatian National Bank was taken into account in the preparation of these statements.

The Croatian National Bank manages its credit risk exposure by investing its international reserve funds into high-quality instruments with minimum risk, such as government bonds, government guaranteed bonds, bank bonds with government guarantees and guaranteed bonds, into instruments of international financial institutions with high credit rating and into both collateralised and non-collateralised deposits. Collateralised deposits represent deposits secured by government bonds in the amount equal to or in excess of the value of the deposit. Uncollateralised deposits are invested only with central banks and international financial institutions. When determining whether a significant increase in credit risk has occurred after initial recognition also taken into account were the impact of the COVID-19 pandemic on the calculation of expected credit losses and reasonable and supportable information that was available without undue costs or effort and may influence the credit risk of a financial instrument. Financial instruments with an investment credit rating are considered low credit risk financial instruments and since the international reserve funds are invested with financial institutions and countries with an investment credit rating the COVID-19 pandemic did not have a significant impact on the increase in credit risk after initial recognition.

1.4.1 Fair value and fair value hierarchy

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price).

Valuation techniques that are used in determining the fair values are the market approach, cost approach and income approach. The market approach uses prices and other relevant information from market transactions with identical or similar assets or liabilities. The cost approach is a valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost). The income approach converts future amounts (e.g. cash flows or income and expenses) to a single current (i.e. discounted) amount.

The fair value hierarchy consists of three levels of data included in the valuation techniques that are used to measure fair value:

- Level 1 – inputs are quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 – inputs other than quoted prices observable for the asset or liability, either directly or indirectly;
- Level 3 – inputs are unobservable inputs for the asset or liability (not available and verifiable market data).

In the process of fair value measurements, suitable valuation techniques for which the necessary data are available are used, with maximum use of observable inputs and minimal use of inputs that are not observable in an active market.

The Croatian National Bank recognises transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

More detailed disclosures on fair value measurements of financial assets and liabilities are presented in Note 36.

1.4.2 Losses on impairment of financial assets

Impairment losses on financial assets are described under accounting policy for Financial assets.

1.4.3 Estimation uncertainty relating to litigations and claims

The Croatian National Bank provided HRK 36,535 thousands in respect of liabilities for court cases (2019: HRK 36,545 thousands). The management estimates these provisions as sufficient. Detailed disclosures regarding provisions for court cases are stated in Note 30.

1.5 Measures to mitigate the economic consequences of the COVID-19 pandemic

Due to the global expansion of the COVID-19 pandemic, central banks worldwide have taken various measures to provide economic support aimed at tackling the economic consequences of the pandemic outbreak on individuals, households and businesses. In response to the crisis, central banks used a number of measures at their disposal: reduction of interest rates, granting of loans, asset purchase programmes and other measures to ensure the liquidity and stability of the financial system.

The Croatian National Bank has taken a set of measures aimed at mitigating the economic consequences caused by the coronavirus pandemic:

- It has implemented a package of monetary policy measures to maintain the stability of the exchange rate and financial stability: government bond purchases aimed at maintaining stability in the government securities market, foreign exchange interventions aimed at maintaining the exchange rate stability and ensuring foreign exchange liquidity and structural and regular operations aimed at increasing banking system liquidity.
- It has adjusted its approach to the supervision of credit institutions in order for banks to facilitate the ensuring of liquidity and thus support the maintenance of economic activity and the safeguarding of jobs.
- In the area of payment operations and transactions with bank clients, it has issued a set of recommendations aimed at facilitating transactions for households during this crisis period.
- It implements measures, which apply to its key tasks, employees, business processes and business premises, that ensure the smooth and regular performance of all the key functions of the central bank as well as of credit institutions supervised by the CNB. In order to protect employees and visitors., i.e. to prevent the further spread of infection, it has also taken the following measures: keeping a social distance, wearing protective masks, avoiding the gathering of a large number of people (especially indoors), washing/disinfecting hands, measuring temperature and disinfecting footwear at the disinfection barriers which are placed in all locations.

1.6. Changes in presentation of the financial statements 2019

In order to improve the presentation of the financial statements certain positions in the Income Statement and the Statement of Financial Position are changed in 2020 compared to 2019.

Operating expenses in the amount of HRK 395,251 thousands which were in 2019 reported as one line item in the Income Statement are in 2020 divided in four line items: Staff costs in the amount of HRK 186,407 thousands, Materials, services and administrative expenses in the amount of HRK 104,858 thousands, Costs of production of kuna banknotes and coins in the amount of HRK 68,002 thousands and Depreciation and amortisation in the amount of HRK 35,984 thousands.

Impairment losses in the amount of HRK 10,109 thousands were presented as one item in the Income Statement in 2019, while in 2020 they are divided in Impairment losses on financial instruments in the amount of HRK 9,519 thousands and Impairment of property in the amount of HRK 590 thousands.

Equity securities at fair value through other comprehensive income – irrevocable election which were in 2019 presented as a separate item in the Statement of Financial Position in the amount of HRK 59,165 thousands are reclassified in accordance with reporting practice of central banks of the European System of Central Banks to Other assets.

Provisions for risks and charges in the amount of HRK 59,767 thousands are reported as a separate item in the Statement of Financial Position and not as a part of Other liabilities as reported in 2019.

The aforementioned reclassifications are presentational in nature and have no effect on net result for the year or equity at year end.

Note 2 – Summary of significant accounting policies

2.1 Interest income and expense

Interest income includes coupons earned on fixed income financial instruments. Interest income is increased for amortised discount and reduced for amortised premium on purchased securities.

Interest income on financial instruments at amortised cost and financial assets at fair value through other comprehensive income are recognised in the Income Statement using the effective interest method.

When calculating interest income, the effective interest rate is applied to the gross carrying amount of financial assets, except for:

- a purchased or originated credit-impaired financial asset (for such financial asset the effective interest rate adjusted by credit risk is applied to the amortised cost of the financial assets from initial recognition); and
- a financial asset that is not a purchased or originated credit-impaired financial asset, but which has subsequently become a credit-impaired financial asset (for such financial asset the effective interest rate is applied to amortised cost).

Interest income on debt securities at fair value through profit or loss is recognised based on the nominal coupon interest rate and presented in line item Other interest income in the Income Statement.

Accrued interest on financial assets with negative interest rate is recognised as interest expense.

Accrued interest on financial liabilities with negative interest rate is recognised as interest income.

2.2 Fee and commission income and expense

Fee and commission income from services provided by the Croatian National Bank is recognised when the service is provided.

Fee and commission expense is included in the Income Statement for the period in which services are received.

2.3 Dividend income

Dividend income on equity investments is recognised in the Income Statement when the right to receive dividends is established.

2.4 Foreign exchange gains and losses

Transactions in foreign currencies are translated into Croatian kuna at the rates of exchange in effect at the dates of the transactions. At each reporting date, items denominated in foreign currencies are retranslated at the exchange rates in effect on that date. Gains and losses on translation of monetary items are recognised in profit or loss in the period in which they arise. Translation is performed using the middle exchange rates of the Croatian National Bank.

Gains and losses arising from trading in foreign currencies are included in realised income and expenses in the period in which they occur. All other foreign exchange differences are reported as unrealised gains or losses in the period in which they occur.

Non-monetary assets and liabilities denominated in foreign currencies stated at historical cost at the exchange rate valid on the date of transaction are not retranslated at the date of the Statement of Financial Position, i.e. the exchange differences are not recognised for these items.

The exchange rates of major foreign currencies at 31 December 2020 were as follows:

1 USD = 6.139039 HRK (2019: 6.649911 HRK)

1 EUR = 7.536898 HRK (2019: 7.442580 HRK)

1 XDR = 8.869642 HRK (2019: 9.227696 HRK)

2.5 Provisions

Provisions are recognised in the Income Statement at the end of the reporting period.

The Croatian National Bank recognises a provision when it has a present legal or constructive obligation as a result of a past event; when it is probable that an outflow of resources will be required to settle the obligation; and when a reliable estimate can be made of the obligation. No provision is recognised unless all of these conditions have been met.

2.6 Financial instruments

At recognition, measurement and classification of financial assets, the Croatian National Bank applies the provisions of IFRS 9 – Financial Instruments.

2.6.1 Recognition and derecognition of financial assets

The Croatian National Bank recognises a financial asset in its Statement of Financial Position only when it becomes party to the contractual provisions of the instrument.

A regular way purchase or sale of financial assets is recognised and derecognised using settlement date accounting. The settlement date is the date that an asset is delivered to or by the Croatian National Bank.

Deposits and loans are initially recognised on the date on which they are originated.

The Croatian National Bank derecognises a financial asset only when:

- the contractual rights to the cash flows from the financial asset expire;
- it transfers the financial asset in a way that it transfers the contractual rights to receive the cash flows of the financial asset or retains the contractual rights to receive the cash flows of the financial asset, but assumes a contractual obligation to pay the cash flows to one or more recipients;
- it transfers substantially all the risks and rewards of ownership of the financial asset; and

- it neither transfers nor retains substantially all the risks and rewards of ownership of the financial asset, and it has not retained control of the financial asset.

2.6.2 Initial and subsequent measurement of financial assets

Financial assets at fair value through profit and loss are initially measured at fair value without transaction costs, whereas for financial assets not measured at fair value through profit and loss fair value is increased by transaction costs.

Following the initial measurement, the Croatian National Bank measures financial assets:

- at amortised cost;
- at fair value through other comprehensive income; or
- at fair value through profit or loss.

The cost of the sold securities is determined using the weighted average cost method.

Measurement at amortised cost

The amortised cost of financial assets is the amount according to which financial assets are measured at initial recognition, minus principal repayments, plus or minus cumulative amortisation, using the effective interest method, of any differences between the initial amount and the maturity amount, and adjusted for any loss allowance.

The effective interest method is the method of calculating amortised cost of financial assets and allocating and recognising interest income through profit and loss during a certain period.

The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial assets instrument against the gross carrying amount of the financial assets.

The gross carrying amount of the financial assets is the amortised cost of the financial assets prior to loss allowance provisions.

2.6.3 Classification of financial assets

The Croatian National Bank classifies financial assets as assets subsequently measured at amortised cost, at fair value through other comprehensive income or through profit or loss based on:

- the business model of financial asset management; and
- the characteristics of financial assets with contractual cash flows.

The business model reflects the manner in which the Croatian National Bank manages its financial assets to generate cash flows. The Croatian National Bank applies the following business models:

- the business model to hold the financial assets in order to collect contractual cash flows;
- the business model whose objective is achieved by both collecting contractual cash flows and selling financial assets;
- other business models.

The Croatian National Bank manages the financial assets, held within a business model whose objective is to hold financial assets in order to collect contractual cash flows, to realise cash flows by collecting contractual payments over the life of the instrument. In determining whether cash flows are going to be realised by collecting the financial assets' contractual cash flows it is necessary to consider the frequency, value and timing of sales in prior periods, the reasons for those sales and expectations about future sales activity. In particular, such sales may be consistent with a business model whose objective is to hold financial assets in order to collect contractual cash flows if those sales are infrequent or insignificant in value both individually and in aggregate.

The Croatian National Bank holds financial assets in a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. Compared to a business model whose objective is to hold financial assets to collect contractual cash flows, this business model will typically involve greater frequency and value of sales. This is because selling financial assets is integral to achieving the business model's objective instead of being only incidental to it.

The Croatian National Bank manages the financial assets held within other business models whose objective is to realise cash flows through the sale of the assets. The decision is made based on the assets' fair values. Even if the Croatian National Bank collects contractual cash flows while it holds the financial assets, the objective of such a business model is not achieved by both collecting contractual cash flows and selling financial assets.

For financial assets that are held within a business model whose objective is to hold assets in order to collect contractual cash flows or within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, it is necessary to determine whether the contractual cash flows of the assets are solely payments of principal and interest on the principal amount outstanding. Only those financial assets that meet the "solely payments of principal and interest" condition can be classified into the category of financial assets measured at amortised cost or into the category of financial assets at fair value through other comprehensive income.

It is estimated that the contractual cash flows of the financial assets are solely payments of principal and interest (compliant with the conditions of the so-called SPPI test, Solely Payments of Principal and Interest) if the financial assets have, amongst other, the following characteristics:

- if they contain a fixed coupon;
- if the principal value is paid at the bond maturity date;
- if they have no linked options, such as conversion, call or put option.

The Croatian National Bank is obliged, only if it changes its business model of financial asset management, to reclassify all financial assets affected by the change of the business model.

2.6.3.1 Financial assets at amortised cost

A financial asset is measured at amortised cost if both of the following conditions are met:

- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

For financial assets classified into the category of financial assets measured at amortised cost, interest income calculated using the effective interest method, foreign currency gains or losses and expected credit losses are

recognised directly in profit or loss. In the event of derecognition of financial assets, gains or losses are recognised in profit or loss.

The category of financial assets measured at amortised cost comprises debt securities, cash, deposits with banks and financial institutions, reverse repo agreements, loans, trade and other receivables complying with the definition of financial instruments.

2.6.3.2 Financial assets at fair value through other comprehensive income

A financial asset is measured at fair value through other comprehensive income if both of the following conditions are met:

- the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

A gain or loss on debt securities measured at fair value through other comprehensive income are recognised in other comprehensive income, except for interest calculated using the effective interest method, loss allowance gains or losses and foreign exchange gains and losses, until the financial asset is derecognised or reclassified.

If debt securities are derecognised, the cumulative gain or loss previously recognised in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment.

For debt securities measured at fair value through other comprehensive income, the amounts that are recognised in profit or loss are the same as the amounts that would have been recognised in profit or loss if the asset had been measured at amortised cost.

Debt securities held within the business model aimed at collecting contractual cash flows and sales, while cash flows represent solely principal and interest payments, are classified as financial assets at fair value through other comprehensive income.

2.6.3.3 Financial assets at fair value through profit or loss

Financial assets are measured at fair value through profit or loss if they are not measured at amortised cost or at fair value through other comprehensive income.

The Croatian National Bank may, at initial recognition, designate a financial asset as measured at fair value through profit or loss if doing so eliminates or significantly reduces a measurement or recognition inconsistency ("accounting mismatch") that would otherwise arise from measuring assets or liabilities or recognising the gains and losses on them on different bases.

Gains or losses on financial assets at fair value through profit or loss are recognised in profit or loss.

2.6.3.4 Investment in equity instruments

For equity instruments not held for trading (all equity instruments of the Croatian National Bank), subsequent changes in fair value are presented in other comprehensive income.

A change in the fair value of investment in equity instruments is recognised in other comprehensive income. The amounts recognised in other comprehensive income are not subsequently transferred to profit and loss. Cumulative gain or loss may be transferred within equity.

Such an investment is not a monetary item. Accordingly, the gain or loss that is presented in other comprehensive income includes any related foreign exchange component.

Dividends on investment in equity instruments are recognised in profit or loss.

Investments in equity securities are designated as financial assets at fair value through other comprehensive income and include investments in BIS shares, SWIFT shares and ECB paid-up capital. These investments are measured at cost because they do not have quoted market prices on an active market and their fair value cannot be reliably measured.

The Croatian National Bank is obliged, only if it changes its business model of financial asset management, to reclassify all financial assets affected by the change of the business model.

2.6.4 Impairment of financial assets

The Croatian National Bank recognises loss allowances for expected credit losses on a financial asset measured at amortised cost, debt financial asset measured at fair value through other comprehensive income, lease receivable and contract asset.

Loss allowances for financial assets measured at fair value through other comprehensive income are recognised through other comprehensive income and are not reduced from carrying amount of financial assets in the Statement of Financial Position.

If the credit risk of a financial instrument has not increased significantly since initial recognition until the reporting date, the loss allowance is measured at an amount equal to expected credit losses in a twelve-month period.

If the credit risk of a financial instrument has increased significantly since initial recognition, the loss allowance is measured at an amount equal to lifetime expected credit losses of the instrument.

The Croatian National Bank recognises impairment gain or loss in profit or loss in the amount of expected credit losses or reversals.

At each reporting date it is determined whether the credit risk of a financial instrument has increased significantly since initial recognition.

It is assumed that the credit risk of a financial instrument has not had a significant increase since initial recognition if the credit risk of a financial instrument is determined as low at the reporting date.

The credit quality of a financial instrument at initial recognition and a change in the credit quality of a financial instrument since initial recognition are monitored through three stages of credit quality.

Stage 1 includes financial instruments with a low credit risk at initial recognition or with no significant increase in credit risk after initial recognition. For this stage loss allowances are calculated at an amount equal to the amount of expected credit losses in a twelve month period, with interest calculated on the gross carrying amount of the financial asset.

Stage 2 includes financial instruments with a significant increase in credit risk since initial recognition. For financial instruments in this stage loss allowances are calculated at an amount equal to lifetime expected credit losses of the instrument, with interest calculated on the gross carrying amount of the financial asset.

Stage 3 includes credit-impaired financial assets. For financial instruments in this stage expected credit losses are calculated for a lifetime of the instrument, with interest calculated based on the amortised cost of the financial asset.

It is assumed that a significant increase in the credit risk of a financial instrument has occurred if the long-term credit rating of a financial instrument, which at initial recognition was within the investment grade, fell below investment grade.

The basic criteria for the transfer of a financial instrument from stage 1 to stage 2 include:

- a downgrade of the long-term credit rating of the financial instrument below the Fitch rating agency's investment grade, and if there is no rating, then the ratings of Moody's and Standard&Poor's are used as a secondary source; and/or
- contractual payments are more than 30 days past due.

The basic criteria for the classification of a financial instrument into stage 3 include:

- a downgrade of the long-term credit rating of the financial instrument below the Fitch rating agency's investment grade; if there is no rating, then the ratings of Moody's and Standard&Poor's as well as contractual payments that are more than 90 days past due for instruments rated by a rating agency are used as a secondary source;
- contractual payments are more than 90 days past due for instruments rated using an internal rating.

The value of a financial asset is credit impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired include important data about the following events:

- significant financial difficulty of the issuer or the borrower;
- a breach of contract, such as a default or past due event;
- the granting of a concession(s) by the lender(s) to the borrower for economic or contractual reasons related to the borrower's financial difficulties, which the lender would not otherwise consider;
- probability that the borrower will enter bankruptcy or other financial reorganisation;
- the disappearance of an active market for that financial asset because of financial difficulties; and
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit loss.

In addition to the basic criteria for determining the stage of credit quality when determining whether a significant increase in credit risk has occurred after initial recognition also taken into account is reasonable and supportable information that is available without undue costs or effort, which may influence the credit risk of a financial instrument.

The Croatian National Bank measures expected credit losses on a financial instrument in the manner that reflects:

- an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes;
- the time value of money; and
- reasonable and supportable information that is available on the reporting date without undue costs or effort about past events, current conditions and forecasts of future economic conditions.

If the credit risk of a financial instrument, for which loss allowances were calculated at an amount equal to lifetime expected credit losses of the instrument in the previous reporting period, decreases to the extent that the financial instrument is transferred to stage 1, loss allowances are calculated at an amount equal to the amount of expected credit losses in a twelve month period.

Expected credit losses represent an assessment of credit losses based on probability (current value of all cash shortfalls) through the expected lifetime of the financial instrument. The cash shortfall is the difference between all contractual cash flows that are due to the Croatian National bank and cash flows expected by the Croatian National Bank. The model for the calculation of expected credit losses is described in Note 37.1.3.

Write-off

The gross carrying amount of a financial asset is directly reduced when there are no reasonable expectations (if it is assessed that a borrower has no asset or income source that could generate cash flows sufficient for the repayment of the amounts being written off) of recovering a financial asset in its entirety or a portion thereof. A write-off constitutes a derecognition event.

2.6.5 Financial liabilities

The Croatian National Bank recognises a financial liability in its Statement of Financial Position only when it becomes party to the contractual provisions of the instrument. A financial liability is initially recognised on the commitment date.

A financial liability is removed from the Statement of Financial Position when, and only when, it is extinguished – i.e. when the obligation specified in the contract is discharged or cancelled or expires.

At initial recognition, a financial liability is measured at fair value minus, in the case of a financial liability not at fair value through profit or loss, transaction costs that are directly attributable to the issue of the financial liability.

The Croatian National Bank classifies its liabilities as liabilities subsequently measured at amortised cost, with the exception of banknotes and coins in circulation which are measured at their nominal value. Financial liabilities are not reclassified.

2.7 Repo and reverse repo agreements

The Croatian National Bank enters into securities purchase/sale agreements under which it agrees to resell/repurchase the same instrument on a specific future date at a fixed price. Securities purchased with the obligation to resell them in the future are not recognised in the Statement of Financial Position.

Payments arising from those agreements are recognised as amounts due from banks or other financial institutions and are collateralised by securities underlying the repurchase agreement. Securities sold under repurchase agreements are not derecognised and continue to be recognised in the Statement of Financial Position. Receipts from sales of securities are recognised as amounts due to banks and other financial institutions. The difference between the sale and the repurchase price is included in interest income or expense and accrued over the period of the transaction.

2.8 Deposits with other banks

Amounts due from domestic and foreign banks represent balances on non-transactional accounts.

2.9 International Monetary Fund

The Croatian National Bank is the fiscal agent of the Republic of Croatia for the International Monetary Fund and the International Monetary Fund's depository. Balances with the International Monetary Fund consist of the membership quota, current account and deposit with the International Monetary Fund, while the due to the International Monetary Fund consists of bills of exchange, International Monetary Fund accounts number 1 and 2 and net cumulative allocations.

The current account and deposit as well as net cumulative allocations with the International Monetary Fund are denominated in Special Drawing Rights (XDR) and measured at amortised cost.

The membership quota, bills of exchange and International Monetary Fund accounts number 1 and 2 are measured at cost, denominated in kuna and linked to the XDR (they are revalued on the reporting date at the XDR exchange rate applicable on that date). As XDR amounts are not revalued, changes in these accounts are due to exchange differences.

2.10 Investments accounted for using the equity method

Since 1 July 2020 the Croatian National Bank holds a 100% share in the Croatian Monetary Institute so that this investment is considered as an investment in subsidiary, whereas until 30 June 2020 the Croatian National Bank had a significant influence in the Croatian Monetary Institute which was considered to be an associate. The Croatian National Bank accounts for its investment in the Croatian Monetary Institute using the equity method. The consolidated financial statements are not prepared given that the investment in the Croatian Monetary Institute is not significant from either a qualitative or quantitative perspective.

The equity method is a method of accounting whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the investor's share of the investee's net assets. The investor's profit or loss includes its share of the investee's profit or loss and the investor's other comprehensive income includes its share of the investee's other comprehensive income.

2.11 Precious metals

Precious metals that are quoted on the world markets are recognised at their market price. Gains and losses on changes in fair value are included in the Income Statement for the period in which they arise.

2.12 Currency in circulation

The official currency in the Republic of Croatia is the Croatian kuna. Banknotes and coins in circulation are carried at nominal value.

2.13 Cash and cash equivalents

For the purpose of the Statement of Cash Flows, cash and cash equivalents is defined as cash on hand, foreign currency cash in the CNB treasury vault, current accounts with foreign banks, balances with the International Monetary Fund, funds in the CNB account at the Croatian Large Value Payment System (CLVPS) and in the account of the CNB in the TARGET2 system.

2.14 Taxation

In accordance with relevant legislation the Croatian National Bank is not subject to Croatian income tax.

2.15 Property, plant, equipment and intangible assets

Property, plant, equipment and intangible assets are reported in the Statement of Financial Position at cost less accumulated depreciation and impairment losses, except for land and buildings, which are carried at revalued amount, representing their fair value at the revaluation date decreased by subsequently accumulated depreciation for buildings and impairment losses. Depreciation is provided under the straight-line method.

Gains on revaluation are included as a separate component of other comprehensive income. Losses on revaluation are charged to the revaluation reserve account to the extent of the revaluation surplus previously recognised in equity, and any loss in excess of the previously recognised surplus is charged to the Income Statement for the reporting period.

The revaluation surplus included in equity in respect of an item of property, plant and equipment may be transferred directly to general reserves when the asset is derecognised. This may involve transferring the whole of the surplus when the asset is retired or disposed of. However, the revaluation surplus is also transferred as the asset is used. In such a case, the amount of the surplus transferred would be the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost. Transfers from revaluation surplus to general reserves are not made through profit or loss.

As a result of a reappraisal of the useful life of property, plant, equipment and intangible assets, and due to increased experience and new information, the accounting estimate of the useful life in the asset class furniture and equipment was changed in 2020, as shown in the table below.

Useful life of property, plant, equipment and intangible assets:

Asset class	Expected useful life in 2020 (number of years)	Expected useful life in 2019 (number of years)
Property	20 – 50	20 – 50
Computers and computing infrastructure	5 – 8	5 – 8
Furniture and equipment	2 – 20	4 – 20
Motor vehicles	4	4
Software and licences	2 – 10	2 – 10

The result of the new useful life estimate in the asset class furniture and equipment is that the depreciation costs for property, plant, equipment and intangible assets in the reporting period were HRK 281 thousands higher than the costs that would have been recognised if the useful life estimate had not changed.

2.16 Impairment of non-financial assets

The net carrying amount of non-financial assets is assessed at the end of each reporting period to determine whether there is any indication that the assets may be impaired. If any such indication exists, the recoverable amount of those assets is estimated. For assets with indefinite useful life and intangible assets not yet available for use, the recoverable amount is estimated on every reporting date.

An impairment loss is recognised if the carrying value of an asset or cash-generating unit is greater than its recoverable amount. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of cash inflows from other assets or groups of assets. The cash-generating unit for the Croatian National Bank is the Croatian National Bank as a whole. Impairment loss is recognised in profit or loss.

The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use. Value in use is the present value of future cash flows expected to be derived from an asset or cash-generating unit. Value in use is estimated by discounting expected future cash flows with the discount rate that reflects current market assessments of the time value of money and the risks specific to these assets.

An impairment loss recognised in prior periods is assessed on every reporting date to determine if there is any indication that impairment may have decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the asset's recoverable amount. An impairment loss is reversed only up to the carrying amount of an asset net of amortisation or depreciation that would have been determined had no impairment loss been recognised for the asset in prior years.

2.17 Staff costs

The Croatian National Bank pays contributions to the obligatory pension funds. The Croatian National Bank has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefits in the Income Statement as they are incurred.

Liabilities for long-term employee benefits, such as jubilee rewards and statutory severance payments, are presented in the balance sheet as the net amount of present value of liabilities for defined benefits on a reporting date. The projected credit unit method is used in the calculation of present value of these liabilities.

2.18 Allocation of the surplus of income over expenditures and the coverage of the shortfall between income and expenditures

The surplus of income over expenditures is allocated to general reserves and to the State Budget in accordance with the Act on the Croatian National Bank. Pursuant to Article 35 of the Act on Amendments to the Act on the Croatian National Bank (Official Gazette 47/2020) the allocation of profit for the financial year 2020 is performed in compliance with the provisions of Article 57 of the Act on the Croatian National Bank (Official Gazette 75/2008 and 54/2013), which specifies the allocation of the surplus of income over expenditures and the coverage of the shortfall between income and expenditures. The Council of the Croatian National Bank determines the amount of the surplus of income over expenditures to be allocated to general reserves. The surplus of income over expenditures allocated to general reserves for the current financial year may neither be lower than net profit from the value adjustment of balance sheet items to changes in the exchange rate or market prices nor higher than 20% of the accumulated surplus of income over expenditures. By way of exception, if the surplus of income over expenditures is lower than net profit from the value

adjustment of balance sheet items to changes in the exchange rate or market prices, the total surplus of income over expenditures is allocated to general reserves. The surplus of income over expenditures remaining after the allocation to general reserves constitutes extraordinary revenue to the State Budget. The Croatian National Bank covers any shortfall between income and expenditures from general reserves. Any shortfall between income and expenditures that cannot be covered from general reserves is covered from the State Budget.

Note 3 – Interest income

(All amounts are expressed in thousands of kuna)	2020	2019
Foreign currency deposits	3,577	62,608
Loans to domestic banks	17,018	24,874
Foreign currency reverse repo agreements	11,049	101,322
Foreign currency securities at amortised cost	11,341	3,945
Bonds of the Republic of Croatia at amortised cost	100,731	–
Securities at fair value through other comprehensive income	446,815	412,740
Foreign currency repo agreements (negative interest)	35,177	53,122
Other	6,414	769
<i>Total interest income calculated using the effective interest method</i>	<i>632,122</i>	<i>659,380</i>
Held-for-trading securities	86,240	169,471
<i>Total other interest income</i>	<i>86,240</i>	<i>169,471</i>
Total interest income	718,362	828,851

Note 4 – Interest expenses

(All amounts are expressed in thousands of kuna)	2020	2019
Foreign currency repo agreements	8,908	89,310
Ministry of Finance deposits	9,166	59,776
Foreign currency deposits (negative interest)	47,646	56,687
Foreign currency reverse repo agreements (negative interest)	60,754	119,135
Leases	186	78
	126,660	324,986

Note 5 – Net fee and commission income

(All amounts are expressed in thousands of kuna)	2020	2019
Fee and commission income (Note 5.a)	55,889	53,762
Fee and commission expenses (Note 5.b)	(21,548)	(22,834)
	34,341	30,928

a) Fee and commission income

(All amounts are expressed in thousands of kuna)	2020	2019
Fees for the supervision of credit institutions	48,428	46,511
Other	7,461	7,251
	55,889	53,762

The Croatian National Bank charges the fee for the supervision of credit institutions based on the Credit Institutions Act. Entities subject to supervision fees are credit institutions with head offices in the Republic of Croatia and branches of credit institutions with head offices outside the Republic of Croatia. The level, calculation method and payment method for the supervision fee is determined by the Decision on supervision fees for credit institutions, issued by the Governor of the Croatian National Bank.

b) Fee and commission expenses

(All amounts are expressed in thousands of kuna)	2020	2019
Securities deposit and custody costs	10,067	11,660
Obligatory contribution to EBA budget	4,172	4,011
Other	7,309	7,163
	21,548	22,834

Regulation (EU) No 1093/2010 establishing a *European Supervisory Authority (European Banking Authority – EBA)* defines that competent authorities form part of a European System of Financial Supervision – ESFS, which also comprises the European Banking Authority (EBA). In accordance with the above Regulation, the Croatian National Bank, as the authority competent for the supervision of credit institutions, forms part of the European System of Financial Supervision (ESFS) and a representative of the Croatian National Bank participates as a member in the Board of Supervisors (BoS), EBA's managing authority. Every year, the EBA budget is adopted by the Board of Supervisors, in the manner laid down in Article 63 of the Regulation. The revenues of EBA funding the budget consist, among other things, of obligatory contributions from the national competent authorities, which are made in accordance with a formula based on the weighting of votes.

Note 6 – Net result from financial assets at fair value through profit or loss

(All amounts are expressed in thousands of kuna)	2020	2019
Net securities trading result	(15,158)	(28,963)
Realised gains from assets under management with international financial institutions	21,751	39,453
<i>Total realised gains/(losses)</i>	<i>6,593</i>	<i>10,490</i>
Net changes in the fair value of held-for-trading securities	(59,124)	(127,402)
Net result from revaluation of assets under management with international financial institutions	(750)	(691)
Net result from revaluation of precious metals	1,884	1,286
<i>Total unrealised gains/(losses)</i>	<i>(57,990)</i>	<i>(126,807)</i>
	(51,397)	(116,317)

Note 7 – Net result from debt securities at fair value through other comprehensive income

(All amounts are expressed in thousands of kuna)	2020	2019
Net result from sale of EUR-denominated debt securities	113,699	75,222
Net result from sale of USD-denominated debt securities	–	(401)
	113.699	74.821

Note 8 – Net exchange differences

(All amounts are expressed in thousands of kuna)	2020	2019
Net unrealised exchange differences	(51,200)	809,729
Net realised exchange differences	49,636	23,897
	(1,564)	833,626

Increase in the EUR/HRK exchange rate (1.27%) and decrease in the USD/HRK exchange rate (7.68%) between the two reporting dates had the biggest effect on the net exchange differences.

Note 9 – Other income

(All amounts are expressed in thousands of kuna)	2020	2019
Sale of numismatics and investment gold	1,135	3,880
Other revenues	5,285	7,158
	6,420	11,038

Note 10 – Operating expenses

(All amounts are expressed in thousands of kuna)	2020	2019
Staff costs (Note 10.1)	203,055	186,407
Materials, services and administrative expenses	104,733	104,858
Costs of production of kuna banknotes and coins	69,808	68,002
Depreciation and amortisation costs	41,880	35,984
	419,476	395,251

Materials, services and administrative expenses include the costs of maintenance of office buildings and other fixed assets, overheads, network programmes maintenance costs, office supplies costs, small inventory costs, professional development costs and other current costs. Rental costs for short-term leases and leases for which the underlying asset is of low value amounted to HRK 2,133 thousands in 2020 (2019: HRK 1,862 thousands).

Depreciation costs for the right of use asset amount to HRK 2,793 thousands in 2020 (2019: HRK 1,208 thousands) and are reported under Depreciation and amortisation costs. The right-of-use asset is depreciated under the straight-line method, from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term.

Note 10.1 – Staff costs

(All amounts are expressed in thousands of kuna)	2020	2019
Net salaries	103,984	93,157
Contributions from and contributions on salaries	54,680	49,399
Taxes and surtaxes	22,649	20,217
Other employee related expenses	21,742	23,634
	203,055	186,407

The average number of employees during 2020 was 690 (2019: 671). Total staff costs for 2020 amount to HRK 203,055 thousands, of which the amount of HRK 32,938 thousands relates to contributions for pension insurance (2019: HRK 186,407 thousands, of which HRK 30,503 thousands was related to contributions for pension insurance).

Note 11 – Impairment losses on financial instruments

(All amounts are expressed in thousands of kuna)	2020	2019
Impairment losses on financial instruments		
Increase in expected credit losses according to IFRS 9	42,264	47,787
Decrease of expected credit losses according to IFRS 9	(27,370)	(38,268)
	14,894	9,519

There was no collection of financial assets that are referred to as stage 3 of credit quality of financial instruments. Changes in loss allowances for expected credit losses during the year are presented in Note 37.1.4.

Note 12 – Increase/(decrease) in provisions

(All amounts are expressed in thousands of kuna)	2020	2019
Provisions for risks and charges		
New provisions (Note 30)	14,077	23,223
Released provisions (Note 30)	(11,142)	(10,222)
	2,935	13,001

Note 13 – Cash and current accounts with other banks

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Cash on hand	2,177	970
Foreign currency cash in the CNB treasury vault	25,164,951	2,962,825
Current accounts with foreign banks	8,534,873	4,327,949
CNB account in TARGET2 system	64,615	59,574
	33,766,616	7,351,318
Loss allowance for expected credit losses	(411)	(204)
	33,766,205	7,351,114

Note 25 contains the explanations of TARGET2.

Note 14 – Deposits with other banks

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Deposits with foreign central banks	11,739,112	15,194,343
Deposits with foreign commercial banks	337,700	133,421
Deposits with domestic commercial banks	2,082	2,946
	12,078,894	15,330,710
Loss allowance for expected credit losses	(6,703)	(8,810)
	12,072,191	15,321,900

Geographical concentration of deposits with other banks:

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Croatia	2,077	2,938
Europe	12,070,114	15,318,962
	12,072,191	15,321,900

Note 15 – Financial assets at fair value through profit or loss

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Held-for-trading securities (Note 15.a)	25,362,372	38,065,903
Assets under management with international financial institutions (Note 15.b)	1,228,636	1,331,694
Precious metals	9,411	7,525
	26,600,419	39,405,122

a) Held-for-trading securities

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
EUR-denominated securities	20,730,766	32,265,349
USD-denominated securities	4,631,606	5,800,554
	25,362,372	38,065,903

Held-for-trading securities include accrued interest in the amount of HRK 38,055 thousands at 31 December 2020 (31 December 2019: HRK 93,281 thousands).

b) Assets under management with international financial institutions

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
USD-denominated funds entrusted to the management of international financial institutions	1,228,636	1,331,694
	1,228,636	1,331,694

Note 16 – Loans

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Loans to domestic banks	4,533,335	1,914,914
Other loans	29	34
	4,533,364	1,914,948
Loss allowance for expected credit losses	(1,319)	(540)
	4,532,045	1,914,408

Loans to domestic banks comprise collateralised credits, which are the instrument to be used to conduct open market operation regulated by the Decision on monetary policy implementation of the Croatian National Bank. A collateralised credit is a reverse transaction used by the Croatian National Bank to provide liquidity to a counterparty against collateral by securities transferred to the pool of eligible assets.

Total fair value of collateral obtained for collateralised credits as at 31 December 2020 amounts to HRK 5,160,822 thousands (31 December 2019: HRK 2,144,026 thousands).

Note 17 – Reverse repo agreements

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Foreign currency reverse repo agreements	4,729,869	11,467,741
	4,729,869	11,467,741
Loss allowance for expected credit losses	(225)	(571)
	4,729,644	11,467,170

Total fair value of collateral obtained by foreign currency reverse repo agreements (sovereign bonds of countries rated Aaa to Baa1, securities of international financial institutions rated Aaa and guaranteed bonds rated Aaa) as at 31 December 2020 amounts to HRK 4,689,013 thousands (31 December 2019: HRK 11,492,828 thousands).

Note 18 – Debt securities at amortised cost

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Foreign currency debt securities (Note 18.a)	18,274,949	14,373,081
Bonds of the Republic of Croatia (Note 18.b)	19,994,169	–
	38,269,118	14,373,081
Loss allowance for expected credit losses	(25,836)	(7,687)
	38,243,282	14,365,394

a) Foreign currency debt securities

(All amounts are expressed in thousands of kuna)	31/12/2019	
Foreign currency debt securities	18,197,441	14,308,359
Accrued interest	77,508	64,722
	18,274,949	14,373,081
Loss allowance for expected credit losses	(8,651)	(7,687)
	18,266,298	14,365,394

b) Bonds of the Republic of Croatia

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Bonds of the Republic of Croatia	19,842,648	–
Accrued interest	151,521	–
	19,994,169	–
Loss allowance for expected credit losses	(17,185)	–
	19,976,984	–

In an effort to maintain the liquidity and stability of the financial system, the Croatian National Bank responded to the coronavirus pandemic (COVID-19) by implementing a set of monetary policy measures, including the purchase of bonds of the Republic of Croatia.

Note 19 – Balances with the International Monetary Fund

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Membership quota	6,363,088	6,619,913
Special Drawing Rights (XDR)	2,696,453	2,803,820
Deposits	4,605	4,791
	9,064,146	9,428,524

Note 20 – Debt securities at fair value through other comprehensive income

Investments in debt securities at fair value through other comprehensive income comprise the following:

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Debt securities	44,419,450	47,174,201
Accrued interest	227,388	265,173
	44,646,838	47,439,374

Loss allowances for expected credit losses on debt securities at fair value through other comprehensive income amount to HRK 10,544 thousands (2019: HRK 12,363 thousands).

Note 21 – Investments accounted for using the equity method

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Investment in the Croatian Monetary Institute	51,076	25,736
	51,076	25,736

The investment of the Croatian National Bank in the Croatian Monetary Institute represents an investment in a subsidiary at year end while it was an associate until 30 June 2020 and it is accounted for using the equity method. The Croatian Monetary Institute does not have quoted market prices on an active market. The Croatian National Bank's share in the capital of the Croatian Monetary Institute was 42.6% until 30 June 2020. On 1 July 2020 the Croatian National Bank acquired a 100% share in the Croatian Monetary Institute.

The following table shows the most important data on the Croatian Monetary Institute on the date of the acquisition of control, 1 July 2020.

(All amounts are expressed in thousands of kuna)

Total consideration paid in cash and cash equivalents	15,271
Total assets	95,100
Non-current assets	22,386
Amount of cash and cash equivalents of subsidiary	2,681
Other current assets	69,866
Prepayments and accrued income	167
Total liabilities	57,857
Current liabilities	57,857
Equity	34,562

The share of the Croatian National Bank in the profit of the Croatian Monetary Institute for the year 2020 amounts to HRK 10,103 thousands, and total amount recognised in profit or loss which comprises the reconciliation of the share in the profit for the year 2019 amounts to HRK 10,069 thousands (2019: HRK 2,119 thousands).

The Croatian Monetary Institute is a domestic company whose core operation is the production of coins and medals of gold and other precious metals, production of coins and commemorative circulation coins, manufacturing of jewellery and related products, trade in gold and other precious metals, trade in jubilee coins and in medals of gold and other precious metals.

The following table presents summarised financial information of the Croatian Monetary Institute:

(All amounts are expressed in thousands of kuna)

	2020	2019
Total assets	76,580	106,014
Non-current assets	21,353	36,458
Current assets	54,974	69,279
Prepayments and accrued income	253	277
Total liabilities	32,225	44,805
Provisions	–	500
Current liabilities	32,194	44,295
Accruals and deferred income	31	10
Equity	44,355	61,209
Total revenue	78,572	87,050
Total expenses	(66,258)	(80,008)
Profit before tax	12,314	7,042
Income tax	(2,220)	(1,303)
Profit for the period	10,094	5,739
Other comprehensive income	–	–
Total comprehensive income	10,094	5,739

The summarised financial information of the Croatian Monetary Institute is presented based on the audited financial statements of the Croatian Monetary Institute.

Note 22 – Other assets

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
BIS shares	41,914	41,914
SWIFT shares	80	80
ECB paid-up capital	19,954	17,171
Total equity securities at fair value through other comprehensive income – irrevocable election	61,948	59,165
Accrued interest	7,514	7,917
Other participants funds in TARGET2	5,726,455	4,467,861
Other financial assets	27,938	27,889
	5,761,907	4,503,667
Loss allowance for expected credit losses	(7,525)	(7,526)
Total other financial assets	5,754,382	4,496,141
Total financial assets	5,816,330	4,555,306
Prepaid expenses	479,648	443,181
Numismatics	11,377	9,458
Other non-financial assets	40,246	58,620
Total other non-financial assets	531,271	511,259
Total other assets	6,347,601	5,066,565

Equity securities at fair value through other comprehensive income – irrevocable election comprise paid-up capital of the European Central Bank (ECB), BIS shares and SWIFT shares. These investments are measured at cost because they do not have quoted market prices on an active market and their fair value cannot be reliably measured. The Croatian National Bank does not intend to sell them in the future.

Based on the ownership holding of 2,441 shares of the Bank for International Settlements (BIS), in the nominal value of XDR 5,000 per share, the Croatian National Bank is a member of the BIS, which enables it to use services the BIS provides to central banks and other financial organisations. In accordance with the Statute of the BIS, 25% of the shares subscribed was paid, while the remaining 75% is payable upon call for payment. No dividend payments were made on BIS shares in 2020 (2019: HRK 5,419 thousands).

The Croatian National Bank is also a member of the Society for Worldwide Interbank Financial Telecommunication (SWIFT). Based on this membership, the Croatian National Bank participates in international transfers of financial messages. Six SWIFT shares in the nominal value of EUR 125 per share held by the Croatian National Bank are fully paid in.

The paid-up capital of the European Central Bank (ECB) represents the participating interest of the Croatian National Bank in the ECB. According to Article 28 of the Statute of the European System of Central Banks (ESCB), the national central banks (NCBs) of the ESCB are the only subscribers to the ECB's capital. The subscriptions depend on the shares that are regulated by Article 29 of the Statute of the ESCB and the amounts are adjusted every five years. Since the Republic of Croatia is not part of the euro area, transitional provisions of Article 47 of the ESCB's Statute are applied, according to which the Croatian National Bank had an obligation to subscribe and pay in 3.75% of the capital to the ECB as a contribution to cover ECB's operating costs. The Croatian National Bank, as a non-euro area national central bank, is not entitled to receive an appropriate share of the ECB's profit distribution and there is no obligation to cover the ECB's loss.

As a result of the departure of the United Kingdom from the European Union on 31 January 2020 and the consequent withdrawal of the Bank of England from the European System of Central Banks, the weightings assigned to the remaining NCBs in the key for subscription to the ECB's capital were adjusted with effect from 1 February 2020 as follows:

Table 1: The adjustment of the key for subscription to the ECB's capital as of 1 February 2020

NCB	Key for subscription to the ECB's capital	
	until 31 January 2020 (%)	from 1 February 2020 (%)
Nationale Bank van België/Banque Nationale de Belgique	2.5280	2.9630
Deutsche Bundesbank	18.3670	21.4394
Eesti Pank	0.1968	0.2291
Central Bank of Ireland	1.1754	1.3772
Bank of Greece	1.7292	2.0117
Banco de España	8.3391	9.6981
Banque de France	14.2061	16.6108
Banca d'Italia	11.8023	13.8165
Central Bank of Cyprus	0.1503	0.1750
Latvijas Banka	0.2731	0.3169
Lietuvos bankas	0.4059	0.4707
Banque centrale du Luxembourg	0.2270	0.2679
Central Bank of Malta	0.0732	0.0853
De Nederlandsche Bank	4.0677	4.7662
Oesterreichische Nationalbank	2.0325	2.3804
Banco de Portugal	1.6367	1.9035
Banka Slovenije	0.3361	0.3916
Národná banka Slovenska	0.8004	0.9314
Suomen Pankki – Finlands Bank	1.2708	1.4939
Subtotal for euro area NCBs	69.6176	81.3286
Българска народна банка (Bulgarian National Bank)	0.8511	0.9832
Česká národní banka	1.6172	1.8794
Danmarks Nationalbank	1.4986	1.7591
Hrvatska narodna banka	0.5673	0.6595
Magyar Nemzeti Bank	1.3348	1.5488
Narodowy Bank Polski	5.2068	6.0335
Banca Națională a României	2.4470	2.8289
Sveriges Riksbank	2.5222	2.9790
Bank of England	14.3374	–
Subtotal for non-euro area NCBs	30.3824	18.6714
TOTAL	100.00	100.00

The European Central Bank kept its subscribed capital unchanged at EUR 10,825,007 thousands after the Bank of England's withdrawal from the European System of Central Banks. The share of the Bank of England in the ECB's subscribed capital, which stood at 14.3%, was reallocated among both the euro area and remaining non-euro area

NCBs. Accordingly, the share of the Croatian National Bank in the ECB's subscribed capital increased from 0.5673% to 0.6595%. As a result, the Croatian National Bank paid up its increased subscription to the ECB's capital of EUR 374 thousands in 2020.

The Croatian National Bank's share in the subscribed and paid-up capital of the ECB amounts to EUR 71,391 thousands and EUR 2,677 thousands respectively.

Table 2: Subscribed and paid-up capital of the ECB

(All amounts are expressed in thousands of kuna)

NCB	Subscribed capital until 31 January 2020	Paid-up capital until 31 January 2020	Subscribed capital from 1 February 2020	Paid-up capital as at 31 December 2020*
Nationale Bank van België/Banque Nationale de Belgique	273,656	273,656	320,745	276,291
Deutsche Bundesbank	1,988,229	1,988,229	2,320,817	1,999,160
Eesti Pank	21,304	21,304	24,800	21,363
Central Bank of Ireland	127,237	127,237	149,082	128,420
Bank of Greece	187,186	187,186	217,767	187,585
Banco de España	902,708	902,708	1,049,820	904,319
Banque de France	1,537,811	1,537,811	1,798,120	1,548,908
Banca d'Italia	1,277,600	1,277,600	1,495,637	1,288,347
Central Bank of Cyprus	16,270	16,270	18,944	16,318
Latvijas Banka	29,563	29,563	34,304	29,550
Lietuvos bankas	43,939	43,939	50,953	43,891
Banque centrale du Luxembourg	24,573	24,573	29,000	24,981
Central Bank of Malta	7,924	7,924	9,234	7,954
De Nederlandsche Bank	440,329	440,329	515,941	444,434
Oesterreichische Nationalbank	220,018	220,018	257,678	221,965
Banco de Portugal	177,173	177,173	206,054	177,496
Banka Slovenije	36,383	36,383	42,391	36,516
Národná banka Slovenska	86,643	86,643	100,824	86,850
Suomen Pankki – Finlands Bank	137,564	137,564	161,715	139,302
Subtotal for euro area NCBs*	7,536,110	7,536,110	8,803,826	7,583,650
Българска народна банка (Bulgarian National Bank)	92,132	3,455	106,431	3,991
Česká národní banka	175,062	6,565	203,445	7,629
Danmarks Nationalbank	162,224	6,083	190,423	7,141
Hrvatska narodna banka	61,410	2,303	71,391	2,677
Magyar Nemzeti Bank	144,492	5,419	167,658	6,287
Narodowy Bank Polski	563,636	21,136	653,127	24,492
Banca Națională a României	264,888	9,933	306,229	11,484
Sveriges Riksbank	273,028	10,239	322,477	12,093
Bank of England	1,552,025	58,201	–	–
Subtotal for non-euro area NCBs*	3,288,897	123,334	2,021,181	75,794
TOTAL*	10,825,007	7,659,444	10,825,007	7,659,444

* Euro area national central banks will pay up the whole amounts of their subscribed capital, increased due to the withdrawal of the Bank of England from the European System of Central Banks, in two annual instalments, at the end of 2021 and 2022.

Accrued interest comprises remuneration charged in the case of irregular allocation of and failure to maintain foreign exchange reserve requirements and accrued negative interest on financial liabilities with the negative interest rate.

The major portion of the prepaid expenses in the amount of HRK 465,642 thousands (2019: HRK 429,393 thousands) relates to the prepaid expenses of the production of kuna banknotes and coins.

Note 25 contains the explanations of TARGET2.

Note 23 – Property, plant, equipment and intangible assets

(All amounts are expressed in thousands of kuna)	Property owned by the CNB (land and buildings)	Right-of-use buildings (office buildings)	Computers	Furniture and equipment	Motor vehicles	Assets under development – property, plant and equipment	TOTAL property, plant and equipment	Software and licences	Assets under development – intangible assets	TOTAL intangible assets	TOTAL property, plant, equipment and intangible assets
Balance at 1 January 2019											
Cost or revaluation	501,282	256	211,511	43,230	9,241	15,170	780,690	89,270	9,866	99,136	879,826
Accumulated depreciation/amortisation	(37,302)	–	(154,038)	(37,132)	(8,864)	–	(237,336)	(63,188)	–	(63,188)	(300,524)
Net book value	463,980	256	57,473	6,098	377	15,170	543,354	26,082	9,866	35,948	579,302
For the year ended 31 December 2019											
Opening net book amount	463,980	256	57,473	6,098	377	15,170	543,354	26,082	9,866	35,948	579,302
Additions	–	8,713	–	–	–	43,140	51,853	–	2,949	2,949	54,802
Brought into use	2,911	–	32,115	3,394	208	(38,628)	–	10,364	(10,364)	–	–
Revaluation	23,308	–	–	–	–	–	23,308	–	–	–	23,308
Impairment	(590)	–	–	–	–	–	(590)	–	–	–	(590)
Net written off	–	–	(1)	(14)	–	–	(15)	–	–	–	(15)
Depreciation/amortisation (charge for the year, Note 10)	(8,228)	(1,208)	(19,582)	(2,493)	(117)	–	(31,628)	(4,355)	–	(4,355)	(35,983)
Closing net book amount	481,381	7,761	70,005	6,985	468	19,682	586,282	32,091	2,451	34,542	620,824
As at 31 December 2019											
Cost or revaluation	481,381	8,969	238,696	45,707	9,449	19,682	803,884	99,634	2,451	102,085	905,969
Accumulated depreciation/amortisation	–	(1,208)	(168,691)	(38,722)	(8,981)	–	(217,602)	(67,543)	–	(67,543)	(285,145)
Net book value	481,381	7,761	70,005	6,985	468	19,682	586,282	32,091	2,451	34,542	620,824

(All amounts are expressed in thousands of kuna)	Property owned by the CMB (land and buildings)	Right-of-use buildings (office buildings)	Computers	Furniture and equipment	Motor vehicles	Assets under development – property, plant, and equipment	TOTAL property, plant and equipment	Software and licences	Assets under development – intangible assets	TOTAL intangible assets	TOTAL property, plant, equipment and intangible assets
Balance at 1 January 2020											
Cost or revaluation	481,381	8,969	238,696	45,707	9,449	19,682	803,884	99,634	2,451	102,085	905,969
Accumulated depreciation/amortisation	–	(1,208)	(168,691)	(38,722)	(8,981)	–	(217,602)	(67,543)	–	(67,543)	(285,145)
Net book value	481,381	7,761	70,005	6,985	468	19,682	586,282	32,091	2,451	34,542	620,824
For the year ended 31 December 2020											
Opening net book amount	481,381	7,761	70,005	6,985	468	19,682	586,282	32,091	2,451	34,542	620,824
Additions	–	457	–	–	–	13,191	13,648	–	17,605	17,605	31,253
Brought into use	62	–	17,471	5,132	–	(22,665)	–	1,331	(1,331)	–	–
Revaluation	–	–	–	–	–	–	–	–	–	–	–
Impairment	–	–	–	–	–	–	–	–	–	–	–
Net written off	–	–	(12)	(17)	–	–	(29)	–	–	–	(29)
Depreciation/amortisation (charge for the year, Note 10)	(7,384)	(2,793)	(23,095)	(3,161)	(165)	–	(36,598)	(5,282)	–	(5,282)	(41,880)
Closing net book amount	474,059	5,425	64,369	8,939	303	10,208	563,303	28,140	18,725	46,865	610,168
As at 31 December 2020											
Cost or revaluation	481,443	9,170	252,515	49,283	8,977	10,208	811,596	100,965	18,725	119,690	931,286
Accumulated depreciation/amortisation	(7,384)	(3,745)	(188,146)	(40,344)	(8,674)	–	(248,293)	(72,825)	–	(72,825)	(321,118)
Net book value	474,059	5,425	64,369	8,939	303	10,208	563,303	28,140	18,725	46,865	610,168

The revalued amounts of fixed assets (land and buildings) were determined based on appraisals performed by independent experts in 2019, and the revaluation effect is presented in other comprehensive income. The valuation technique used to determine fair value was the cost method. Certain significant inputs for valuation were not observable market data (Level 3 of fair value hierarchy). The input data were data from the property market information system “eNekretine” and construction indicators for a model object from the Bulletin of Institut IGH d.o.o., which were used in individual assessments of the property value pursuant to the Property Valuation Act and the Ordinance on the property valuation methods as well as other relevant regulations on property valuation.

If the land and buildings were carried at cost less depreciation their net book value as at 31 December 2020 would be HRK 132,045 thousands (2019: HRK 134,660 thousands). The property, plant and equipment of the Croatian National Bank are not pledged, either as part of mortgage agreements or as a fiduciary relationship. The Zagreb earthquake of 22 March 2020 caused damage to the buildings owned by the Croatian National Bank and the buildings where CNB's offices are located. However, these buildings' mechanical resistance was not impaired and they have since been regularly and routinely used. Following the earthquake of 29 December 2020 with the epicentre near Petrinja, which heavily rocked the buildings in Zagreb, all buildings and offices owned by the CNB were examined. The examination established that there were no new defects or damages relative to the condition before the Petrinja earthquake so that all CNB's buildings and offices have been used regularly in the regime applicable until 29 December 2020.

At the reporting date, there were no intangible assets with indefinite useful life. As at 31 December 2020, contractual commitments for the acquisition of property, plant and equipment amounted to HRK 2,977 thousands (2019: HRK 1,798 thousands), while there were no contractual commitments for the acquisition of intangible assets (2019: HRK 2,191 thousands).

The gross carrying amount of fully depreciated assets amounts to HRK 221,985 thousands (2019: HRK 152,516 thousands). The carrying amount of land that is not depreciated amounts to HRK 114,178 thousands (2019: HRK 114,178 thousands).

Note 24 – Banknotes and coins in circulation

(All amounts are expressed in thousands of kuna)

	2020	2019
Banknotes and coins in circulation as at January 1	38,734,616	35,046,160
Increase/(decrease) of banknotes and coins in circulation during the year	3,058,062	3,688,456
Banknotes and coins in circulation – total as at 31 December	41,792,678	38,734,616

In HRK	Nominal value	31/12/2020		31/12/2019	
		Pieces	Value in thousands of kuna	Pieces	Value in thousands of kuna
Coins	0.01	128,096,234	1,281	127,787,238	1,278
Coins	0.02	85,746,912	1,715	85,742,921	1,715
Coins	0.05	418,770,808	20,939	405,827,534	20,291
Coins	0.10	602,359,529	60,236	587,529,874	58,753
Coins	0.20	470,993,381	94,199	455,328,197	91,066
Coins	0.50	273,545,238	136,773	266,209,895	133,105
Coins	1	308,756,200	308,756	302,798,298	302,798
Coins	2	190,830,614	381,661	186,122,191	372,244
Coins	5	129,006,476	645,032	125,010,988	625,055
Coins	25	1,364,201	34,105	1,315,613	32,890
Banknotes	5	4,122,545	20,613	4,124,081	20,620
Banknotes	10	53,218,620	532,186	52,586,315	525,863
Banknotes	20	37,639,522	752,790	37,171,874	743,438

In HRK	Nominal value	31/12/2020		31/12/2019	
		Pieces	Value in thousands of kuna	Pieces	Value in thousands of kuna
Banknotes	50	18,722,968	936,148	20,042,177	1,002,109
Banknotes	100	47,539,398	4,753,940	45,031,262	4,503,126
Banknotes	200	96,089,661	19,217,932	89,916,703	17,983,341
Banknotes	500	9,461,267	4,730,634	8,971,768	4,485,884
Banknotes	1,000	9,163,738	9,163,738	7,831,040	7,831,040
TOTAL			41,792,678		38,734,616

Note 25 – Due to banks and other financial institutions

(All amounts are expressed in thousands of kuna)

	31/12/2020	31/12/2019
Kuna reserve requirements	19,956,987	24,890,304
Foreign currency accounts of TARGET2 system participants	5,726,455	4,467,861
Other deposits from domestic banks	64,769,838	44,993,153
Deposits from foreign banks and other financial institutions	72	72
Court-mandated deposits	270,124	273,406
	90,723,476	74,624,796

Due to banks and other financial institutions also comprises foreign currency accounts of participants in the TARGET2 system. TARGET2 (Trans-European Automated Real-time Gross Settlement Express Transfer system) is a payment system for the settlement of payment transactions in euro on a gross basis in real time. TARGET2 is a system with the Single Shared Platform (SSP), jointly administered by Banca d'Italia, Banque de France and Deutsche Bundesbank on behalf of the Eurosystem. In addition to this Note to the financial statements, business activities related to TARGET2 are presented in the balance sheet positions Cash and current accounts with other banks (see Note 13) and Other assets (see Note 22).

Court-mandated deposits of banks are assets foreclosed pursuant to the Act on the Execution of Enforcement over Monetary Assets.

Note 26 – Repo agreements

(All amounts are expressed in thousands of kuna)

	31/12/2020	31/12/2019
Foreign currency repo agreements	3,756,698	5,998,829
	3,756,698	5,998,829

Total fair value of collateral given in repo agreements as at 31 December 2020 amounts to HRK 3,752,077 thousands (31 December 2019: HRK 5,956,987 thousands).

Note 27 – Due to the state and state institutions

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Domestic currency account balances	14,740,134	6,642,591
Foreign currency deposits	2,981,935	70,003
	17,722,069	6,712,594

Note 28 – Due to the International Monetary Fund

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Kuna-denominated bills of exchange	6,344,334	6,600,618
Net cumulative allocations	2,688,716	2,797,255
Other IMF's accounts	15,975	16,619
	9,049,025	9,414,492

The bills of exchange denominated in the Croatian kuna relate to the membership of the Republic of Croatia in the International Monetary Fund.

Pursuant to the Resolution of the Board of Governors of the International Monetary Fund approving allocation of special drawing rights for the ninth basic period adopted in 2009, the Republic of Croatia has been assigned funds in the amount of XDR 271 million (general allocation). Moreover, pursuant to the Resolution of the Board of Governors of the International Monetary Fund on the Fourth Amendment of the Articles of Agreement, the Republic of Croatia has been provided a special one-time allocation of XDRs in the amount of XDR 32 million in 2009. The Government of the Republic of Croatia may adopt a special decision on the withdrawal of funds or a portion of funds provided through the general and special one-time allocations.

Note 29 – Other liabilities

(All amounts are expressed in thousands of kuna)	31/12/2020	31/12/2019
Accrued interest	4,469	13,694
Amounts due to employees	9,011	8,241
Taxes and contributions	8,073	6,764
Obligations to European Commission in EUR	663	484
Obligations to European Commission in HRK	287,636	414,609
Due to the Ministry of Finance	229,240	133,153
Trade payables	23,338	31,339
Other liabilities	132,007	19,046
	694,437	627,330

The European Commission has opened EUR and HRK transaction accounts and the European Development Fund Account in euro with the Croatian National Bank for the performance of payment transactions.

Other liabilities in 2020 includes the present value of the lease liability of HRK 4,864 thousands (2019: 6,834 thousands) and the liabilities for short-term leases and leases for which the underlying asset is of low value of HRK 161 thousands (2019: HRK 176 thousands). The present value of the lease liability is calculated using the discount rate of the Croatian National Bank, which stood at 3% on 31 December 2020 (on 31 December 2019 it was 3%).

Note 30 – Provisions for risks and charges

(All amounts are expressed in thousands of kuna)

	31/12/2020	31/12/2019
Liabilities for court cases	36,535	36,545
Provisions for employee benefits	26,167	23,222
	62,702	59,767

The following tables present movements in provisions for risks and charges:

(All amounts are expressed in thousands of kuna)

	Court cases	Employee benefits	Total
As at 1 January 2020	36,545	23,222	59,767
Released provisions (Note 12)	(10)	(11,132)	(11,142)
New provisions (Note 12)	–	14,077	14,077
<i>Recognised in profit or loss</i>	<i>(10)</i>	<i>2,945</i>	<i>2,935</i>
As at 31 December 2020	36,535	26,167	62,702

(All amounts are expressed in thousands of kuna)

	Court cases	Employee benefits	Total
As at 1 January 2019	24,822	21,944	46,766
Released provisions (Note 12)	–	(10,222)	(10,222)
New provisions (Note 12)	11,723	11,500	23,223
<i>Recognised in profit or loss</i>	<i>11,723</i>	<i>1,278</i>	<i>13,001</i>
As at 31 December 2019	36,545	23,222	59,767

Note 31 – Equity

The equity of the Croatian National Bank consist of the initial capital and reserves.

The initial capital in the amount of HRK 2,500,000 thousands may not be transferred or pledged. Reserves comprise general and specific reserves. General reserves are formed for the purpose of covering general operational risks of the Croatian National Bank, they are not limited in size and they are formed in accordance with the Act on the Croatian

National Bank. Specific reserves are formed for the purpose of covering identified losses in accordance with the decisions of the Council of the Croatian National Bank.

Total reserves as at 31 December 2020 amount to HRK 14,362,530 thousands, which is an increase of HRK 628,823 thousands from 31 December 2019 when they stood at HRK 13,733,707 thousands. The increase in total reserves resulted from the rise in general reserves brought about by the allocation of a portion of the profit for 2020 into general reserves (HRK 53,193 thousands) and from other comprehensive income of HRK 575,630 thousands.

Note 32 – Maturity analysis of assets and liabilities

The following table presents maturity analysis of assets and liabilities depending on the expected maturity date or the settlement date:

- up to twelve months after the reporting period,
- more than twelve months after the reporting period.

32.1 Maturity analysis of assets and liabilities

(All amounts are expressed in thousands of kuna)	Up to 12 months	More than 12 months	Total
As at 31 December 2020			
Assets			
Cash and current accounts with other banks	33,766,205	–	33,766,205
Deposits with other banks	12,070,702	1,489	12,072,191
Financial assets at fair value through profit or loss	25,362,373	1,238,046	26,600,419
Loans	–	4,532,045	4,532,045
Reverse repo agreements	4,729,644	–	4,729,644
Debt securities at amortised cost	1,351,175	36,892,107	38,243,282
Balances with the International Monetary Fund	2,696,453	6,367,693	9,064,146
Debt securities at fair value through other comprehensive income	44,646,838	–	44,646,838
Investments accounted for using the equity method	–	51,076	51,076
Other assets	5,891,064	456,537	6,347,601
Property, plant, equipment and intangible assets	34	610,134	610,168
Total assets	130,514,488	50,149,127	180,663,615
Liabilities			
Banknotes and coins in circulation	41,792,678	–	41,792,678
Due to banks and other financial institutions	90,723,404	72	90,723,476
Repo agreements	3,756,698	–	3,756,698
Due to the State and State institutions	17,722,069	–	17,722,069
Due to the International Monetary Fund	–	9,049,025	9,049,025
Other liabilities	691,495	2,942	694,437

(All amounts are expressed in thousands of kuna)	Up to 12 months	More than 12 months	Total
Provisions for risks and charges	62,702	–	62,702
Total liabilities	154,749,046	9,052,039	163,801,085
Net position	(24,234,558)	41,097,088	16,862,530

(All amounts are expressed in thousands of kuna)	Up to 12 months	More than 12 months	Total
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As at 31 December 2019**Assets**

Cash and current accounts with other banks	7,351,114	–	7,351,114
Deposits with other banks	15,319,926	1,974	15,321,900
Financial assets at fair value through profit or loss	38,065,903	1,339,219	39,405,122
Loans	94,721	1,819,687	1,914,408
Reverse repo agreements	11,467,170	–	11,467,170
Debt securities at amortised cost	64,722	14,300,672	14,365,394
Balances with the International Monetary Fund	2,803,820	6,624,704	9,428,524
Debt securities at fair value through other comprehensive income	47,439,374	–	47,439,374
Investments accounted for using the equity method	–	25,736	25,736
Other assets	4,645,692	420,873	5,066,565
Property, plant, equipment and intangible assets	48	620,776	620,824
Total assets	127,252,490	25,153,641	152,406,131

Liabilities

Banknotes and coins in circulation	38,734,616	–	38,734,616
Due to banks and other financial institutions	74,624,724	72	74,624,796
Repo agreements	5,998,829	–	5,998,829
Due to the State and State institutions	6,712,594	–	6,712,594
Due to the International Monetary Fund	–	9,414,492	9,414,492
Other liabilities	622,145	5,185	627,330
Provisions for risks and charges	59,767	–	59,767
Total liabilities	126,752,675	9,419,749	136,172,424
Net position	499,815	15,733,892	16,233,707

Note: According to convention, the amount of the kuna component of reserve requirements of HRK 19,956,987 thousands (2019: 24,890,304 thousands) is stated in the position Due to banks and other financial institutions with a maturity of up to 12 months. The calculation, maintenance and allocation of reserve requirements is performed on a monthly basis and a change in the amount of reserves may result from changes in the base for calculation, the reserve requirement rate and the percentage of the reserves banks are required to hold in their accounts with the Croatian National Bank. In practice, these liabilities may be considered as having a maturity of over 12 months and in that case the short-term liabilities would be lower than the short-term assets. Debt securities at fair value through other comprehensive income and at fair value through profit or loss are included in the period up to 12 months due to their high marketability in the secondary market, regardless of their contractual maturities. Assets and liabilities without contractual maturities are included in the period more than 12 months.

Note 33 – Contingent liabilities and commitments and treasury inventory system

Legal actions: As at 31 December 2020, there were several legal actions outstanding against the Croatian National Bank. In the opinion of the management and internal legal advisers of the Croatian National Bank, the Bank may lose certain cases. As a result, provisions for potential losses on such cases were made by the Bank in the amount of HRK 36,535 thousands (see Note 30).

Capital commitments: As at 31 December 2020, the capital commitments of the Croatian National Bank amounted to HRK 2,977 thousands (2019: HRK 3,754 thousands).

Treasury inventory system

(All amounts are expressed in thousands of kuna)

	31/12/2020	31/12/2019
Banknotes and coins not in circulation	46,494,179	44,546,507
Inventory of government stamps and bill-of-exchange forms	54,375	102,318
	46,548,554	44,648,825

Note 34 – Cash and cash equivalents

(All amounts are expressed in thousands of kuna)

	31/12/2020	31/12/2019
Cash on hand (Note 13)	2,177	970
Foreign currency cash in the CNB treasury vault (Note 13)	25,164,951	2,962,825
Current accounts with foreign banks (Note 13)	8,534,873	4,327,949
Funds with the IMF (Note 19)	2,696,453	2,803,820
CNB account in TARGET2 system (Note 13)	64,615	59,574
	36,463,069	10,155,138

Note 35 – Result for the year

(All amounts are expressed in thousands of kuna)

	31/12/2020	31/12/2019
Surplus of income over expenditures	265,965	927,138
Allocated to general reserves	(53,193)	(809,729)
Allocated to the State Budget	(212,772)	(117,409)
	–	–

The Croatian National Bank realised the surplus of income over expenditures for the year 2020 in the amount of HRK 265,965 thousands.

Given that in 2020 net unrealized exchange differences of HRK 51,200 thousands were negative (see Note 8), and the sum of net unrealized losses on financial assets at fair value through profit or loss (see Note 6) and the results from investment measured under equity method was negative (HRK 47,921 thousands), the CNB allocates to the general reserves 20% of the surplus of income over expenditures in the amount of HRK 53,193 thousands. The remaining profit in the amount of HRK 212,772 thousands is allocated to the State Budget.

The Croatian National Bank realised the surplus of income over expenditures for the year 2019 in the amount of HRK 927,138 thousands and, given that in 2019 net unrealised exchange differences of HRK 809,729 thousands (see Note 8) were positive and higher than 20% of the surplus of income over expenditures of HRK 185,428 thousands and that the sum of net unrealised losses on financial assets at fair value through profit or loss (see Note 6) and the results from investment measured under equity method was negative (HRK 124,688 thousands), net unrealised exchange differences were allocated to the general reserves. The remaining profit in the amount of HRK 117,409 thousands was allocated to the State Budget.

Note 36 – Fair values and classification of financial assets and liabilities

In the process of determining the fair value of financial assets and liabilities the market approach is used as a valuation technique. As a part of the hierarchical approach to the determination of fair value, the Croatian National Bank uses the first hierarchical valuation level (Level 1), which means that inputs are observable market values that reflect quotation prices for the same assets or liabilities in active markets. If price quotations are not available, fair value is calculated based on the models recognized by the GIPS standards (Global Investment Performance Standards). The input data used are observable market values (interest rates), which corresponds to Level 2 of the fair value hierarchy.

During the reporting period there were no reclassifications between the levels of the fair value hierarchy.

36.1 Financial assets and liabilities measured at fair value

The following table presents the fair value hierarchy for financial assets measured at fair value.

(All amounts are expressed in thousands of kuna)

	31/12/2020		
	Level 1	Level 2	Total
Financial assets at fair value through profit or loss			
<i>Foreign currency securities held for trading</i>			
Government securities	19,790,678	4,551,212	24,341,890
Guaranteed bonds	179,770	–	179,770
Bank bonds with government guarantees	–	840,712	840,712
<i>Total securities held for trading (Note 15.a)</i>	<i>19,970,448</i>	<i>5,391,924</i>	<i>25,362,372</i>
<i>Assets under management with international financial institutions (Note 15.b)</i>	<i>1,228,636</i>	–	<i>1,228,636</i>
<i>Precious metals</i>	<i>9,411</i>	–	<i>9,411</i>
Total financial assets at fair value through profit or loss	21,208,495	5,391,924	26,600,419

(All amounts are expressed in thousands of kuna)

	31/12/2020		
	Level 1	Level 2	Total
Debt securities at fair value through other comprehensive income			
<i>Foreign currency securities at fair value through other comprehensive income</i>			
Government securities	40,573,577	–	40,573,577
Guaranteed bonds	510,810	–	510,810
Securities of international financial institutions	2,720,513	–	2,720,513
Bank bonds with government guarantees	841,938	–	841,938
<i>Total debt securities at fair value through other comprehensive income (Note 20)</i>	<i>44,646,838</i>	<i>–</i>	<i>44,646,838</i>
Total debt securities at fair value through other comprehensive income	44,646,838	–	44,646,838
Total	65,855,333	5,391,924	71,247,257

(All amounts are expressed in thousands of kuna)

	31/12/2019		
	Level 1	Level 2	Total
Financial assets at fair value through profit or loss			
<i>Foreign currency securities held for trading</i>			
Government securities	24,949,818	7,673,427	32,623,245
Guaranteed bonds	3,416,440	–	3,416,440
Securities of international financial institutions	685,337	219,450	904,787
Bank bonds with government guarantees	677,569	443,862	1,121,431
<i>Total securities held for trading (Note 15.a)</i>	<i>29,729,164</i>	<i>8,336,739</i>	<i>38,065,903</i>
<i>Assets under management with international financial institutions (Note 15.b)</i>	<i>1,331,694</i>	<i>–</i>	<i>1,331,694</i>
<i>Precious metals</i>	<i>7,525</i>	<i>–</i>	<i>7,525</i>
Total financial assets at fair value through profit or loss	31,068,383	8,336,739	39,405,122
Debt securities at fair value through other comprehensive income			
<i>Foreign currency securities at fair value through other comprehensive income</i>			
Government securities	43,170,073	–	43,170,073
Guaranteed bonds	657,082	–	657,082
Securities of international financial institutions	2,541,175	–	2,541,175
Bank bonds with government guarantees	838,478	232,566	1,071,044
<i>Total debt securities at fair value through other comprehensive income (Note 20)</i>	<i>47,206,808</i>	<i>232,566</i>	<i>47,439,374</i>
Total debt securities at fair value through other comprehensive income	47,206,808	232,566	47,439,374
Total	78,275,191	8,569,305	86,844,496

36.2 Financial assets and liabilities not measured at fair value

The comparison of book and fair values of loans and debt securities at amortised cost is presented in the following table.

(All amounts are expressed in thousands of kuna)	31/12/2020			
	Level 1	Level 2	Total market value	Book value
Loans	–	4,538,097	4,538,097	4,532,045
Foreign currency debt securities	18,879,122	–	18,879,122	18,266,298
Bonds of the Republic of Croatia	20,232,119	–	20,232,119	19,976,984

(All amounts are expressed in thousands of kuna)	31/12/2019			
	Level 1	Level 2	Total market value	Book value
Loans	–	1,912,469	1,912,469	1,914,408
Foreign currency debt securities	14,292,217	–	14,292,217	14,365,394

Investments in equity securities are designated as financial assets at fair value through other comprehensive income and include investments in BIS shares, SWIFT shares and ECB paid-up capital. These investments are measured at cost because they do not have quoted market prices on an active market and their fair value cannot be reliably measured. The Croatian National Bank does not intend to sell them in the future. Other central banks, which present their financial statements according to IFRS, measure fair value of investment in BIS shares in the amount of 70%-100% of net asset value of the BIS, or use their own valuation models.

Special drawing rights within Balances with the IMF are short-term assets translated into kuna using the XDR exchange rate at the reporting date; hence their book value may be regarded as their fair value. The membership quota and liabilities with the IMF have no contractual maturities so that they are because of their nature considered long-term instruments and their fair value cannot be reliably estimated.

The fair values of the remaining financial assets and liabilities of the Croatian National Bank are approximately equal to the book values due to the short maturities of the instruments.

36.3 Classification of financial assets and liabilities

Classification of financial assets and liabilities for 2020

(All amounts are expressed in thousands of kuna)

Category of financial assets/liabilities	Book value as at 31/12/2020	Income statement			Other comprehensive income			
		Interest income calculated using the effective interest method	Other interest income	Interest expenses	Net result from financial assets at fair value through profit or loss	Net result from financial assets at fair value through other comprehensive income	Net changes in fair value	Transferred to profit or loss
Financial assets at amortised cost: *	108,161,895	143,716	-	(108,400)	-	-	-	-
Cash and current accounts with other banks	33,766,205	-	-	-	-	-	-	-
Deposits with other banks	12,072,191	3,577	-	(47,646)	-	-	-	-
Loans	4,532,045	17,018	-	-	-	-	-	-
Reverse repo agreements	4,729,644	11,049	-	(60,754)	-	-	-	-
Foreign currency debt securities	18,266,298	11,341	-	-	-	-	-	-
Bonds of the Republic of Croatia	19,976,984	100,731	-	-	-	-	-	-
Balances with the International Monetary Fund	9,064,146	-	-	-	-	-	-	-
Other assets**	5,754,382	-	-	-	-	-	-	-
Financial assets at fair value through other comprehensive income:	44,708,786	446,815	-	-	113,699	689,329	(113,699)	
Debt securities at fair value through other comprehensive income	44,646,838	446,815	-	-	113,699	689,329	(113,699)	
Equity securities at fair value through other comprehensive income – irrevocable election	61,948	-	-	-	-	-	-	-
Financial assets at fair value through profit or loss:	26,600,419	-	86,240	-	(51,397)	-	-	-
<i>Held-for-trading securities</i>	<i>25,362,372</i>	-	<i>86,240</i>	-	<i>(74,282)</i>	-	-	-
<i>Non-trading financial assets mandatorily at fair value through profit or loss</i>	<i>1,238,047</i>	-	-	-	<i>22,885</i>	-	-	-
Assets under management with international financial institutions	1,228,636	-	-	-	21,001	-	-	-
Precious metals	9,411	-	-	-	1,884	-	-	-

(All amounts are expressed in thousands of kuna)

Category of financial assets/liabilities	Book value as at 31/12/2020	Income statement				Other comprehensive income	
		Interest income calculated using the effective interest method	Other interest income	Interest expenses	Net result from financial assets at fair value through profit or loss	Net result from financial assets at fair value through other comprehensive income	Net changes in fair value
Financial liabilities at amortised cost:**	121,945,705	41,591	-	(18,260)	-	-	-
Due to banks and other financial institutions	90,723,476	-	-	-	-	-	-
Repo agreements	3,756,698	35,177	-	(8,908)	-	-	-
Due to the State and State institutions	17,722,069	6,386	-	(9,166)	-	-	-
Due to the International Monetary Fund	9,049,025	-	-	-	-	-	-
Other liabilities**	694,437	28	-	(186)	-	-	-

Classification of financial assets and liabilities for 2019

(All amounts are expressed in thousands of kuna)

Category of financial assets/liabilities	Book value as at 31/12/2019	Income statement				Other comprehensive income	
		Interest income calculated using the effective interest method	Other interest income	Interest expenses	Net result from financial assets at fair value through profit or loss	Net result from financial assets at fair value through other comprehensive income	Net changes in fair value
Financial assets at amortised cost:**	64,344,651	192,749	-	(175,822)	-	-	-
Cash and current accounts with other banks	7,351,114	-	-	-	-	-	-
Deposits with other banks	15,321,900	62,608	-	(56,687)	-	-	-
Loans	1,914,408	24,874	-	-	-	-	-
Reverse repo agreements	11,467,170	101,322	-	(119,135)	-	-	-
Debt securities at amortised cost	14,365,394	3,945	-	-	-	-	-
Balances with the International Monetary Fund	9,428,524	-	-	-	-	-	-
Other assets**	4,496,141	-	-	-	-	-	-

(All amounts are expressed in thousands of kuna)

Category of financial assets/liabilities	Book value as at 31/12/2019	Income statement					Other comprehensive income	
		Interest income calculated using the effective interest method	Other interest income	Interest expenses	Net result from financial assets at fair value through profit or loss	Net result from financial assets at fair value through other comprehensive income	Net changes in fair value	Transferred to profit or loss
Financial assets at fair value through other comprehensive income:	47,498,539	412,740	-	-	-	74,821	1,004,054	(74,821)
Debt securities at fair value through other comprehensive income	47,439,374	412,740	-	-	-	74,821	1,004,054	(74,821)
Equity securities at fair value through other comprehensive income – irrevocable election	59,165	-	-	-	-	-	-	-
Financial assets at fair value through profit or loss:	39,405,122	-	169,471	-	(116,317)	-	-	-
<i>Held-for-trading securities</i>	<i>38,065,903</i>	-	<i>169,471</i>	-	<i>(156,365)</i>	-	-	-
<i>Non-trading financial assets mandatorily at fair value through profit or loss</i>	<i>1,339,219</i>	-	-	-	<i>40,048</i>	-	-	-
Assets under management with international financial institutions	1,331,694	-	-	-	38,762	-	-	-
Precious metals	7,525	-	-	-	1,286	-	-	-
Financial liabilities at amortised cost:*	97,378,041	53,891	-	(149,164)	-	-	-	-
Due to banks and other financial institutions	74,624,796	6	-	-	-	-	-	-
Repo agreements	5,998,829	53,122	-	(89,310)	-	-	-	-
Due to the State and State institutions	6,712,594	732	-	(59,776)	-	-	-	-
Due to the International Monetary Fund	9,414,492	-	-	-	-	-	-	-
Other liabilities**	627,330	31	-	(78)	-	-	-	-

* During the reporting period there were no effects of the derecognition of financial assets at amortised cost.

** Other assets include negative interest on repo agreements, and other liabilities include negative interest on financial assets.

Note 37 – Risk management

The Croatian National Bank manages international reserves of the Republic of Croatia based on the principles of liquidity and safety. The Bank maintains high liquidity of international reserves and appropriate risk exposures, and seeks to achieve a favourable return on its investments within the defined limits.

Risks inherent to managing international reserves consist primarily of financial risks such as credit risk, liquidity risk and market risk. However, attention is given also to operating risk.

Operating risk is the risk of loss due to inappropriate or inefficient internal processes, employees or systems or due to the events external to the Bank. Operating risk is managed by strict segregation of duties and responsibilities, formalised methodologies and procedures and by conducting regular internal and external audits.

Note 37.1 – Credit risk

Credit risk is the risk that the counterparty will not settle its liability i.e. the possibility that invested funds will not be recovered in full or within the planned schedule.

The Croatian National Bank manages its credit risk exposure by investing its international reserve funds into high-quality instruments with minimum risk, such as government bonds, government guaranteed bonds, bank bonds with government guarantees and guaranteed bonds, into instruments of international financial institutions with high credit rating and into both collateralised and non-collateralised deposits. Collateralised deposits represent deposits secured by government bonds in the amount equal to or in excess of the value of the deposit. Uncollateralised deposits are invested only with central banks and international financial institutions.

Its assessment of counterparties' creditworthiness is based on ratings of major internationally recognized rating agencies (Moody's, Standard & Poor's, and Fitch).

International reserves placements are limited per types of issuer and per types of financial institutions, which diversifies credit risk.

The Croatian National Bank invests the international reserve funds in government bonds and government guaranteed bonds of countries rated Aaa to Baa3 (Moody's), guaranteed bonds rated Aaa to Aa2, reverse repo agreements with commercial banks rated Aaa to Baa3, deposits with central banks rated Aaa to Baa3, instruments with international financial institutions rated Aaa to A2, and deposits placed with commercial banks rated Aaa to A3 for the purpose of carrying out foreign currency transactions.

The presentation of financial assets exposed to credit risk in the tables Maximum exposure to credit risk and credit risk by counterparty credit rating and Geographical concentration of credit risk (Notes 37.1.1 and 37.1.2) differ from the presentation in the Statement of Financial Position as they are based on management reports. Reconciliation is not practicable. Some of the main differences are:

- Line item Deposits in tables in Notes 37.1.1 and 37.1.2 includes line items Cash and current accounts with other banks, Deposits with other banks and Balances with the International Monetary Fund from the Statement of Financial Position. Additionally, deposits are split by currency and recipient (international financial institutions, foreign and domestic banks). Balances of deposits presented tables in Notes 37.1.1 and 37.1.2 include accrued negative interest, included in line item Other liabilities in the Statement of Financial Position.

- Securities are divided by financial asset category in the Statement of Financial Position, while they are additionally divided by issuer and currency in tables Maximum exposure to credit risk and credit risk by counterparty credit rating and Geographical concentration of credit risk.
- Line item Reverse repo agreements from the Statement of Financial Position is divided per currency in tables shown in Notes 37.1.1 and 37.1.2 and includes accrued negative interest presented in line item Other liabilities in the Statement of Financial Position.
- Line item Other financial assets denominated in foreign currency and Other financial assets in kuna presented in tables in Notes 37.1.1 and 37.1.2 are part of line item Accrued interest and other assets from the Statement of Financial Position.

37.1.1 Maximum exposure to credit risk and credit risk by counterparty credit rating

(All amounts are expressed in thousands of kuna)	Rejting (Moody's)	31/12/2020	31/12/2019
Foreign currency securities held for trading			
Government securities			
	Aaa	21,247,020	18,683,460
	Aa1	1,223,414	853,951
	Aa2	800,810	4,133,020
	Aa3	220,071	67,922
	A1	124,130	–
	Baa1	–	1,192,419
	Baa3	–	4,356,714
	AAA ^a	603,501	3,222,420
	AA+ ^b	–	–
	AA ^a	122,944	113,339
Total government securities		24,341,890	32,623,245
Guaranteed bonds			
	Aaa	179,770	2,892,683
	AAA ^a	–	523,757
Total guaranteed bonds		179,770	3,416,440
Securities of international financial institutions			
	Aaa	–	219,450
	Aa1	–	685,337
Total securities of international financial institutions		–	904,787
Bank bonds with government guarantees			
	Aaa	699,575	798,931
	Aa1	141,137	322,500
Total bank bonds with government guarantees		840,712	1,121,431
Total foreign currency securities held for trading		25,362,372	38,065,903

Foreign currency securities at amortised cost

(All amounts are expressed in thousands of kuna)	Rejting (Moody's)	31/12/2020	31/12/2019
Government securities			
	Aaa	1,133,205	822,150
	Aa1	1,511,082	650,268
	Aa2	1,943,862	1,326,726
	Aa3	1,625,906	1,538,187
	A2	2,544,769	2,211,561
	Baa1	4,656,254	3,771,556
	AAA ^e	793,583	784,369
	AA+ ^b	150,711	148,822
Total government securities		14,359,372	11,253,639
Guaranteed bonds			
	Aaa	985,860	975,132
	AAA ^b	225,518	222,629
Total guaranteed bonds		1,211,378	1,197,761
Securities of international financial institutions			
	Aaa	685,202	298,626
	Aa1	1,103,722	869,868
Total securities of international financial institutions		1,788,924	1,168,494
Bank bonds with government guarantees			
	Aa1	915,275	753,187
Total bank bonds with government guarantees		915,275	753,187
Foreign currency securities at amortised cost		18,274,949	14,373,081
<i>Expected credit losses</i>		<i>(8,651)</i>	<i>(7,687)</i>
Total foreign currency securities at amortised cost		18,266,298	14,365,394
Foreign currency debt securities at fair value through other comprehensive income			
Government securities			
	Aaa	8,602,814	9,117,069
	Aa1	6,165,774	6,110,833
	Aa2	16,585,261	19,134,683
	Aa3	5,995,907	5,854,725
	A1	280,765	–
	A2	893,430	896,384
	AAA ^e	879,590	856,618
	AA+ ^b	627,542	612,663
	AA ^a	542,494	587,098
Total government securities		40,573,577	43,170,073
Guaranteed bonds			
	Aaa	510,810	657,082

(All amounts are expressed in thousands of kuna)	Rejting (Moody's)	31/12/2020	31/12/2019
Total guaranteed bonds		510,810	657,082
Securities of international financial institutions			
	Aaa	1,284,418	1,556,041
	Aa1	1,436,095	985,134
Total securities of international financial institutions		2,720,513	2,541,175
Bank bonds with government guarantees			
	Aaa	–	232,566
	Aa1	841,938	838,478
Total bank bonds with government guarantees		841,938	1,071,044
Foreign currency debt securities at fair value through other comprehensive income		44,646,838	47,439,374
Total foreign currency securities		88,275,508	99,870,671
Foreign currency reverse repo agreements			
	Aaa	1,222,303	6,637,485
	Aa1	98,239	–
	Aa2	1,635,124	807,767
	Aa3	–	731,316
	Baa1	1,773,392	2,155,779
	AAA ^e	–	187,272
	AAA ^a	–	193,328
	AA+ ^b	–	748,791
Foreign currency reverse repo agreements		4,729,058	11,461,738
<i>Expected credit losses</i>		<i>(225)</i>	<i>(571)</i>
Total foreign currency reverse repo agreements		4,728,833	11,461,167
Foreign currency deposits			
	Aaa	8,592,373	4,383,099
	Aa1	184	96
	Aa2	811,060	2,198,573
	Aa3	1,708	3,139
	A1	1,852	237
	A2	10,926,841	12,990,052
	A3	2,627	32
	No rating ^c	69	60
Total deposits		20,336,714	19,575,288
Deposits with international financial institutions	No rating ^d	3,038,758	2,942,032
Foreign currency deposits		23,375,472	22,517,320

(All amounts are expressed in thousands of kuna)	Rejting (Moody's)	31/12/2020	31/12/2019
<i>Expected credit losses</i>		(7,109)	(9,006)
Total foreign currency deposits		23,368,363	22,508,314
Other foreign currency financial assets			
	Aaa	5,726,455	4,467,861
	Aa3	–	359
	A1	–	273
	A+ ^e	583	331
	Baa1	–	22
	Bez rejtinga	1,978	1,578
Other foreign currency financial assets		5,729,016	4,470,424
<i>Expected credit losses</i>		(7)	(6)
Total other foreign currency financial assets		5,729,009	4,470,418
Bonds of the Republic of Croatia at amortised cost;			
	Ba1	19,994,169	–
<i>Expected credit losses</i>		(17,185)	–
Total bonds of the Republic of Croatia at amortised cost;		19,976,984	–
Kuna loans			
	No rating ^f	4,533,364	1,914,948
<i>Expected credit losses</i>		(1,319)	(540)
Total loans in kuna		4,532,045	1,914,408
Kuna deposits			
Other deposits of domestic commercial banks			
	BBB– ^e	1,111	1,129
	No rating	971	1,817
Kuna deposits		2,082	2,946
<i>Expected credit losses</i>		(5)	(8)
Total kuna deposits		2,077	2,938
Other financial assets in kuna			
	No rating	32,891	33,243
<i>Expected credit losses</i>		(7,518)	(7,520)
Total other financial assets in kuna		25,373	25,723
TOTAL		146,638,192	140,253,639

^a The ratings according to Fitch Ratings and Standard&Poor's.

^b The ratings according to Standard & Poor's.

^c Demand funds with Clearstream.

^d Investments in the BIS and IMF, which are not rated, but are considered institutions of high-credit score.

^e The ratings according to Fitch Ratings.

^f Lending based on collateral, rather than rating.

37.1.2 Geographical concentration of credit risk

(All amounts are expressed in thousands of kuna)

Instrument	Euro area	Other	Total
As at 31 December 2020			
Government securities	70,372,571	8,902,268	79,274,839
Guaranteed bonds	1,901,958	–	1,901,958
Securities of international financial institutions	3,447,311	1,062,126	4,509,437
Bank bonds with government guarantees	2,597,925	–	2,597,925
Total foreign currency securities	78,319,765	9,964,394	88,284,159
Foreign currency reverse repo agreements	4,675,648	53,410	4,729,058
Deposits	20,307,047	29,667	20,336,714
Deposits with international financial institutions	–	3,038,758	3,038,758
Total foreign currency deposits	20,307,047	3,068,425	23,375,472
Other foreign currency financial assets	–	5,729,016	5,729,016
Republic of Croatia bonds	–	19,994,169	19,994,169
Loans in the Republic of Croatia	–	4,533,364	4,533,364
Kuna deposits	–	2,082	2,082
Other financial assets in kuna	–	32,891	32,891
TOTAL 31 December 2020	103,302,460	43,377,751	146,680,211
Total expected credit losses			(42,019)
TOTAL			146,638,192
As at 31 December 2019			
Government securities	77,667,745	9,379,212	87,046,957
Guaranteed bonds	5,271,283	–	5,271,283
Securities of international financial institutions	3,910,446	704,010	4,614,456
Bank bonds with government guarantees	2,945,662	–	2,945,662
Total foreign currency securities	89,795,136	10,083,222	99,878,358
Foreign currency reverse repo agreements	6,210,319	5,251,419	11,461,738
Deposits	19,566,492	8,796	19,575,288
Deposits with international financial institutions	–	2,942,032	2,942,032
Total foreign currency deposits	19,566,492	2,950,828	22,517,320
Other foreign currency financial assets	–	4,470,424	4,470,424
Loans in the Republic of Croatia	–	1,914,948	1,914,948
Kuna deposits	–	2,946	2,946
Other financial assets in kuna	–	33,243	33,243
TOTAL 31 December 2019	115,571,947	24,707,030	140,278,977
Total expected credit losses			(25,338)
TOTAL			140,253,639

Note: The table shows gross carrying amount of financial instruments.

37.1.3 Model for the calculation of expected credit losses

The calculation of expected credit losses at the Croatian National Bank is made according to the following formula:

$$\text{ECL} = \text{EAD} \times \text{LGD} \times \text{PD}$$

where:

- **EAD** is exposure at default;
- **LGD** is loss given default;
- **PD** is probability of default.

In the ECLC application the CNB calculates the ECL at the lowest technically possible analytical level, taking into account the logic of granularity of the ECL calculation, but guided by the conservatism principle typical of central bank operations.

The estimate of ECL reflects an unbiased and probability weighted amount, which is determined by the assessment of three possible scenarios (realistic, pessimistic and optimistic scenarios). According to peer review results, three different PD values are defined according to the realistic, pessimistic and optimistic scenario for the ECL calculation. In the pessimistic scenario, the PD/ECL value is 25% higher than in the realistic scenario, whereas in the optimistic scenario it is 25% lower than in the realistic scenario. The ECL value recognised in the Income Statement is calculated as the weighted average value of three various scenarios.

The optimistic and pessimistic scenarios have a weight of 0.4 and the realistic scenario of 0.2.

EAD is the gross carrying amount of a financial instrument on the date of initial recognition, that is, on the date of the ECL calculation.

LGD or loss given default means the ratio of loss on exposure due to the default of the counterparty and the exposure amount at the time of the default. LGD determines the amount of the possible loss, that is, the part of the exposure that the CNB can lose. LGD for non-collateralised financial instruments and LGD for collateralised financial instruments are calculated under different rules.

A predefined value of 45% (i.e. a predefined coefficient of 0.45) is used for all types of kuna and foreign currency non-collateralised financial instruments. The following volatility adjustments are applied in the valuation of financial collateral:

1. volatility adjustments to the market value of financial collateral to take into account price volatility;
2. foreign exchange risk volatility adjustment if collateral is denominated in a currency that differs from the currency in which the underlying exposure is denominated;
3. volatility adjustment to maturity mismatch if the maturities of the primary financial instrument and collateral are not matched.

PD is the probability of default of the counterparty during a one-year period.

PD for the twelve-month period is calculated by means of three internally developed models:

1. internal model for the calculation of PD for foreign currency financial instruments that are part of international reserves;
2. internal model for the calculation of PD for kuna financial instruments;
3. internal model for other receivables.

PD of the counterparty/issuer for foreign currency financial instruments is calculated using the latest available data on the probability of default from transition matrices (TM) for the sovereigns sector (SOVEREIGNS) and the banking sector (BANKS) of the Fitch rating agency. The counterparty/issuer rating is based on the long-term credit rating of the Fitch rating agency, and if there is no rating, then the ratings of Moody's and Standard&Poor's are used as a secondary source.

The counterparties for kuna financial instruments are domestic credit institutions that are as a rule not assigned a credit rating by a rating agency and PD is calculated by means of internal models for the PD calculation of domestic banks. The PD variable is calculated by means of the multi-criteria optimisation model, which defines 8 initial criteria for all credit institutions in the Republic of Croatia.

The appropriate model is calculated by means of the Analytic Hierarchy Process method. The model applies the following criteria (all indicators are used in practice and consist of a combination of the banking sector's financial indicators and macroeconomic indicators): the bank assets to GDP ratio, total capital ratio, equity to asset ratio, deposit safety, cost to income ratio, net interest margin, rate of change in GDP and unemployment rate.

PD for the lifetime period is calculated by means of the matrix multiplication concept, with the starting point being the calculated PD value for 12-month ECL calculation.

The year 2020 saw no significant credit rating downgrade resulting from the COVID-19 pandemics, with the result that no significant impact was made on the calculation of expected credit losses of the Croatian National Bank as these are high-quality investments.

37.1.4. Changes in loss allowances for expected credit losses

Changes in loss allowances for expected credit losses 1 January – 31 December 2020

(All amounts are expressed in thousands of kuna)

Financial assets	Loss allowance for expected credit losses as at 1 January 2020	(Decrease) in loss allowance during the period	Increase in loss allowance during the period	Net effect of (decrease)/increase in loss allowances	Loss allowance for expected credit losses as at 31 December 2020
Cash and current accounts with other banks	204	(418)	625	207	411
Deposits with other banks	8,810	(21,566)	19,459	(2,107)	6,703
Loans	540	(668)	1,447	779	1,319
Reverse repo agreements	571	(1,814)	1,468	(346)	225
Foreign currency securities at amortised cost	7,687	(1,245)	2,209	964	8,651

Financial assets	Loss allowance for expected credit losses as at 1 January 2020	(Decrease) in loss allowance during the period	Increase in loss allowance during the period	Net effect of (decrease)/increase in loss allowances	Loss allowance for expected credit losses as at 31 December 2020
Bonds of the Republic of Croatia at amortised cost	–	(518)	17,703	17,185	17,185
Financial assets at fair value through other comprehensive income – debt instruments	12,363	(3,979)	2,160	(1,819)	10,544
Other financial assets	7,526	(7)	6	(1)	7,525
TOTAL	37,701	(30,215)	45,077	14,862	52,563

Gains from and losses on loss allowances for expected credit losses are translated into kuna based on the exchange rate valid on the transaction date, while loss allowances for expected credit losses reported in foreign currencies are again translated at the date of the Statement of Financial Position using the exchange rate valid on that date. The total increase in loss allowances for expected credit losses in the reporting period is HRK 14,862 thousands. In the Income Statement, line item Impairment losses on financial instruments shows an increase in loss allowances for expected credit losses in the amount of HRK 14,894 thousands (see Note 11). Positive exchange differences in line items loss allowances for expected credit losses amount to HRK 2,845 thousands, negative exchange differences amount to HRK 2,813 thousands and net positive exchange differences in the amount of HRK 32 thousands are shown in line item Net unrealised exchange differences (see Note 8).

Changes in loss allowances for expected credit losses 1 January – 31 December 2019

(All amounts are expressed in thousands of kuna)

Financial assets	Loss allowance for expected credit losses as at 1 January 2019	(Decrease) in loss allowance during the period	Increase in loss allowance during the period	Net effect of (decrease)/increase in loss allowances	Loss allowance for expected credit losses as at 31 December 2019
Cash and current accounts with other banks	297	(333)	240	(93)	204
Deposits with other banks	6,750	(29,217)	31,277	2,060	8,810
Loans	575	(663)	628	(35)	540
Reverse repo agreements	1,079	(5,886)	5,378	(508)	571
Foreign currency securities at amortised cost	84	(1,112)	8,715	7,603	7,687
Financial assets at fair value through other comprehensive income – debt instruments	11,712	(2,317)	2,968	651	12,363
Other financial assets	7,564	(42)	4	(38)	7,526
TOTAL	28,061	(39,570)	49,210	9,640	37,701

Gains from and losses on loss allowances for expected credit losses are translated into kuna based on the exchange rate valid on the transaction date, while loss allowances for expected credit losses reported in foreign currencies are again translated at the date of the Statement of Financial Position using the exchange rate valid on that date. The total increase in loss allowances for expected credit losses in the reporting period is HRK 9,640 thousands. In the Income Statement, line item Impairment losses on financial instruments shows an increase in loss allowances for expected credit losses in the amount of HRK 9,519 thousands (see Note 11). Positive exchange differences in line items loss allowances for expected credit losses amount to HRK 1,303 thousands, negative exchange differences amount to HRK

1,424 thousands and net negative exchange differences in the amount of HRK 121 thousands are shown in line item Net unrealised exchange differences (see Note 8).

37.1.5 Loss allowances for expected credit losses by the stage of credit quality of financial instruments

Loss allowances for expected credit losses by the stage of credit quality of financial instruments in 2020

(All amounts are expressed in thousands of kuna)

Financial assets	Loss allowance for expected credit losses as at 1 January 2020				Loss allowance for expected credit losses as at 31 December 2020			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Cash and current accounts with other banks	204	–	–	204	411	–	–	411
Deposits with other banks	8,810	–	–	8,810	6,703	–	–	6,703
Loans	538	–	2	540	1,317	–	2	1,319
Reverse repo agreements	571	–	–	571	225	–	–	225
Foreign currency securities at amortised cost	7,687	–	–	7,687	8,651	–	–	8,651
Bonds of the Republic of Croatia at amortised cost	–	–	–	–	17,185	–	–	17,185
Financial assets at fair value through other comprehensive income – debt instruments	12,363	–	–	12,363	10,544	–	–	10,544
Other financial assets	36	–	7,490	7,526	35	–	7,490	7,525
TOTAL	30,209	–	7,492	37,701	45,071	–	7,492	52,563

Loss allowances for expected credit losses by the stage of credit quality of financial instruments in 2019

(All amounts are expressed in thousands of kuna)

Financial assets	Loss allowance for expected credit losses as at 1 January 2020				Loss allowance for expected credit losses as at 31 December 2020			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Cash and current accounts with other banks	297	–	–	297	204	–	–	204
Deposits with other banks	6,750	–	–	6,750	8,810	–	–	8,810
Loans	573	–	2	575	538	–	2	540
Reverse repo agreements	1,079	–	–	1,079	571	–	–	571
Foreign currency securities at amortised cost	84	–	–	84	7,687	–	–	7,687
Financial assets at fair value through other comprehensive income – debt instruments	11,712	–	–	11,712	12,363	–	–	12,363
Other financial assets	74	–	7,490	7,564	36	–	7,490	7,526
TOTAL	20,569	–	7,492	28,061	30,209	–	7,492	37,701

Note: Financial assets in stage 3 are not secured by collateral.

Note 37.2 – Liquidity risk

Liquidity risk is the risk of inability to settle all the liabilities and obligations arising from the operations of the Croatian National Bank as they fall due. Hence, the Croatian National Bank has to ensure, through its strategy, sufficient liquid funds on a daily basis to settle all of its liabilities and commitments.

Liquidity risk is controlled by investing the international reserve funds into highly marketable bonds and partly in deposit instruments with short maturities.

Liquid funds include all assets that are convertible into cash within a period of one to three days. The Croatian National Bank invests international reserves into deposits with maturities of up to three months and into securities with maturities of less than ten years, provided that those securities are readily convertible into cash at any time.

At 31 December 2020, approximately 74% of net international reserves were liquid (2019: approximately 68% of net international reserves were liquid).

In the following tables, the financial liabilities of the Croatian National Bank are classified into relevant groupings by remaining contractual maturity from the reporting date. The tables have been drawn up based on the undiscounted cash flows of financial liabilities on the earliest date on which payment could be required and include both interest and principal cash flows as well as future interest expenses.

(All amounts are expressed in thousands of kuna)	Up to 1 month	From 1 to 3 months	From 3 months to 1 year	From 1 to 5 years	Over 5 years	Total	Book value
As at 31 December 2020							
Liabilities							
Banknotes and coins in circulation	41,792,678	–	–	–	–	41,792,678	41,792,678
Due to banks and other financial institutions	90,723,404	–	–	–	72	90,723,476	90,723,476
Repo agreements	3,754,341	–	–	–	–	3,754,341	3,756,698
Due to the State and State institutions	17,722,073	–	–	–	–	17,722,073	17,722,069
Due to the International Monetary Fund	–	–	–	–	9,049,025	9,049,025	9,049,025
Other liabilities	349,329	337,152	2,317	2,547	395	691,740	694,437
Provisions for risk and charges	–	–	62,702	–	–	62,702	62,702
Total liabilities	154,341,825	337,152	65,019	2,547	9,049,492	163,796,035	163,801,085
As at 31 December 2019							
Liabilities							
Banknotes and coins in circulation	38,734,616	–	–	–	–	38,734,616	38,734,616
Due to banks and other financial institutions	74,624,724	–	–	–	72	74,624,796	74,624,796
Repo agreements	5,998,304	–	–	–	–	5,998,304	5,998,829

(All amounts are expressed in thousands of kuna)	Up to 1 month	From 1 to 3 months	From 3 months to 1 year	From 1 to 5 years	Over 5 years	Total	Book value
Due to the State and State institutions	6,712,594	–	–	–	–	6,712,594	6,712,594
Due to the International Monetary Fund	–	–	–	–	9,414,492	9,414,492	9,414,492
Other liabilities	489,032	118,367	2,165	4,669	516	614,749	627,330
Provisions for risk and charges	–	–	59,767	–	–	59,767	59,767
Total liabilities	126,559,270	118,367	61,932	4,669	9,415,080	136,159,318	136,172,424

Note: Repo agreements in the table above include accrued negative interest, presented as financial assets in the statement of financial position. Other liabilities in the table above do not include accrued negative interest on financial assets, presented as other liabilities in the statement of financial position.

Note 37.3 – Market risk

Market risk is the risk of fluctuations in the fair value or future cash flows of a financial instrument due to changes in market prices. Market risk includes foreign exchange risk, interest rate risk and other price risks.

Foreign exchange risk (risk of changes in value of one currency against another) is the risk of fluctuation in fair value or future cash flows of a financial instrument due to changes in foreign exchange rates.

Interest rate risk is the risk of fluctuations in fair value or future cash flows of a financial instrument due to changes in market interest rates.

Other price risks include the risk of fluctuations in fair value or future cash flows of financial instruments due to changes in market prices that do not arise from interest rate or foreign exchange risk.

Note 37.3.1 – Foreign exchange risk

The Croatian National Bank holds most of its assets in foreign currencies, which exposes it to foreign exchange risk in terms of fluctuations in the exchange rates of the kuna against the euro and the US dollar. These cross-currency changes affect the Income Statement and, consequently, the financial performance of the Croatian National Bank.

The Croatian National Bank takes on exposure to foreign exchange risk only in respect of net international reserves, covering part of the reserves it manages in accordance with its own guidelines (net international reserves exclude the Ministry of Finance and European Commission funds, XDR holdings with the IMF and investments in repo agreements). A high proportion of the euro contributes to reducing volatility due to the stable exchange rate of the euro against the kuna. Although VaR analysis for foreign exchange risk and various stress tests are made, the currency structure is not defined by these measures, but primarily by the currency structure of debt and imports. Accordingly, VaR limits are not set, nor is back-testing implemented.

The portion of international reserves formed out of the allocated foreign exchange reserve requirement, the Ministry of Finance funds, repo deals and funds in Special Drawing Rights (XDR) is managed passively by the central bank, based on the currency structure of foreign currency obligations; hence, there is no exposure to foreign exchange risk on this basis.

Currency VaR for a period of one year with a confidence level of 95% is HRK 4.1 billion.

37.3.1.1 Sensitivity analysis – impact of percentage fluctuations in exchange rates on the Income Statement

2020 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2020	USD	EUR
Exchange rate appreciation/depreciation	±5%	±1%
Impact of fluctuations in exchange rates on the Income Statement	907,207/(907,207)	1,128,814/(1,128,814)

The table above shows the sensitivity of the Croatian National Bank Income Statement result in the case of an increase/decrease in the EUR/HRK exchange rate by ±1% and in the case of an increase/decrease in the USD/HRK exchange rate by ±5%. Historically, the yearly volatility of the USD/HRK exchange rate has been five times higher than the EUR/HRK exchange rate volatility.

A positive figure denotes an increase in the Income Statement result if the Croatian kuna exchange rate appreciates against the relevant currency by the selected percentage (i.e. the kuna value depreciates in relation to the relevant currency), while the negative figure denotes a decrease in the Income Statement result if the Croatian kuna exchange rate depreciates against the relevant currency (i.e. the kuna value appreciates in relation to the relevant currency).

In the case of a 1% decrease in the EUR/HRK exchange rate as at 31 December 2020, the result of the Croatian National Bank reported in the Income Statement for the year would be lower by approximately HRK 1,128,814 thousands, while for a 5% decrease in the USD/HRK exchange rate, the result would be lower by approximately HRK 907,207 thousands.

Calculation methodology

The amount of the net euro and net US dollar international reserves as at balance sheet date is multiplied by the difference between the EUR/HRK exchange rate or the USD/HRK exchange rate valid at that date and those rates increased/decreased by the selected percentage.

2019 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2019	USD	EUR
Exchange rate appreciation/depreciation	±5%	±1%
Impact of fluctuations in exchange rates on the Income Statement	1,004,136/(1,004,136)	1,074,532/(1,074,532)

37.3.1.2 CNB exposure to foreign exchange risk – analysis of assets and liabilities by currency

(All amounts are expressed in thousands of kuna)	EUR	HRK linked to EUR	USD	XDR	HRK linked to XDR	Other foreign currencies	HRK	Total
As at 31 December 2020								
Assets								
Cash and current accounts with other banks	33,735,577	–	3,821	–	–	26,427	380	33,766,205
Deposits with other banks	10,922,060	2,077	1,148,054	–	–	–	–	12,072,191
Financial assets at fair value through profit or loss	20,730,767	–	5,860,241	–	–	–	9,411	26,600,419
Loans	–	–	–	–	–	–	4,532,045	4,532,045
Reverse repo agreements	4,578,000	–	151,644	–	–	–	–	4,729,644
Debt securities at amortised cost	18,266,297	3,318,715	–	–	–	–	16,658,270	38,243,282
Balances with the International Monetary Fund	–	–	–	2,701,058	6,363,088	–	–	9,064,146
Debt securities at fair value through other comprehensive income	33,185,104	–	11,461,734	–	–	–	–	44,646,838
Investments accounted for using the equity method	–	–	–	–	–	–	51,076	51,076
Other assets	5,732,109	–	–	–	–	20	615,472	6,347,601
Property, plant, equipment and intangible assets	–	–	–	–	–	–	610,168	610,168
Total assets	127,149,914	3,320,792	18,625,494	2,701,058	6,363,088	26,447	22,476,822	180,663,615
Liabilities								
Banknotes and coins in circulation	–	–	–	–	–	–	41,792,678	41,792,678
Due to banks and other financial institutions	5,726,455	–	–	–	–	–	84,997,021	90,723,476
Repo agreements	3,756,698	–	–	–	–	–	–	3,756,698
Due to the State and State institutions	2,870,938	–	85,941	–	–	25,056	14,740,134	17,722,069
Due to the International Monetary Fund	–	–	–	2,688,716	6,360,309	–	–	9,049,025
Other liabilities	10,770	–	19	7,601	–	6	676,041	694,437
Provisions for risk and charges	–	–	–	–	–	–	62,702	62,702
Total liabilities	12,364,861	–	85,960	2,696,317	6,360,309	25,062	142,268,576	163,801,085
Net position	114,785,053	3,320,792	18,539,534	4,741	2,779	1,385	(119,791,754)	16,862,530

(All amounts are expressed in thousands of kuna)

	EUR	HRK linked to EUR	USD	XDR	HRK linked to XDR	Other foreign currencies	HRK	Total
As at 31 December 2019								
Assets								
Cash and current accounts with other banks	7,341,123	–	4,283	–	–	5,344	364	7,351,114
Deposits with other banks	14,772,299	2,938	546,663	–	–	–	–	15,321,900
Financial assets at fair value through profit or loss	32,265,349	–	7,132,248	–	–	–	7,525	39,405,122
Loans	–	–	–	–	–	–	1,914,408	1,914,408
Reverse repo agreements	9,274,570	–	2,192,600	–	–	–	–	11,467,170
Debt securities at amortised cost	14,365,394	–	–	–	–	–	–	14,365,394
Balances with the International Monetary Fund	–	–	–	2,808,611	6,619,913	–	–	9,428,524
Debt securities at fair value through other comprehensive income	35,297,696	–	12,141,678	–	–	–	–	47,439,374
Investments accounted for using the equity method	–	–	–	–	–	–	25,736	25,736
Other assets	4,471,050	–	9	–	–	1	595,505	5,066,565
Property, plant, equipment and intangible assets	–	–	–	–	–	–	620,824	620,824
Total assets	117,787,481	2,938	22,017,481	2,808,611	6,619,913	5,345	3,164,362	152,406,131
Liabilities								
Banknotes and coins in circulation	–	–	–	–	–	–	38,734,616	38,734,616
Due to banks and other financial institutions	4,467,861	–	–	–	–	–	70,156,935	74,624,796
Repo agreements	4,065,227	–	1,933,602	–	–	–	–	5,998,829
Due to the State and State institutions	59,153	–	6,336	–	–	4,514	6,642,591	6,712,594
Due to the International Monetary Fund	–	–	–	2,797,255	6,617,237	–	–	9,414,492
Other liabilities	17,259	–	15	6,422	–	15	603,619	627,330
Provisions for risk and charges	–	–	–	–	–	–	59,767	59,767
Total liabilities	8,609,500	–	1,939,953	2,803,677	6,617,237	4,529	116,197,528	136,172,424
Net position	109,177,981	2,938	20,077,528	4,934	2,676	816	(113,033,166)	16,233,707

Note: Line items of the Statement of Financial Position are shown at net carrying amount (minus expected credit losses), as presented in the Statement of Financial Position.

Note 37.3.2 – Interest rate risk

Interest rate risk is the risk of a decline in the value of the Croatian National Bank's foreign currency portfolios of international reserves due to possible changes in interest rates on the fixed-yield instrument markets.

Net international reserves, which are managed in accordance with the CNB's own guidelines, are invested in trading and investment portfolios. An investment portfolio may be formed as a portfolio measured at fair value through other comprehensive income and as a portfolio measured at amortised cost, with both of them serving as a long-term source of stable income and being of long average maturity.

The Croatian National Bank has, through the Income Statement, an open exposure to interest rate risk only with the trading portfolios, while with the investment portfolios, it almost has no exposure to interest rate risk.

Trading portfolios have short duration and interest rate risk is minimised. The portfolio measured at amortised cost, from the standpoint of interest rate risk, has no effect on the Income Statement, while securities of the portfolio measured at fair value through other comprehensive income are, generally, sold only in situations favourable to the CNB. However, regardless of that, even for portfolios measured at fair value through other comprehensive income, their duration and interest rate risk are taken into account.

The part of the reserves that consists of the Ministry of Finance funds, funds based on repo agreements with banks, swap interventions in the domestic foreign exchange market, the membership in the IMF and other property owned by other legal entities, is operated by the CNB in accordance with commitments, in order to protect it against interest rate risk.

37.3.2.1 Sensitivity analysis – exposure of the CNB's net international reserves to fluctuations in interest rates

2020 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2020	USD	EUR
Yield curve increase/decrease	±1 b. p.	±1 b. p.
Effect of a change in the level of the yield curve on the financial result	(390)/390	(2,227)/2,227

Should as at 31 December 2020 the entire USD yield curve increase by 1 basis point (0.01%), the Croatian National Bank Income Statement result would be lower by approximately HRK 390 thousands, while in the case of the EUR yield curve increasing by 1 basis point, the result would be lower by approximately HRK 2,227 thousands.

For a 1 basis point decrease of the yield curve, the Income Statement result would be higher by approximately the same amounts.

Calculation methodology

The values of USD and EUR trade portfolios as at balance sheet date were multiplied by modified duration and by 1 basis point (0.01%). Modified duration denotes by how many basis points the value of the portfolio will decrease should the interest rate curve increase by 1 percentage point.

2019 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2019	USD	EUR
Yield curve increase/decrease	±1 b. p.	±1 b. p.
Effect of a change in the level of the yield curve on the financial result	(529)/529	(3,300)/3,300

37.3.2.2 Interest rate risk analysis

(All amounts are expressed in thousands of kuna)

	Up to 1 month	From 1 to 3 months	From 3 months to 1 year	From 1 to 5 years	Over 5 years	Non-interest bearing	Total	Average EIR as at 31/12
As at 31 December 2020								
Assets								
Cash and current accounts with other banks	8,599,488	–	–	–	–	25,166,717	33,766,205	–0.64
Deposits with other banks	10,384,951	1,691,551	–	–	–	(4,311)	12,072,191	–0.43
Financial assets at fair value through profit or loss	25,324,318	–	–	–	–	1,276,101	26,600,419	–0.53
Loans	–	–	–	4,517,029	–	15,016	4,532,045	0.30
Reverse repo agreements	4,631,630	98,225	–	–	–	(211)	4,729,644	–0.72
Debt securities at amortised cost	–	–	1,123,124	8,588,871	28,328,095	203,192	38,243,282	0.29
Balances with the International Monetary Fund	2,696,453	–	–	–	–	6,367,693	9,064,146	0.08
Debt securities at fair value through other comprehensive income	44,419,450	–	–	–	–	227,388	44,646,838	1.00
Investments accounted for using the equity method	–	–	–	–	–	51,076	51,076	–
Other assets	–	–	–	–	–	6,347,601	6,347,601	–
Property, plant, equipment and intangible assets	–	–	–	–	–	610,168	610,168	–
Total assets	96,056,290	1,789,776	1,123,124	13,105,900	28,328,095	40,260,430	180,663,615	–
Liabilities								
Banknotes and coins in circulation	–	–	–	–	–	41,792,678	41,792,678	–
Due to banks and other financial institutions	5,726,455	–	–	–	–	84,997,021	90,723,476	–
Repo agreements	3,756,698	–	–	–	–	–	3,756,698	–0.85

(All amounts are expressed in thousands of kuna)	Up to 1 month	From 1 to 3 months	From 3 months to 1 year	From 1 to 5 years	Over 5 years	Non-interest bearing	Total	Average EIR as at 31/12
Due to the State and State institutions	10,501,815	–	–	–	–	7,220,254	17,722,069	0.1
Due to the International Monetary Fund	2,688,716	–	–	–	–	6,360,309	9,049,025	0.08
Other liabilities	–	–	2,317	2,547	–	689,573	694,437	3.00
Provisions for risk and charges	–	–	–	–	–	62,702	62,702	–
Total liabilities	22,673,684	–	2,317	2,547	–	141,122,537	163,801,085	–
Net position	73,382,606	1,789,776	1,120,807	13,103,353	28,328,095	(100,862,107)	16,862,530	–

As at 31 December 2019**Assets**

Cash and current accounts with other banks	4,387,522	–	–	–	–	2,963,592	7,351,114	–0.62
Deposits with other banks	12,673,261	2,652,995	–	–	–	(4,356)	15,321,900	–0.42
Financial assets at fair value through profit or loss	37,972,622	–	–	–	–	1,432,500	39,405,122	–0.10
Loans	–	62,000	27,000	1,792,000	35	33,373	1,914,408	1.22
Reverse repo agreements	11,466,449	–	–	–	–	721	11,467,170	–0.09
Debt securities at amortised cost	–	–	–	2,322,360	11,985,999	57,035	14,365,394	0.06
Balances with the International Monetary Fund	2,803,820	–	–	–	–	6,624,704	9,428,524	0.74
Debt securities at fair value through other comprehensive income	47,174,201	–	–	–	–	265,173	47,439,374	1.01
Investments accounted for using the equity method	–	–	–	–	–	25,736	25,736	–
Other assets	–	–	–	–	–	5,066,565	5,066,565	–
Property, plant, equipment and intangible assets	–	–	–	–	–	620,824	620,824	–
Total assets	116,477,875	2,714,995	27,000	4,114,360	11,986,034	17,085,867	152,406,131	–

Liabilities

Banknotes and coins in circulation	–	–	–	–	–	38,734,616	38,734,616	–
Due to banks and other financial institutions	4,467,861	–	–	–	–	70,156,935	74,624,796	–
Repo agreements	5,997,962	–	–	–	–	867	5,998,829	0.14

(All amounts are expressed in thousands of kuna)	Up to 1 month	From 1 to 3 months	From 3 months to 1 year	From 1 to 5 years	Over 5 years	Non-interest bearing	Total	Average EIR as at 31/12
Due to the State and State institutions	4,897,969	–	–	–	–	1,814,625	6,712,594	0.30
Due to the International Monetary Fund	2,797,255	–	–	–	–	6,617,237	9,414,492	0.74
Other liabilities	–	–	2,165	4,669	–	620,496	627,330	3.00
Provisions for risk and charges	–	–	–	–	–	59,767	59,767	–
Total liabilities	18,161,047	–	2,165	4,669	–	118,004,543	136,172,424	–
Net position	98,316,828	2,714,995	24,835	4,109,691	11,986,034	(100,918,676)	16,233,707	–

Note: Line items of the Statement of Financial Position are shown at net carrying amount (minus expected credit losses), as presented in the Statement of Financial Position. Accrued interest and expected credit losses are shown in column Non-interest bearing. Fixed interest rate is charged on presented interest bearing amounts, except on the part of the position Cash and current accounts with other banks, amounting to HRK 8,599,488 thousands (31 December 2019: HRK 4,387,522 thousands), and the part of the position Financial assets at fair value through profit or loss (floaters) in the amount of HRK 245,838 thousands (31 December 2019: HRK 320,221 thousands), as well as on the part of the position Due to the State and State institutions, amounting to HRK 10,501,815 thousands (31 December 2019: HRK 4,897,969 thousands), on which variable floating rate is charged.

Note 37.3.3 – Other price risks

The Croatian National Bank is exposed to other price risks on funds entrusted to the management of international financial institutions and precious metals since price risks affect the change in value of these financial instruments.

37.3.3.1 Sensitivity analysis – impact of changes in prices of financial instruments on the Income Statement

2020 Sensitivity analysis – assets under management with international financial institutions

(All amounts are expressed in thousands of kuna)

2020

Financial assets price exposed to price risk increase/decrease	±1%
Effect of change in the level of price on the Income Statement	12,286/(12,286)

The table shows the sensitivity of the Croatian National Bank Income Statement result in the case of a rise or fall of prices of financial instruments by ± 1%.

A positive number implies an increase in the Income Statement result if there is an increase in the prices of financial instruments by the selected percentage, while a negative number implies a reduction in the Income Statement result if the prices of financial instruments fall.

Should the prices of a financial instrument increase by 1% compared to the prices recorded on 31 December 2020, the Croatian National Bank Income Statement result would be higher by approximately HRK 12,286 thousands, while the fall in prices by 1% would result in the Income Statement being lower by approximately HRK 12,286 thousands.

2020 Sensitivity analysis – precious metals

(All amounts are expressed in thousands of kuna)

2020

Financial assets price exposed to price risk increase/decrease	±5%
Effect of change in the level of price on the Income Statement	471/(471)

The table shows the sensitivity of the Croatian National Bank Income Statement result in the case of a rise or fall of prices of precious metals by ± 5%.

A positive number implies an increase in the Income Statement result if there is an increase in the prices of financial instruments by the selected percentage, while a negative number implies a reduction in the Income Statement result if the prices of financial instruments fall.

Should the prices of precious metals increase by 5% compared to the prices recorded on 31 December 2020, the Croatian National Bank Income Statement result would be higher by approximately HRK 471 thousands, while the fall in prices by 5% would result in the Income Statement result being lower by approximately HRK 471 thousands.

Calculation methodology

Investments in financial assets exposed to price risks as at balance sheet date in the balance sheet has been increased or reduced by the selected percentage change in the price of financial instruments.

2019 Sensitivity analysis – assets under management with international financial institutions

(All amounts are expressed in thousands of kuna)

2019

Financial assets price exposed to price risk increase/decrease	±1%
Effect of change in the level of price on the Income Statement	13,317/(13,317)

2019 Sensitivity analysis – precious metals

(All amounts are expressed in thousands of kuna)

2019

Financial assets price exposed to price risk increase/decrease	±5%
Effect of change in the level of price on the Income Statement	376/(376)

Note 38 – Related parties

While performing regular activities, the Croatian National Bank enters into transactions with related parties. In accordance with IAS 24 Related Party Disclosures, related parties are the State and state bodies of the Republic of Croatia, the Croatian Monetary Institute and the key management of the Croatian National Bank. For the purpose of disclosure in this note, companies and other legal entities owned by the Republic of Croatia (including credit institutions) are not considered to be related parties. Transactions with related parties took place under normal market conditions.

a) Relations with the State and State bodies of the Republic of Croatia

The Croatian National Bank is in the exclusive ownership of the Republic of Croatia, but in achieving its objective and in carrying out its tasks the Croatian National Bank is independent and autonomous.

In relations with the State bodies of the Republic of Croatia, the Croatian National Bank acts as a depository institution, that is, keeps the accounts of the Republic of Croatia and executes payment transactions across these accounts. Under market conditions, the Croatian National Bank can perform fiscal agency services for the Republic of Croatia related to:

- issuance of debt securities of the Republic of Croatia, as a registrar or as a transfer agent of the entire issuance,
- payment of the amount of principal, interest and other charges related to securities,
- other issues associated with these operations, if they are consistent with the objective of the Croatian National Bank.

Relations with the Croatian State and Croatian State bodies are presented in the following table:

(All amounts are expressed in thousands of kuna)

	2020		2019	
	State	State entities	State	State entities
ASSETS				
Debt securities at amortised cost	19,994,169	–	–	–
Other assets	1,711	231	1,690	424
TOTAL	19,995,880	231	1,690	424
LIABILITIES				
Deposits	13,598,929	4,123,140	5,089,638	1,621,585
Accrued interest and other liabilities	212,772	–	118,780	–
TOTAL	13,811,701	4,123,140	5,208,418	1,621,585
REVENUES				
Interest income calculated using the effective interest method	100,731	–	–	–
Other interest income	6,386	–	732	–
TOTAL	107,117	–	732	–
EXPENDITURE				
Interest expenses	9,166	–	59,776	–
TOTAL	9,166	–	59,776	–

State bodies that are considered related parties are the State Agency for Deposit Insurance and Bank Resolution and the Croatian Health Insurance Fund.

b) Subsidiary (Associate until 30 June 2020)

The investment of the Croatian National Bank in the Croatian Monetary Institute represents an investment in a subsidiary (an associate until 30 June 2020) and the share ownership of the Croatian National Bank in the Croatian Monetary Institute capital is 100.00% (2019: 42.6%). Detailed disclosures on the investment in the Croatian Monetary Institute are presented in Note 21.

Relations with the Croatian Monetary Institute are presented in the following table:

(All amounts are expressed in thousands of kuna)	2020	2019
Assets		
Investments accounted for using the equity method	51,076	25,736
Other assets	37,123	52,447
TOTAL	88,199	78,183
Liabilities		
Other liabilities	84	–
TOTAL	84	–
Revenues		
Gains in the alignment of investments in the CMI	10,103	2,479
Other revenues	32	11
TOTAL	10,135	2,490
Expenditure		
Losses from the alignment of investments in the CMI	34	360
Minting of kuna and lipa coins*	76,075	79,211
Other	108	541
TOTAL	76,217	80,112

* Total coins production cost invoiced by the Croatian Monetary Institute in the reporting period. The presented costs differ from costs recognised in profit or loss in the reporting period, since the cost of minting coins are recognised in the Income Statement in accordance with the cost deferral policy (refer to Note 10).

c) Key management of the Croatian National Bank

The Council of the Croatian National Bank is responsible for the achievement of the objective and performance of tasks of the Croatian National Bank. The Council of the Croatian National Bank establishes policies related to the activities of the Croatian National Bank. In line with the aforementioned, the key management of the Croatian National Bank is composed of members of the Council of the Croatian National Bank.

The Council of the Croatian National Bank comprises Governor, Deputy Governor and six Vicegovernors.

Total short-term compensations to the key management of the Croatian National Bank amount to HRK 9,092 thousands, of which the amount of HRK 1,275 thousands relates to contributions for pension insurance (2019: HRK 9,201 thousands, of which HRK 1,311 thousands was related to contributions for pension insurance).

Provisions for employee benefits of the key management of the Croatian National Bank amount to HRK 504 thousands (2019: HRK 475 thousands).

Note 39 – Events after the reporting period

Since 1 January 2021 and pursuant to Article 35 of the Act on Amendments to the Act on the Croatian National Bank (Official Gazette 47/2020), the financial statements of the Croatian National Bank have been prepared in accordance with Guideline (EU) 2016/2249 of the European Central Bank of 3 November 2016 on the legal framework for accounting and financial reporting in the European System of Central Banks (ECB/2016/34), with all amendments (hereinafter: ECB Guideline). The Croatian National Bank reports on transactions that are not regulated by the ECB guideline applying, providing that there is no contrary decision of the Croatian National Bank Council, valuation principles in accordance with the International Financial Reporting Standards as adopted in the European Union that are material for the operations and reports of the Croatian National Bank.

The most important differences from the previous accounting framework (the International Financial Reporting Standards in force in the EU) concern the method of recognition of realised and unrealised foreign exchange gains and losses and gains and losses from changes in the prices of financial instruments. In accordance with the ECB Guideline and the asymmetric valuation approach, unrealised foreign exchange gains and gains from price changes are not recognised in the Income Statement but are recorded in revaluation accounts. Unrealised foreign exchange losses and losses from price changes are taken at year end to the Income Statement if they exceed previous revaluation gains registered in the corresponding revaluation account. The average cost of the foreign currency is calculated for each currency and the comparison of the transaction exchange rate and the average cost of the foreign currency provides for the calculation of realised foreign exchange gains/losses, while the comparison of the average cost of the foreign currency and the mid-market rate of the currency (CNB middle exchange rate) provides for the calculation of unrealised foreign exchange gains/losses. The exchange rate revaluation is carried out separately for each individual currency because positive revaluation effects from one currency must not be offset against the negative effects of revaluation from another currency.

The accounting policy for the recognition of the costs of production of kuna banknotes and coins is also changed in the manner that these costs are no longer deferred but are recognised in the Income Statement when they are invoiced or occur in any other way.

In line with the new accounting policies, the financial statements comprise the Balance Sheet, Income Statement and Notes to the Financial Statements. As of the financial year 2021, the Croatian National Bank no longer prepares the Statement of Cash Flows and the Statement of Changes in Equity. The financial statements are prepared annually as the ECB Guideline neither provides for the obligation to prepare semi-annual statements nor lays down the rules for their preparation.

After 31 December 2020 there were no other significant events that would have an impact on the financial statements of the Croatian National Bank.

ABBREVIATIONS

AIS	account information service
AMLSCO	Standing Committee on anti-money laundering and countering terrorist financing
AnaCredit	analytical credit database
API	application programming interface
AQR	asset quality review
BIS	Bank for International Settlements
bn	billion
CBDC	central bank digital currency
CBS	Croatian Bureau of Statistics
CDCC	Central Depository and Clearing Company
CDIA	Croatian Deposit Insurance Agency
CESEE	Central, Eastern and Southeastern Europe
CHF	Swiss franc
CIR	cost-to-income ratio
CLVPS	Croatian Large Value Payment System
CNB	Croatian National Bank
CompNet	Competitiveness Research Network
CPII	Croatian Pension Insurance Institute
CSDB	Centralised Securities Database
DLT	distributed ledger technology
DWH	Data Warehouse
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
EDIS	European Deposit Insurance Scheme
EEA	European Economic Area
EFC	Economic and Financial Committee
EFTPOS	electronic funds transfer at point of sale
EGMLTF	Expert Group on Money Laundering and Terrorist Financing
ESM	European Stability Mechanism
ESRB	European Systemic Risk Board
ESCB	European System of Central Banks
EU	European Union
EUR	euro
EuroNCS	Euro National Clearing System
Fed	Federal Reserve System
FINA	Financial Agency
FinTech	financial technology
GDP	gross domestic product
GVA	gross value added

HANFA	Croatian Financial Services Supervisory Agency
HFCN	Household Finance and Consumption Network
HRK	kuna
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IMFC	International Monetary and Financial Committee
IReF	Integrated Reporting Framework
ILAAP	Internal Liquidity Adequacy Assessment Process
IRT	Internal Resolution Team
IT	information technology
LCR	liquidity coverage ratio
MoF	Ministry of Finance
m	million
MREL	minimum requirement for own funds and eligible liabilities
NCS	National Clearing System
NGFS	Network for Greening of the Financial Systems
NPE	non-performing exposures
NPL	non-performing loans
O-SIIs	other systemically important institutions
PIS	payment initiation service
PMLTF	prevention of money laundering and terrorist financing
PSD2	Second Payment Services Directive
RC	Republic of Croatia
RTA	Resident Twinning Advisor
RIAD	Register of Institutions and Affiliates Data
RIAD TS	RIAD transaction system
ROAA	return on average assets
ROAE	return on average equity
SCT SEPA	SEPA Credit Transfer
SCTInst SEPA	SEPA Credit Transfer Instant
SDR	special drawing rights
SEPA	Single Euro Payment Area
SGRE	Sub-Group on Resolution Execution
SGRPP	Sub-Group on Resolution Planning Preparedness
SHSDB	Securities Holdings Statistics Database
SRB	Single Resolution Board
SREP	Supervisory Review and Evaluation Process
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism
SudReg	Court Register

TARGET2	Trans-European Automated Real-time Gross Settlement Express Transfer system
TARGET2-HR	national component of the TARGET2 system
thous.	thousand
TIPS	TARGET Instant Payment Settlement
USA	United States of America
USD	US dollar

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

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