



HNB

2018

ANNUAL REPORT

CROATIAN NATIONAL BANK

2018

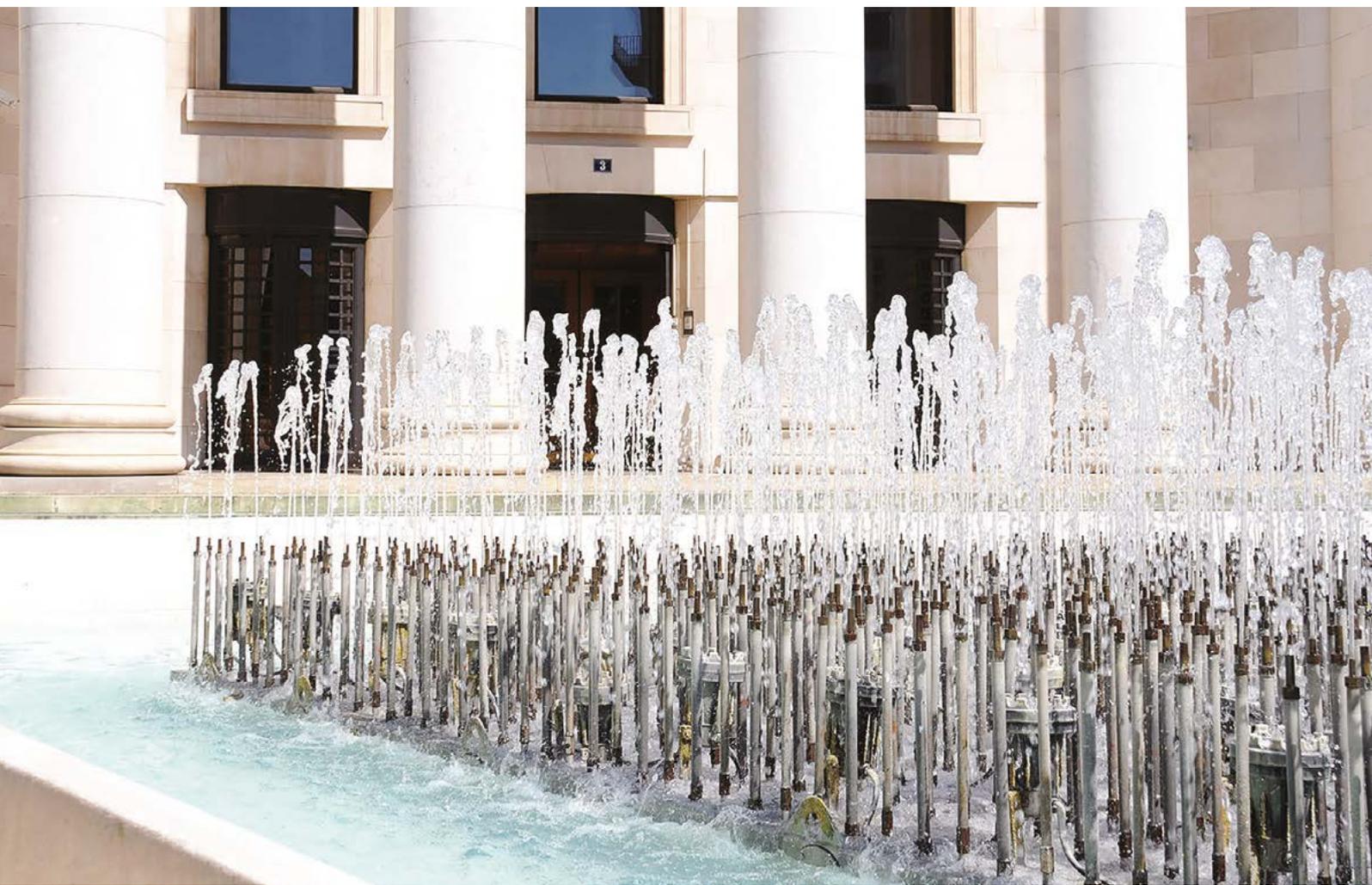


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ANNUAL REPORT 2018

Zagreb, June 2019

CROATIAN NATIONAL BANK



Foreword by the Governor

Economic growth continued in 2018, but its momentum weakened from 2017, primarily due to lower exports. On the other hand, higher employment, growing consumer confidence and increased household borrowing spurred personal consumption, and thus economic growth. Inflation picked up slightly owing to a rise in the prices of energy products. The current and capital account surplus remained significant, mainly due to an increase in tourism revenues and the more vigorous uptake of EU funds, which contributed to appreciation pressures. The government budget ran a surplus for the second consecutive year in 2018, despite collected shipyard guarantees, and external debt continued to decline, as did the public debt-to-GDP ratio.

To support economic growth, the CNB continued to pursue an expansionary monetary policy, maintaining a stable exchange rate. Abundant liquidity contributed to the further improvement of financial conditions, a decrease in interest rates and, ultimately, to the stronger increase in loans to households and corporations. Particularly noteworthy is the several-year long upward trend in kuna lending, mainly to households, coupled with a steady decrease in loans with a currency clause.

As always, we prevented the excessive strengthening of the kuna exchange rate by purchasing foreign exchange, and 2018 saw the second largest annual increase in international reserves, which



Boris Vujčić, governor

stood at EUR 17.4bn at the year's end. Earnings generated by the management of reserves are essential for the CNB's overall financial performance. Despite the historically low, and, in case of the euro, negative interest rates, a positive result of EUR 62.1m or HRK 460.9m was achieved.

The last crisis strengthened euro area architecture. After the public debt crisis, the banking union was established, if not yet completed. Common banking rules in the EU are safeguarded by the Single Supervisory Mechanism and the Single Resolution Mechanism, which protect the funds of citizens as bank depositors and tax payers in case a bank exits the market. The CNB continued to cooperate with foreign supervisors, particularly in joint assessments of the risk of business operations of banking groups and the adequacy of allocated amounts of capital for members of individual groups, as well as in other areas of supervision. In addition, we began preparing for Croatia's participation in the Single Resolution Mechanism.

Bank operating results improved in 2018 following a sharp decrease in 2017 that resulted from the difficulties in the operation of the Agrokor Group. Banks' loan portfolio quality continued to improve, driven to a significant extent by the sale of non-performing loans. Ample system liquidity and capitalisation continue to ensure the safe and stable operation of banks.

We continued to strengthen consumer protection. Following our publication of individual banks' lending conditions in 2017, we enabled consumers to compare payment account costs in the same way. We required banks to provide standardised information and thus made it easier for citizens to opt for a payment account that suits them the most. We resolved consumer complaints, intermediated with banks and took action where necessary.

Our research priority plan and programme was presented to the public for the first time last year. We wanted to offer insights into research processes at the CNB and open a dialogue with the public and colleagues on current topics: monetary policy, inflation, exchange rate, international financial flows, financial stability, productivity and source of growth, fiscal sustainability and the payment system. Particularly worthy of mention is our decision to place the challenges of technological innovations, particularly in the financial system, at the very top of our research priorities in 2018. This includes topics such as cryptocurrencies, the impact of FinTech on banks, firms and citizens, cyber risks and cybersecurity.

"Facts first" was the motto under which 20 years of ESCB (European System of Central Banks) statistics were celebrated in 2018. The main purpose of statistics in the CNB is to support the making of monetary and macroprudential

policies and other central bank tasks and provide the public, financial markets, media, public authorities and the business sector with timely, relevant and, above all, precise statistical indicators. We continued to perfect and extend macroeconomic series and, in line with the clear determination of the European Central Bank, to enhance our set of granular and survey data.

The payment system is a key economic infrastructure and in 2018 we completed the harmonisation of regulations with the European payment area, of which the general public may not be aware. The benefits and improvement of payment will ensue only after instant payments are in full application. Payments by mobile phone will be effected in less than ten seconds, at any time of the day, year-round, regardless of whether the payer and payee have accounts in the same bank or even the same country. This will facilitate, accelerate and reduce the price of payments for citizens, and simplify business for firms.

The Government of the Republic of Croatia adopted the Eurostrategy in May 2018 and entrusted the National Council for Euro Adoption with its implementation. The public opinion polls we regularly conduct suggest that citizens support euro adoption, but are also concerned about a possible increase in prices. Such findings impose on us the obligation to maintain an open dialogue with the public, to make information on small European economies that recently adopted the euro more available and to establish clear procedures and carry out measurements to prevent an unjustifiable rise in prices. Still, one must bear in mind that the adoption of the euro exceeds the scope of activity of the central bank alone.

Positive economic developments continuing from 2018 into 2019 are, among other things, a result of the European monetary policy whose effects are spilling over to the domestic economy. "A rising tide lifts all boats", one might say, but the already noticeable signs of slowdown in European growth or the potential moderation of the expansionary character of European monetary policy will also impact the Croatian economy. Strengthening the economic structure, as well as other systems, such as the educational system or the administrative system, to enhance the resilience of the economy and accelerate its growth, would be of benefit to both citizens and businesses. The Croatian National Bank will, within its area of competence, continue, perseveringly and consistently, to contribute to that objective.



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CNB Council members, left to right: Vicegovernors Neven Barbaroša, Martina Drvar and Slavko Tešija, Governor Boris Vujčić, Deputy Governor Sandra Švaljek, Vicegovernors Roman Šubić, Bojan Fras and Michael Faulend



Left: Governor Vujčić and Vicegovernor Fras;
middle: new management members – Slavko Tešija,
Sandra Švaljek, Martina Drvar and Roman Šubić;
right: Governor Vujčić and Deputy Governor Sandra Švaljek

The year at a glance

Macroeconomic developments – main highlights

Slight deceleration in growth:

2.6% was the annual growth rate of real GDP in 2018, down from 2.9% of 2017.

Inflation picked up:

to an average of 1.5%, compared with 1.1% in 2017

Current and capital account surplus:

was recorded for the sixth year in a row: in 2018, it stood at 4.0% of GDP, having dropped by 0.7 percentage points from the year before.

Continued decline in interest rates:

The average interest rate on new housing loans in kuna was 3.6% at the end of 2018, while in 2017, it was 3.9%.

General government surplus:

0.2% of GDP in 2018, compared with 0.9% of GDP in 2017.

Governor Vujčić reappointed for a second term of office, new Council members appointed

On 13 July 2018, the Croatian Parliament reappointed Boris Vujčić, for his second six-year term of office.

In July 2018, the terms of office of deputy governor Relja Martić and vicegovernors Tomislav Presečan, Vedran Šošić and Damir Odak expired.

New members of the Council were appointed by a decision of the Croatian Parliament: on 18 July 2018, Sandra Švaljek became deputy governor of the Croatian National Bank. The deputy governor coordinates and manages the Central Banking Operations Area, Internal Audit Office, Communications

Area and the Office of the Governor. On the same day, Martina Drvar was appointed vicegovernor of the Croatian National Bank. Vicegovernor Drvar is in charge of the Prudential Regulation and Supervision Area. Slavko Tešija assumed office as vicegovernor of the Croatian National Bank on 18 July 2018 as well. Vicegovernor Tešija manages the Succession Issues Coordination Office and the Foreign Exchange Regulation Office. Roman Šubić was the fourth vicegovernor appointed on 18 July 2018. Vicegovernor Šubić coordinates the Statistics Area and the Credit Institutions Resolvability Assessment Office.

Strategy for the Adoption of the Euro in Croatia was officially adopted in Croatia

The Government of the Republic of Croatia adopted the Strategy for the Adoption of the Euro in the Republic of Croatia in May 2018 and appointed a National Council for Euro Adoption responsible for the implementation of the Eurostrategy. The Governor of the CNB was appointed deputy head of the National Council. In August 2018, the CNB organised a poll to gauge public opinion on the adoption of the euro in Croatia.

Furthermore, numerous activities were carried out throughout 2018 to inform the public on the course of the euro adoption procedure and its possible effects. The Governor and the competent vicegovernors held public presentations of the Eurostrategy in 17 county chambers of commerce and six business schools in Croatia. This enabled CNB officials to meet with representatives of the business and academic community in almost all Croatian counties. The aim of the presentations was to inform the public of the advantages and disadvantages of euro adoption, explain the euro adoption procedure and describe economic policies and reforms contributing to the adoption of the euro. CNB officials and other CNB employees gave a number of lectures for pupils, students, teachers and experts from various areas of the economy as well as other interested groups. In addition to presenting the main conclusions of the Eurostrategy, the lectures were aimed at explaining the role of the CNB once Croatia joins the euro area.

A structural operation was held

The CNB continued to provide long-term kuna liquidity to banks via structural operations first carried out in February 2016. The operations are used

to place kuna funds to banks for a longer term, thus supporting long-term kuna lending at fixed interest rates. The only structural auction in 2018 was held in December, when the CNB placed HRK 1.4bn to banks for a period of five years at an interest rate of 1.2%.

New regulations in payment operations – aimed at increasing transparency and care for consumers

Two new laws were adopted in 2018: the Payment System Act and the Electronic Money Act. These acts introduce new payment services and new payment service providers, improve the rules on the protection of payment service users (consumers), ensure higher security of electronic payments, broaden the requirements for the licensing and registration of new payment service providers, and enable higher supervisory powers in the cross-border provision of payment services and electronic money issue. Moreover, subordinate regulations were adopted under the acts mentioned above.

Improved mHNB mobile application – users can compare banking fees

In late 2018, the CNB improved its mobile application, mHNB, which provides services and additional information to consumers. In addition to the information available on the CNB website, via the mHNB, consumers have access to a systematic and user-friendly overview of the conditions under which banks grant loans. As of November 2018, the application also provides a simple comparison of the fees charged by banks for their most frequently used payment services in order to enable consumers to make informed decisions on the choice of payment services and their providers more easily. The most representative services related to payment accounts are the services which are most frequently used by consumers and which expose consumers to the most significant total or individual cost, such as maintaining a payment account, credit transfers, direct debits and standing orders. The application, which is available for Android and iPhone, had been installed in 6,235 devices by the end of 2018.

Strong interest in economic and financial education

The Croatian National Bank continued its long-standing tradition of informing and educating the young on topics pertaining to the area of operations of the central bank. The CNB was visited by 3,369 pupils, students, teachers

and other members of the public interested in its work with the aim of expanding their knowledge and improving their economic and financial literacy. Lectures and workshops were held on the activity of Croatia's central bank, current economic and monetary trends in our country and personal finance. Most lectures were given in March, during Global Money Week, which was also when a large student debate on the adoption of the euro was held. The debate sparked particular interest among and engagement by secondary school pupils and was live-streamed on Facebook and followed by more than 4,300 viewers.

The CNB opened its doors as part of the Design District Zagreb Project

The main building of the Bank situated on Trg hrvatskih velikana in Zagreb, a masterpiece by one of the greats of Croatian modernism, the architect Viktor Kovačić, attracted members of the public interested in the architecture of the former Zagreb Stock and Commodity Exchange in 2018 as well. As part of the CNB's cooperation with the Design District Zagreb Festival, almost 300 visitors visited the Round Hall, the former main stock exchange hall, over the course of four days.

Public relations

In 2018, the Croatian National Bank continued to strive to raise public awareness of its work, as well as to increase public economic and financial literacy, directing its efforts towards the young in particular. This was achieved by press releases, replies to queries, consumer notifications, publications, conferences, communication with the press and members of the Croatian parliament, workshops for economists, presentations for students, a student debate, teacher seminars and social network posts. The Bank also launched its Twitter profile in 2018.

The Croatian National Bank pays special attention to providing the domestic and international public with the fullest and most comprehensible information possible on its activity – its objectives, the measures taken to attain them, its tasks and the results of its activities. In 2018, the CNB continued to inform and educate the public about its activity using various communication channels.

Press releases on the decisions of the CNB Council were published immediately after the sessions at which they were enacted. Furthermore, other activities undertaken as part of the fulfilment of the tasks of the central bank were also regularly reported on. The public was introduced to a new service available within the mobile application of the Croatian National Bank (mHNB) – parallel listings of applicable fees charged by banks for the most frequently used payment services.

The professional and the general public were also informed of the activity of Croatia's central bank through the appearances of the Bank's officials and employees in the media, as well as at various thematic meetings. Throughout the year, meetings were held with journalists who cover the financial and



banking sector to inform them about the activities of the central bank related to monetary policy, payment services and other tasks of the central bank, and to enable them to inform the professional and the general public as fully and comprehensively as possible.

At its website www.hnb.hr, the central bank also presented the latest legislation and subordinate regulations concerning the activity of the central bank and the instructions and forms for the implementation of applicable regulations. The website also features draft regulations in order to allow the public to comment on them. All CNB publications were published on its website, the majority of which are in both Croatian and English. In addition to regular publications, the CNB published the research and study findings of its employees within its working papers series.

Over the course of 2018, the CNB received, by e-mail, post or telephone, over 1,600 written and oral inquiries from members of the public, companies, media representatives, government institutions, embassies, etc. These requests

for information were related to all CNB areas of operation and maximum efforts were made to reply immediately or in the shortest possible period.

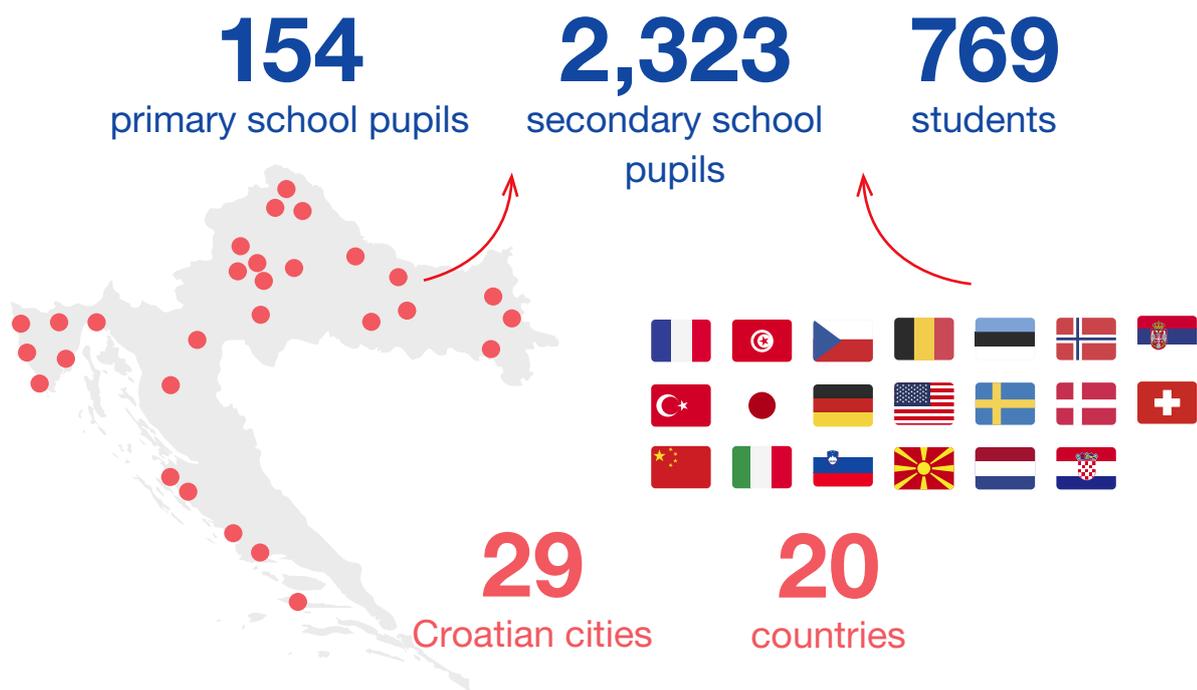
In addition to the existing official profiles on YouTube, Facebook, LinkedIn and Flickr, in late 2018, the Croatian National Bank launched its official profile on another social network – Twitter. The new channel is used to promote publications, research, analyses and other content from the area of competence and activity of the central bank. Using social networks, the CNB strives to strengthen further the timely communication with all segments of the public and promote content from the central bank's area of competence with the aim of raising public awareness and providing financial and economic education.

Also, towards the end of 2018, the CNB improved its mobile application, mHNB, which provides services and additional information to consumers. In addition to the systematic and easily searchable list of information regarding the conditions under which banks grant loans, as of November 2018, consumers can compare the fees charged by banks for their most frequently used payment services more simply, in order to be able to make informed decisions on the choice of payment services and their providers more easily. The application, which is available for Android and iPhone, had been installed in 6,235 devices by the end of 2018.

In late 2018, the mobile application mHNB was improved to include additional information for consumers.

The central bank also organised several expert conferences in 2018. In June, Split welcomed IMF and World Bank executive directors and the highest representatives of central banks and ministries of finance of the fifteen countries comprising the IMF and World Bank constituency that includes Croatia at the regular spring meeting jointly hosted by the Ministry of Finance of the Republic of Croatia and the Croatian National Bank.

In February, the Croatian National Bank hosted the regular annual meeting of the Bank for International Settlements (BIS) Working Group on Monetary Policy in Central and Eastern Europe. In addition to the representatives of



Presentations aimed at raising the level of financial literacy were attended by



Pupils, students and teachers in the
Croatian National Bank in 2018

organising institutions, the BIS and the CNB, the meeting brought together representatives of the European Central Bank and the central banks of Albania, Austria, Bosnia and Herzegovina, Bulgaria, the Czech Republic, Estonia, Finland, Germany, Italy, Latvia, Hungary, Macedonia, Montenegro, Poland, Romania, Slovenia and Serbia.

In March, the CNB hosted the conference “Investments – Moving productivity frontier”, organised by the European Investment Bank (EIB) and the Croatian National Bank, at which high-ranking officials of the Croatian government and international financial institutions gathered, while in May, a round table was organised by the Croatian National Bank and the Croatian Chamber of Commerce, bringing together the representatives of the Zagreb chamber and county chambers.

In order to introduce the structural characteristics of covered bonds and the proposal of the European Commission directive governing their issue to the professional public, the workshop “New EU Covered Bonds Framework – What is in It for Croatia?” was held in the Croatian National Bank in November, jointly organised by the Croatian National Bank and the European Bank for Reconstruction and Development (EBRD).

The CNB also held the second research conference “Research in Central Banks”, where the CNB’s annual research plan was presented along with the findings of research conducted thus far and an overview of research carried out over the past several years.

The Central Bank of Ireland hosted the traditional Ante Čičin-Šain Lecture, dedicated to the first CNB Governor. The international Dubrovnik Economic Conference, including the Young Economists’ Seminar, was held for the 24th consecutive year in 2018, gathering several central bank governors, representatives of international financial institutions and other renowned researchers and financial policy makers from Croatia and abroad.

Several meetings of CNB management with the members of the Croatian Parliament were held in 2018. The management introduced the members of the Parliament to the role and the activities of Croatia’s central bank in the area of consumer protection, the relation and hierarchy of the regulations of the Republic of Croatia and the EU with regard to the operation of the central bank and other banks and the strategy for the adoption of the euro as the national currency in Croatia.

In line with the CNB’s strategy of strengthening research activities in the central bank, in 2018, the CNB organised seven economic workshops open for the academic and professional public, where recent research of CNB employees was presented along with the papers of other authors from domestic and international institutions (for more information, see the chapter “Research”).

The Croatian National Bank continued its long-standing tradition of educating the young on topics pertaining to the area of central bank operations: in 2018, the CNB was visited by 3,369 pupils, students, teachers and other members of the public interested in its work with the aim of expanding their knowledge of the activity of the Croatian central bank

and current economic and financial developments in our country. Most lectures took place in March, during Global Money Week, during which a large student debate entitled “The Euro in Croatia – PROS and CONS” was held as well, sparking particular interest among and engagement by secondary school students. More than 4,300 viewers followed the live streaming of the debate on Facebook, and the roughly two hundred students debating in the CNB Round Hall decided against euro adoption in Croatia.

As part of the financial literacy enhancement project, a group of teachers from the Economic and Administrative School in Osijek visited the CNB in 2018. The teachers wanted to expand their knowledge of the activity of the Croatian National Bank and improve their knowledge of personal finance management and other topics related to consumers, i.e. users of financial and banking services. Educational activities covered various topics within the CNB’s competence: the objective, tasks and monetary policy of Croatia’s central bank, the adoption of the euro in Croatia, financial stability, supervision of credit institutions, cashless payment operations in Croatia, circulation of currency and consumer protection. Furthermore, a lecture on the adoption of the euro in Croatia was held in Čakovec for teachers of economic groups of subjects from three Croatian counties.

The main building of the Bank situated on Trg hrvatskih velikana in Zagreb, a masterpiece by one of the greats of Croatian modernism, the architect Viktor Kovačić, attracted members of the public interested in the architecture of the former Zagreb Stock and Commodity Exchange in 2018 as well. Some 300 visitors visited the former main stock exchange hall, the Round Hall, as part of the third Design District Zagreb Festival.

Monetary policy and economic developments

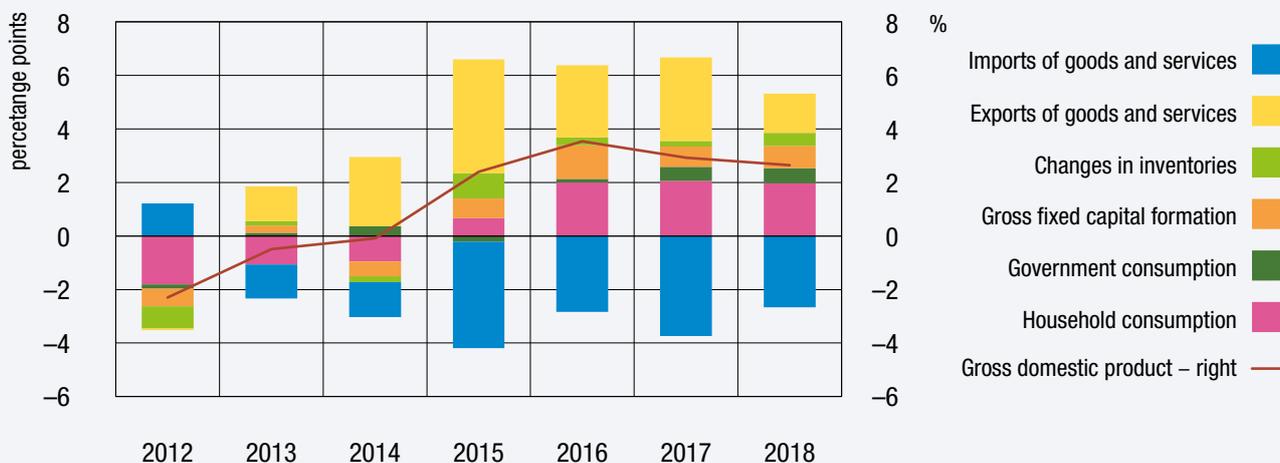
Economic growth decelerated from 2.9% in 2017 to 2.6% in 2018, mostly due to slower growth in the exports of goods and services. The growth in real GDP was mostly attributable to personal consumption, which continued to rise at a pace similar to that of 2017. Consumer price inflation picked up slightly, mainly as a result of a rise in the prices of energy products (mostly electricity).

The current and capital account surplus narrowed from 4.7% of GDP in 2017 to 4.0% of GDP in 2018. However, if one were to exclude the effects of expenses of the adjustment of claims on the Agrokor Group on the profits of banks, which were particularly pronounced in 2017, the current and capital account surplus would have increased on an annual basis. The continued increase in tourism revenues and the more vigorous uptake of EU funds in particular provided positive contributions to the results seen in the current and capital account in 2018, while the balance of goods trade deteriorated significantly. At the same time, domestic sectors continued to deleverage vis-a-vis their foreign creditors.

The CNB's expansionary monetary policy coupled with the maintenance of a stable nominal exchange rate of the kuna against the euro continued to support economic recovery. This resulted in an all-time high in surplus kuna liquidity of the monetary system and contributed to the further relaxing of the financing conditions in the domestic market, and, ultimately, to the continued growth in the banks' lending activity to households and corporates.

The general government budget recorded a positive balance in 2018 as well, regardless of substantial payments arising from shipyard guarantees.

Figure 1 Slowdown in real GDP growth
contributions by components



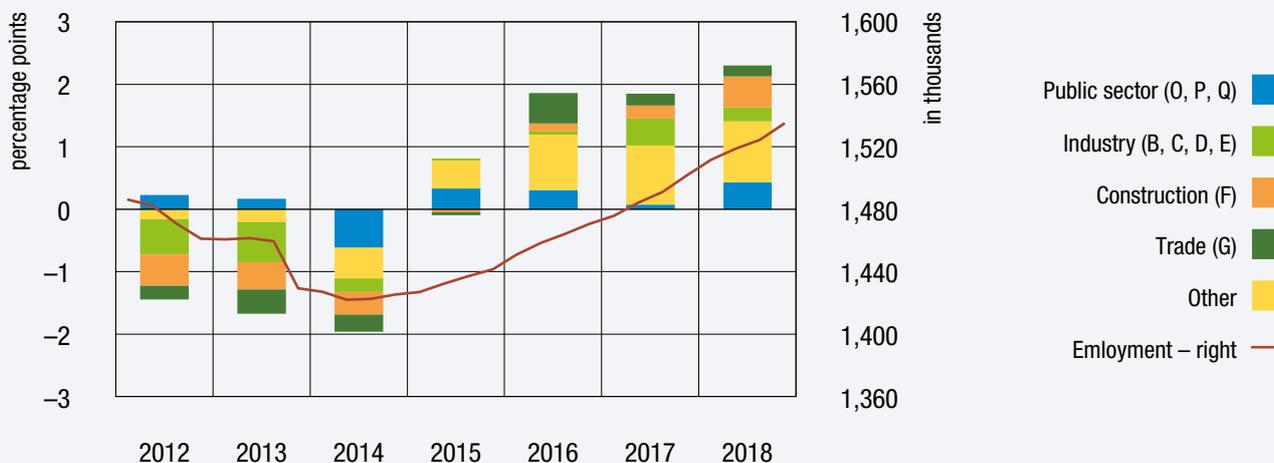
SOURCE: CBS.

Growth in real gross domestic product and favourable labour market developments seen in 2018 as well

The annual rate of real GDP growth was 2.6% in 2018, down from the 2.9% of 2017 (Figure 1). The economic growth rate decelerated mainly as a result of a pronounced slowdown in the growth in exports of goods and services. Total exports increased by 2.8% annually in 2018, while in 2017 the growth rate was 6.4%. Even though the slowdown was mainly caused by less favourable results in the exports of goods, the exports of services lost momentum as well.

The increase in economic activity in 2018 was mainly due to a rise in personal consumption, which grew at a pace similar to that recorded the year before (3.5% versus 3.6% in 2017). The rise in personal consumption was supported by favourable developments in the labour market and growing consumer confidence as well as by increased household borrowing. The rise in employment picked up from 2017, with the number of employed persons up by 2.3% on an annual basis in 2018 according to the data of the Croatian Pension Insurance Institute (CPII). Employment grew across all activities (Figure 2), with the most significant contribution to growth coming from employment in other service

Figure 2 Favourable labour market developments
seasonally adjusted data, contributions to the annual rate of change



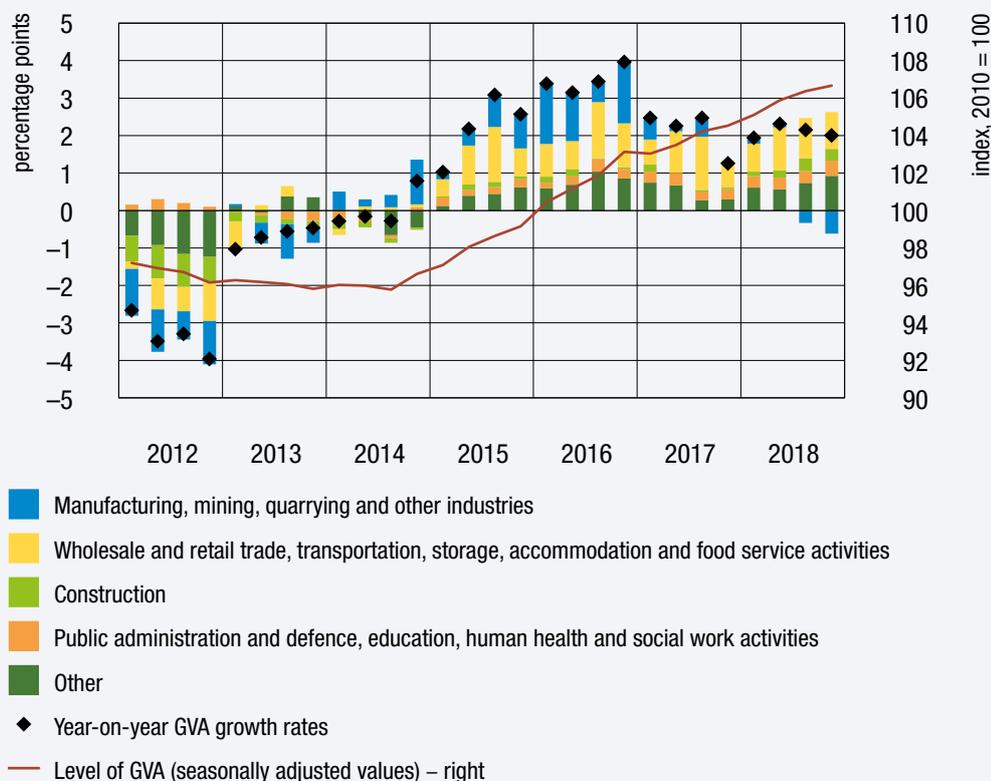
SOURCE: CPII (SEASONALLY ADJUSTED BY THE CNB).

activities and construction. At the same time, the unemployment rate continued to decline at a slightly faster pace than in 2017, with the ILO unemployment rate down to 8.4% of the labour force in 2018. In addition to growing employment, the decline in unemployment was also due to the continuous emigration of working age people. Wages went up too, with the average real gross wage up by 3.6% and the real net wage up by 3.0% on an annual basis. Gross wages grew at a somewhat faster pace than in 2017, while net wages increased more slowly, as their sharp rise in 2017 was attributable to tax changes.

Favourable labour market developments increased consumer confidence, so that in 2018, the consumer confidence index reached the highest level seen in the past 20 years since household expectations surveys were introduced.

Other components of domestic demand also recorded growth. Gross fixed capital formation increased by 4.1% on an annual basis in 2018, picking up slightly from 2017, when the rate of growth was 3.8%. According to available data, intensified capital investments may be attributed to a rise in general government investments. Government expenditures grew as well, at a similar pace as in 2017 (2.9% in 2018 versus 2.7% in 2017).

Figure 3 GVA grew in most activities
contributions by components



SOURCE: CBS.

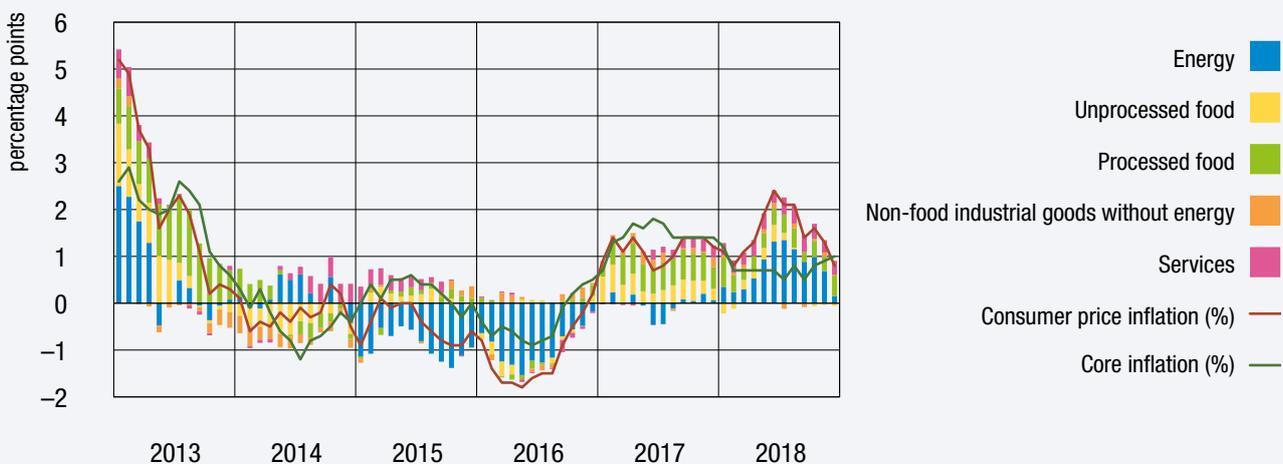
Due to a significant slowdown in the growth in exports of goods and services, the rise in total imports decelerated as well. Imports of goods grew by 5.5% in 2018, less than the 8.1% of the year before. The slowdown in the growth in exports was more pronounced than that in imports, causing the negative contribution of net foreign demand to economic growth to double from 2017, from -0.6% to -1.2% .

Gross value added increased in 2018 at the same pace as in the preceding year (2.1%). Broken down by activities, the most significant positive contribution to the total increase in gross value added came from trade, transportation and tourism services. Growth was seen in other activities as well, with the exception of manufacturing and mining and quarrying (Figure 3). Unfavourable developments seen in industry were associated with the slowdown in exports and problems in Croatian shipyards.

Consumer price inflation picked up due to a rise in the prices of energy

Average annual consumer price inflation picked up slightly in 2018, averaging 1.5%, after being 1.1% in 2017 (Figure 4). Observed by individual consumer price index components, the increase in the annual rate of inflation was mainly due to the prices of energy. Particularly significant was the rise in the contribution made by electricity prices resulting from the waning of the effect of the cut of the VAT rate on this energy source on the annual rate of change in these prices. Movements seen in the prices of petroleum products in 2018 had a major impact on the intra-year dynamics of the overall CPI. As a result of growing crude oil prices on the global market, the first half of the year witnessed a substantial increase in the prices of petroleum products, pushing overall inflation up. In contrast, the annual rate of change in the prices of petroleum products decreased significantly towards the end of 2018. This was due to a drop in the prices of crude oil on the global market in November and December caused by increased production by major crude oil producers and by the anticipated weakening of demand amid a slowdown in global economic growth. Overall, prices of petroleum products saw a considerable increase (of around 7%) in the whole of the year, although the increase was only slightly greater than in 2017. In addition to the prices of energy, the contribution of the prices of services to the annual rate of growth of overall inflation increased as well, although to a

Figure 4 Consumer price inflation picked up largely due to higher energy prices contributions to annual inflation



Notes: Core inflation does not include agricultural product prices, energy prices and administered prices. Processed food products include tobacco and alcohol.

SOURCES: CBS AND CNB CALCULATIONS.

significantly smaller extent. In contrast, the contributions of other components shrank in 2018. In unprocessed food products, the decline in the annual rate of change in the prices of meat and vegetables was particularly pronounced.

In contrast to overall consumer price inflation, the average annual rate of growth of core inflation (which excludes prices of agricultural products, energy and administered prices) slowed down from 1.4% in 2017 to 0.8% in 2018. Such developments are a result of a decrease in the annual rate of growth in the prices of food products and industrial goods excluding food and energy. The prices of meat and milk, cheese and eggs contributed the most to the slower increase in the prices of food products, which may partly be explained by the base period effect caused by a substantial rise in the aforementioned prices in 2017, as well as by a decline in the prices of food products on the global market. The slower rise in the prices of industrial goods excluding food and energy mainly reflects the decrease in the annual rate of change in the prices of clothing and footwear and motor cars (due to reduced excises on cars).

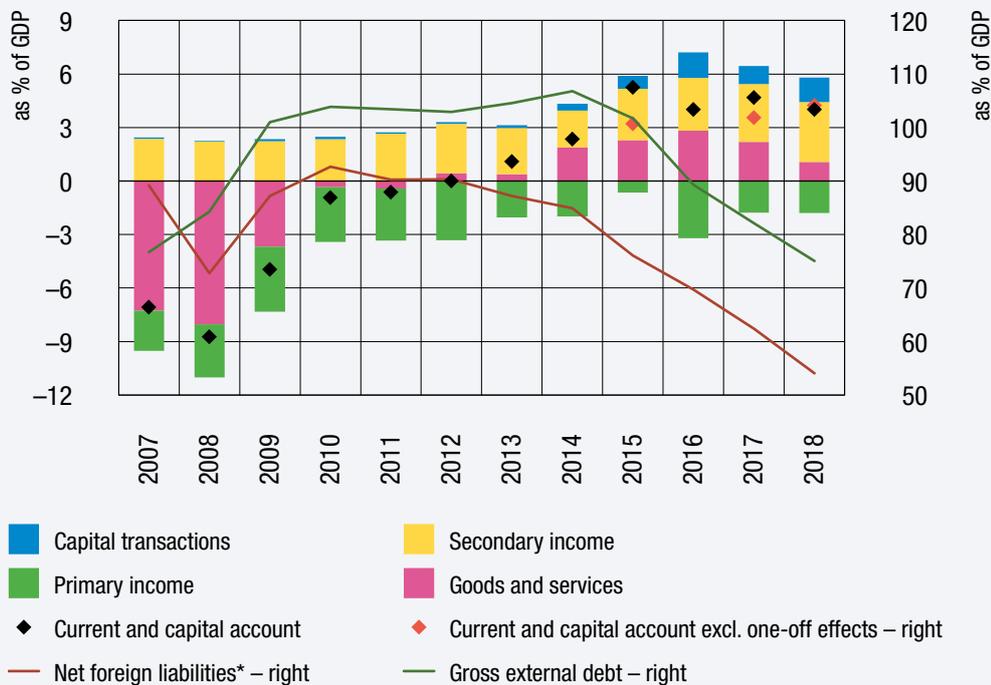
Domestic inflationary pressures became more pronounced, but had only a moderate effect on inflation. An increase in domestic inflationary pressures on the demand side is suggested by a slight increase in the positive GDP gap relative to 2017. In contrast, domestic cost pressures strengthened considerably due to a sharp increase in unit labour costs. Pressures from the external environment intensified as well, which primarily refers to a further increase in the average annual price of crude oil in the global market.

The current and capital account surplus held steady, coupled with a further decrease in external debt

The balance of payments current and capital account, where transactions and transfers of residents (of Croatia) with non-residents (abroad) are recorded, ran a surplus for the sixth consecutive year, standing at 4.0% of GDP in 2018 (Figure 5), having decreased by 0.7 percentage points from the preceding year. However, if one were to exclude the effects of expenses arising from value adjustments related to claims on the Agrokor Group on the profits of banks, which were particularly pronounced in 2017, the current and capital account surplus would have increased from 3.6% of GDP in 2017 to 4.2% of GDP in 2018.

The foreign goods trade deficit widened substantially as a result of a

Figure 5 The several-year trend of improvement of external imbalances continued current and capital account and the balance of foreign liabilities



Notes: One-off effects include the 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 (-54.1% of GDP at the end of 2018).

SOURCE: CNB.

considerably slower increase in exports than in imports (3.6% versus 8.1% according to CBS data). After the average annual rate of growth in total exports hovered around 10% over the past four years, in 2018, the growth in exports decelerated considerably, which may be explained by slower growth in the foreign demand of the main trading partners and a decline in global trade volume, as well as by factors specific for Croatia, such as problems in the country's shipyards. Moreover, the positive effects of Croatia's EU accession on Croatian exports began to diminish, resulting in a slight slowdown of the growth in domestic exports to the single market. In contrast, the exports to markets outside the EU fell sharply, particularly to the US, due to the lower exports of medical and pharmaceutical products. On the other hand, a strong increase in investments and personal consumption caused the total imports of goods to rise further, although to a smaller extent than in 2017,

due to a simultaneous slowdown in the growth in exports. The foreign trade deficit widened primarily due to the deterioration in the balance of the trade of medical and pharmaceutical products (following positive trends in 2017) and the rise in the net imports of oil and refined petroleum products (primarily because of the unfavourable effect of price increases), road vehicles and certain categories of capital goods (notably electrical machinery, apparatus and appliances).

The continued increase in the net exports of services, primarily in tourism, had a favourable effect on the current and capital account balance in 2018. The annual growth in tourism revenues was 6.4%, supported by an increase in the number of arrivals and overnight stays of foreign tourists (by 6.7% and 3.7% respectively), particularly tourists from Germany, the United Kingdom, the USA and Hungary. Despite a substantial rise in tourism revenues, growth slowed down noticeably from the preceding three years, when the average annual growth rate was almost 9%. The slower growth in tourism turnover (not only in Croatia, but also in west Mediterranean countries) may generally be attributed to stronger competition due to the recovery of the Turkish and Greek market and the calming of geopolitical instability in the South Mediterranean. In addition to tourism, other services, primarily telecommunication, computer and information services also contributed to the increase in the total net exports of services, although to a significantly smaller extent. In contrast to the favourable developments in the foreign trade in services, the deficit in the goods account deteriorated noticeably, resulting in a decline in the total net exports of goods and services for the second year in a row.

Gross external debt ended 2018 at 75.4% of GDP, which is a decrease of 7 percentage points from the previous year.

The deficit in the primary income account deteriorated only slightly from the year before. On the one hand, the improved performance of banks from 2017 (when the banks' profits were adversely affected by a surge in value adjustments for claims on Agrokor) and of other foreign-owned enterprises resulted in a pronounced increase in expenditures on the primary income account. This was, however, largely offset by a rise in revenues from residents temporarily working abroad, reduced interest expenses on the foreign liabilities of domestic sectors and the improved performance of foreign enterprises in

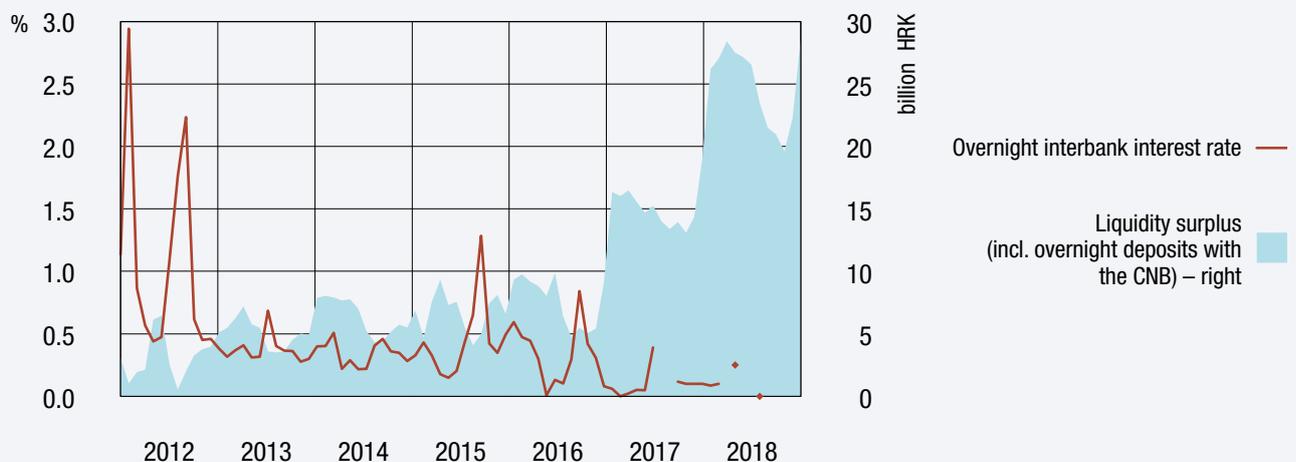
domestic ownership. In contrast to the primary income account, the overall surplus in the secondary income account and in the account of capital transactions improved further owing to the intensified use of EU funds.

Net capital outflow was recorded in the financial account as a result of a decrease in net debt liabilities of domestic sectors, while foreign equity liabilities increased. The strong year-on-year increase in net inflows from equity investments is primarily a result of a rise in the retained earnings of banks (following the unfavourable effect of provisions set aside for loans to the Agrokor Group on the preceding year's performance) and, to a significantly smaller extent, of foreign-owned non-financial corporations. As for the net debt position of domestic sectors, the most significant improvement was recorded in the central bank due to a surge in gross international reserves. Furthermore, the government and other domestic sectors also reduced their net external debt (exclusively on account of a decrease in debt to affiliated creditors). At the same time, the net foreign position of banks deteriorated slightly, reversing a long-standing trend of improvement.

The continued reduction of net debt liabilities of domestic sectors, coupled with the rise in nominal GDP, led to a further improvement in the relative indicators of external debt. Hence, total gross external debt ended 2018 at EUR 38.8bn, amounting to 75.4% of GDP after having dropped by seven

Figure 6 Noticeable increase in surplus kuna liquidity was primarily created by foreign exchange interventions

surplus liquidity and overnight interbank interest rate



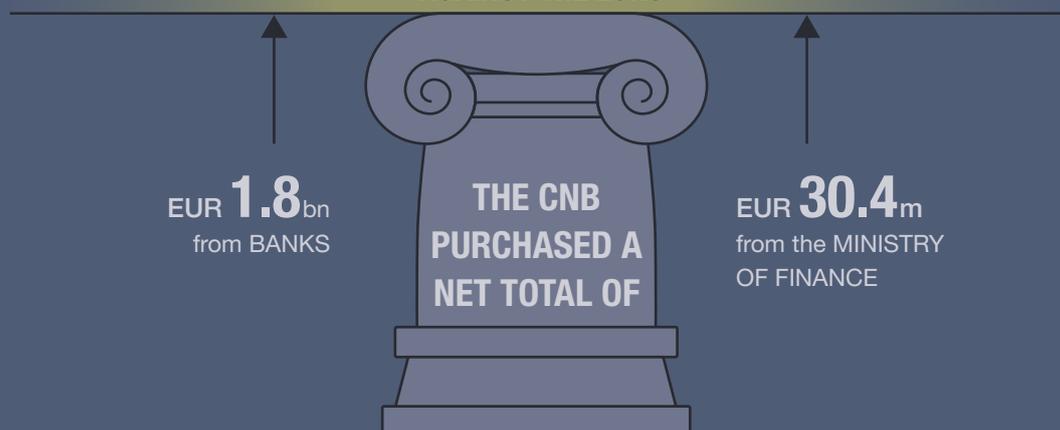
SOURCE: CNB.

Upward pressures on the exchange rate of the domestic currency against the euro

Appreciation pressures resulting from...



EXCHANGE RATE OF THE KUNA AGAINST THE EURO



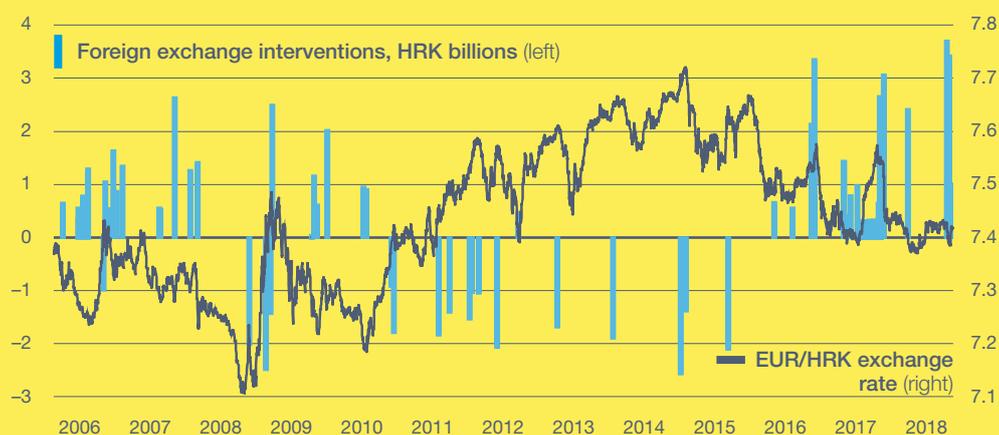
Average exchange rate in 2018

7.41 ▼ **-0.6%**
EUR/HRK from 2017

Exchange rate at end-2018

7.42 ▼ **-1.3%**
EUR/HRK from 2017

Amount of foreign exchange interventions and EUR/HRK exchange rate



percentage points from the end of 2017. The relative indicator of net external debt improved as well, from 31.3% of GDP at end-2017 to 23.8% at end-2018. The continued several-year trend of reduction of external imbalances is also reflected in the further improvement of the negative value of the net international investment position, which went from –62.4% of GDP to –54.1% of GDP at the end of 2018. Nevertheless, the value remains relatively high due to previously accumulated liabilities.

Expansionary monetary policy continued to support economic growth

In 2018, the CNB continued to pursue an expansionary monetary policy, thus supporting the continued recovery of economic growth against the backdrop of sustained low inflation. This was reflected in a strong increase in free reserves in the banks' settlement accounts with the CNB. Surplus kuna liquidity averaged HRK 24.9bn in 2018 (Figure 6), up by HRK 9.7bn from 2017. A small number of overnight intrabank loans also points to very favourable liquidity conditions in the domestic market. In April, the overnight interest rate increased to 0.25%, reflecting the one transaction carried out in that month, while in July, the interest rate dropped to 0.00%, after which the instrument was not used in the rest of the year.

The pressures pushing the domestic currency's exchange rate against the euro upwards continued in 2018. As in 2017, appreciation pressures on the exchange rate were associated with the favourable developments in the balance of payments as well as with reduced euroisation and the continued recovery of economic activity, which lowered fiscal risks and reduced other macroeconomic imbalances. In order to alleviate excessive pressures driving the exchange rate of the domestic currency up, the CNB purchased a net total of EUR 1.8bn from banks in 2018, similarly as in 2017. The CNB regularly carries out foreign exchange transactions with other counterparties as well: in 2018, it purchased a net total of EUR 30.4bn from the Ministry of Finance. In total, the CNB created HRK 13.6bn in 2018 using foreign exchange transactions. The nominal daily kuna/euro exchange rate thus moved within a quite narrow range from –0.6% to +1.3% around the average exchange rate of EUR/HRK 7.41, down by 0.6% from the average exchange rate in 2017. The exchange rate ended 2018 at EUR/HRK 7.42, down by 1.3% from the year before. A noticeable rise in surplus kuna liquidity was a result of reserve money creation by means of foreign exchange interventions.

In addition to foreign exchange interventions, the CNB continued to provide banks with long-term kuna liquidity using structural operations that were carried out for the first time in February 2016. Using such operations, banks are provided with kuna funds for a longer term, stimulating long-term kuna lending at fixed interest rates. December 2018 saw the only structural auction held in that year, by which the CNB placed HRK 1.4bn to banks for a period of five years at an interest rate of 1.2%. The total balance of structural operations at the end of the year was HRK 2.0bn. The CNB also continued to place short-term kuna funds to banks for seven-day periods through regular weekly operations. However, banks showed little interest in the short-term funds thus provided due to the abundance of surplus kuna liquidity in the system.

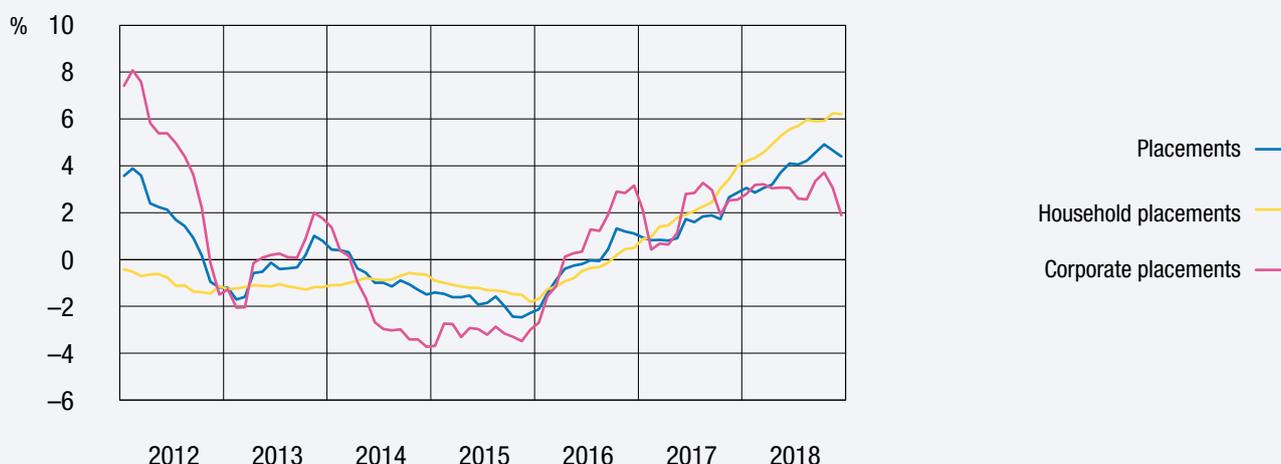
Owing to the very high liquidity levels, interest rates on government borrowing continued to decrease in 2018. Interest rates on one-year MoF T-bills reached historical lows, standing at 0.09% for kuna T-bills and at 0.00% for euro T-bills at the end of 2018. The price of long-term government borrowing also continued to decline: the average cost of government borrowing in the foreign market estimated by the sum of the EMBI for Croatia and the yield on the generic German 10-year government bond was 0.2 percentage points lower in 2018 than in 2017.

Bank interest rates for the corporate and the household sector also continued their several-year downward trend. The interest rate on new kuna housing loans was 3.6% at the end of 2018, compared with 3.9% in 2017. Moreover, interest rates on consumer loans and other loans to households also decreased, with the interest rate on new kuna consumer loans at 6.7%, while in 2017, it stood at 7.0%. As regards the corporate sector, the average interest rate on short-term loans to the sector ended 2018 at 3.2%, while for long-term loans, it was 2.9%, down by 0.4% and 0.2% respectively from the end of 2017.

Thanks to expansionary monetary policy, banks continued to relax loan granting standards for corporations and households, which was supported not only by exceptionally high liquidity but also by positive expectations regarding overall economic trends and the pressure of increased competition among banks. In such conditions, demand for loans continued to rise. As in 2017, there was a particular increase in corporate demand for loans to finance inventories and working capital as well as investments. On the other hand, households increased their demand for housing loans, but also consumer loans and other types of loans, most notably uncollateralised general-purpose

Figure 7 Steady growth in lending activity

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.

cash loans with an initial maturity of five years or more, which the banks granted under more relaxed conditions than housing loans. Such developments motivated the CNB to issue the [Recommendation on actions in granting non-housing consumer loans](#).

In addition to improved financial conditions, 2018 saw a recovery of the lending activity of domestic banks (Figure 7). Total bank placements to domestic sectors (excluding the government) grew by 4.4% in 2018, up from 2.9% in 2017¹. Loans to households contributed to the trend, having increased by 6.2%, with general-purpose cash loans still being the main trigger of growth, having picked up from 7.2% at end-2017 to 12.3% at the end of 2018. Housing loan growth also continued to accelerate, driven by decreasing interest rates and the government's housing loans subsidy programme. As for corporate lending, the annual increase in corporate placements slowed down from 2.5%

¹ The rates of change in placements specified in this section are calculated on the basis of transactions, which means that they do not include the effects of exchange rate changes, reclassifications, price adjustments of securities and loan write-offs on the rate of change in placements. Total placements to domestic sectors (excluding the government) include placements of credit institutions and money market funds and, in addition to loans, include money market instruments, bonds, shares and holdings in investment funds.

in 2017 to 1.9% in 2018 because the activation of government guarantees provided for loans to shipyards decreased the annual rate of growth in 2018 by 1.7 percentage points. The rise in corporate placements was distributed across various activities in 2018, with accommodation and food service, manufacturing and real estate activities providing the most significant contribution. Observing corporate loans by purpose, investment loans grew the most in 2018.

In the lending structure of banks, the several-year long upward trend in kuna lending continued, with the most significant contribution coming from the household sector, where kuna loans increased by 13.8% in 2018, while loans with a currency clause dropped by 0.9%. As a result, at the end of the year, kuna loans accounted for 51.9% of all household loans, while six years before, their share stood at slightly below one quarter. The increased offer of bank loans denominated in the domestic currency was driven by, among other factors, a surge in the sources of kuna funds in the banks' liabilities, particularly in the funds on transaction accounts which saw an annual growth of 24.3%.

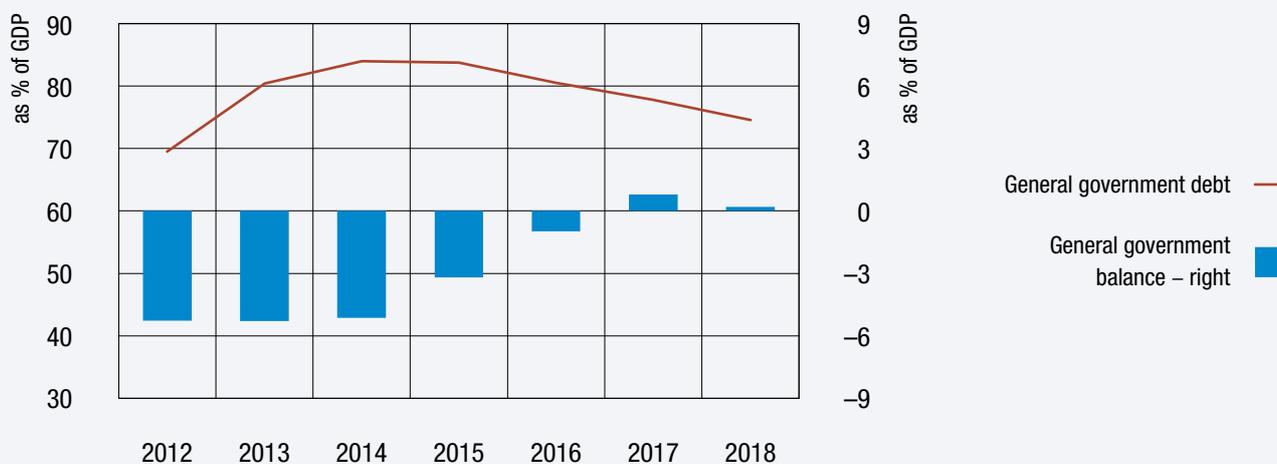
Besides increasing lending, banks continued to sell placements in 2018. A total of HRK 5.1bn of balance sheet claims was sold, of which almost three quarters were corporate placements. This affected the nominal stock of total placements in the banks' balance sheets, whose increase at the end of 2018 was almost twice as slow as the increase in transaction-based placements. The sale of placements is still influenced by the high level of provisions for irrecoverable claims, the business strategies of domestic banks' parent banks focused on balance sheet cleaning by selling non-performing loans, and the activity of companies specialised in the purchase of such loans in the domestic market. In addition to the sale of claims, the decrease in the nominal stock of placements in the banks' balance sheets was also due to write-offs unrelated to sale.

Positive general government budget balance in 2018 despite significant payments arising from shipyard guarantees

As regards fiscal policy, the general government balance ran a surplus for the second consecutive year according to the internationally comparable methodology of the European System of National and Regional Accounts (ESA 2010), while the public debt-to-GDP ratio continued to decline noticeably.

Figure 8 Continued public debt-to-GDP ratio decline

fiscal indicators as % of GDP



SOURCES: CBS AND CNB.

The general government recorded a budget surplus of 0.2% of GDP (Figure 8), while in 2017, the surplus was 0.9% of GDP. The balance deteriorated mainly on account of activated government guarantees to shipyards, which increased government expenditures by some HRK 2.5bn or 0.6% of GDP in 2018. On the other hand, favourable economic developments and the steady decline in interest expenditures had a positive effect on the balance.

Thanks to the positive general government balance, the ongoing economic recovery and the strengthening of the kuna against the euro, the general government debt-to-GDP ratio decreased steadily. At the end of 2018, public debt stood at 74.6% of GDP², 3.2 percentage points down from the end of 2017.

2 The series for general government debt has been revised from December 2001 due to the further alignment of classification of institutional units with ESA 2010 methodology.



Financial stability

Contributing to the financial stability of the system as a whole is one of the statutory tasks of the Croatian National Bank. To carry out this task, the CNB regularly analyses systemic risks that may jeopardise financial stability and adopts measures aimed at preventing the occurrence and expansion of such risks and strengthening the resilience of the entire financial system to sudden shocks. In 2018, the developments in the domestic and the international environment had a favourable impact on financial stability in Croatia. Since the assessment of the exposure of the financial system to systemic risk did not change significantly from last year, there was no need to adjust the existing measures and macroprudential policy instruments applied by the CNB.

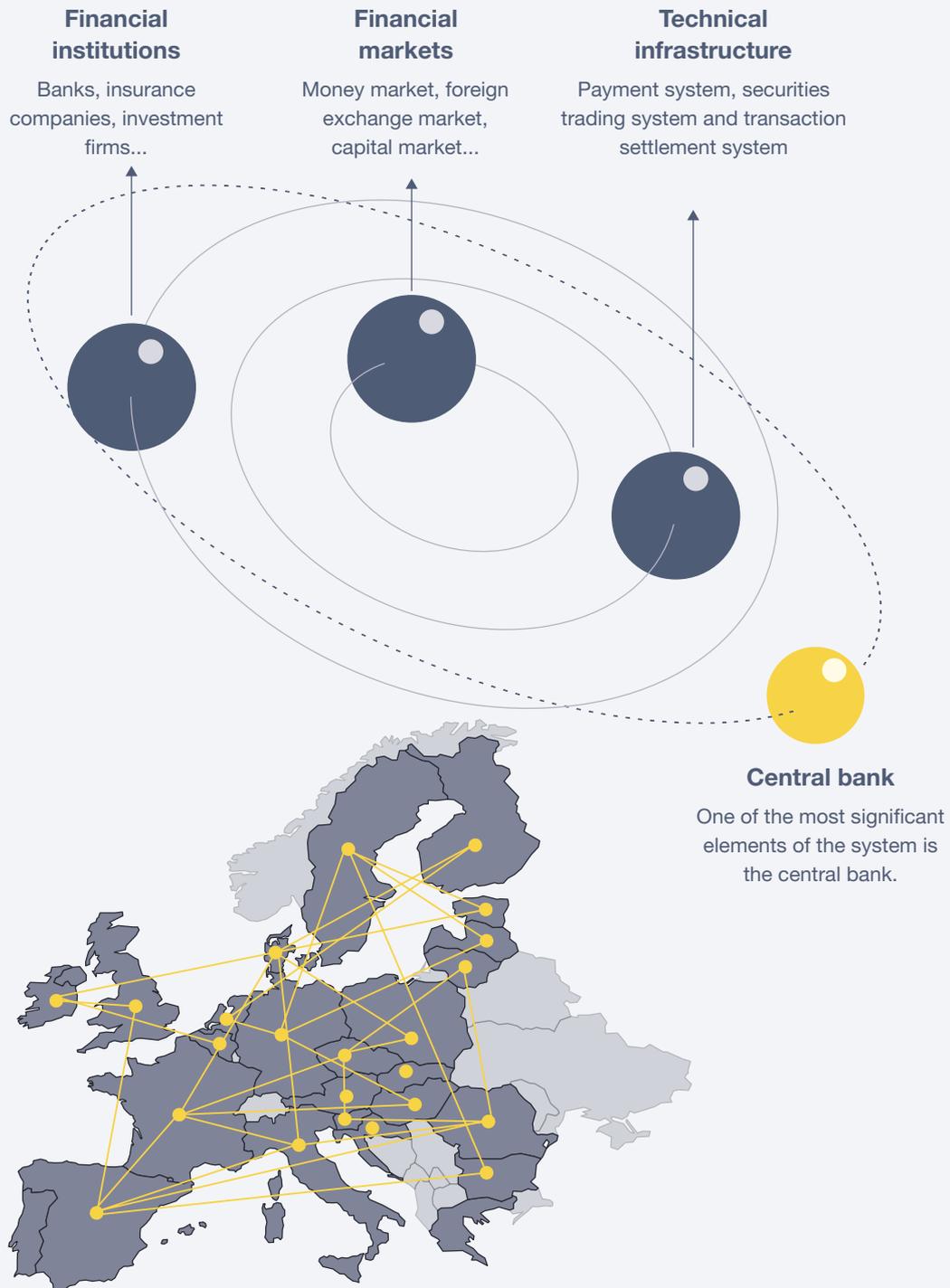
Overall assessment of the main risks and challenges to financial stability

In 2018, moderate growth in real economic activity continued in Croatia. Still, the high level of general government and external debt make the Croatian economy vulnerable, considering the possible changes in the financing conditions on international markets. Therefore, the total exposure of the financial system to systemic risks is assessed as moderate.

Structural imbalances continued to decline. Government debt indicators were improved by the budget surplus in 2018, although the assumption of the debt accumulated by the shipyard Uljanik reduced the surplus relative to 2017. Favourable developments in international economic relations continued, as did the further deleveraging of domestic sectors vis-a-vis foreign creditors, while the current account of the balance of payments again recorded a surplus.

What is a financial system?

A financial system comprises three principal elements:



Nowadays, the principal elements of national financial systems are closely interconnected across borders, which is why they are often referred to as the **European or the global financial system**.

The banking system in Croatia retained ample capital and liquidity buffers, while its vulnerabilities stem from the unfavourable currency and interest rate structure of loans, high banking market concentration and concentrated exposure to the government sector and groups of connected persons. The exposure of banks to the currency-induced and interest rate-induced credit risk is still high, but continued to decline in 2018 as the main contribution to the rise in lending came from kuna loans and loans with a fixed interest rate. However, the maturity mismatch between the banks' assets and liabilities increased as the exceptionally low interest rates on time deposits encourage clients to keep funds in their current accounts, while loans are being granted with increasingly longer maturities. Considering the high risk of contagion narrowly linked to the concentration of exposure, the CNB amended its [Decision on large exposures of credit institutions](#).

Cyclical vulnerabilities of the financial sector remain low. No significant volatility was seen on the domestic foreign exchange and capital markets, but there was no significant activity either. On the other hand, international financial markets were marked by considerable uncertainty, associated with monetary policy tightening in the US, the pending Brexit agreement and political uncertainty in Italy, which resulted in a surge in the yield on Italian government bonds and the risk premiums of Italian banks. Since such developments did not spill over to other markets, Croatia's risk premium hovered around very low levels in 2018, although it remained higher than that of peer countries of Central and Eastern Europe.

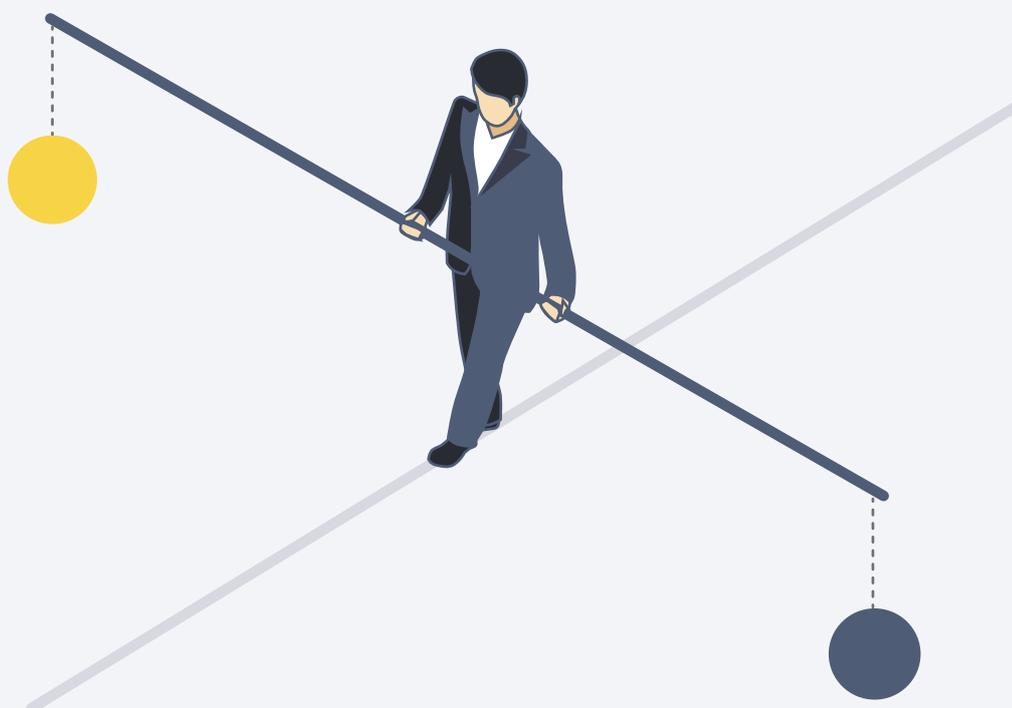
The rise in employment and wages had a favourable impact on the decrease in household sector debt and increased the demand for loans. Interest rate and currency risk dropped as the number of household loans granted at a variable interest rate or denominated in or linked to a foreign currency has been steadily decreasing¹. In an environment characterised by low interest rates encouraging consumers to refinance existing liabilities, this was also due to the [Recommendation to mitigate interest rate and interest rate-induced credit risk in long-term consumer loans](#). On the other hand, a substantial rise was recorded in uncollateralised general-purpose cash loans with an initial maturity of five years and more, granted under more relaxed conditions than

1 The share of household loans granted at a variable interest rate in total loans dropped from 61% at the end of September 2017, when the CNB issued the Recommendation to mitigate interest rate and interest rate-induced credit risk in long-term consumer loans, to 49% in late 2018, while the share of loans denominated in or linked to a foreign currency fell from 53% to 48% over the same period.

What makes a financial system stable?

A stable financial system is a financial system that is resilient to sudden shocks. System resilience means that the system is able to smoothly perform its core functions of financial resource allocation, risk assessment and management and payment operations even if events occur that might otherwise jeopardise its stability.

Financial stability is one of the key prerequisites for sustainable economic growth. The maintenance of financial stability is considered a public good and is an important objective of economic policy due to the exceptionally high economic and social costs of an instable financial system.

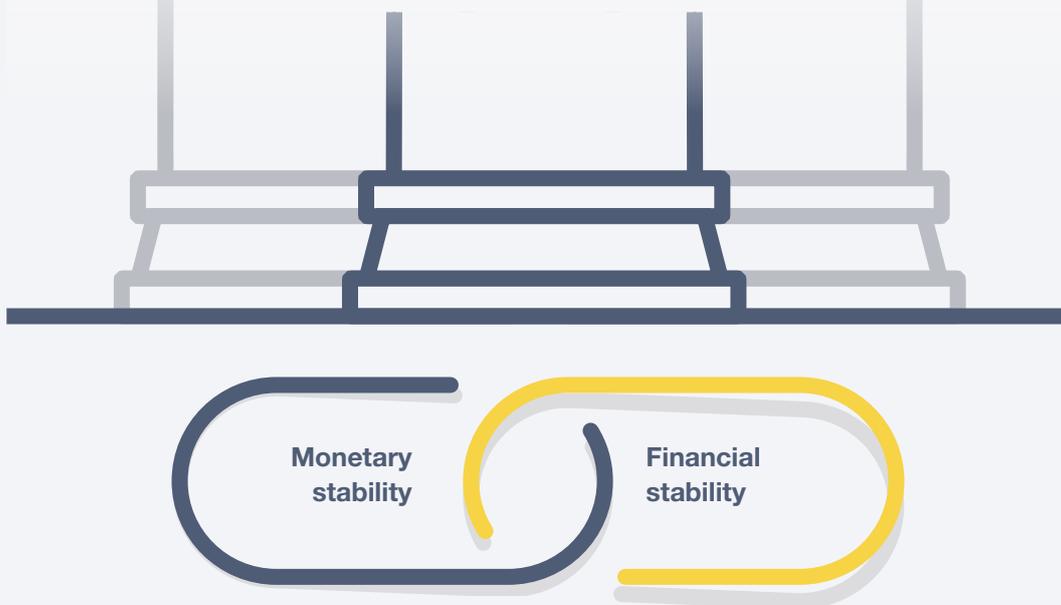


housing loans. At the same time, placements of banks to the corporate sector grew at a slower pace than placements to households, with deleveraging seen vis-a-vis foreign creditors. Relative corporate debt began to decline, along with expenditures for interest payments.

After the real estate market stabilised in 2017, the recovery continued in 2018 as well. The rise in real estate prices was driven by the favourable macroeconomic environment: exceptionally low interest rates, positive trends in the labour market spurred by economic growth and the government housing loans subsidy programme that relieves the repayment burden over the initial

What is monetary stability?

Monetary stability is achieved by maintaining price stability, which is the primary objective of the Croatian National Bank. The Croatian National Bank strives to achieve price stability by maintaining a stable exchange rate of the kuna against the euro.



Monetary and financial stability are closely linked as monetary stability lowers the risks to financial stability. Financial stability in turn contributes to maintaining monetary and macroeconomic stability by facilitating the effective implementation of monetary policy.

period and makes real estate financially more accessible. Despite the aforementioned growth, it is estimated that the level of real estate prices still does not deviate from macroeconomic fundamentals.

Macroprudential activities of the CNB in 2018

a) Capital buffers

Macroprudential measures aimed at the capital of banks are used to strengthen the resilience of the banking system to possible sudden shocks. In line with the European regulations transposed into national law, Croatia applies four

What does 'macroprudential' mean?

The term 'macroprudential' refers to activities related to the stability of the financial system as a whole.

What is macroprudential supervision?

Macroprudential supervision is carried out by supervisory authorities and central banks responsible for the identification, assessment and mitigation of systemic risks to the financial system.



What is microprudential supervision?

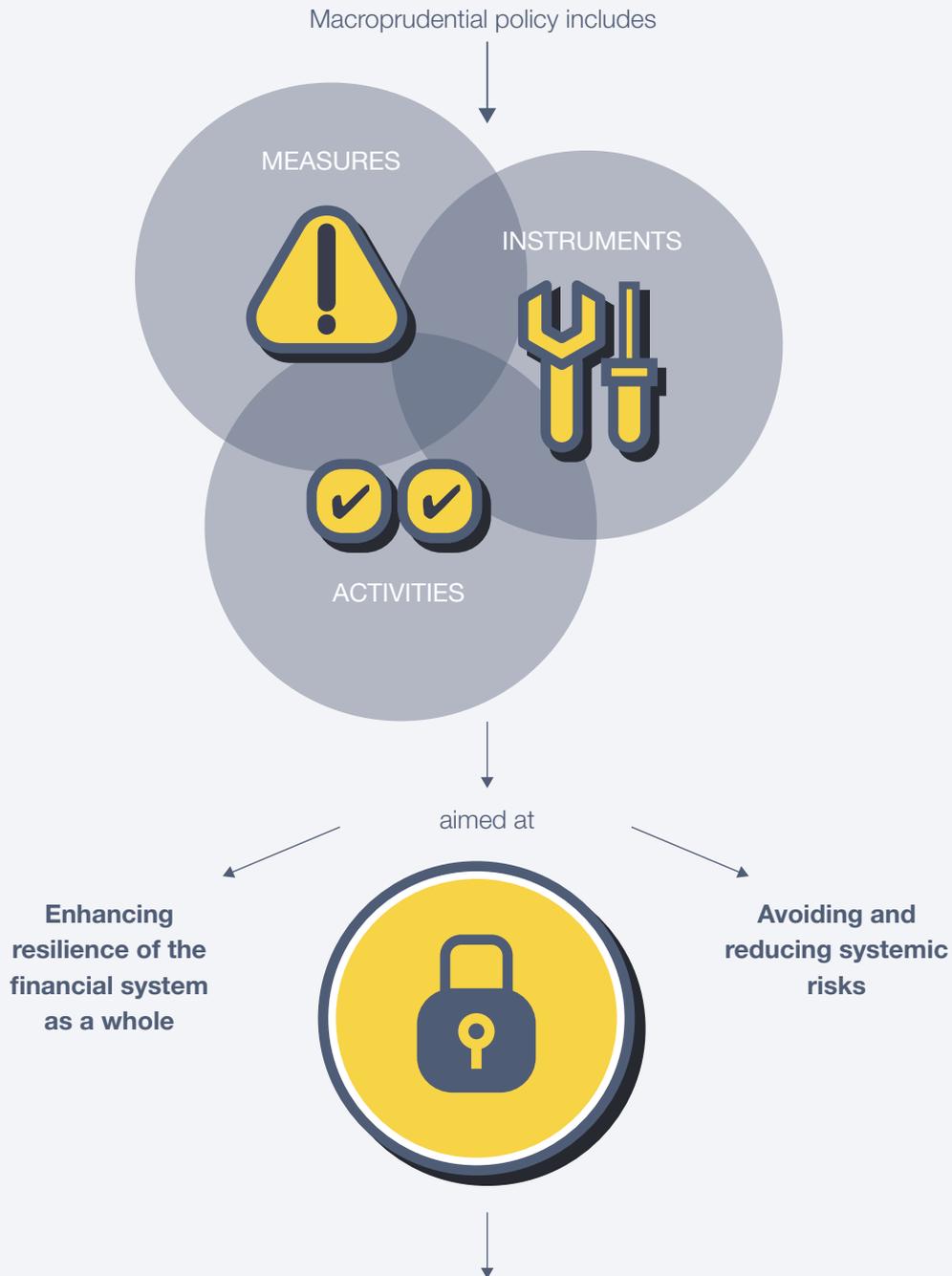
This covers the supervision of individual financial institutions, participants in the financial system, with the aim of verifying the compliance with the prescribed rules of operation.



capital buffers for credit institutions which, combined, totalled 4% or 5.5% of the total amount of risk exposure in 2018, depending on institution size.

Four capital buffers comprise the capital conservation buffer, the systemic risk buffer, the systemically important institutions buffer and the countercyclical capital buffer and are maintained in the form of common equity tier 1 capital. The capital conservation buffer level is set out in the [Credit Institutions Act](#) and amounts to 2.5% of the total risk exposure amount. The systemic risk

What is macroprudential policy?



The macroprudential policy of the Republic of Croatia is set by the **Financial Stability Council**. The authorities competent for the implementation of macroprudential policy are the CNB and the Croatian Financial Services Supervisory Agency (HANFA).



What is the Financial Stability Council?

The Financial Stability Council is an interinstitutional body that consists of representatives of the CNB, the Croatian Financial Services Supervisory Agency (HANFA), Ministry of Finance of the Republic of Croatia (MoF) and the State Agency for Deposit Insurance and Bank Resolution (DAB). The Council is chaired by the Governor of the CNB, who manages its work.



buffer level remained at 1.5% or 3% of the risk exposure amount in 2018, depending on the size of the institution's assets, as decided [in 2017](#). According to the Credit Institutions Act and the Decision on the application of the structural systemic risk buffer ([OG 78/2017](#)), the Croatian National Bank reviews the necessary levels of this capital buffer when needed, or once every two years at a minimum. Considering that the structural vulnerabilities of the domestic economy remained mostly the same as in the year before, there was no need for an ahead-of-schedule review of the systemic risk buffer rate level.

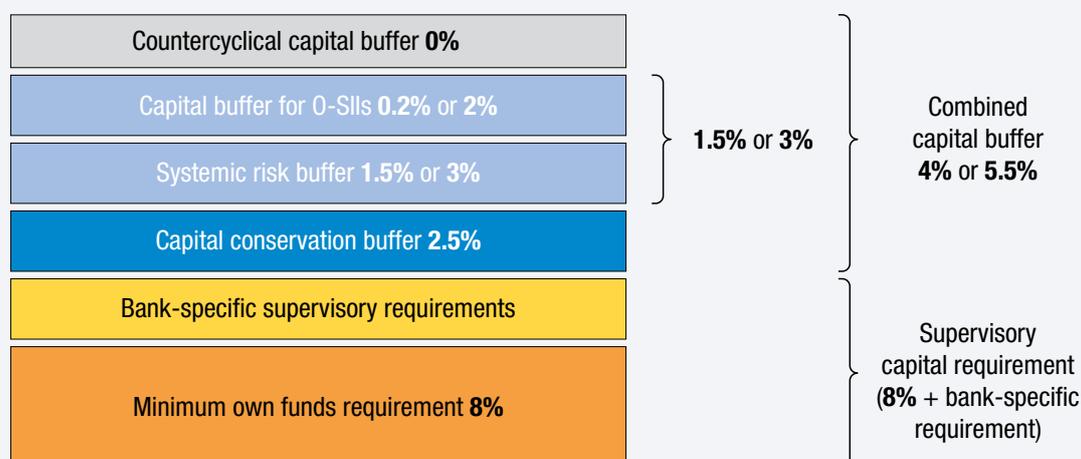
In [February 2018](#), the number of other systemically important credit institutions (O-SIIs) dropped to eight. The O-SII buffer stood at 0.2% or 2.0% of the total amount of risk exposure and was never effectively in use. Specifically, when the systemic risk buffer is applied to all exposures, as it is in Croatia, O-SIIs are only required to maintain the higher of the two capital buffers.

In 2018, the countercyclical capital buffer again stood at 0% of the total amount of risk exposure. Regular quarterly reviews of the development of cyclical systemic risks have shown that, despite the continued recovery in domestic credit activity, there is still no pressure requiring corrective action by the CNB. Hence, the required countercyclical capital buffer rate to be applied in 2019 was again estimated at zero.

In June 2018, the CNB performed the regular yearly identification of material exposures of credit institutions to third countries (non-EU countries) in line with [Recommendation ESRB/2015/1](#). As in 2017, only Bosnia and Herzegovina was identified as a third country material for the banking system of the Republic of Croatia. Despite a moderate increase of lending activity in Bosnia and Herzegovina, the growth thus far still cannot be considered excessive and there is currently no pressure that would require a countercyclical capital buffer to be imposed for exposures of Croatian credit institutions to Bosnia and Herzegovina.

In addition to the combined capital buffer of 4% or 5.5%, total capital requirements for banks include the maintenance of a minimum capital adequacy ratio of 8% and bank-specific supervisory requirements.

Figure 1 Capital requirements for all credit institutions total 12% and 13.5% respectively, to which bank-specific supervisory requirements are added



SOURCE: CNB.

b) Other CNB measures of macroprudential character

In addition to capital buffers, the Croatian National Bank uses other instruments of a macroprudential character to mitigate systemic risks. Measures aimed at risks associated with the real estate market are set out in the [Decision implementing the part of Regulation \(EU\) No 575/2013 pertaining to the valuation of assets and off-balance sheet items and the calculation of own funds and capital requirements](#). In this decision and its amendments, the CNB, among other things, imposed stricter criteria for the application of the preferential risk weight of 35% to exposures secured by residential real estate, while the risk weight for exposures secured by commercial immovable property was increased to 100%. Since the beginning of 2018, the [Decision on the additional criteria for the assessment of consumer creditworthiness and on the procedure of collection of arrears and voluntary foreclosure](#) has also been applied. Under the decision, credit institutions are required to determine the consumer's minimum costs of living, which may not total less than the part of the consumer's salary exempt from seizure, as the Foreclosure Act specifies that this portion may not be used for loan repayment. Thus a cap on the amount used for loan repayment was indirectly introduced for housing loans, depending on the consumer's income.

c) Reciprocity (mutual recognition) of measures adopted by other EU member states

In May 2018, the Croatian National Bank adopted the [Decision on the reciprocity of the macroprudential policy measure referred to in the Recommendation of the European Systemic Risk Board of 8 January 2018²](#), prescribing the reciprocation of the macroprudential policy measure adopted by the macroprudential authority of Finland, relating to exposures on the real estate market. Since the measure provides for a *de minimis* exemption where such exposures do not exceed one billion euro, the exemption currently applies to all banks in Croatia.

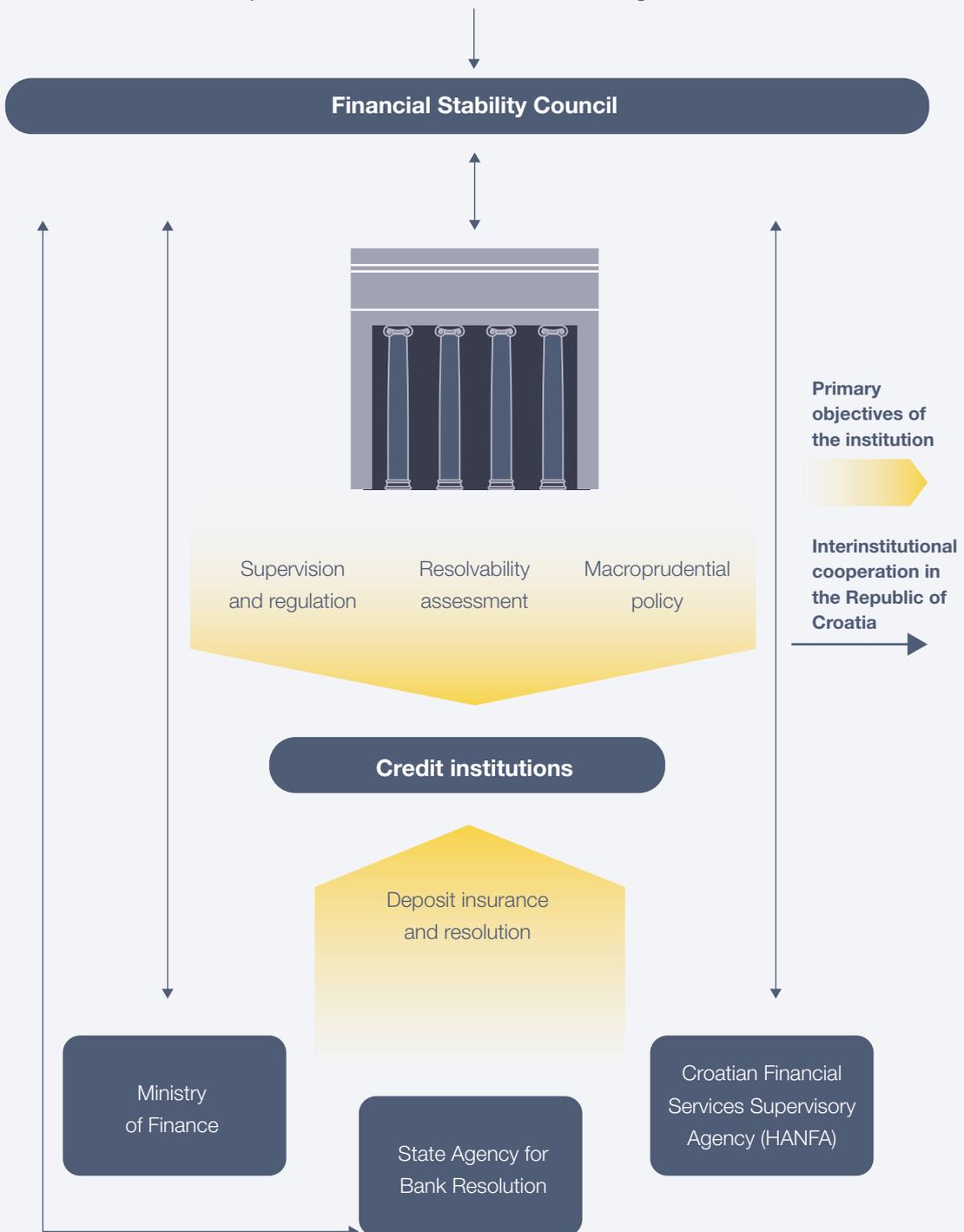
Cooperation in the field of macroprudential policy

Representatives of the CNB participated in the work of the Financial Stability Council, which held two meetings in 2018, chaired by the Governor of the CNB. At the meetings, members of the Council were presented with the

2 Recommendation amending Recommendation ESRB/2015/2 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures

The role of the CNB in financial stability

The Financial Stability Council is an interinstitutional body composed of the representatives of the CNB, the Croatian Financial Services Supervisory Agency (HANFA), the Ministry of Finance of the Republic of Croatia and the State Agency for Deposit Insurance and Bank Resolution (DAB). The Council is chaired by the Governor of the CNB, who manages its work.



main indicators of the stability of the financial system as well as with analyses and activities related to the implementation of macroprudential policy in the Republic of Croatia and the activities carried out with the aim of collecting the missing data on the real estate market. Representatives of the CNB also participated in the work of various committees and working groups of the European Systemic Risk Board, whose Steering Committee also includes the Governor of the CNB. Among the most significant topics were the analysis of the requests for reciprocation of macroprudential policy measures of other member states, risks to financial stability in the EU (particularly those associated with the real estate market, but also Brexit), macroprudential instruments for the prevention of non-performing loan growth in the balance sheets of banks and the exchange of experiences related to the application of macroprudential measures in member states, with a particular emphasis on measures aimed at loan users.

International reserves management

Due to their continued strong growth, the CNB's international reserves reached their second all-time high in 2018. The growth was mainly driven by substantial foreign currency purchases from banks, which ensured the stability of the domestic currency exchange rate and prevented an excessive strengthening of the kuna versus the euro. Despite a prolonged period of historically low interest rates and negative euro interest rates, international reserves management generated a positive result and an adequate level of income in 2018, while successfully fulfilling its key mandate – to ensure the safety and liquidity of international reserves.

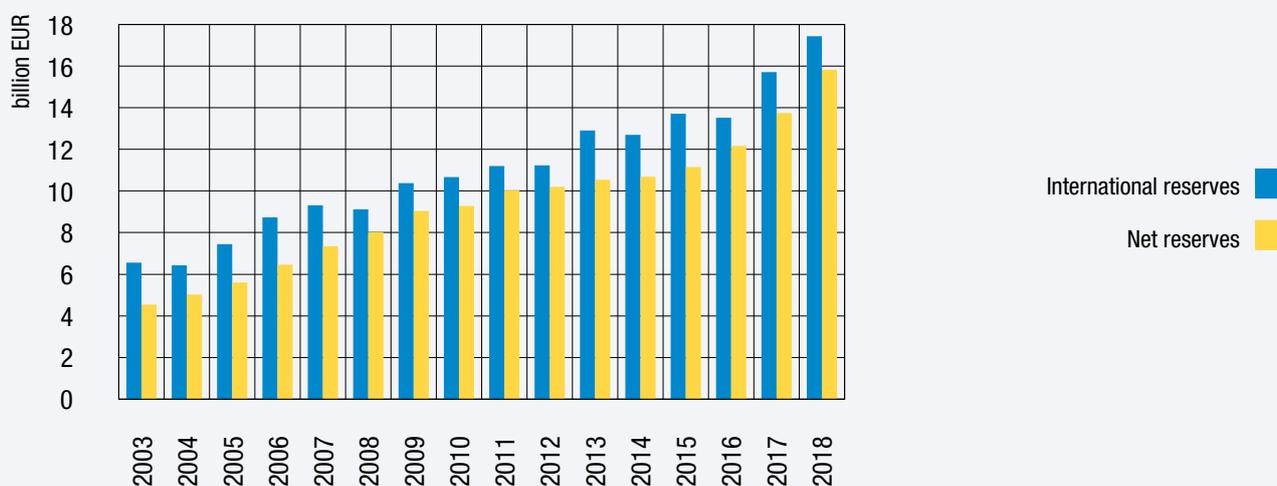
CNB international reserves in 2018

International reserves stood at EUR 17,438.8m at the end of 2018, up by EUR 1,732,9m (11.0%) from the end of 2017 (Figure 10). Net reserves, which exclude the funds of the Ministry of Finance and the European Commission, SDR holdings with the IMF and investments in repo operations, increased by EUR 2,084.8 m (15.2%), reaching EUR 15,820.0m.

The factors behind the international reserves growth in 2018 include foreign currency purchases from banks, earnings from reserves management and cross-currency gains resulting from the strengthening of the US dollar versus the euro, which increased the value of the dollar share of reserves expressed in the euro. On the other hand, the growth was reduced due to a lower level of repo agreements at the end of the year. Having been unaffected by the balance of repo operations, net international reserves grew more than gross reserves in 2018.

Figure 10 Strong growth in CNB international and net reserves continued in 2018

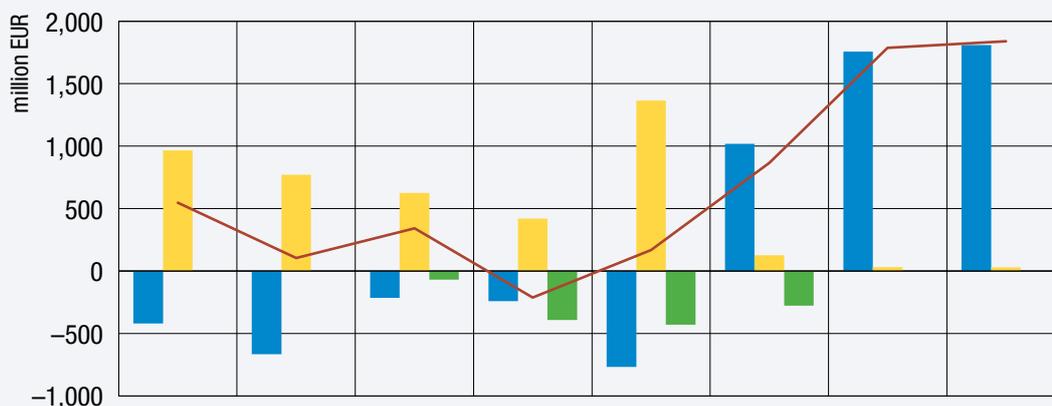
end of period, in billion EUR



SOURCE: CNB.

Figure 11 Substantial CNB purchase of foreign currency from banks, similar as in the previous year

in net amounts, from 2011 to 2018, in million EUR



■ Banks	-419.4	-666.3	-214.9	-240.2	-767.2	1,018.8	1,757.0	1,808.9
■ MoF	966.5	770.2	625.7	420.6	1,364.0	125.6	30.6	30.4
■ EC	-	-69.4	-	-392.2	-428.9	-277.8	-	-
— Total	547.1	103.9	341.3	-211.8	167.9	866.6	1,787.6	1,839.3

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

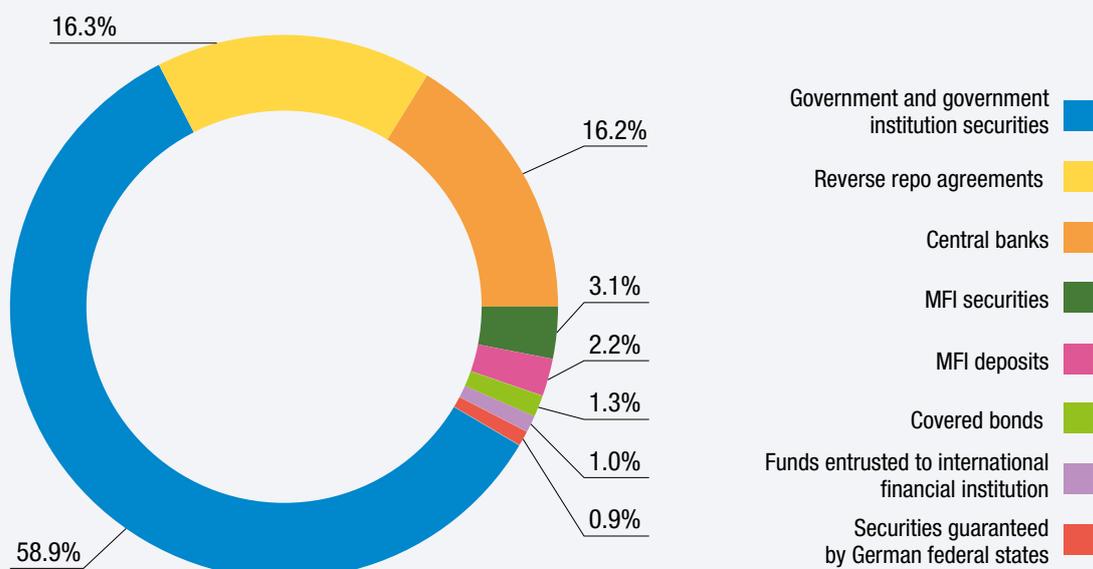
SOURCE: CNB.

In 2018, the CNB's net foreign currency purchases amounted to a record high of EUR 1,839.3m (Figure 11), with HRK 13.6bn of kuna liquidity created. The bulk of the foreign exchange transactions was accounted for by foreign currency purchases from banks (EUR 1,808.9m), while the remaining and smaller share was accounted for by net purchases from the Ministry of Finance (EUR 30.4m).

Structure of international reserves investment

International reserves, managed by the CNB independently and in line with its own guidelines, comprise held-for-trading portfolios, investment portfolios, funds entrusted for management to an international financial institution and foreign cash in the vault. The securities of governments and government institutions, reverse repo agreements and deposits with central banks accounted for the largest share in the structure of international reserves investment at the end of 2018 (Figure 12).

Figure 12 Investments in the safest instruments accounted for the largest share in the international reserves structure
shares in percentages, at the end of 2018



SOURCE: CNB.

In its international reserves management, the CNB is governed primarily by the principles of liquidity and safety.

International reserves are invested in financial institutions and in countries with an investment grade rating. The CNB applies restrictions to investments in individual financial institutions and countries and individual instruments, thus diversifying credit risk. At the end of 2018, almost half of the CNB's international reserves was invested in countries, banks and institutions within the two highest credit rating categories, or in the BIS and the IMF, or in foreign cash in the CNB's vault.

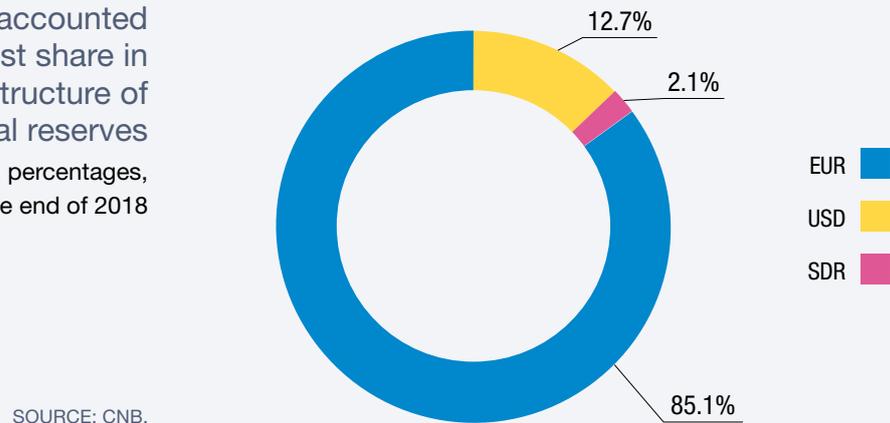
Currency structure of international reserves

In 2018, the currency structure of international reserves changed slightly in favour of the euro. The euro share was 85.1% at the end of 2018, compared with 83.2% at the end of 2017 (Figure 13). The US dollar share decreased from 14.5% to 12.7% and the share of SDRs dropped slightly from 2.3% to 2.1% over the same period. The greater share of the euro was due to the allocation of the total increase in reserves to the euro portfolio, as dollar investments and SDRs were kept stable.

Due to such a currency structure and the fact that international reserves account for almost all 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, and exchange rate differences have a direct impact on the final financial result in the CNB's Income Statement¹. The US dollar strengthened against the euro (and, consequently, against the kuna) in 2018, which led to an increase in international reserves in kuna terms and unrealised foreign exchange gains. However, as the kuna gained in strength against the euro in the same period, unrealised foreign exchange losses were calculated for the euro share of the reserves. Since these were higher than foreign exchange gains derived from the strengthening of the US dollar, total unrealised foreign exchange differences were negative: HRK –592m. This determined the financial result reported in the CNB's Income Statement, which

¹ According to the 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 covered from the CNB's general reserves.

Figure 13 Euro accounted for the largest share in the currency structure of international reserves shares in percentages, at the end of 2018



was HRK –468 m in 2018. This amount was covered from the CNB’s general reserves, which stood at HRK 11.3bn at 31 December 2017 and were mostly formed from foreign exchange gains generated in previous years. These reserves are used, among other things, as a buffer against currency risk and to preserve the CNB’s capital.

Financial markets and international reserves management results in 2018

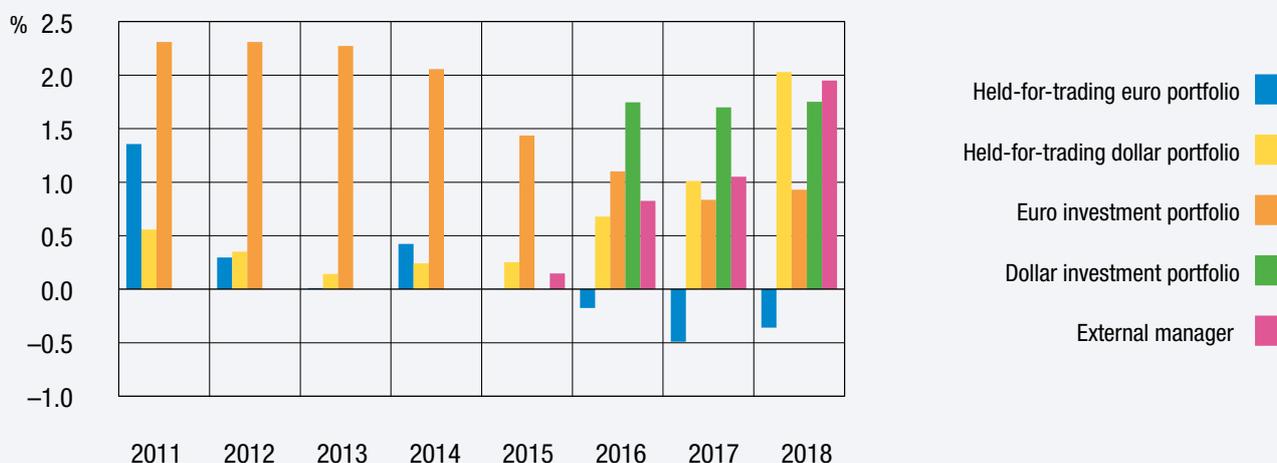
In 2018, financial markets were marked by high volatility, continued monetary policy tightening in the US, the end of the ECB’s asset purchase programme and the first signals of increasing interest rates. The increase in volatility was due to frequent trade war threats, political uncertainty in Europe and numerous geopolitical risks as well as to the general global economic slowdown and the absence of acceleration in inflation.

The ECB left interest rates unchanged, gradually curtailing the asset purchase programme during the year and ending it at the year-end. European yields remained low and were mainly negative, while the German yield curve was in negative territory for all maturities up to seven years late in the year.

The Fed on four occasions raised its benchmark interest rate range to between 2.25% and 2.50% and continued to reduce its balance sheet. American yields increased in 2018 over the whole yield curve, while the curve significantly flattened. Diverging monetary policy stances of the Fed and the ECB,

Figure 14 International reserve investment portfolios secure adequate rates of return in a period of historically low yields

year-on-year rates of return, in percentage



SOURCE: CNB.

high political uncertainties in Europe and expectations that European rates will not increase for a long period caused the euro to weaken against the US dollar.

In these conditions, and despite the continued unfavourable environment of a prolonged period of negative euro yields, the CNB ensured an adequate income from the investment of international reserves in 2018 as well. This was largely due to strategic and tactical decisions on international reserves management in the 2011–2018 period and ongoing adjustments of investment guidelines. The investments of net international reserves generated a total income of EUR 62.1m (HRK 460.9m) in 2018.

The entire euro portfolio of net reserves generated a rate of return of 0.18% in 2018, while the rate of return on the entire dollar portfolio stood at 1.88%. If held-for-trading and investment portfolios are observed separately, the euro held-for-trading portfolio generated a rate of return of –0.36%, while the dollar held-for-trading portfolio generated a rate of return of 2.03% in 2018. The euro investment portfolio yielded a return of 0.93%, while the dollar investment portfolio yielded 1.75% (Figure 14).

Held-for-trading portfolios, which account for approximately 58% of net reserves, have short average maturities and are used as a source of liquidity. Investment portfolios, which account for approximately 38% of net reserves, have longer average maturities and serve as a source of more stable long-term income.

In 2018, the rate of return on the US dollar funds entrusted for management to an international financial institution was 1.95%. The entrusting of funds to this international financial institution enabled additional diversification and knowledge-exchange in the field of investment management.

A detail in the Round Hall – skylight



Consumer protection

As part of its activities aimed at the protection of consumers – the users of credit institutions' products and services – and the improvement of their position, in 2018, the CNB focused on raising the awareness of the importance of consumer-related issues in credit institutions themselves. The CNB familiarised providers of financial and banking products and services with consumer rights by providing opinions on the application of regulations pertaining to consumer protection, organising workshops and bilateral meetings and exercising supervision.

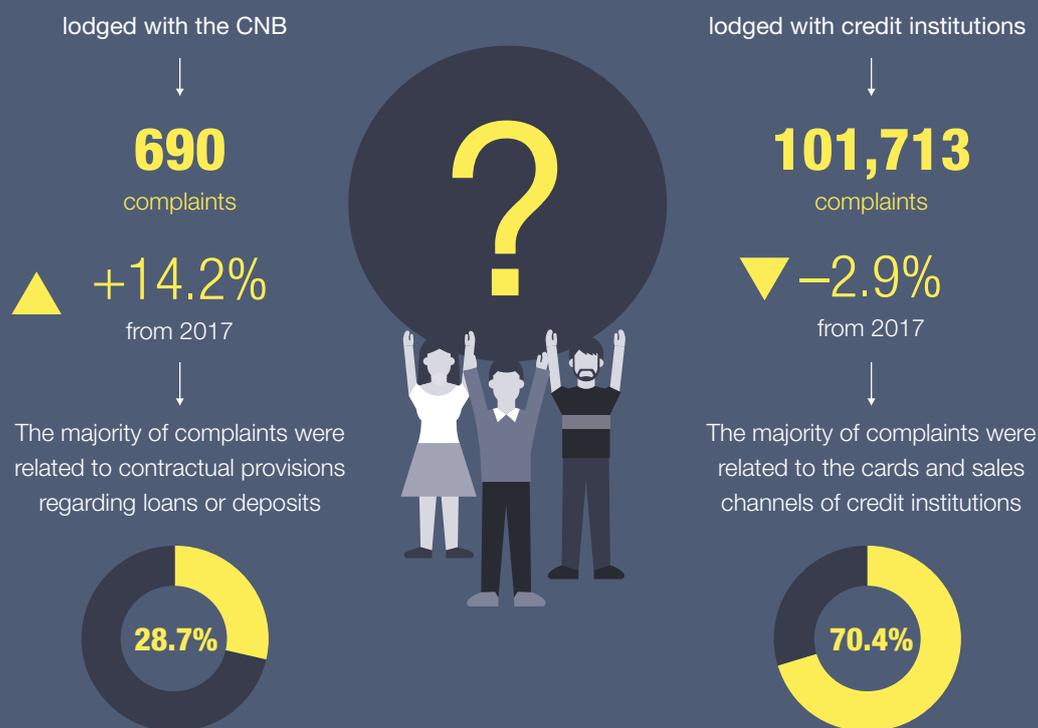
Most of the supervisory activities related to the application of legislation related to consumer protection were carried out in response to complaints received from consumers, followed by supervisory activities performed in response to information obtained through various questionnaires.

The CNB also continued its activities focused on raising consumer awareness concerning the offer of loans, associated costs and payment service fees as well as its financial education activities aimed particularly at young people, but also the general public.

Educational activities of the Croatian National Bank mostly focused on the young. Informational and educational presentations were held on the basics of banking and the development of money as well as banking operations. Lectures focusing on financial literacy were attended by a record total of 1,300 secondary school pupils and 101 teachers accompanying them.

Work on the harmonisation with EU regulations continued, as did numerous other activities aimed at improving the quality of consumer protection and developing good practices in providers of banking and financial services.

Number of consumer complaints



Complaints of consumers – natural persons, users of banking and financial services of credit institutions

The Credit Institutions Act prescribes the possibility of filing a notification of complaint to the central bank, i.e. in cases in which a consumer is not satisfied with the response received from a credit institution or in which the credit institution failed to reply. The CNB takes the subjects and/or the number of such complaints into account when performing regular supervision of credit institutions' activities. Depending on the subject of the complaint itself, the CNB responded to the consumer directly, or requested credit institutions to respond to their clients' forwarded complaints, with the obligation of sending copies of such responses to the CNB. As a rule, a credit institution's response was required in the case of complaints that were directly related to bilateral contractual relationships between a consumer and the credit institution.

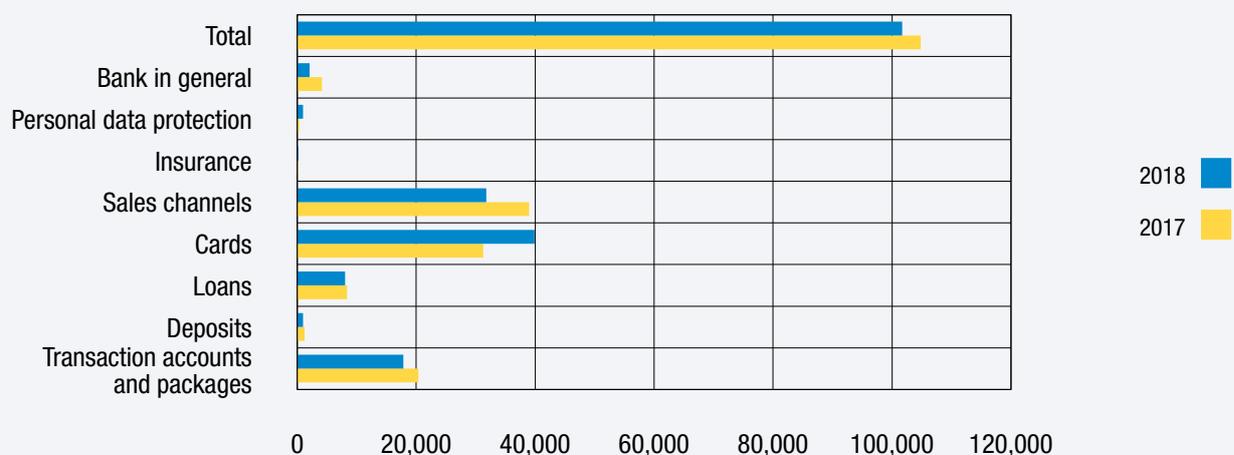
In 2018, the CNB received a total of 690 complaints, which means that their number increased by 14.2% from 2017. The highest proportion of complaints, or 28.7%, referred to the provisions of contracts governing loans or deposits,

followed by complaints related to payment accounts and cards, banking fees, seizure of assets and freezing of accounts and sold claims. Each group of complaints accounts for around 10% of the total number of complaints. Other complaints referred mainly to disputed business practices of credit institutions related to the informing of clients and the level and structure of contracted interest rates, and, to a smaller extent, to the amount of debt and types of information requested by credit institutions from their clients, etc.

Moreover, in 2018, the CNB continued with the semi-annual collection of statistical data on the types and the number of complaints filed with credit institutions by consumers. A total of 101,713 client complaints were recorded as having been received by credit institutions in 2018, which is 3% less than in 2017. The largest number of complaints in both 2017 and 2018 referred to cards and credit institutions sales channels, followed by complaints related to payment accounts and service packages and loans. The analysis of consumer complaints in 2017 and 2018 shows that most complaints received were financial complaints, referring, for example, to disputed debt amounts, incorrect payments and account statements. These are followed by complaints related to the functionality of the service used by clients, fees, manner of entering into contracts and general terms and conditions.

Complaints are analysed not only in relation to data from the previous period,

Figure 15 Statistics of consumer complaints against credit institutions



SOURCE: CNB.

but also according to the number and type for each credit institution. Where a significant increase in the number of complaints is established relative to the preceding periods, a more detailed examination is made. Depending on reasons established, the CNB defines further activities to be taken in relation to the credit institution with the aim of eliminating the cause of the increase in complaints – for example, CNB recommendations, supervisory measures, amendments to existing regulations and adoption of new regulations.

Supervision of the application of consumer protection laws within the competence of the CNB

As part of its regular supervisory activities related to the application of regulations in the field of consumer protection, in order to ensure the legality of the operation of institutions within its competence, the CNB issued 11 reports and one decision in 2018 as a result of identified illegalities in six credit institutions.

Furthermore, using a questionnaire, the CNB performed supervision of the harmonisation of existing practices of credit institutions with the requirements referred to in Guidelines on product oversight and governance arrangements for retail banking products published by the EBA (European Banking Authority) in 2016, in application since 3 January 2017. According to conclusions obtained from analysed responses, the initial level of harmonisation of credit institutions was estimated. The estimation was complemented by an analysis of policies and other internal bylaws of credit institutions, after which bilateral meetings were held with the aim of addressing the weaknesses established. By the end of 2018, meetings were held with six credit institutions and a schedule was established for meetings with other credit institutions.

Moreover, pursuant to the Decision on the necessary knowledge and competence of staff of credit institutions and credit intermediaries and on the

Pursuant to the Decision on the register of credit intermediaries, the CNB established and published the Register of credit intermediaries with head offices in the Republic of Croatia and the List of credit intermediaries from other member states.

requirements and the procedure for authorisation to provide credit intermediation services (OG 107/2017), the CNB issued authorisations to provide credit intermediation services to 20 credit intermediaries. The CNB also supervised the training procedures organised by credit institutions for the staff of credit intermediaries with which they have entered into agreements on intermediation with regard to consumer housing loans. The training programmes developed by credit institutions were also verified within the supervision process, by which the training of staff of the credit institution that developed the programme was also indirectly verified. The staff referred to is the staff regularly engaged in the offering and/or sale of consumer housing loans.

Finally, pursuant to the Decision on the register of credit intermediaries (OG 107/2017), the CNB established and published the Register of credit intermediaries with head offices in the Republic of Croatia and the List of credit intermediaries from other member states.

Issuing opinions on applicable regulations and preparation of new regulations in the field of consumer protection

In order to ensure a balanced implementation of applicable regulations, in 2018, the CNB continued its practice of giving opinions and responding to queries regarding the individual provisions of applicable regulations governing consumer protection, the implementation of which it supervises. In 2018, such opinions were mainly related to the Act on Consumer Housing Loans which entered into force in October 2017 and the subordinate legislation that the CNB adopted and published under this Act in the course of 2017. To a smaller extent, the opinions also referred to the interpretation of the provisions of the Credit Institutions Act regarding consumer protection. A total of 23 opinions were issued, of which most referred to the interpretation of open issues related to the manner of calculation and the maximum allowed level of the effective interest rate on housing loans and other consumer loans, consumer creditworthiness, requirements related to the knowledge and competence of the service provider's staff and the structure and contents of the loan repayment plan.

In order to comply fully with the provisions of Directive 2014/17/EU on credit agreements for consumers relating to residential immovable property and amending Directives 2008/48/EC and 2013/36/EU and Regulation (EU) No 1093/2010, transposed into the Croatian legal system through the Act on

Consumer Housing Loans, the CNB adopted two subordinate regulations in 2018.

1. The *Decision on remuneration policies and practices related to the provision of banking products and/or services to consumers* (OG 106/2018) imposes a new requirement on credit institutions and credit intermediaries to develop and apply remuneration policies and practices taking into consideration the rights and interest of consumers. The objective behind the introduction of this requirement is to prevent damage to the consumer. The Decision, among other things, transposes the requirements set out in the Guidelines on remuneration policies and practices related to the sale and provision of retail banking products and services (EBA/GL/2016/06). Under the Guidelines, the aforementioned service providers are required to apply these requirements to their sales staff, i.e. natural persons working for an institution and directly offering or providing products and/or services to consumers as well as persons directly or indirectly managing them.
2. The *Decision on the minimum content of residential real estate records* (OG 109/2018), prescribing the minimum content of records on residential real estate in agreements on consumer housing loans and its characteristics, to be kept by credit institutions and credit unions

Moreover, in late 2018, the CNB launched a public discussion on the draft Decision on amendments to the Decision on the necessary knowledge and competence of staff of credit institutions and credit intermediaries and on the requirements and the procedure for authorisation to provide credit intermediation services, prepared in 2017. The amendments were proposed with the aim of improving the procedure for issuing the authorisation to provide credit intermediation services in relation to consumer housing loans.

Furthermore, pursuant to the Act on the Comparability of Fees Related to Payment Accounts, Payment Account Switching and Access to Payment Accounts with Basic Features (OG 70/2017), in 2018, the CNB adopted the Decision on the most representative services linked to a payment account (OG 42/2018). These are the services that are most frequently used by consumers and that expose consumers to the largest total or individual costs, such as maintaining the payment account, credit transfer, direct debit and standing order. Pursuant to Article 5, paragraph (9) of the aforementioned Act,

the CNB was obliged to adopt a subordinate regulation establishing a list of the most representative services linked to payment accounts for the Republic of Croatia, as defined in this Decision. Based on the Decision, the CNB published a comparison of fees aimed at consumers, covering a comparison of applicable fees for the most frequently used payment services. The comparison is made based on the data delivered to the CNB by credit institutions, which are also responsible for their accuracy.

Financial education

In 2018, the Croatian National Bank continued its educational activities, which were, for the most part, aimed at the young. Informational and educational presentations were held for the young, focusing on topics such as the basics of banking, the development of money and banking operations. Lectures aimed at enhancing financial literacy were attended by a record total of 1,300 secondary school pupils and 101 teachers accompanying them. The public showed great interest in the tasks and the work of the Croatian National Bank and the various elements of its mandate: a total of 3,369 participants were included in various educational activities related to the CNB's work and topics related to economic and financial literacy.

The aforementioned educational lectures were organised throughout the year, particularly during Global and European Money Week, held from 12 to 18 March 2018 under the motto "Money Matters Matter". The central event of the week was the debate "The Euro in Croatia – PROS and CONS", organised by the CNB in cooperation with members of the Croatian Debate Society. The debate was live streamed on the CNB's website and Facebook page.

In order to raise the level of financial literacy of Croatian citizens in general, three educational brochures have been compiled: "Payment Accounts", "Loans" and "Savings", available in print and electronic form and downloadable from the CNB's website. The CNB published a series of most frequently

The CNB's website and Facebook page are used to publish the most frequently asked questions and answers related to the rights of users of credit institution services.

asked questions related to consumer rights of users of credit institution services and answers to them, which can be accessed on the CNB's website and Facebook page.

CNB representatives participated in various meetings and round tables related to financial literacy, organised by the Ministry of Education, Ministry of Economy, Entrepreneurship and Crafts, Association of Croatian Pension Funds Management Companies and Pension Insurance Companies, Zagreb Faculty of Economics and Business, Hanza Media, and so on, as well as in the project "Consumer Rights Week", organised by the Ministry of Economy, Entrepreneurship and Crafts.

Large student debate "The Euro in Croatia – PROS and CONS" was the central event to mark Global Money Week at the CNB.

Furthermore, in the last quarter of 2018, the Organisation for Economic Cooperation and



Development (OECD) and the Ministry of Finance of the Kingdom of the Netherlands launched a five-year programme with the aim of providing technical assistance in the area of financial education. The project is managed by OECD and its platform INFE (International Network for Financial Education), and in addition to Croatia, it includes six more countries (Bulgaria, Georgia, Moldova, Montenegro, North Macedonia and Romania). The OECD, as the umbrella organisation with extensive global experience in financial education projects, launched the project to define the key participants and the current level and type of financial education activities performed in the countries participating in the project. Croatia entered the project to cooperate with the aforementioned institutions and bodies in finding adequate solutions for improving the financial literacy of its citizens, to which the Croatian National Bank contributes significantly.

Inter-institutional cooperation

CNB representatives participate in the work of EU institutions and bodies in preparing regulations within the scope of activity of central banks, including the European Banking Authority (EBA). In 2018, such activities included, among other things, the discussion of topics related to consumer protection in the area of FinTech and the convergence of supervisory practices of central banks and other national competent authorities in the adoption and application of regulations aimed at protecting and improving the position of consumers in credit and other financial institutions. The working group for the convergence of supervisory practices at the EBA, which includes the CNB, compiled a questionnaire to gain an overview of national practices and the alignment with the Guidelines on product oversight and governance arrangements for retail banking products. The practices of the five largest banks in each of the Member States participating in the activities of the working group were analysed based on the questionnaire. The results of the analysis of questionnaire responses and the accompanying documentation provide a basis for further convergence and improvement of supervisory practices in all Member States. Furthermore, Guidelines on complaints-handling for the securities (ESMA) and banking (EBA) sectors were issued as a result of the cooperation between the EBA and the European Securities and Markets Authority (ESMA). The Guidelines are focused on improving the protection of all users of banking and financial services in order to harmonise the complaints-handling procedures in all EU Member States.

In addition to participating in the work of EU institutions and working bodies, CNB representatives also participated in the South-Eastern European Regional Working Group for Youth Financial Education and Financial Inclusion. At the national level, they took part in the work of the National Consumer Protection Council set up at the Ministry of Economy, Entrepreneurship and Crafts and in the work of the operating working group responsible for monitoring the implementation of measures and activities in the field of financial education, set up at the Ministry of Finance.

Other activities

For the purpose of providing better information to consumers, a table with information on the current offer of kuna loans of all credit institutions is regularly updated on the CNB website as the “Information list with the offer of loans to consumers”; it is also accessible via a mobile application.

The CNB also issued the Recommendation to credit institutions regarding the delivery of contractual documentation to consumers. The recommendation was issued in response to numerous complaints of consumers recently received by the CNB regarding credit institutions that refuse to deliver the documentation related to loan agreements at the consumers’ request after the loans have been repaid in full. The aim of the recommendation was to encourage credit institutions to place contractual documentation at the consumers’ disposal after the contractual relationship ends, even though they are not required to do so by law, in order to facilitate the establishment of all relevant facts in the contractual relationship.

Bearing in mind the importance of transparency and of the harmonised application and interpretation of regulations from the CNB’s scope of activity, in 2018, the CNB responded to numerous queries from the press and organised workshops and bilateral meetings for entities within its area of competence.

Research

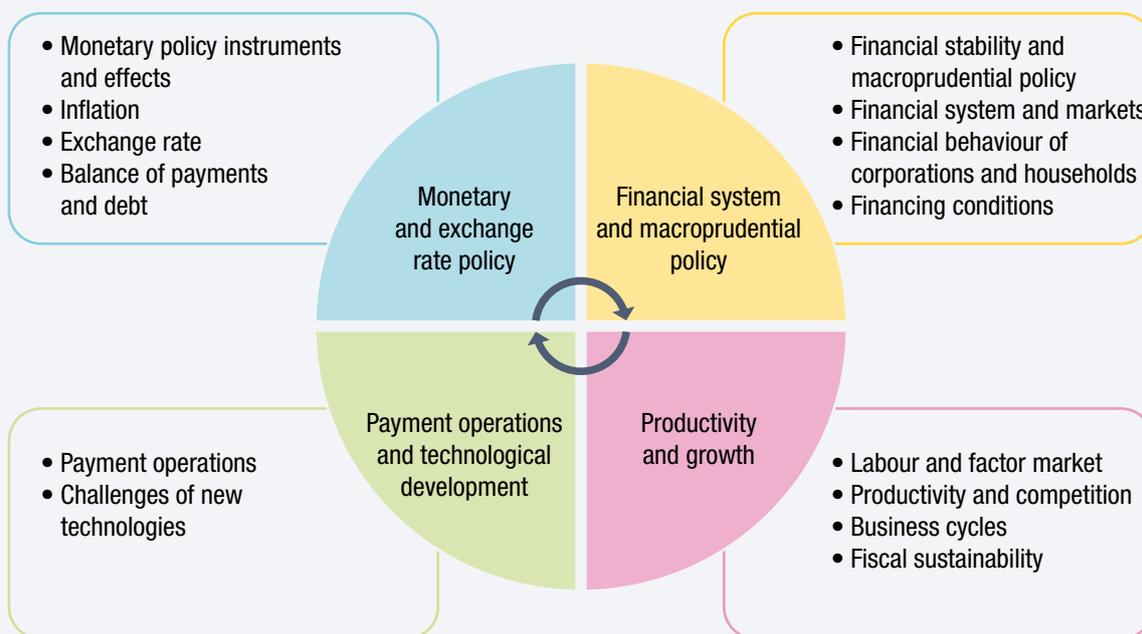
In 2018, the Croatian National Bank presented its plan and programme of research priorities for the first time. The past two years saw intensified activity in research preparation and publication, as evident in the number of published scientific and professional papers authored by CNB employees. Last year, Eurostat recognised the CNB's Research Area as a research entity.

Research objectives and areas of the Croatian National Bank

The Croatian National Bank conducts research in order to fulfil its objectives and tasks. The bulk of the CNB's research supports the implementation of monetary policy and the maintenance of financial stability. The Bank publishes most of its research findings so that they are accessible to the public. The quality of published papers increases the channels of activity and the visibility of the central bank and contributes to the continuous development of its analytical capacities.

Priority research areas of the CNB may be classified into four groups. The first area focuses on attaining the main objective – price stability. The area comprises topics related to the instruments and effects of monetary policy, inflation and exchange rate movements and international financial relations. The second research area is dedicated to financial stability. Financial systems and markets are analysed for that purpose, as are the financial behaviour of corporations and households, their access to financing and the long-term sustainability of their financial position. The third area concentrates on the developments in productivity and the sources of growth of the Croatian economy, with an emphasis on cyclical movements. In particular, the area focuses on fiscal sustainability as an important determinant of macroeconomic stability. The fourth priority area comprises payment operations and challenges of technological innovations, particularly in the financial system.

Figure 16 Priority research areas of the Croatian National Bank



SOURCE: CNB.

Research activities in 2018

Research at the CNB is carried out independently within the central bank, in cooperation with representatives of the academic community and within working groups and research networks of the European System of Central Banks (ESCB) and the European Systemic Risk Board (ESRB).¹ A special CNB working group is focused on monitoring technological changes in the area of finance with the aim of fostering technological development and competitiveness in the financial sector coupled with adequate consumer protection. FinTech comprises technological innovations in financial services that may result in new business models, applications, processes or products, and the introduction of which may have a material influence on the providers and users of financial services.

¹ In the course of 2018, CNB employees participated in the following networks: Inflation Persistence Network, Wage Dynamics Network, Task Force on Exchange Rate Pass Through, Task Force on Potential Output, Wage Expert Group, Household Finance and Consumption Network and Competitiveness Research Network within the ESCB and the Assessment Team on National Macroprudential Measures, Assessment team on the Assessment of Cross-border Effects of and Voluntary Reciprocity for Macroprudential Policy Measures and Task Force on Stress Testing within the ESRB.

Research findings are published in presentations and publications.

As part of its activities aimed at improving research and cooperation with economists in Croatia, the CNB continued to organise economic workshops where ongoing new research by CNB employees and other interesting studies of foreign lecturers were presented. Economic workshops are open to the academic and professional public. A total of seven economic workshops were held in 2018, with presentations by authors from the CNB and international institutions.

The Croatian National Bank organises scientific conferences as well. In 2018, the Bank organised two economic conferences. In June 2018, the traditional 24th Dubrovnik Economic Conference was held, bringing together economists from central banks, international financial organisations and the scientific community. The conference also included the Young Economists Seminar. In November, the second Research Conference of the Croatian National Bank was held, dedicated to presenting the findings of CNB research to the domestic scientific community. At last year's conference, the Bank presented its research programme and findings and an international panel discussion on the role of research in central banks was held. CNB employees presented their papers in numerous scientific meetings and conferences.

In 2018, the CNB presented its plan and programme of research priorities for the first time.

The Croatian National Bank issues two types of publications in which it publishes the first research findings obtained by its employees: [Working Papers](#) and [Surveys](#). In 2018, a total of ten new papers were published, of which four were working papers and six were surveys. CNB employees also publish papers in the publications of the [European Central Bank](#) and other central banks.

Some of the papers were published in scientific journals as well. In 2018, ten papers authored by CNB employees were published in scientific journals, of which seven were published in domestic, and three in foreign journals.

Based on the Bank's research results, in 2018 Eurostat recognised the CNB's Research Area as a research entity.

Economic workshops of the Croatian National Bank in 2018

Workshop number	Authors	Title	Date
21 st CNB Economic Workshop	Helen Louri (Greece)	NPLs IN THE EURO AREA: ARE CORE-PERIPHERY BANKING MARKETS FRAGMENTED?	31 January 2018
22 nd CNB Economic Workshop	Tanja Broz (Faculty of Economics and Business Zagreb) and Tomislav Ridzak (CNB)	LENDING ACTIVITY AND CREDIT SUPPLY IN CROATIA DURING THE CRISIS	23 February 2018
23 rd CNB Economic Workshop	Dubravko Mihaljek (BIS)	KONVERGIRAMO LI EUROPSKOM PROSJEKU?	8 March 2018
24 th CNB Economic Workshop	Nicolas Veron (Bruegel)	THE FRANCO-GERMAN EURO REPORT: A REALISTIC PLAN FOR EURO AREA REFORM	28 March 2018
25 th CNB Economic Workshop	Ivana Draženović, Marina Kunovac and Dominik Pripuzić (CNB)	DYNAMICS AND DETERMINANTS OF MIGRATION – THE CASE OF CROATIA AND EXPERIENCE OF NEW EU MEMBER STATES	22 May 2018
26 th CNB Economic Workshop	Mario Bambulović and Miljana Valdec (CNB)	DETERMINANTS OF CREDIT CYCLE – THE CASE OF CROATIA	13 September 2018
27 th CNB Economic Workshop	Davor Kunovac and Karlo Kotarac (CNB)	CIJENE STAMBENIH NEKRETNINA U HRVATSKOJ	13 December 2018

Overview of selected papers according to priority areas

Priority area 1: Monetary and exchange rate policy

Bokan, N., and R. Ravnik (2018): Quarterly Projection Model for Croatia, CNB Surveys, S-34

Brkić, M., and A. Šabić (2018): Is the Euro the Optimum Currency for Croatia: An Assessment Using the Optimum Currency Area Theory, *Privredna kretanja i ekonomska politika*, 27(1), pp. 9-70 (also published in CNB Surveys, S-30)

Dumičić, M., I. Ljubaj, and A. Martinis (2017): Persistence of Euroisation in Croatia, CNB Surveys, S-31

Gattin-Turkalj, K., and I. Ljubaj (2017): CNB Transparency and Monetary Policy, CNB Surveys, S-25

Pufnik, A. (2018): Effects of the Adoption of the Euro on Consumer Prices and Inflation Perceptions: An Overview of Experiences and Assessment of the Possible Impact in Croatia, *Privredna kretanja i ekonomska politika*, 27(1), pp. 129-159 (also published in CNB Surveys, S-27)

Comunale, M., and D. Kunovac (2017): Exchange Rate Pass-Through in the Euro Area, ECB Working paper No 2003 (also published in CNB Working Papers, W-46)

Bukovšak, M., G. Lukinić Čardić, and N. Pavić (2018): Structure of Capital Flows and Exchange Rate: the Case of Croatia, *Empirica*, doi: <https://doi.org/10.1007/s10663-018-9406-x> (also published in CNB Working Papers, W-52)

Ranilović, N. (2017): The Effects of Economic Integration on Croatian Merchandise Trade: A Gravity Model Study, *Comparative Economic Studies*, September 2017, 59(3), pp. 382-404 (also published in CNB Working Papers, I-50)

Priority area 2: Financial system and macroprudential policy

Dumičić, M. (2018): Effectiveness of macroprudential policies in Central and Eastern European countries, *Public Sector Economics*, 42(1), pp. 1-19 (also published in CNB Working Papers, W-48)

Dumičić, M. (2017): A Brief Introduction to the World of Macroprudential Policy, *Journal of Central Banking Theory and Practice*, 6(1), pp. 87-109 (also published in CNB Surveys, S-18)

- Kraft, E., and I. Huljak (2018): How Competitive is Croatia's Banking System? A Tale of Two Credit Booms and Two Crises, CNB Working Papers, W-54
- Delalić, A., M. Ćurković, and J. Antić (2018): The Croatian Banking System Total Assets Concentration Dynamics: Performing a Variety of Inequality Measures, *Croatian Review of Economic, Business and Social Statistics*, 4(1), pp. 14-26
- Dumičić, M., and I. Ljubaj (2018): Delayed Credit Recovery in Croatia: Supply or Demand Driven?, *Journal of Central Banking Theory and Practice*, 7(1), pp. 121-44 (also published in CNB Working Papers, W-45)
- Bambulović, M., I. Huljak, and A. Kozul (2017): Testing Out the Disciplinary Role of Debt in Croatian Banks, *Croatian Review of Economic, Business and Social Statistics*, 3(1), pp. 45-62
- Rosan, M. (2017): Exposure of the Private Non-financial Sector to Interest Rate Risk: Analysis of Results of the Survey on Interest Rate Variability, CNB Surveys, S-24
- Grebenar, T. (2018): Behavioural Model of Assessment of Probability of Default and the Rating of Non-Financial Corporations, CNB Working Papers, W-56
- Broz, T., and T. Ridzak (2017): Lending Activity and Credit Supply in Croatia during the Crisis, *Journal of Policy Modeling*, Vol. 39(6), pp. 1102-1116
- Martinis, A., and I. Ljubaj (2017): Corporate Debt Overhang in Croatia: Micro Assessment and Macro Implications, CNB Working Papers, W-51
- Pintarić, M. (2016): What Is the Effect of Credit Standards and Credit Demand on Loan Growth? Evidence from the Croatian Bank Lending Survey, *Comparative Economic Studies*, 58(3), pp. 335-358
- Kunovac, D., and N. Pavić (2018): Can the Adoption of the Euro in Croatia Reduce the Cost of Borrowing?, *Privredna kretanja i ekonomska politika*, 27(1), pp. 71-94 (also published in CNB Surveys, S-28)
- Kunovac, D., and R. Ravnik (2017): Are sovereign credit ratings overrated?, *Comparative Economic Studies*, 59(2), pp. 210-242 (also published in CNB Working Papers, W-47)
- Bašić, I. (2017): Supervisory and Statistical Granular Data Modelling at the Croatian National Bank, *ECB Statistics Paper*, No. 25

Priority area 3: Productivity and growth

- Draženić, I., M. Kunovac, and D. Pripuzić (2018): Dynamics and Determinants of Emigration: the case of Croatia and the Experience of new EU Member States, *Public Sector Economics* 42(4), pp. 415-447
- Kunovac, M. (2018): Determinants of Labour Cost Adjustment Strategies during the Crisis – Survey Evidence from Croatia, CNB Working Papers, W-42
- Valdec, M., and J. Zrnc (2018): Characteristics of Croatian Manufacturing Exporters and the Export Recovery during the Great Recession – the CompNet Trade Module Research Results, CNB Surveys, S-35
- Vidaković Peruško, I., K. Kovač, and M. Jošić (2018): Croatia in Global Value Chain, CNB Surveys, S-32
- Baňbura, M., M. Albani, G. Ambrocio, D. Bursian, G. Buss, J. de Winter, M. Gavura, C. Giordano, P. Júlio, J. Le Roux, M. Lozej, S. Malthe-Thagaard, J. R. Maria, C. Martínez Carrascal, P. Meinen, N. Michail, D. Papageorgiou, S. Pool, R. Ravnik, L. San Juan del Peso, M. Tóth, and G. Zevi (2018): Business investment in EU countries, *ECB Occasional Paper*, No. 215
- Valdec, M., and J. Zrnc (2018): Microeconomic Aspects of Productivity Developments during the Great Recession in Croatia – the CompNet Productivity Module Research Results, CNB Surveys, S-22
- De Jong, J. F. M., M. Ferdinandusse, and J. Funda (2018): Public capital in the 21st century: as productive as ever? *Applied Economics*, 50(51), 5543-5560, <https://doi.org/10.1080/00036846.2018.1487002>
- Vetlov, I., M. Ferdinandusse, J. De Jong, and J. Funda (2017): The Effect of Public Investment in Europe: a Model-Based Assessment, *ECB Working Paper Series No 2021*

Jovičić, G. (2017): Estimating Potential Growth and Output Gap in Croatia, CNB Surveys, S-29

Đozović, E. (2017): Price Competitiveness of the Manufacturing Sector – a Sector Approach Based on Technological Intensity Level, CNB Survey, S-23

Kunovac, D., M. Mandler, and M. Scharnagl (2018): Financial Cycles in Euro Area Economies: A Cross-Country Perspective, Deutsche Bundesbank Discussion Paper No. 04/2018 (also published in CNB Working Papers, W-55)

Rünstler, G., H. Balfoussia, L. Burlon, G. Buss, M. Comunale, B. De Backer, H. Dewachter, P. Guarda, M. Haavio, I. Hindrayanto, N. Ivanov Iskrev, I. Jaccard, D. Kulikov, D. Kunovac, C. Lenarcic, M. Lequien, M. Lozej, M. Mandler, D. Papageorgiou, J. Pedersen, G. Perez-Quiros, A. Rannenberg, E. Rots, M. Scharnagl, and P. Welz (2017): Real and Financial Cycles in EU countries: Stylised Facts and Modelling implications, ECB Occasional Paper No. 205

Čobanov, A. (2018): Seasonal Adjustment of Time Series and Calendar Influence on Economic Activity, CNB Surveys, P-40

Bukovšak, M., A. Čudina, and N. Pavić (2018): The Effects of the Euro Adoption in Croatia on International Trade and Foreign Direct Investments, *Privredna kretanja i ekonomska politika* 27(1), pp. 95-28 (also published in CNB Surveys, S-26)

Kotarac, K., D. Kunovac, and R. Ravnik (2017): Coherence of Business Cycles and Economic Shocks between Croatia and Euro Area Member States, CNB Working Papers, W-53

Jovičić, G., and D. Kunovac (2017): What is Driving Inflation and GDP in a Small European Economy: The Case of Croatia, CNB Working Papers, W-49

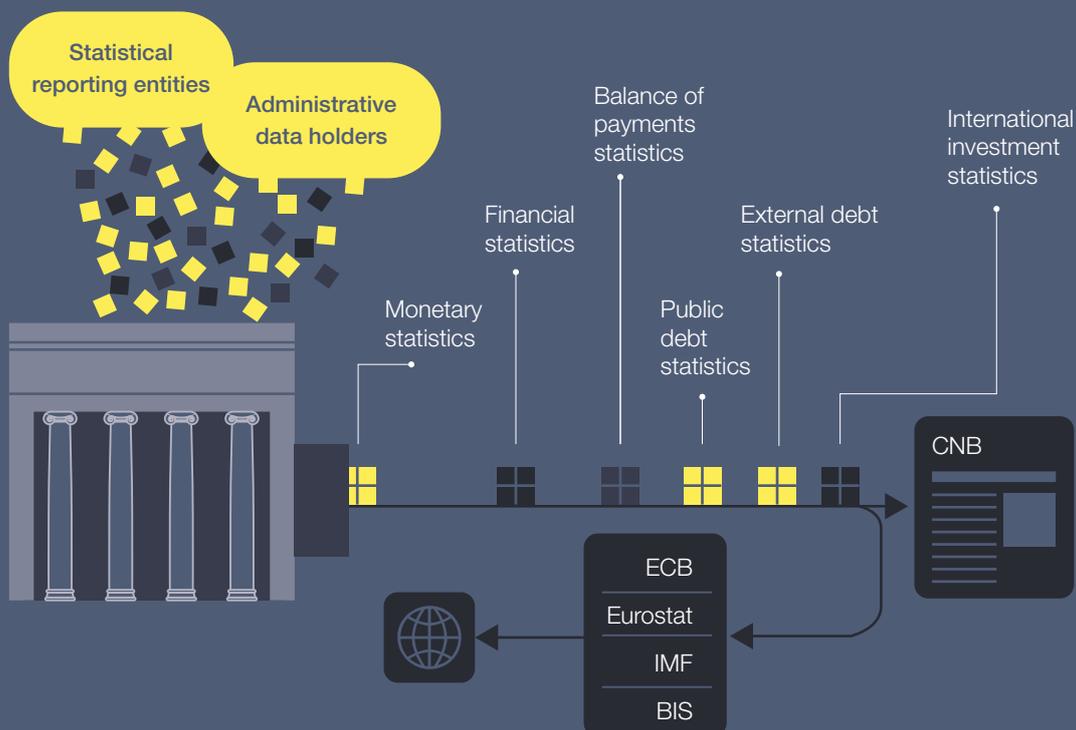
Statistics

The main purpose of the statistics function is to support monetary and macroprudential policies and other central bank tasks. In order to achieve this, the content, level of detail, precision and timeliness of statistical indicators need to be continuously improved. In 2018, the level of detail of the indicator of general government debt from 1995 onwards was improved, as were the balance sheet indicators of corporate assets and liabilities. The quality of original data and the reliability of evaluation for the calculation of numerous international relations indicators were perfected. As regards new statistical research, the findings of the Survey on the Access to Finance of SMEs were published and the data collected by the Household Finance and Consumption Survey were processed in 2018. The several-year infrastructure projects aimed at establishing a granular credit database and a business demography register were continued.

Aggregate statistics were improved, survey sources strengthened and the development of microdata infrastructure was continued

Along with the Croatian Bureau of Statistics, the Croatian National Bank is the key provider of official statistics in the Republic of Croatia. The Bank 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, which includes monetary statistics, financial statistics, balance of payments statistics, external debt and international investments statistics and public debt statistics. As part of its statistics function, the Bank sends indicators to the ECB, Eurostat, IMF and BIS to be published in publicly accessible databases for multiple countries, serving as a basis for macroeconomic policies and research.

Data collection, processing and publication



** The data referred to here are collected and processed under the Official Statistics Act, in line with the multi-annual programme and the annual implementation plan of statistical activities of the Republic of Croatia.*

In addition to being published on the CNB website, the data from the official statistics of the Republic of Croatia are delivered to supranational competent authorities such as the ECB, Eurostat, IMF and BIS to be collected and published in publicly accessible databases at multiple country level. The aforementioned statistical data, collected at national and supranational levels, serve as a basis for the shaping of current and future macroeconomic policies and for future research.

In addition to the official statistics of the Republic of Croatia pertaining to the CNB's area of competence, the CNB statistics function includes the publishing of payment statistics, monetary operation statistics and statistics for supervisory purposes. The data included in the statistics mentioned above are collected and processed in other functional organisational units of the CNB. Systematised data from the previously mentioned individual statistical areas are published in regular CNB publications.

The main purpose of the statistics function is to support monetary and macroprudential policies and other central bank tasks. In order to improve the content, the level of detail and the accessibility of statistical indicators, methods of collection, processing, analysis and publication must be continuously and consistently improved. Several such development projects were carried out in 2018.

Aggregate statistics on public debt, quarterly financial accounts, tourism revenues and foreign income and transfers were improved, completed and reconstructed

As of 2018, public debt can be monitored on a consolidated basis, as can domestic government debt which excludes the mutual debts and claims of general government units. Public debt indicators are also available on a non-consolidated basis, and published indicators enable the calculation of indicators of a wider coverage of debt, which includes public enterprises. Furthermore, general government debt data since the end of 1995 have been reconstructed, facilitating the recording of fiscal developments in Croatia over a longer period of time and increasing the comparability with other EU countries. General government debt is also regularly recorded in line with the EC methodology to meet the Maastricht criterion, under which government debt may not exceed 60% of GDP.

Quarterly financial accounts are the primary source revealing mutual financial flows between the household, corporate, financial institution and foreign sectors. In 2018, the limits of flows between the government and the non-financial corporate sector were improved in the part in which they relate to corporate debt assumed by the government or to concessions and public-private partnerships.

The main purpose of the statistics function is to support monetary and macroprudential policies and other central bank tasks.

Tourism revenues are key statistics for the calculation of balance of payments and GDP, collected, among other methods, by a detailed survey of passengers at road border crossings, airports and harbours. A continuous improvement of the quality of source data and assessments based on them is key for the

reliability and precision of such data. Several activities were performed to that end in 2018. The statistics of wages and pensions earned abroad as well as personal transfers (worker remittances, gifts, grants and gifts from abroad) and external equity and debt relations were improved as well.

Further development of infrastructural projects aimed at establishing granular databases

The Register of Institutions and Affiliates Data (RIAD) in Croatia, which is gradually turning into a single register of all legal persons in the Republic of Croatia (RIAD 4.0), is a key infrastructural statistical project whose development began in 2018. The data from the Register are used for the delivery and the control of data on legal persons in Croatia in the ECB's Register of Institutions and Affiliates in the whole of the EU (ECB-RIAD). It also enables a systematic overview of changes to the population of enterprises in Croatia and is used for other purposes as well, such as the recording of business demography.

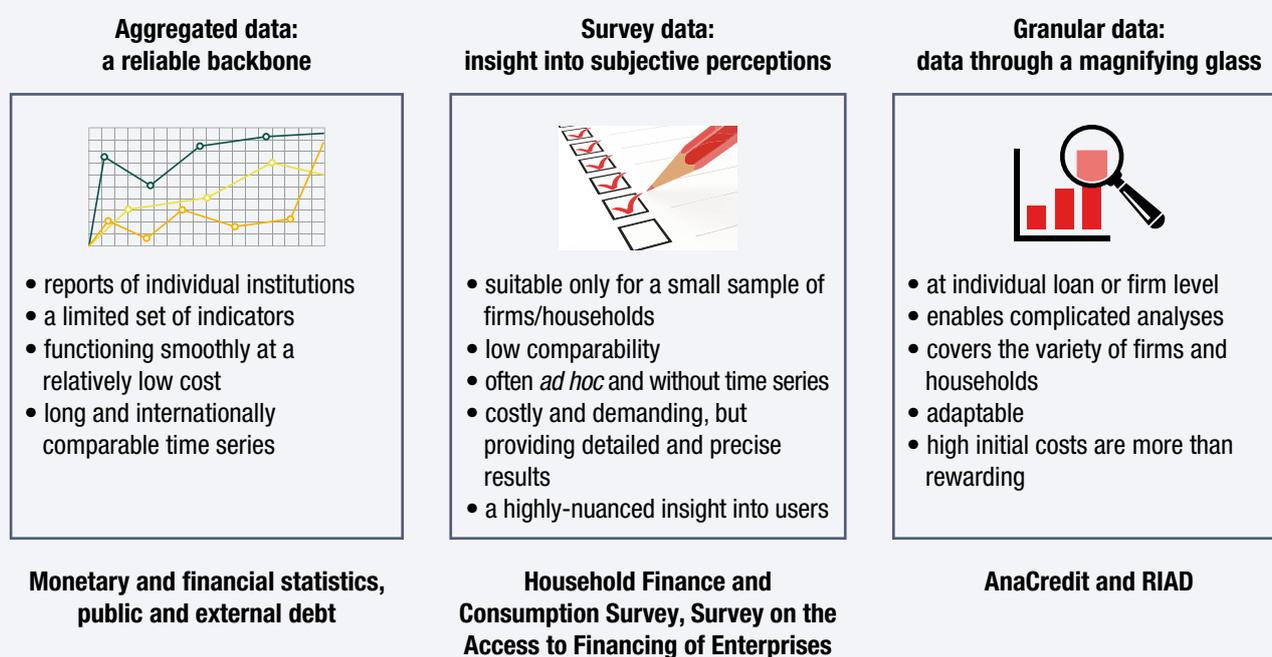
Moreover, the further development of the CNB's RIAD 4.0 register provides a basis for future CNB participation in reporting for the ECB's AnaCredit database. Reporting is completely reliant on the ECB-RIAD register, which contains the basic data on all legal persons that are debtors or guarantors based on loans granted by credit institutions or bonds issued in the EU, i.e. the data on all legal persons from the AnaCredit database. AnaCredit is a multi-purpose set of credit data developed for the purposes of monetary policy, financial stability analysis, supervision, research and ESCB statistics. For instance, by using these data, it is possible to evaluate loan supply and demand or the extent to which the banks' lending conditions affect credit growth.

Stronger reliance on survey sources coupled with participation in international research networks

The Household Finance and Consumption Survey (HFCS), Survey on Access to Finance of Small and Medium-Sized Enterprises (SAFE) and Bank Lending Survey (BLS) are a part of a growing set of survey sources enabling additional economic insight.

The Household Finance and Consumption Survey is conducted by national central banks in order to estimate the effect of financial shocks on

Figure 17 Significance of the CNB's statistics function



households, achieve better understanding of the behaviour and financial decision-making of households, estimate the effects of social, tax, educational and other policies and research into poverty and inequality. It is a joint project of 23 EU member states implemented within the ECB's Household Finance and Consumption Network. The results of the survey carried out in 2017 were processed and delivered to the ECB at the end of 2018 to enable a comparison of households across the EU. The main findings confirm the relatively high share of real assets, while deposits account for the largest portion of financial assets, which is comparable to the structure of household assets in other newly-joined EU member states.

The aim of the ECB's Competitiveness Research Network (CompNet) is to achieve better insight into the effect of the productivity and competitiveness of firms on exports, employment and economic growth. The network regularly updates its database containing microdata on the competitiveness of firms in 20 European countries, which is a unique register in terms of its coverage and methodological comparability. The sixth round of data collection was completed in 2018, covering 18 EU countries in addition to Croatia.

Microdata on Croatian households and the competitiveness of Croatian firms collected within the two research networks mentioned above primarily serve scientific and research entities for the purposes of carrying out economic research and performing further analyses. In addition to the data on Croatian households, comparable data of other countries participating in the surveys at EU level are also available to researchers on the HFCS and CompNet websites.

The main findings of the Survey on Access to Finance of Small and Medium-Sized Enterprises, which suggest that the access of such enterprises to financing has improved and that the regulatory framework and shortage of labour force remain the main obstacles to doing business, were published in December 2018 as part of the CNB's regular publication *Macroeconomic Developments and Outlook*. The Bank Lending Survey is conducted on a quarterly basis, and the results are published regularly on the CNB website. The survey provides information on the lending conditions of banks and complements the existing statistics with information on the supply of and demand for corporate and household loans, credit standards and financing conditions. Insights obtained by the survey in the course of 2018 point to relaxed credit standards and an increased demand of corporations and households for loans.

To conclude, aggregate statistics provide a "bird's eye view" of economic issues, but sometimes, a more in-depth view is necessary, which is achieved by analysing granular and survey-based sources. The adaptability and speed of response of monetary policy to disruptions and unexpected circumstances also depends on the ability to see the "big picture" with the intricacies of fine details, all of which is precisely the purpose of statistics.

Supervision

Business operations of credit institutions in 2018¹

Bank operating results recovered in 2018 following a plunge in 2017 in the aftermath of the difficulties in the operations of the Agrokor Group. The downward trend in loans was reversed, owing in particular to the rise in household general-purpose cash loans, and the quality of loans continued to improve, driven to a significant extent by the sale of non-performing loans. Ample system liquidity and capitalisation continue to ensure the safe and stable operation of banks.

The banking system continued to be dominated by credit institution in foreign ownership, which accounted for 90.2% of total assets of credit institutions. The moderate downward trend in the number of credit institutions, noticeable since 2010, picked up in 2018. The number of credit institutions went down by five, so that 21 banks and four housing savings banks were operating in the Republic of Croatia at the end of 2018. Considerable importance is attached to the merger of Splitska banka d.d. with OTP banka Hrvatska d.d., which became the fourth largest bank in the system in terms of asset size. In addition, there was one branch of an EU credit institution operating in the country, while around 160 EU (and EEA) institutions notified the CNB of the direct provision of mutually recognised services in the territory of the Republic of Croatia.²

Banks

Following six years of decline or stagnation, in 2018 bank assets increased noticeably (by 4.4%), reaching record levels. The significance of highly liquid

1 Data on the business operations of credit institutions for 2018 are preliminary unaudited data.

2 Updated information on credit institutions operating in the Republic of Croatia are available [on the CNB website](#).

items increased in its structure, as evident from the high liquidity coverage ratio (LCR)³, which was 161.0% at the end of 2018. The share of loans granted also increased considerably. The four-year downward trend in loans thus ended, primarily owing to the more vigorous lending to households, but also to the rise in general-purpose cash loans to that sector. In order to cover potential increased risks, the CNB issued [recommendations](#) related to non-housing consumer loans, while banks were instructed to pay particular attention to this type of loan when performing their internal risk assessments. Loans to non-financial corporations dropped due to the sale of claims and the collection of government guarantees provided to shipbuilding companies at the end of the year. Lending at fixed interest rates continued at a faster pace, as did kuna lending, increasing the need for kuna sources of funds, which resulted in an enhanced interest in the CNB's structural operation⁴ and the issue of a

Deposits of domestic sectors grew noticeably in 2018, particularly household deposits.

kuna bond by one bank. The structural liquidity indicator, NSFR⁵, was 147.8%, pointing to a stable source structure, arising from the strong reliance on domestic household deposits.

Deposits of domestic sectors grew noticeably in 2018, particularly household deposits, whose increase picked up considerably, especially at mid-year, under the seasonal influences of tourist activity. Against such a backdrop, the share of sources from the majority foreign owners remained relatively low (2.9% of assets). Kuna deposits continued to rise, as did transaction account deposits, which exceeded one half of total bank deposits (at the end of 2015 they accounted for slightly more than one quarter). This is attributable to an

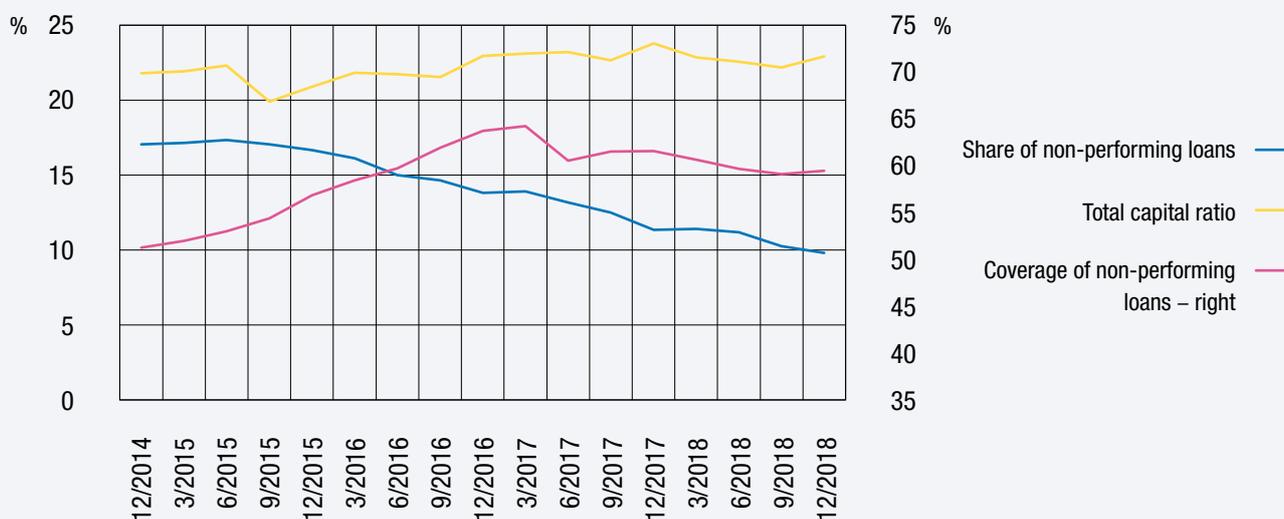
3 The Liquidity Coverage Ratio (LCR) measures the bank's capability to endure a 30-day stress period from the aspect of liquidity and must be at least 100%.

4 At the structural repo operation in December, the CNB placed HRK 1.4bn with banks for a period of five years, at a fixed repo rate of 1.2%.

5 The Net Stable Funding Ratio (NSFR) is applied to ensure that banks maintain stable sources of financing in relation to the structure of their assets and off-balance sheet items. The final calibration of this indicator (numerator and denominator) has not yet been completed and the banks are currently not obligated to maintain a minimum NSFR value of 100%. The NSFR will be introduced as an obligatory coefficient by the adopted amendments to the EU framework, which are expected to enter into force in 2021.

Figure 18 Loan quality improved, capital adequacy remained high

total capital ratio, share and coverage of non-performing loans



SOURCE: CNB.

environment characterised by low interest rates and to the continued decline in interest rates on time deposits. In addition, the introduction of the taxation of interest payments on savings in 2015 certainly contributed to the trend.⁶

Loan quality improved under the strong influence of the sale of claims. The share of non-performing loans (B and C risk category loans) dropped below 10%, from 11.3% to 9.8% (Figure 18). In early 2018, non-performing loans increased due to the introduction of the new accounting standard for financial instruments and the provisions of the related new subordinate legislation governing the classification of exposures, in application since the beginning of 2018⁷. In relation to the non-financial corporate sector, the obligation to

6 The Act on Amendments to the Income Tax Act (OG 143/2014), which entered into force in 2015, introduced a tax on interest on kuna and foreign currency savings deposits (sight and time savings deposits and annuity savings) at a rate of 12%. Interest on the positive balance in giro accounts, current accounts and foreign currency accounts is not subject to tax provided that the interest rate does not exceed 0.5% a year.

7 Since 1 January 2018, International Financial Reporting Standard 9 has been in application (replacing International Accounting Standard 39), according to which losses are recognised in the amount they are expected (and not in the amount actually incurred, as was previously the case). For more information on the initial application of IFRS 9 in Croatian credit institutions, see Banks Bulletin No. 31

classify loans to clients in default as non-performing loans had the most significant effect, while in relation to the household sector, the effect of provisions related to the pulling effect⁸ and the three-month probation period necessary for a loan to exit the non-performing loan category⁹ had the strongest impact. Still, by the end of the year, the trend had changed and non-performing loans declined to a level of 6.6% in the household sector and 20.4% in the non-financial corporate sector. In the non-financial corporate sector, the largest share of non-performing loans related to manufacturing, followed by construction, where the quality of loans improved due to a large amount of claims sold. Over the past years, the largest part of credit growth has been concentrated in tourism, i.e. in accommodation and food services.

The decline in losses arising from non-performing loans (i.e. the coverage of non-performing loans by value impairments) that began in the preceding year continued. The coverage indicator went down to 59.4% under the influence of the sale of above-average covered claims, but also of the inflow of new non-performing loans. Since the indicator was introduced in late 2013, the coverage of non-performing loans has been increasing, and the rise of related expenses motivated the banks to pursue a more active approach in resolving non-performing loans, particularly by selling their claims. The total amount of sold claims was noticeably lower than in the year before, when a record number of claims were sold; the bulk of the amount again involved claims on non-financial corporations and professional acquirers¹⁰.

In 2018, the profit of banks¹¹ grew by 44.4% thanks to lower credit risk expenses, which was largely influenced by lower expenses related to the Agrokor Group. Due to difficulties in the operation of the Group, the earnings of banks were heavily burdened by credit risk expenses in 2017. As these expenses dropped in 2018, banks' ROAA¹² and ROAE¹³ recovered and grew to 1.4% and 8.6% respectively. However, operating profitability, i.e. profitability

8 In exposures to households, instead of assessing the default status at debtor level, credit institutions may do so at product level. In that case, where balance sheet exposures in default account for more than 20% of total balance sheet exposures to the debtor, all exposures to the debtor are considered as being in default and have to be classified into the B or C risk category (the so-called pulling effect).

9 Exceptionally, the probation period for restructured exposures is at least 12 months.

10 Sale of claims is regulated by the [Decision on the sale of placements by credit institutions](#).

11 From continuing operations, before tax

12 Return on average assets

13 Return on average equity

before expenses on value adjustments and provisions decreased considerably, from 2.2% to 1.9%. Net operating income dropped due to a decrease in all components, particularly in the key source of bank income, net interest income. The effects of savings on interest expenses weakened due to previously recorded low levels, the predominant influence coming from the fall in interest income, the result in turn of declining interest rates. The effect of the decline in interest income from the domestic government was particularly strong as a result of an early repayment of a large loan amount towards the end of 2017 and the favourable refinancing of the road sector¹⁴ in April 2018. The effects of new lending activity were evident in the slight rise in interest income from general-purpose cash loans to households, while non-interest income fell, primarily due to a decline in dividend income. The profitability of O-SIIs¹⁵ was considerably higher than the profitability of other banks, with the three leading banks particularly standing out as the only banks in the system with an above-average ROAA. Three banks reported a current year loss, all from the group of smaller banks.

Total capital ratio went down under the influence of stronger business activities of banks and growing credit risk exposure. At the end of 2018, it stood at 22.9%, down by 0.9 percentage points from the end of 2017. The average credit risk weight was slightly lower than in 2017, standing at 49.4%, primarily as a result of the sale of claims and despite the changes in the weighting of exposures to the domestic central government and central bank in currencies other than kuna. As of 2018, such exposures are no longer weighted by a preferential risk weight of 0% and a risk weight of 20% is applied to them instead. Own funds stagnated despite losses related to the introduction of IFRS 9 in the amount of HRK 1.4bn. This was mainly a result of the inclusion of unrealised profits from assets measured at fair value, which had been excluded from the calculation of own funds until 2017 according to the regulations. Although lower, total capital ratio remained high, and would remain so even in case all non-performing exposures became fully irrecoverable (19.9%).

14 Croatian Motorways (HAC), Croatian Roads (HC) and Rijeka-Zagreb Motorway (ARZ)

15 Other systemically important credit institutions (O-SIIs) are institutions the failure or malfunction of which could lead to systemic risk in the Republic of Croatia. The last review of the identification of O-SIIs was carried out in January 2019, when seven O-SIIs were identified.

Housing savings banks

Under the influence of a merger of one housing savings bank with its parent bank¹⁶, the assets of housing savings banks dropped by one third to only 1.3% of the total assets of credit institutions. If the effect of the merger is excluded, assets grew (3.4%), with deposits and loans exhibiting the most significant growth. Loan quality improved, with the share of non-performing loans down to 1.4%. The exit of one housing savings bank from the system reduced profits. However, even if this were not taken into account, profits would have been lower by half mainly due to the base period effect, i.e. the effect of the income from the sale of domestic government bonds by a housing savings bank in 2017. ROAA and ROAE fell to 0.2% and 1.5% respectively, while one housing savings bank operated at a loss. Although noticeably lower, total capital ratio remained high (24.2%).

16 Prva stambena štedionica merged with Zagrebačka banka d.d. on 1 June 2018.

Prudential regulation and supervision

The Croatian National Bank continued to supervise the operation of credit institutions in 2018, successfully fulfilling its statutory task of maintaining financial stability. In addition to oversight, supervisory activities performed by the CNB included developing the regulatory framework and granting authorisations to credit institutions.

Legislative framework

The CNB's tasks regulated by the [Act on the Croatian National Bank](#) include the issuance and withdrawal of authorisations and approvals, and supervision and oversight in accordance with acts governing the operations of credit institutions¹⁷ and credit unions. The main objectives of the supervision exercised by the CNB are to maintain confidence in the Croatian banking system, and to promote and safeguard its safety and stability. The exercise of supervision and oversight of credit institutions and credit unions is governed by the [Credit Institutions Act](#) and the Credit Unions Act.

The rules and requirements pertaining to the operations of credit institutions are governed by Croatian regulations (primarily by the Credit Institutions Act and accompanying subordinate legislation), as well as EU regulations. This is primarily Regulation (EU) No 575/2013¹⁸ of the European Parliament and of the Council with corresponding technical standards, i.e. regulations that are directly applied in EU member states.

In the course of supervision, the Croatian National Bank verifies the legality of a credit institution's operations, including the organisational structure, strategies, policies, processes and procedures adopted by the credit institution to comply with regulations and evaluates risks arising from the credit institution's operations.

In addition to supervision, the CNB oversees the implementation of the Act

17 The term 'credit institutions' includes banks and housing savings banks. As the share of housing savings banks is small, the terms 'bank' and 'credit institution' are used synonymously in this document.

18 [Regulation \(EU\) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation \(EU\) No 648/2012 \(OJ L 176\)](#), the so-called Capital Requirements Regulation (CRR)

on the Croatian National Bank, regulations adopted under that Act, and the implementation of other laws and regulations for which it is competent.

The CNB exercises supervision of credit institutions by:

- collecting and analysing reports and information and by ongoing monitoring of credit institutions' operations
- carrying out on-site examinations of credit institutions' operations
- imposing supervisory measures in order to take actions at an early stage to improve the safety and stability of credit institutions' operations and to eliminate any illegalities established
- issuing opinions, authorisations and approvals and by assessing credit institutions.

The CNB exercises supervision of credit unions in a similar manner.

Supervision of credit institutions

All 30 credit institutions that were in operation in 2018 were covered by at least one supervisory activity. A summary of activities is given in Table 1.

Table 1 Supervisory activities in 2018

Activities	Number of activities	Number of credit institutions covered
Reports based on ongoing supervision (regular risk assessment)	16	16
Reports based on ongoing supervision due to established irregularities	27	17
On-site examinations	18	13
Decisions issued for the purpose of rectifying irregularities or improving the situation at a credit institution	36	20
Technical decisions issued (authorisations and approvals), implementing Regulation (EU) No 575/2013	9	7
Issued warnings	–	–
Trusteeship and special administration	2	2
Joint decisions adopted	9	8

SOURCE: CNB.

Ongoing monitoring of operations

The CNB carries out this form of supervision by collecting and analysing reports and information and by analysing additional information submitted by credit institutions at the request of the CNB. The purpose of the monitoring is to establish the risk profile of a credit institution¹⁹, set priorities in an on-site examination and adopt and monitor the implementation of supervisory measures to ensure and maintain the stability of each credit institution and the system as a whole.

Upon receiving the requested reports, the CNB examines their timeliness, completeness and compliance.

In 2018, the CNB carried out the regular supervisory cycle of assessing credit institutions. This includes assessing the risk profile of credit institutions, examining the adequacy of procedures in place for assessing and maintaining the internal capital of credit institutions²⁰ and continuous cooperation based on a dialogue between the supervisors and the credit institution. In addition, supervision includes the imposition of supervisory measures aimed at taking actions at an early stage to ensure the stability of credit institutions' operations, improve the safety of operations and eliminate any illegalities or irregularities in credit institutions' operations, as well as monitoring the execution of these measures.

The supervisory cycle of the assessment of credit institutions in 2018 also included the analyses of credit institutions' internal capital adequacy assessment reports. The analysis of the submitted internal reports and self-assessments makes it possible for the supervisor to assess the adequacy of procedures prescribed and implemented by a credit institution with a view to timely identification, measurement, control and management of the risks and assessment of adequacy of the required internal capital. Combined, all these factors, together with the risk profile assessment, provide a basis

19 The risk profile is a measurement or assessment of all risks to which a credit institution is or might be exposed in its operation.

20 Based on their risk profiles, credit institutions are obliged to identify significant risks to which they are or might be exposed in their operation and quantify their exposure to such risks (calculate internal capital requirements). In order to meet these requirements, credit institutions may use the internally defined measure of available capital (internal capital), taking into account the risk profile, risk management system and risk mitigation techniques. The adequacy of this procedure in credit institutions is assessed during oversight.

for determining minimum capital requirements and the planning of the next supervisory cycle for an individual credit institution.

The CNB compiles reports containing risk assessments of credit institutions. In 2018, the CNB issued 16 such reports, of which nine had to do with credit institutions for which cross-border colleges of supervisors²¹ were established and for which joint decisions on institution-specific prudential requirements are made. In relation to these institutions, analyses are mainly based on consolidated data. Pursuant to these reports the CNB adopted measures stipulating the minimum requirement for own funds until the next supervisory review, and, in cases where indicated by the risk profile analysis, additional measures to improve the operations of a credit institution. Since the European Central Bank carried out stress testing in 2018, the results of which are used to determine the required capital of banks, the majority of joint decisions were reached in the first quarter of 2019 as the results were disclosed in November 2018.

In line with the supervisory cycle of the assessment of credit institutions in 2018, analyses of the banks' internal capital adequacy assessment reports were performed in the segment of supervising advanced approaches to measuring risks and risk management with a special focus on internal models.

Credit institutions authorised by the CNB to apply the internal ratings-based approach (IRB approach) are subject to annual supervisory benchmarking of internal approaches for calculating own funds requirements with the aim of comparing and assessing the consistency of risk parameters of such credit institutions with reference values defined by the European Banking Authority (EBA). Furthermore, the implementation of supervisory recommendations related to the application of the IRB approach is monitored in cooperation with the competent consolidating authorities, when needed, in credit institutions applying the approach only for a part of their portfolio on a consolidated basis.

The supervisory cycle of the CNB also entails an assessment of IT risks of credit institutions on an ongoing basis within the framework of the supervisory

21 Where there are several credit institutions or investment firms in a group, operating in several EU member states, a college of supervisors is established in order to facilitate supervision. A college of supervisors is a forum consisting of competent authorities responsible for the supervision of individual group members. At the college of supervisors, the individual competent authorities, among other things, exchange information, lay down supervision plans and the division of tasks, and reach joint decisions on the application of prudential requirements to all group members.

review and evaluation process (hereinafter referred to as 'SREP'). The assessment is based on an analysis of reports by external auditors on the audit of the information systems of credit institutions, self-assessment results and direct information collected from the credit institutions' organisational units in charge of the functioning, safety and internal audit of the information system. The CNB actively communicated with credit institutions and analysed and monitored the situation in relation to various information system incidents.

The CNB continues to pay special attention to the area of cybersecurity by continuously monitoring cyber threats that could affect the banking system in Croatia, participating in the work of relevant committees and coordinating activities at the national level. Furthermore, the Bank systematically communicates with credit institutions in order to maintain and enhance the level of cybersecurity and the capability of reacting to cyber threats.

Additional efforts were put into the harmonisation of banking operations with the Act on the Cybersecurity of Essential Service Operators and Digital Service Providers (OG 64/2018). Under the aforementioned Act, the Croatian National Bank is the competent authority for the banking sector, payment services are defined as essential services, and other systemically important credit institutions (O-SIIs) as operators of essential services. The CNB is obligated to carry out the identification of essential service operators, to supervise them in the implementation of measures for achieving a high level of cybersecurity and meeting other obligations arising from the Act and to cooperate and exchange information with other bodies. In order to meet its obligations, the CNB held a series of workshops/meetings with other systemically important credit institutions (O-SIIs) explaining the competences of the bodies and institutions included and the content of measures for achieving a high level of cybersecurity.

Pursuant to Article 180, paragraph (5) of the Credit Institutions Act, the CNB performed the stress testing of systemically important credit institutions in Croatia for supervisory purposes. The testing was performed according to an adjusted EBA methodology for the purpose of the supervisory review and assessment process.

Finally, in line with the provisions of the Decision on the obligation to make provisions for litigations conducted against a credit institution, the CNB regularly receives reports on significant litigation proceedings. Banks prepare a

report as at 31 December and submit it to the Croatian National Bank by 31 January of the following year at the latest. Based on the received reports, the CNB monitors key indicators related to litigation involving credit institutions.

On-site examination of banks

The CNB carries out on-site examinations in accordance with the methodology for supervision adopted, based on a plan made at the end of each year for the following year. The on-site examination plan for 2018 was based on the established cycle of regular on-site examinations of credit institutions, while extraordinary activities included the operations of a trustee and special administration.

Eighteen on-site examinations were carried out in 2018, adding up to 1,460 supervisory days. Examinations were carried out in 13 credit institutions the assets of which accounted for 54% of banking system assets, according to un-audited data as at 31 December 2018. They were related to the following areas:

- eight on-site examinations in the area of risk management in eight credit institutions;
- two on-site examinations in the area of supervision of advanced approaches to measuring risks and risk management:
 - due to a significant change to the PD assessment (calibration) model and the methodology of validation of the model
 - to verify compliance with the prescribed requirements for the application of the IRB approach
- on-site examinations of the implementation of legal provisions in the segment of money laundering and terrorist financing were carried out in five credit institutions
- on-site examinations of the implementation of legal provisions in the area of monetary policy measures were carried out in three credit institutions.

In addition, CNB resources were dedicated to the operations of trustees and special administration in two credit institutions in 2018, adding up to 56 supervisory days. They were used for detailed assessment and monitoring of the credit institutions' financial positions and operating conditions.

Supervisory activities were performed in a total of thirteen credit institutions (the assets of which constituted 54% of banking system assets according to unaudited data as at 31 December 2018), adding up to a total of 1,516 supervisory days.

The total number of on-site examinations in 2018 equally included banks categorised as large and those categorised as small according to the size of their assets. As regards examination areas, special focus was placed on the analysis of asset quality and credit risk management, analysis of market and interest rate risk, own funds adequacy and the supervision of the implementation of legal provisions pertaining to the prevention of money laundering and terrorist financing.

The total number of on-site examinations in 2018 equally included banks categorised as large and those categorised as small according to the size of their assets.

Following the on-site examinations, and with regard to illegalities, irregularities and weaknesses established in the reports, the CNB imposed measures aimed at eliminating established illegalities and irregularities as well as measures to improve the state of affairs.

Cooperation with foreign supervisors

In 2018, the CNB continued to cooperate with foreign supervisors, particularly as regards joint assessments of the risk of the business operations of banking groups and the adequacy of allocated amounts of capital for members of individual groups, as well as in the segment of IT system supervision.

Based on the memoranda of understanding in effect, in 2018 the CNB representatives participated in numerous colleges of supervisors relating to the supervision of banking groups that include domestic banks (nine banks).

As part of its cooperation with foreign supervisors, the CNB is responsible for drawing up the Supervisory Risk Report, i.e. the annual assessment of the risk profile of a domestic credit institution, serving as the element for adopting the final Joint Risk Assessment Decision and the joint decision on the

Table 2 Credit institutions with cross-border colleges of supervisors

1 Addiko Bank d.d.	6 Sberbank d.d.
2 Erste&Steiermärkische Bank d.d.	7 J&T banka d.d.
3 OTP banka Hrvatska d.d.	8 Wüstenrot stambena štedionica d.d.
4 Privredna banka Zagreb d.d.	9 Zagrebačka banka d.d.
5 Raiffeisenbank Austria d.d.	

SOURCE: CNB.

required amount of capital of a banking group. Nine supervisory reports for 2017 were compiled in 2018 and a joint decision on the capital adequacy of a banking group was adopted for all of them. Furthermore, in the area of supervision of advanced approaches to measuring risks and risk management, the process of pre-validation of material changes to the internal model applied for the calculation of capital requirements was initiated in 2018.

Since 2015, the CNB has participated in the process of reaching a joint decision on the review and assessment of the recovery plan for groups of credit institutions. Seven joint decisions were adopted in 2018, while the other two were made in the first quarter of 2019.

The CNB continued to cooperate and provide technical assistance to supervisory authorities in the region as regards the application of prudential regulations and technical aspects of supervision.

Supervision of credit unions

At the end of 2018, there were 20 credit unions in operation, whose assets, according to the reports submitted to the CNB, totalled HRK 676m. Although compared to end-2017 the number of credit unions had decreased by one (against which voluntary winding-up proceedings were initiated), the assets of credit unions increased slightly by HRK 9.2m (1.4%). In the structure of assets, loans granted accounted for the largest share (85%), having recorded a moderate year-on-year growth of 3%, while in the sources of funds, deposits of members prevail with an amount of HRK 508m. The capital of credit unions was HRK 140m at the end of 2018, up slightly (3%) from 2017. Profits of credit unions stood at HRK 6.5m, up by 35% from 2017, driving the

profitability indicators upwards. The return on average assets (ROAA) and the return on average equity (ROAE) stood at 1.12% and 4.76% respectively. The solvency rate of credit unions was 20.3% at the end of 2018. The total number of credit union members was 56,865, and the total number of employed persons was 121.

As at 31 December 2018, ten credit unions were in the process of winding up, while three credit unions were undergoing bankruptcy proceedings.

In 2018, the CNB continued regular analyses of the quarterly financial and supervisory reports and monthly liquidity reports submitted by credit unions within the prescribed deadlines. Additional data submitted by credit unions after requests by the CNB were also analysed. Following on-site examinations, reports were issued for three credit unions, while decisions imposing measures aimed at taking timely action to ensure the stability of operations, improve the safety of operations and eliminate illegalities and irregularities, i.e. ensure compliance with the legal framework, were issued for seven credit unions.

Issuance of authorisations and approvals to credit institutions and credit unions

Under its mandate arising from the Act on the Croatian National Bank, and in accordance with the provisions of the Credit Institutions Act, the Act on Housing Savings and State Incentives for Housing Savings, and the Credit Unions Act, the CNB, within its supervisory powers, is also responsible for issuing authorisations and approvals necessary for the establishment and operation of credit institutions and credit unions.

Through the system of authorisations and approvals, the CNB can control some of the decisions and legal transactions of a credit institution prior to their adoption, execution or realisation, and thus, as a supervisory tool, licensing can have two functions:

- to detect in advance and prevent any decisions and transactions that might have an adverse effect on the future operations of a credit institution; and
- to make the credit institution implement the imposed supervisory measures.

In accordance with the Credit Institutions Act, the Act on Housing Savings and State Incentives for Housing Savings and the Credit Unions Act, the CNB issued a total of 129 decisions on authorisations and approvals to banks, housing savings banks, savings banks and credit unions and one decision to revoke the approval to acquire a qualifying holding in a credit institution in 2018.

The majority of decisions related to applications for approval to perform the function of a member of the supervisory board of a credit institution (58 applications were approved and two denied). The next to follow in terms of number were decisions on applications for granting prior approval for the appointment of the chairperson or a member of the management board of a credit institution (42 were approvals and one a denial of an application). Other authorisations issued included three authorisations to credit institutions for the provision of financial services, three approvals for the merger of a credit institution with another credit institution, two decisions on the approval and one decision on the denial of the application to acquire a qualifying holding in the capital of a credit institution, one decision on the approval to a credit institution for the acquisition of a majority holding in another legal person, ten decisions on the approval of and one decision on the denial of the appointment of management board members of credit unions. In addition, pursuant to the Act on Housing Savings and State Incentives for Housing Savings, the CNB issued five authorisations of the general operating conditions of housing savings banks.

Other activities

In 2018, the CNB continued to cooperate with the Croatian Financial Services Supervisory Agency (HANFA) by participating in the work of the joint Working Committee. At the Committee meetings, the institutions exchange information on current topics in the banking sector and the sector supervised by HANFA, resolve open issues on the exchange of data and arrange the coordination of supervisory activities.

Regular meetings of the Working Committee with the State Agency for Deposit Insurance and Bank Resolution (DAB) were held in 2018 as well, at which institutions exchanged data and information on the subjects of supervision and oversight within their scope of activity and competence. The CNB regularly monitors the methodology for the calculation of individual credit

institutions' degree of risk prescribed by the DAB for the purpose of calculating deposit insurance premiums.

As an EBA member, the CNB participates in the European System of Financial Supervision. Over the course of 2018, the Bank allocated considerable resources to participation in EBA and ECB working groups. The following areas were covered:

- prudential regulation (credit risk, market risks, operational risk, liquidity risk, own funds, governance arrangements, advanced approaches to measuring risk, crisis management),
- reporting, accounting, auditing and disclosure,
- cooperation in the area of the prevention of money laundering and terrorist financing and consumer protection;
- improvement of the supervisory process;
- security of electronic payments;
- supervision of IT systems.

Throughout 2018, the CNB continued to act based on notifications of breaches of the Credit Institutions Act and related subordinate legislation and Regulation (EU) 575/2013 and regulations adopted based on that Regulation. Upon receiving such notifications, the CNB took action pursuant to prescribed internal bylaws. Personal data included in such notifications were handled in line with regulations governing personal data protection.

Development of regulations

New prudential regulations on business operations and supervision of credit institutions

In the course of 2018, the CNB continued the normative harmonisation with EU regulations, with the most significant changes in terms of regulatory improvement relating to the Credit Institutions Act, which was amended in early 2018. Amendments were introduced to govern in more detail the operation of

EU credit institutions in the Republic of Croatia and to harmonise the provisions on the relationship of the CNB with external auditors with the new Audit Act (OG 127/2017). Provisions governing the assessment of the suitability of shareholders and members of the management board and the supervisory board were fully adapted to allow for the application of EBA guidelines. Due to the announcement of particular voluntary winding-up proceedings, the new Credit Institution Act now defines the provisions governing the implementation of such proceedings more precisely, creating a basis for the more detailed regulation of this area by subordinate legislation. The Decision on the application of provisions of the Credit Institutions Act to credit institutions undergoing winding-up proceedings thus governs voluntary and compulsory winding-up proceedings of credit institutions in more detail.

In 2018, the CNB adopted 18 subordinate regulations in the area of prudential regulation. For the purpose of harmonisation with the amendments to the Credit Institutions Act, the Decision on capital buffers and capital conservation measures was amended and the new Decision on the documentation to be enclosed with the application for the authorisation of a credit institution and the application for the authorisation to provide financial services was adopted; in line with the proposed EBA technical standard, this prescribes in detail the documentation to be enclosed with an application for authorisation.

Under the amendments to the Credit Institutions Act, the CNB had the obligation to prescribe the documentation that credit institutions are required to submit along with an application for permission to classify capital instruments as common equity tier 1 and additional tier 1 and tier 2 capital instruments. The obligation was met by the Decision on the documentation to be enclosed with the application for permission to classify capital instruments as own funds instruments of credit institutions. In order to improve the quality of capital used for risk coverage, special emphasis was placed on the quality and the documenting of individual instruments classified as own funds.

The CNB also adopted the Decision on amendments to the Decision on the assessment of the suitability of the chairperson of the management board, members of the management board, members of the supervisory board and key function holders in a credit institution for the purpose of harmonisation with the Joint ESMA and EBA Guidelines on the assessment of the suitability of members of the management body and key function holders (EBA/GL/2017/12). Furthermore, for the purpose of alignment with EBA guidelines,

the CNB also adopted the Decision on the approval to acquire a qualifying holding in a credit institution and the Decision on governance arrangements.

In order to ensure harmonisation with the EBA Guidelines on connected clients under Article 4(1)(39) of Regulation (EU) No 575/2013 (EBA/GL/2017/15), the CNB adopted the Decision on large exposures of credit institutions. Since the Decision on large exposures of credit institutions (OG 2/2010, 160/2013 and 12/2018) had been amended several times, a consolidated text of the Decision was made for easier application. The new Decision thus includes the limitations thus far applied when establishing the maximum permitted exposure, as well as an extended framework for establishing groups of connected persons. In that regard, the Decision includes the procedure for establishing a group of connected persons, defines in detail the manner of identifying a control relationship and specifies indicators of economic and financial interconnectedness as well as the approach for exposures to the central government. It is noteworthy that the proposed framework should not lead to any significant deviations from the method of establishing groups of connected persons applied until now.

In 2018, the CNB adopted 18 subordinate regulations in the area of prudential regulation.

Based on powers arising from the Act on Consumer Housing Loans (OG 101/2017), the CNB also adopted the Decision on the minimum content of residential real estate records, which governs in detail the content of data on and the characteristics of residential real estate from the scope of application of the aforementioned Act. The aim of the Decision is to improve the quality of data in the existing database of residential real estate serving as collateral in a credit relationship and to expand the database with data on financed residential real estate.

In order to achieve harmonisation with Commission Delegated Regulation (EU) 2018/171 of 19 October 2017 on supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for the materiality threshold for credit obligations past due, which entered into force in February 2018, the CNB adopted the Decision implementing the part of Regulation (EU) No 575/2013 pertaining to the valuation of assets and off-balance sheet items and the calculation of own

funds and capital requirements, setting common materiality thresholds for retail and non-retail exposures for all banks for which the CNB is competent. This rounds off the harmonisation of the definition of client default at EU level, setting up a harmonised procedure for identifying non-performing loans within the EU.

As regards regulations referring to the reporting framework, the new Decision on statistical and supervisory reporting, Decision on the IT-solutions for the delivery of reports of credit institutions and the Decision on amendments to the Decision on supervisory reports of credit institutions were adopted.

Pursuant to the Accounting Act, the Croatian National Bank is obligated to prescribe the structure and content of annual financial reports for entities under its supervision. Since banks began applying International Financial Reporting Standard 9 – Financial Instruments in 2018, the new Decision on the structure and content of annual financial statements of credit institutions²² was adopted, updated in terms of accounting standards, to be applied to reporting periods beginning on 1 January 2018.

Prior to the adoption of each of the regulations mentioned above, consultations with credit institutions and other stakeholders were held, with comments on the responses received during public consultations published on the CNB's website. In order to promote the consistent application of regulations, the CNB held numerous seminars and workshops in 2018 aimed at entities subject to supervision.

The CNB also continued its practice of giving opinions and responding to queries of credit institutions within its competence. Over the course of 2018, 105 queries were received and answered. In order to promote the transparency of work and ensure the consistent application of regulations, the CNB publishes answers to queries on its website.

Regulatory activities in the area of prevention of money laundering and terrorist financing in credit institutions and credit unions

The CNB continued to participate actively in the national system of the prevention of money laundering and terrorist financing and to work on the

22 OG 42/2018

monitoring and application of the *acquis* in that field. The new [Anti-Money Laundering and Terrorist Financing Act](#), which transposes Directive (EU) 2015/849²³ into the Croatian legal system, entered into force on 1 January 2018, and pursuant to its provisions, in 2018, the CNB adopted the Decision on the assessment of money laundering and terrorist financing risk and the manner of implementing simplified and enhanced customer due diligence measures (OG 57/2018) to transpose the joint Risk Factor Guidelines issued by the bodies of the European System of Financial Supervision (JC/2017/37). The aforementioned Decision governs the assessment of money laundering and terrorist financing risk, risk factors that credit and financial institutions have to consider when assessing such a risk in individual business relationships and occasional transactions and the manner of carrying out simplified and enhanced customer or client due diligence. This regulation additionally strengthened the process of identifying suspicious transactions in banks.

In order to raise awareness on the importance of the prevention of money laundering and terrorist financing and in order to announce new regulations and obligations arising from them, in 2018, the CNB organised a seminar for credit institutions in cooperation with the Croatian Chamber of Commerce. In early 2018, the CNB also organised a seminar for credit unions in cooperation with the Anti-Money Laundering Office.

As part of the preparation for the application of the new Anti-Money Laundering and Terrorist Financing Act, meetings with competent management board members and authorised persons from the seven largest banks were held, as envisaged in the Action Plan for the Reduction of Identified Risks. Furthermore, in order to identify and monitor money laundering and terrorist financing risks in the banking sector, the CNB conducted a survey among credit institutions.

In order to ensure the consistent application of the provisions of the Anti-Money Laundering and Terrorist Financing Act (OG 87/2008 and 25/2012) and regulations adopted under that Act, the CNB responded to 14 queries from credit institutions related to the prevention of money laundering and terrorist

23 Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC

financing in cooperation with the Anti-Money Laundering Office and other competent bodies.

To coordinate and engage in joint activities aimed at attaining strategic and operational objectives in this field, the CNB continued to cooperate with other competent authorities, particularly within the Supervision Subgroup of the Inter-Institutional Working Group for Preventing Money Laundering and Terrorist Financing.

Cooperation with international institutions continued in 2018 in terms of interactive participation in the work of committees of European supervisory bodies dealing with the problem of money laundering and terrorist financing, including the work on the adoption and application of guidelines issued by European supervisory bodies. In the course of last year, the CNB continuously cooperated with other European bodies competent for the prevention of money laundering and participated in the preparation of materials for the special committee of the Council of Europe – MONEYVAL.

Data exchange and analysis

At the same time as working on regulations governing reporting, the CNB continued to develop the software for data receipt, processing and integrity.

Furthermore, in 2018 the CNB continued to meet its obligation to communicate data to the EBA and the ECB and also exchanged data with HANFA (for the purpose of monitoring entities subject to its oversight) and the DAB (for the purpose of calculating contributions to the resolution fund and deposit insurance premiums).

Within the framework of its regular activities, the CNB publishes annual, semi-annual and quarterly reports to provide market participants and the general public with data on the state and trends in the banking system and the basic operating indicators of individual credit institutions. In addition, data are also prepared for meetings with credit rating agencies and various domestic and foreign institutions, questionnaires are completed and replies to queries of various interested parties, particularly the media, are prepared.

Of the regular publications issued in 2018, No 31 of the [Banks Bulletin](#) was issued for 2017, while reports on the banking system and targeted analyses

were regularly compiled for in-house purposes. In addition, the CNB compiled its contribution for the [BSCEE Review](#)²⁴, including quantitative data and information regarding the situation in Croatia's banking system and supervisory activities.

Finally, the CNB actively monitored and estimated the effects of the new International Financial Reporting Standards on the banking system.

24 The publication is issued by Banking Supervisors from Central and Eastern Europe (BSCEE).

Round Hall in the CNB building, the former main hall of the Zagreb Stock Exchange



Resolution planning

Over the course of 2018, the CNB, as a resolution authority, was dedicated to monitoring and actively participating in the process of amending regulations relating to resolution issues. A significant portion of activities related to bank resolution were directed at creating resolution plans for cases of potential financial difficulties of credit institutions. In 2018, the CNB submitted a request to open bankruptcy proceedings against one credit institution. Furthermore, preparations for Croatia's participation in the Single Resolution Mechanism began.

The banking union is one of the cornerstones of the European Union, established to protect and safeguard the money of its citizens as savers and tax payers. The banking union comprises all euro area countries and Member States outside the euro area which decide to join by establishing close cooperation with the European Central Bank.

The banking union is based on three pillars: The first pillar includes the establishing of the Single Supervisory Mechanism (SSM) a supranational EU body responsible for the supervision of banks in which the European Central Bank is competent for the supervision of financial institutions in close cooperation with national supervisory authorities. The second objective is achieved via the Single Resolution Mechanism (SRM), a system ensuring the effective resolution of failing financial institutions. It consists of the central resolution authority (the Single Resolution Board (SRB)) and the Single Resolution Fund (SRF). The Fund is intended to be used for failing banks and is completely financed by the European banking sector from the Member States within the banking union. The structure of the banking union will be completed once the European Deposit Insurance Scheme (EDIS), still under construction, is established. These three banking union pillars ensure safe and competitive banking

for European citizens, the protection of tax funds and the fast and efficient payment of savings in case a smaller bank, but also a bank that is “too big to fail”, exits the market.

In 2018, the Croatian National Bank intensified preparations for entering close cooperation with the European Central Bank, which automatically implies joining the banking union, i.e. the participation of the CNB as a resolution authority in the Single Resolution Mechanism.

In 2018, preparations for entering close cooperation with the European Central Bank intensified.

Measures aimed at reducing risk in the banking and financial sector¹ were a central topic at the level of the continued strengthening of the European regulatory framework and the deepening of the banking union in 2018. Hence, the CNB's activities greatly focused on the monitoring and active participation in the process of amending regulations governing resolution issues as part of the package of measures aimed at reducing risk in the banking and financial sector.

In order to prevent tax payers' money being used to absorb banking losses, a series of barriers has been established and a hierarchy of stakeholders assuming resolution costs was set up. Funding from resolution financing arrangements, financed by the banking sector itself, has been envisaged as well. Additional regulatory requirements in the form of a [minimum requirement for own funds and eligible liabilities](#)² were also imposed on EU credit institutions, ensuring that a credit institution is capable of absorbing an adequate amount of losses and being recapitalised by an amount sufficient to implement the preferred resolution strategy. In 2018, the CNB proposed amendments to the Act on the Resolution of Credit Institutions and Investment Firms with the aim of regulating non-preferred and unsecured debt instruments that may be categorised as eligible liabilities and constitute an additional defence against the spillover of losses from credit institutions in difficulty to public funds. Through the amendments, Croatia's legal framework is being harmonised with the European regulations.

1 Risk Reduction Measures (RRM)

2 Minimum Requirement for Own Funds and Eligible Liabilities (MREL)

Shareholders and holders of relevant capital instruments should be the first to take the consequences of an institution's failure. In that regard, the European legislative framework provides resolution authorities with powers to write down or convert relevant capital instruments. Over the course of 2018, the CNB adopted a subordinate regulation governing the option of exercising the powers to write down capital instruments or convert relevant capital instruments into common equity tier 1 instruments.

In 2018, the CNB proposed amendments to the Act on the Resolution of Credit Institutions and Investment Firms.

Minimum consequences for the economy and the financial system during a credit institution's recovery or exit from the market are achieved by identifying the critical functions provided by the credit institution to third parties and by ensuring they are continued in case the credit institution fails. Since the identification of critical functions provided by the credit institution to third parties is one of the starting points in the development of resolution plans, the Methodology for identification of critical functions in the operation of credit institutions for the purposes of resolution planning was published in 2018. Critical functions may include lending and deposit taking, payment services or any other function which a credit institution performs for households, corporations or other sectors and which, if suddenly disrupted, could have a significant negative effect on market participants or cause panic, undermining market participants' trust. Information on the most significant aspects of the process of identification of critical functions based on the aforementioned methodology are provided on the CNB's website.

The existence of an adequate resolution plan is the fundamental prerequisite for the successful management of credit institutions in case they find themselves in difficulty. The representatives of the CNB as the resolution authority participated in six resolution colleges for the purpose of preparing and updating resolution plans for credit institutions that operate in Croatia, but are members of EU banking groups. The colleges resulted in the signing of joint decisions on group resolution plans for our largest banks. Furthermore, the CNB, in its capacity as the resolution authority, carried out the regular annual resolution plan update for credit institutions that are not members of a group.

The organisational unit responsible for resolution at the CNB became the independent Credit Institutions Resolvability Assessment Office in August 2018. The Office is responsible for tasks related to CNB decisions to initiate compulsory winding-up proceedings and decisions related to the submission of a request to open bankruptcy proceedings against a credit institution. In that regard, at its meeting held on 21 February 2018, the CNB Council took the decision to submit a request to open bankruptcy proceedings against Tesla štedna banka d.d.

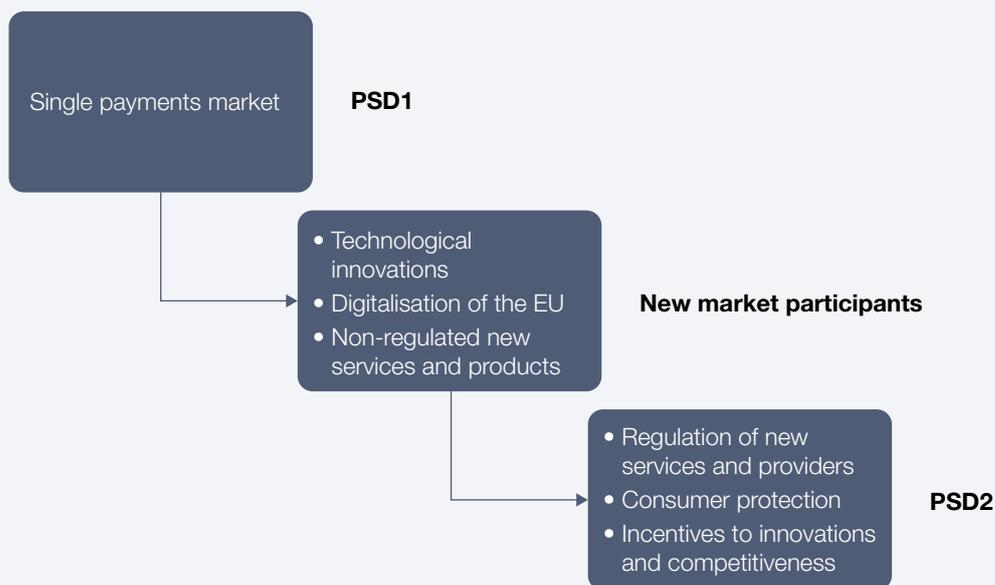
Payment operations

Payment operations are the financial bloodstream of any economy, and their safety and efficiency are among the preconditions of growth and development. The payment system comprises authorised payment service providers, an adequate infrastructure, payment service users and the regulations that prescribe the rights, obligations and roles of each participant. The CNB plays the key role in ensuring the conditions for a safe and efficient functioning of payment operations in the Republic of Croatia by carrying out the function of the manager and controller of the main payment systems. In addition, the CNB is a designated institution for the development of regulations governing payment operations and it is the payment service provider for the Republic of Croatia.

Development of payment operations: from the harmonisation of the European payments area to technological innovation and enhanced consumer protection

Only about a decade or so ago, payment service markets were organised separately in the individual EU member states based on domestic rules and a legal framework fragmented among 27 national systems. The creation of a single internal payments area with harmonised rules was imperative not only for the further development of the payments market, but also for the continued existence of the EU in general. The first Payment Services Directive¹ (PSD1), or the “full harmonisation” directive, was adopted in 2007. The Directive completely and comprehensively regulated the provision of payment services in

¹ Directive 2007/64/EC of the European Parliament and of the Council of 13 November 2007 on payment services in the internal market amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and repealing Directive 97/5/EC (Payment Services Directive 1, PSD1)



the territory of the EU and established the rules and conditions applicable to all payment services in the EU. In Croatia, the PSD1 was transposed into the Payment System Act and the Electronic Money Act.

Since then, the manner in which we make payments has changed to such an extent that it has become necessary to adjust the legal framework thoroughly. The new rules have had to cover the new types of payment services, such as internet and mobile payments, different technological innovations, the evolution of service users' needs, as well as the new participants in the market.

Over the past years, risks linked to electronic payments have also increased, as a result of the increase in technological complexity of electronic payments, the constantly growing volume of electronic payments and the new types of payment services. Since safe and reliable payment services are the key precondition for the payment services market, the new rules also require the strict protection of payment service users from such risks.

Payment services are the key for the functioning of vital economic and social activities, and competition opens payment markets to new participants, which leads to more competition, larger choice and better prices for consumers.

The new rules are defined in the Second Payment Services Directive² (hereinafter referred to as 'PSD2'), which introduces new payment services and new payment service providers, improves the rules on the protection of users and consumers, enhances the security of electronic payments, sets stricter rules on licensing requests and the registration of new payment service providers, and expands the supervisory powers in cross-border payments and the issuance of electronic money.

The PSD2 was adopted at the time of the implementation of main European reforms, such as the Digital Agenda for Europe, Digital Single Market and other initiatives foreseen in the Europe 2020 Strategy. The objective of these reforms is to provide the EU economy and citizens larger opportunities by enabling them to use digital technologies, in order to integrate the fragmented European digital market and compete with the USA more successfully. Although the PSD2 is not part of the Digital Agenda directly, it builds on it and provides the basic infrastructure by defining the single framework for internet payments.

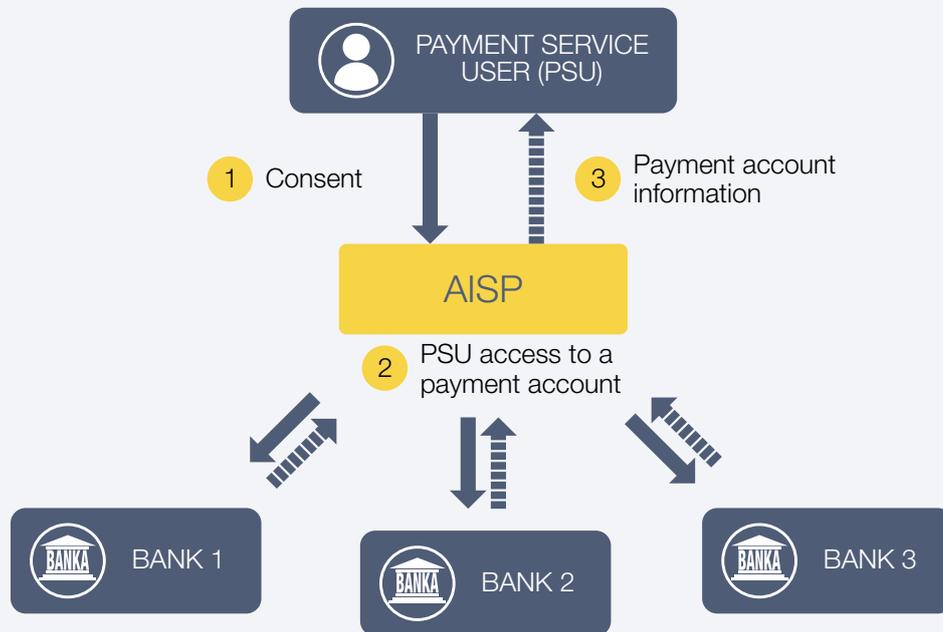
The new Payment System Act and the new Electronic Money Act: new payment services based on internet and mobile solutions, enhanced competition among service providers and stronger consumer safety

The CNB transposed the PSD2 into the new Payment System Act and the new Electronic Money Act (hereinafter referred to as 'the new acts') in 2018. This has enabled Croatian consumers and payment service users, simultaneously with the citizens in other EU countries, to enjoy all the benefits of technologically advanced payments, innovative additional services for the management of personal finance and the purchase with payment performed by a third party (in addition to strict authentication protocols and unambiguous user consent), i.e. by applying the highest standards of safety and protection of personal data.

The new acts have introduced two new payment services, which are based on internet and mobile solutions, payment initiation and account information

2 Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (Payment Services Directive 2)

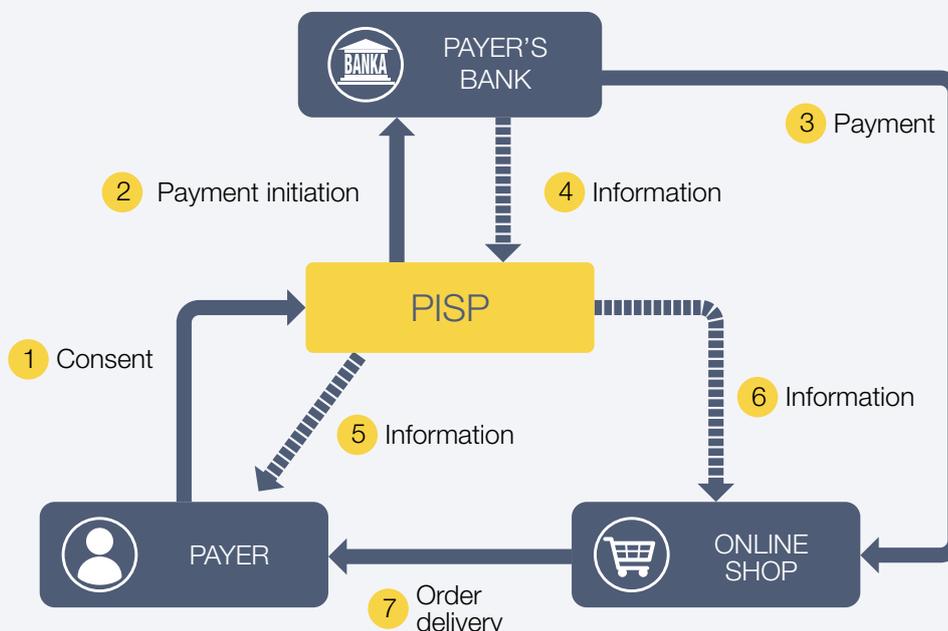
Example: Using the AIS service to obtain information from all PSU's accounts with several banks



services, as well as payment initiation service providers (hereinafter referred to as 'PISPs') and account information service providers (hereinafter referred to as 'AISPs'). The new payment service providers, with respect to the bank and the payment service user, appear as a third party. The PSD2 and the new acts bind the bank to allow access to the customer's payment account to third parties, i.e. PISP and AISP payment service providers, *at the request and with the consent of the customer*. The introduction of new payment services boosts competitiveness in the payment services market, enables a further development of innovative mobile and internet payment operations and additionally motivates banks to adjust their products in line with the needs of clients more rapidly.

The AISP is the aggregator of information on several different payment accounts from different banks; it integrates the overview of all transactions and balances in one place. Potential new services include personal finance management, information on creditworthiness of customers, etc.

Example: Purchase via the internet or via different solutions on mobile applications



The PISP allows the initiation of a payment order at the request of the customer with respect to a payment account held with another payment service provider (e.g. bank) and thus creates an alternative to credit cards. This enables cooperation with FinTech companies in developing new products, such as, for example, peer-to-peer solutions, instant payments and so on.

The new acts raise security requirements for the initiation and processing of electronic payments (reliable customer authentication and obligatory secure communication between payment service providers). All payment services offered electronically must be executed in a secure manner, using technologies that can ensure a reliable authentication of payment service users and reduce any risks of fraud, to the maximum possible degree.

In the new acts, enhanced safety of payments is ensured by additional requirements for the licensing of payment institutions and the licensing of electronic money institutions. Subsequent decisions adopted pursuant to the new acts prescribe own funds, the volume and scope of the annual financial statements, the scope and the methodology for the calculation of

safeguarded funds the institutions have received from payment service users for the execution of payment transactions. The decisions also determine the assets in which the received funds are invested (which must be safe and very liquid) and insurance policies or guarantees that safeguard the funds received.

According to the new Payment System Act, the services of collective purchase, gift cards and other cards of retail chains are not payment services. The same applies to the cards that can be used in a limited network, e.g., for the purchase of refined petroleum products and cash withdrawal services offered by means of ATMs of third persons, etc. Such activities, which are not deemed to be payment services but trade promotion, had to be regulated in more detail and more clearly differentiated from payment services. At the same time, the Electronic Money Act prescribes what is not deemed to be electronic money.

Another novelty in the Payment System Act is the small payment institution, which may provide one or more payment services in the Republic of Croatia exclusively. Despite the intensified capital and other requirements for the licensing of payment institutions, which in addition to the decision issued in the RC may, based on “passporting”, provide services in the whole of the EU, a “small institution” means greater competition and better services for consumers in certain market niches. At the same time, the Electronic Money Act governs the conditions for the operation of small electronic money institutions, which may also issue electronic money and provide limited payment services only in the RC.

The list of payment service providers and electronic money issuers, the type of service they provide and the EU countries in which they operate is available in the [register of Croatian institutions](#)³. This information can also be accessed via the [European register](#)⁴, in which institutions from all EU countries are also available.

In the area of consumer protection, the Decision on the most representative services linked to a payment account was adopted. These are the services most commonly used by consumers, that generate the highest cost for consumers, and that are subject to a fee, offered by at least one payment service

3 <https://www.hnb.hr/documents/20182/121807/e-registar-pruzatelja-platnih-usluga-i-izdavatelja-e-novca.pdf/8d5daa97-89cb-f0c1-8c30-6566334f1a1e?t=1549445617335>

4 <https://euclid.eba.europa.eu/register/pir/disclaimer>

provider. Guidelines were also adopted in which a uniform procedure was defined for all banks when preparing the fee information document, which makes it easier for consumers to compare the fees charged by different service providers and to make decisions about which payment account best suits their needs. Banks also have the obligation to submit data for the comparison of fees from the list of the most representative services. A list of fees is available at the CNB's website.

Payment infrastructure – payment systems

SEPA project in the Republic of Croatia

SEPA (Single Euro Payments Area) is a single area of payments in euro enabling citizens, business entities and public authorities to make cashless euro payment transactions by means of uniform models and procedures applied equally throughout the SEPA area, which includes 28 member states of the European Union, Iceland, Liechtenstein, Norway, Switzerland, Monaco, San Marino, Andorra and the Vatican City State (the Holy See).



HRK SCTInst payment scheme

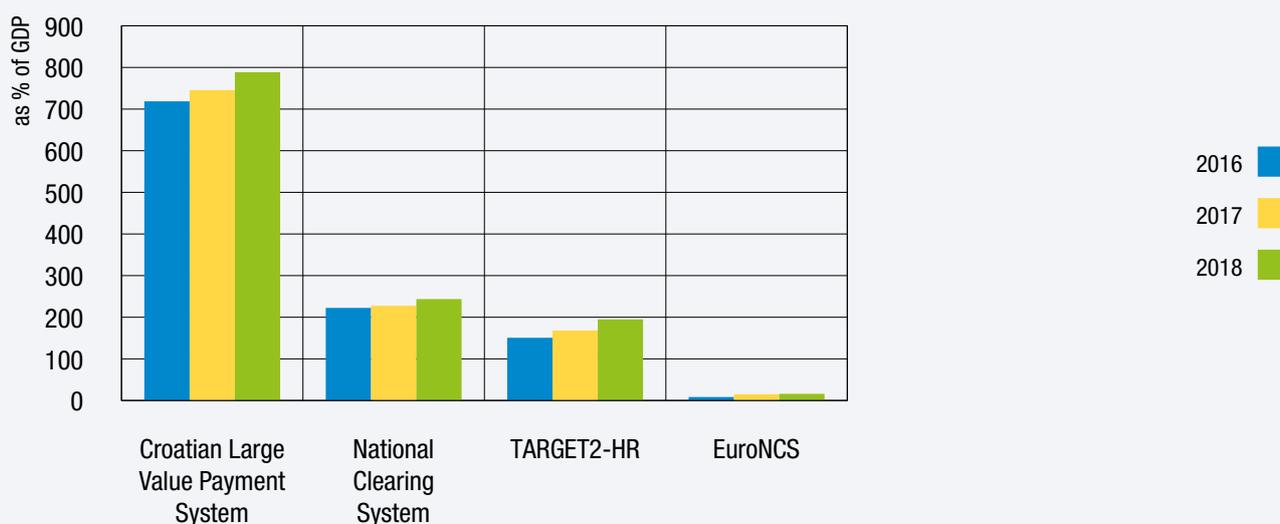
The project of the implementation of single European payment standards (SEPA standards) continued in the Republic of Croatia in 2018. The National Payment System Committee, at a meeting held in July 2018, adopted the Rules of the national instant kuna credit transfer scheme (HRK SCTInst payment scheme). This payment scheme will enable service users to initiate and receive payments constantly (around the clock, seven days a week, 365 days a year (24/7/365)). The payment transaction execution time is 10 seconds. The amount of the individual payment transaction will be limited to HRK 100,000. The above payment scheme should be operational from the first quarter of 2020.

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 services necessary for a smooth and efficient functioning of payment operations. Payment systems function based on regulations, operational procedures, business processes and technical solutions, which enable the transfer of cash among system participants. Payment operations in the Republic of Croatia are carried out through four payment systems: the Croatian Large Value Payment System (CLVPS), the National Clearing System (NCS), TARGET2-HR and EuroNCS.

The [Croatian Large Value Payment System \(CLVPS\)](#) is a payment system for the settlement of large value payment transactions in kuna among its participants (banks, CNB and Central Depository Agency) 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

Figure 19 Payment systems in the Republic of Croatia – overview of turnover



Note: EuroNCS system became operational in May 2016.

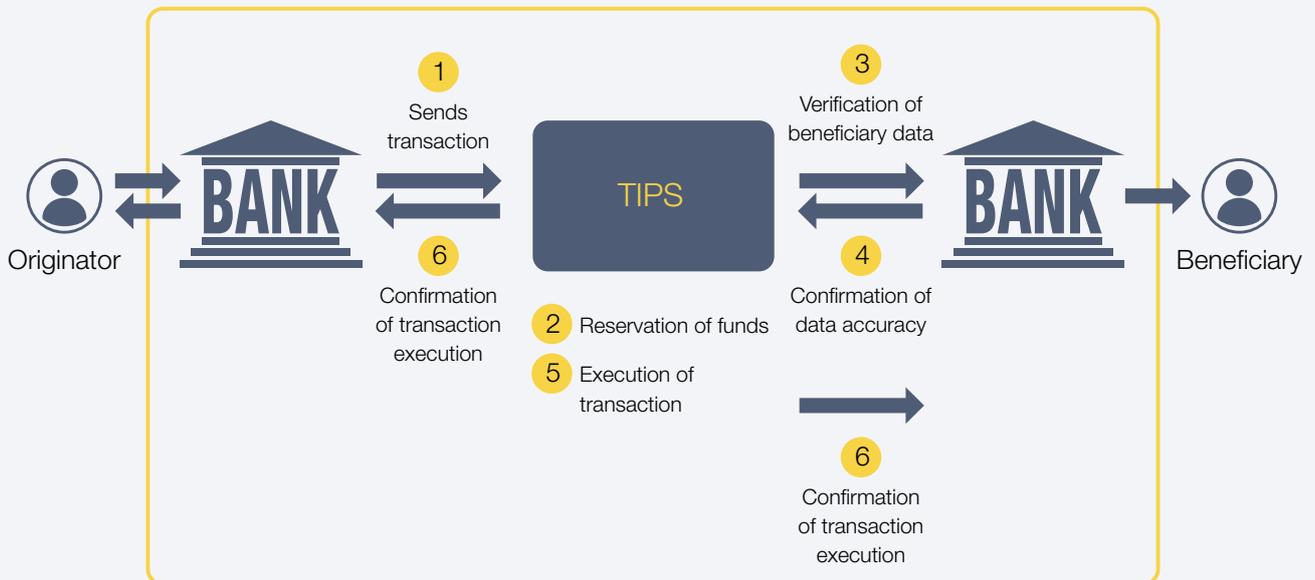
SOURCE: CNB.

execution of payment transactions linked to the participation in the capital market and other payment transactions of the system participants.

The National Clearing System (NCS) is a payment system for the clearing of a large number of credit transfer payment transactions in kuna that are of relatively low value, based on a multilateral net principle. The credit transfer payment transactions are 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.

The TARGET2-HR is a component of the TARGET2⁵ 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.

Figure 20 TIPS process flow



SOURCE: CNB.

5 Trans-European Automated Real-time Gross settlement Express Transfer System

TIPS⁶ is a new service, available from 30 November 2018 within TARGET2-HR, enabling its users to settle instant transactions, i.e. payment transactions in euro, which are settled within seconds, at any time of the day, throughout the year (24/7/365).

[EuroNCS](#) 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 a bank – settlement agent in the EuroNCS, since the settlement of clearings from the EuroNCS is carried out in the TARGET2-HR.

Authorised currency exchange offices

As at 31 December 2018, 1,296 authorised currency exchange offices operated in the Republic of Croatia on the basis of valid authorisations to conduct currency exchange transactions issued by the CNB.

In 2018, the authorised currency exchange offices' turnover in foreign cash purchase and sale transactions with natural persons (consumers) in their kuna equivalent totalled HRK 30.15bn. Of that amount, purchase accounted for HRK 21.97bn, or 72.9%. The bulk of total authorised currency exchange offices' transactions (84.68%) were in euro.

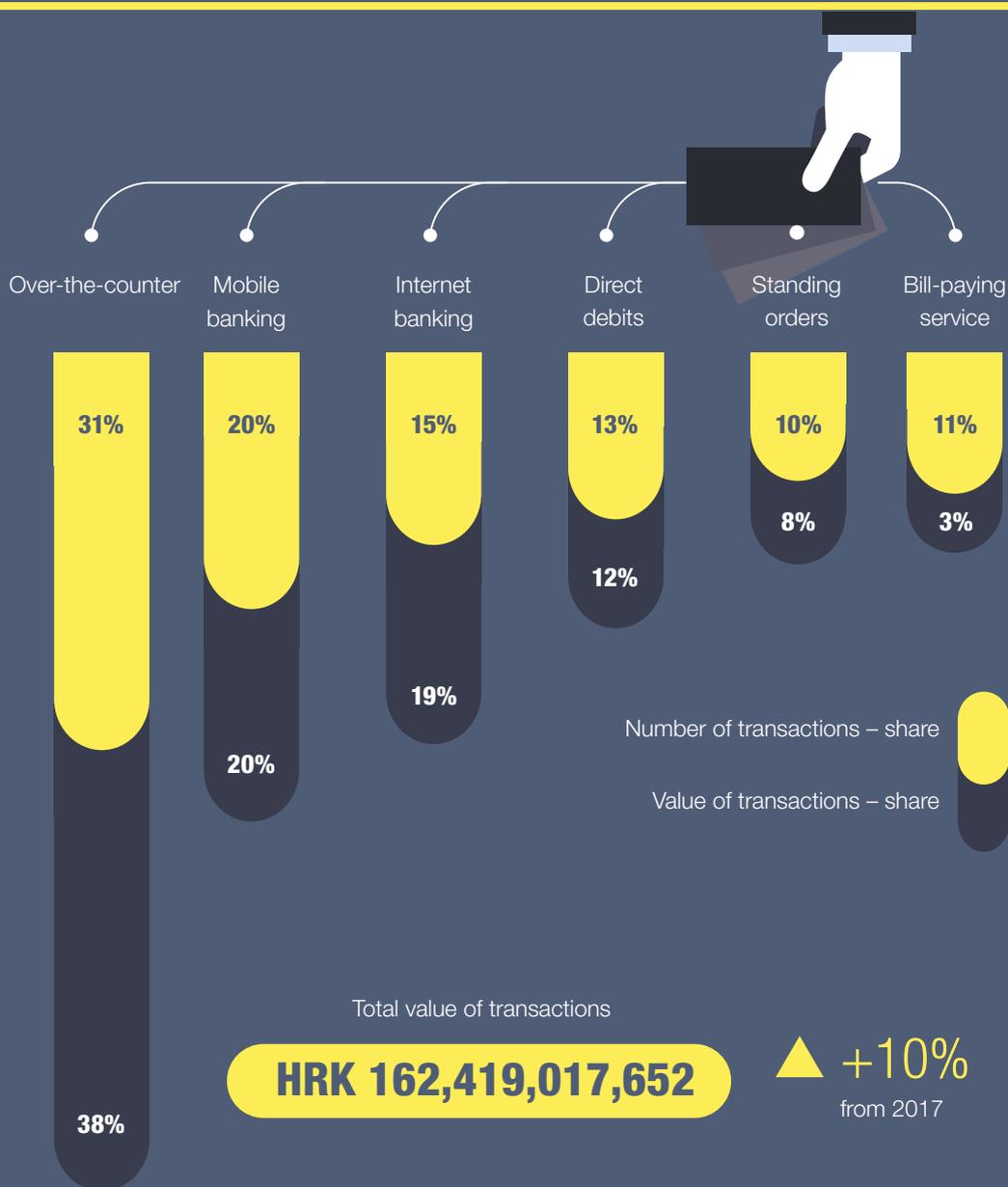
The kuna equivalent of the authorised currency exchange offices' total turnover in foreign cash was down by HRK 85m (1.3%) from 2017, while the share of the euro in total turnover was down by 0.33 percentage points (a decrease from 87.12% to 86.79%).

Payment operations in figures: increase in mobile banking and contactless payments

At the end of 2018, there were 7 million transaction accounts in banks. Of the total number of accounts, 95% were held by individuals, while the remaining 5% were held by corporations. Individuals contracted internet banking for almost every third account, while mobile banking was contracted for a slightly smaller number of accounts. Corporations had some sort of electronic banking contracted for 85% of the accounts.

6 TARGET Instant Payment Settlement

Channels and methods of initiation of payment transactions of individuals (consumers) for 2018



- In 2018 individuals most frequently initiated payment transactions over-the-counter.

- In 2018 for the first time mobile banking overtook internet banking in terms of number and value of transactions.

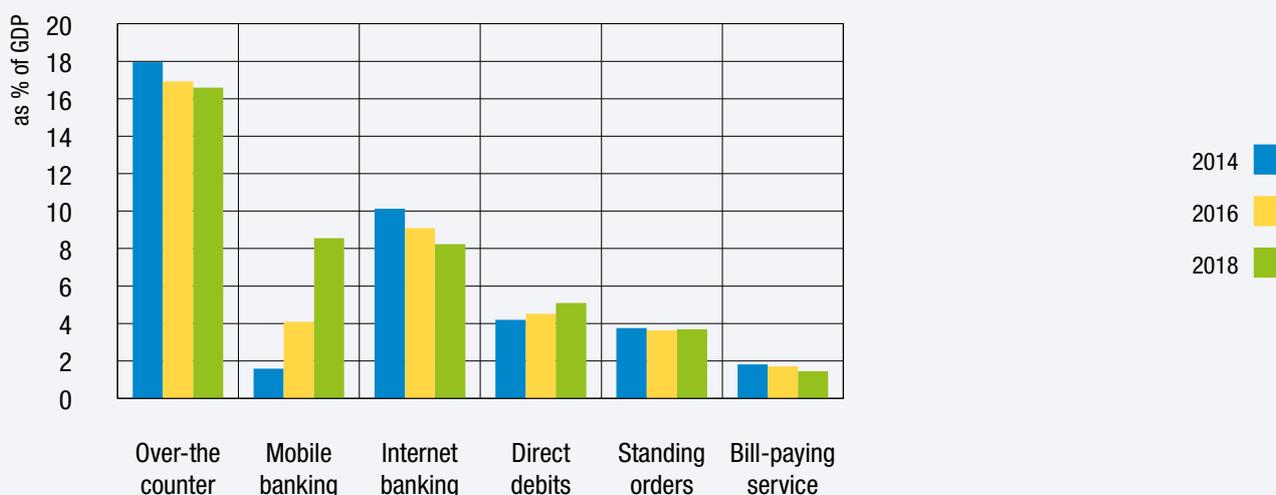
Individuals still most frequently initiated payment transactions over-the-counter, but mobile banking overtook internet banking after several years of rapid growth. Direct debits, standing orders and bill-paying service were less represented and accounted for a steady share of approximately 10% in the number and the value of total transactions.

In contrast, corporations almost exclusively use electronic payments, 92% in the number and 94% in the value of transactions. Internet banking was the most represented channel for the initiation of transactions for corporations, while mobile banking was still less used, despite a growing trend.

The number of payment cards in the Republic of Croatia exceeded 8.5 million, or almost two cards per capita, at the end of 2018, and the introduction of contactless payment cards intensified in particular. Although the replacement of contact cards with those containing contactless technology typically occurs upon the expiry of the validity of a card, the introduction of the new technology is also being speeded up by the ever greater tendency of users to opt for simpler and faster payment methods.

The territory of the Republic of Croatia is well covered by the ATM network, and EFTPOS terminals are also broadly accessible. The number and the distribution of the ATM and EFTPOS networks held steady from year to year.

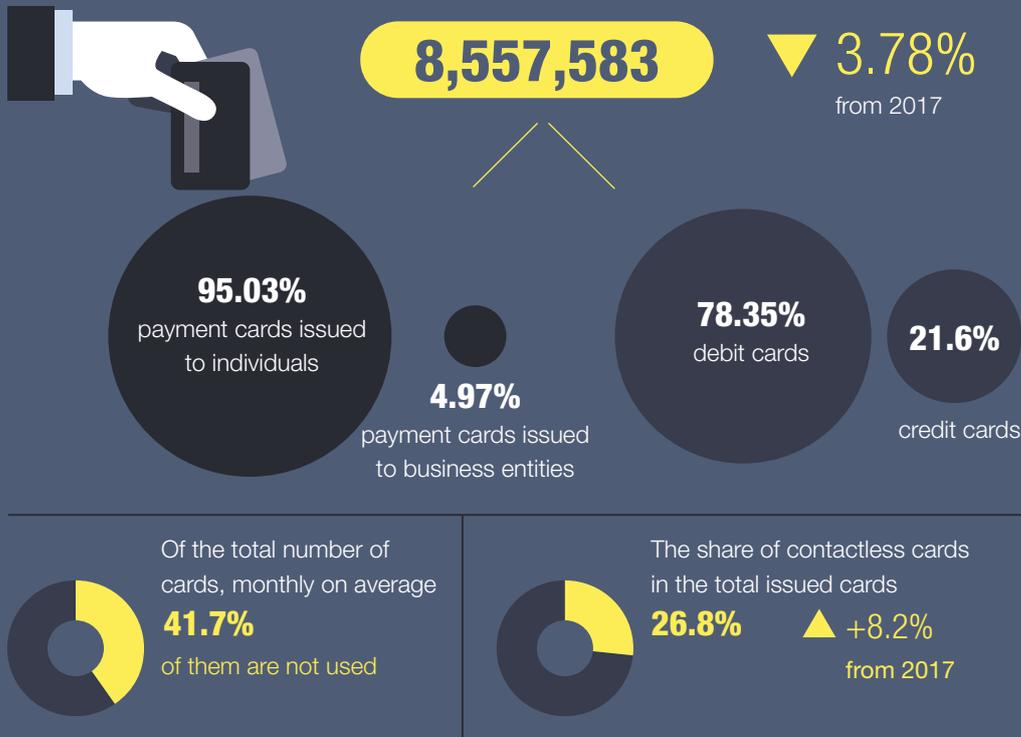
Figure 21 Rapid growth of mobile banking at the expense of internet banking and to a certain extent of over-the-counter transactions



SOURCE: CNB.

Cards

On 31 December 2018, the number of registered payment cards in circulation in the Republic of Croatia totalled



Two regular publications, [Payment Cards and Card Transactions](#) and [Payment Transactions and Accounts](#), as well as the [Report on cashless payment transactions in the Republic of Croatia](#), with a detailed overview and an analysis of data collected within the payment statistics, are published on the website of the Croatian National Bank.

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. With this regard, the CNB takes into account the planning of the manufacturing of cash, delivery, storage, distribution and organisation of distribution of cash, its protection from 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, with the aim of ensuring the quality of cash in circulation in accordance with public needs.

Cash issuance and supply

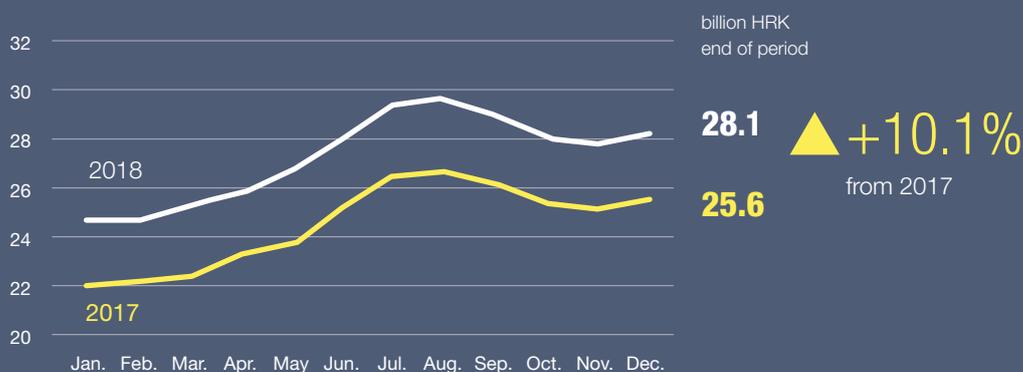
The issuance of banknotes and coins and the supply of banknotes and coins in circulation in the Republic of Croatia is one of the CNB's basic tasks. The supply of banks with cash implies the conduct of activities aimed at ensuring a sufficient amount of cash for banks and their clients (consumers and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

Currency outside banks

The growth of currency outside banks has continued since 2011. As at 31 December 2018, currency in circulation amounted to HRK 28.1bn, an increase of 10.1% from the end of 2017. Circulation means the volume of cash outside the CNB vault and cash centres (CCs) minus the volume of cash in banks' vaults.

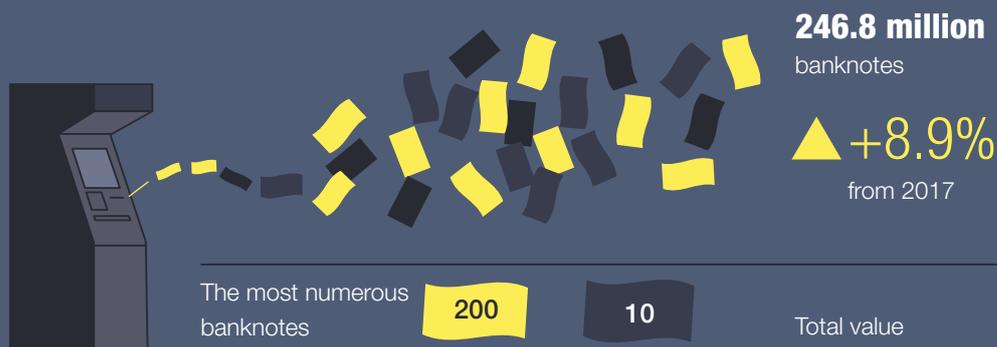
Currency in circulation

Currency in circulation = the volume of cash outside the CNB vault and CCs minus the volume of cash in banks' vaults



Volume of currency in circulation

Outside the CNB vault and CCs on 31 December 2018



The most numerous coins

5
kuna

37.6%

of the total **value**
of coins

10
lipa

23.2%

of the total **number**
of coins

Banks mostly use 200 kuna banknotes in ATM withdrawals, which has resulted in their high proportion in total banknotes outside the CNB vault and CCs.

If the balance at banks' cash desks and in their vaults is added to the circulation, on 31 December 2018, there were 246.8 million banknotes outside the CNB vault and CCs, worth HRK 33.5bn. From the end of 2017, the number of banknotes outside the CNB vault and CCs rose by 8.9% in 2018, while their total value increased by 10.7%.

Of banknotes outside the CNB vault and CCs, 200 kuna banknotes, with a share of 33.3%, and 10 kuna banknotes, with a share of 20.0%, were the most numerous in 2018 and accounted for HRK 16.92bn, or 50.5% of the total value of banknotes.

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

Of coins in circulation, the most numerous were 10 lipa coins (562.7 million items, or 23.2% 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 575.4m, or 37.6% of the total value of coins outside the CNB vault and CCs).

Issues of commemorative coins and numismatic coin sets

In 2018, the CNB issued the "Dubrovnik" 200 kuna commemorative silver coin dedicated to the City of Dubrovnik, the world-famous tourist destination, port city and centre of the County of Dubrovnik-Neretva (Figure 3). The coin belongs to the "Croatian cities" series of coins.

In the same year, in addition to the "Dubrovnik" silver coin, the CNB also issued a commemorative

Obverse and reverse of the 200 kuna commemorative silver coin





Obverse and reverse of the 150 kuna commemorative silver coin

silver coin of 150 kuna to mark the 100th anniversary of the end of the First World War (1918 – 2018), a historical event significant for the Republic of Croatia and the world.

The CNB also issued a numismatic set of the Croatian kuna and lipa circulation coins, with the year of issue 2018, consisting of all denominations.

Withdrawal of banknotes and coins

The CNB withdraws banknotes and coins unfit for circulation and replaces them. A total of 41.8 million banknotes were processed in 2018, of which 80.4% or 33.6 million banknotes were destroyed as the banknotes failed to meet the quality standards set for circulation banknotes. In addition, 89,676 items or 0.2% of the processed banknotes were sorted as damaged, to be destroyed subsequently.

Counterfeit banknotes and coins and their prevention

In 2018, in all, 499 counterfeit kuna banknotes, worth a total of HRK 150,920.00 were registered, of which 71.9% were counterfeits with a poor quality of reproduction. The number of registered counterfeit kuna banknotes increased by 97.2% from 2017. Taking into account that the number of banknotes outside the CNB vault and CCs averaged 244,833,167 items, two counterfeits were detected per 1 million kuna circulation notes in 2018. In 2017, 1.1 counterfeit banknotes were detected per 1 million kuna circulation banknotes.

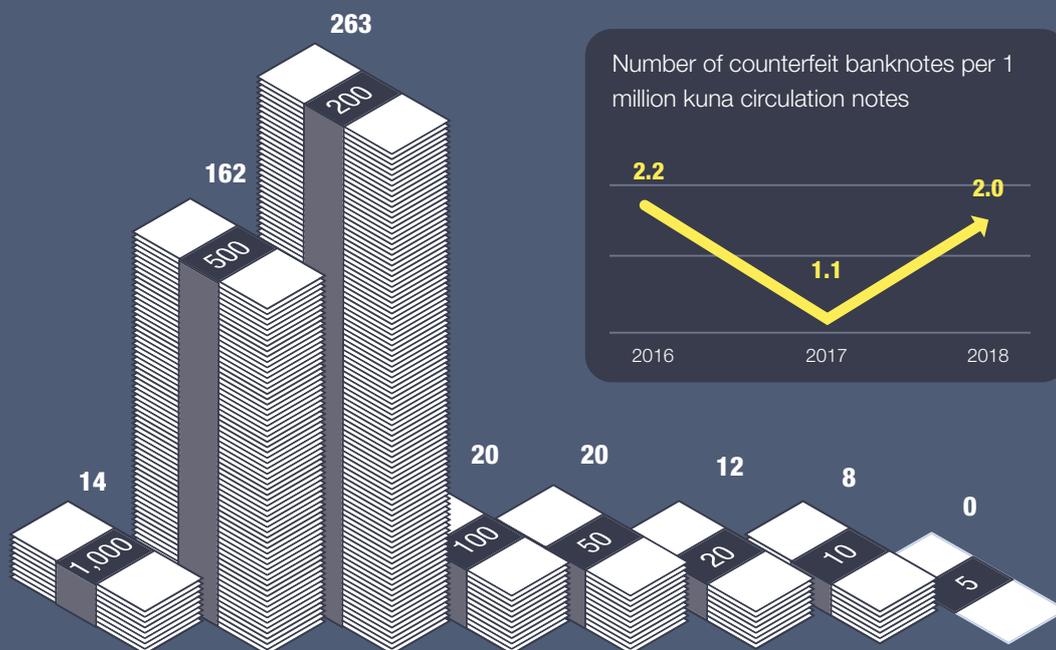
For the sake of comparison, in 2017 four counterfeit kuna coins were registered, but in 2018, only two counterfeit 5 kuna coins were registered.

Registered counterfeit kuna banknotes in 2018

499 items

=

HRK 150,920.00



With regard to foreign currencies, in all, 1,600 counterfeits were registered, of which the largest number, 1,488, was of counterfeit euro banknotes, followed by counterfeit US dollar banknotes (76), counterfeit pound sterling banknotes (30), and the remaining six banknotes were counterfeits of the Hungarian forint, Polish zloty, Swiss franc, convertible mark and Australian dollar. The number of registered counterfeit euro banknotes increased by 703 items or 89.6% from 2017. Individual cases of fraud in which a natural person received suspect banknotes from an unknown perpetrator when currency was being exchanged accounted for 983 or 66.1% of counterfeit euro banknotes.

In 2018, 166 counterfeit euro coins were registered (there were 159 2-euro coins, six 1-euro coins and one 50-cent coin). The number of registered counterfeit euro coins increased by 42 or 33.9% from 2017.

The Croatian National Bank continued implementing the National Training Programme on Banknote and Coin Authentication for Bank and Financial Institution Employees. In 2018, a total of 15 specialist courses for employees

of banks, institutions specialised in cash operations and the trade sector were held. In all, 221 employees of the above categories received training.

International relations

The CNB is a member of the European System of Central Banks and actively contributes to the performance of tasks of the General Council of the European Central Bank. CNB representatives also participate in the work of the European Systemic Risk Board, the European Banking Authority and the working bodies of the Council of the European Union and the European Commission.

The CNB is the fiscal agent of the RC for the IMF and a depository of the IMF, and it also cooperates with other international multilateral financial institutions. Concluding the Article IV consultations with the RC for 2018, the IMF Executive Directors welcomed its continued economic recovery, which helped further reduce indebtedness and build external buffers, and commended the achievement of a budget surplus in 2017.

Activities connected with EU membership

European System of Central Banks (ESCB)

The CNB is an integral part of the European System of Central Banks (ESCB) and the CNB Governor is a full member of the General Council of the of the European Central Bank (ECB). In 2018, the Governor participated in the regular quarterly meetings of the General Council, which dealt with macro-economic, monetary and financial developments in the EU as well as with monetary policy measures in non-euro area member states.

CNB representatives took part in the work of 13 ESCB committees and numerous sub-committees and working groups that provide expert assistance to the General 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 legislative proposals of the EU and individual member states.

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). Together with the vicegovernor competent for banking supervision, the Governor, who is also a member of the ESRB Steering Committee, participated in the regular quarterly meetings of the ESRB General Board dealing with systemic risks to the EU financial system and macroprudential policy. As assessed at the meetings, total risk increased in 2018, due mainly to the uncertainties stemming from geopolitical disturbances and trade tensions between major global economies as well as those surrounding the outcome of the UK's exit negotiations, which might trigger a jump in interest rates.

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

EU Council and the European Commission (EC)

In mid-2018, preparations started for the Croatian six-month presidency of the Council of Europe in the first half of 2020, during which CNB experts will participate in the coordination of the activities of some EU Council working groups.

In 2018, the EU Council continued with activities aimed at establishing a banking union and the further development of a capital markets union.

In 2018, CNB experts continued to participate in the activities of working bodies of the EU Council and the EC, most often together with representatives of the Ministry of Finance. The Governor and Deputy Governor took part in informal meetings of economy and finance ministers, while designated CNB representatives participated in the work of the Economic and Financial Committee (EFC), which promotes the coordination of economic policies of member states. Through participation in the work of the working bodies of the Economic and Financial Affairs Council, CNB representatives were actively involved in the preparation of positions of the RC related to the fields

of competence of central banks, such as improving the quality of financial services and the functioning of financial markets as well as strengthening the resilience of the EU financial system.

In 2018, the EU Council continued with activities aimed at establishing a banking union and the further development of a capital markets union. Negotiations continued on a package of measures to reduce risks within the banking system and on the European Deposit Insurance Scheme. In late 2018, an agreement was reached on the establishment of a common backstop for potential major disruptions in the euro area banking system, a role to be performed by the European Stability Mechanism (ESM). Activities continued on the design of a budgetary instrument for convergence and competitiveness dedicated to euro area member states and member states in the process of euro adoption.

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

The EC Country Report on Croatia, published in March 2018 within the European Semester, established that Croatia still had excessive macroeconomic imbalances although it had made some progress in eliminating their causes. The EC's detailed analysis of the Croatian economy showed that these imbalances primarily arose from the high stocks of public, private and external debt and their significant currency exposure in the context of low potential growth. The EC assessed that Croatia had made limited progress in most of the areas covered by country-specific recommendations for 2017. The Report stated that the banking system was well capitalised and that the bank asset quality continued to improve. However, the NPL ratio was still regarded as high.

The recommendations of the EU Council made to Croatia in mid-2018 emphasise the importance of implementing reforms in the areas of public finances, labour market, education, social policy, public administration and the management of government-owned enterprises and government property. In late 2018, the EC decided to conduct again in-depth reviews of national economies for the RC and 12 other member states.

Other activities connected with the European Union

National central banks are not directly involved in the negotiations on the UK's dissociation from the EU, but act as advisors. The CNB participates in an ESCB working group dealing with the assessment of the economic and financial implications of the UK's dissociation on the EU-27. As the outcome of the negotiations is uncertain, the CNB contributes at the national level in preparing the analyses of potential impacts of the UK's withdrawal from the EU regarding the areas within its competence.

In 2018, the CNB also continued cooperation with the representatives of EU member state central banks, the ECB and other EU institutions and bodies. Noteworthy in this context are several visits by EC and ECB experts and the thirteenth annual dialogue between the CNB and the Austrian central bank.

In addition to periodical bilateral cooperation with the central banks of EU candidate and potential candidate countries in the form of transfer of knowledge on the *acquis*, in 2018 the CNB was engaged as a partner in two twinning projects: for the Montenegrin financial sector (the consortium members were institutions from Germany, Croatia and the Netherlands) and for the strengthening of institutional capacities of the National Bank of Serbia during its EU accession process (the consortium members were central banks from Germany, Croatia and Romania). CNB experts also participated in the twinning light project for North Macedonia, related to the strengthening of the system for combatting euro counterfeiting. Intensive preparations got underway for the regional Central Bank Capacity Building Programme for six Western Balkan countries in the context of their forthcoming accession to the ESCB, in which the CNB will provide assistance, together with 17 other member state central banks and the ECB.

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 15 countries (Armenia, Belgium, Bosnia and Herzegovina, Bulgaria, Cyprus, Montenegro, Georgia, Croatia, Israel, Luxembourg, Moldova, the Netherlands, Romania, North Macedonia and Ukraine). Anthony De Lannoy, a Belgian representative, is the executive director in the current term, with alternates from the Netherlands and Ukraine. The RC appoints its representative as advisor



to the executive director for a two-year term within each four-year period.

The 2018 Article IV consultations with the RC were concluded at the beginning of February 2019. The executive directors welcomed Croatia's continued economic recovery, which helped further reduce indebtedness and strengthen external buffers, and commended the achievement of a fiscal surplus in 2017, the first one recorded during Croatia's independence. The directors stressed the importance of pursuing growth-friendly fiscal consolidation, while improving the structure of revenues and the quality of expenditures, encouraging the Croatian authorities to seize the opportunity presented by good macroeconomic conditions to press on with the reform agenda. They also encouraged the Croatian authorities to broaden the tax base and take measures to reduce the informal economy, and called for a more ambitious restructuring of

Meeting of the IMF and World Bank constituency to which Croatia belongs, jointly organised by the RC Ministry of Finance and the CNB in Split

public administration. While welcoming the passage of the pension reform and recent measures to improve the efficiency of the healthcare system, they underscored the further reforms that are necessary to this end. The executive directors consider monetary policy to be appropriately accommodative within the limits of the exchange rate anchor. They also emphasised the need to complete the reform agenda in order to derive maximum benefits from the envisaged adoption of the euro and to maintain strong external buffers to withstand any negative asymmetric shocks. They commended the CNB for its conservative prudential policies and welcomed the efforts towards the further reduction of the NPL stock. The executive directors encouraged continued improvements in bankruptcy legislation and highlighted the need to further reduce administrative and tax burdens on the economy. They also advised the streamlining of the state-owned enterprise sector and improving the efficiency of legislative and judicial proceedings. Finally, they underscored the importance of pursuing a balanced approach to increasing labour market flexibility as a safeguard against the creation of a dual labour market, which would further encourage the emigration of the young to the detriment of medium-growth prospects.

In addition to Article IV consultations, cooperation with IMF experts and exchange of opinions also took place in a number of other gatherings and conferences in 2018. In addition to the IMF and World Bank Spring Meetings and the Annual Meetings, also important was the meeting of the IMF and World Bank constituency of which Croatia is a member, held in Split, in the joint organisation of the Ministry of Finance of the RC and the CNB.

Pursuing its commitment to supporting low-income countries, the RC has participated in several initiatives launched to this end by the IMF. In late 2018, it extended for five years the term of a non-interest-bearing deposit (SDR 519,161) in favour of the Poverty Reduction and Growth – Heavily Indebted Poor Countries Trust.

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 the obligations of the RC, in its name and for its account, on the basis of its membership in the IMF.

The quota of the RC in the IMF and its voting power remained unchanged in 2018 (SDR 717.4m and 0.171% respectively).

Bank for International Settlements (BIS)

In 2018, the CNB Governor took part in the regular meetings of central bank governors from BIS member countries, at which topical issues in the area of central banking, international banking and finance were discussed. In addition, in June 2018, the Governor participated in the BIS Annual General Meeting, on which occasion the BIS Annual Report was adopted.

Cooperation with other international financial institutions

The CNB, within its competence, continued its cooperation with a number of other international financial institutions and organisations in 2018. This cooperation largely included the cooperation with multilateral development banks, with the RC as their member, such as the World Bank Group, the European Bank for Reconstruction and Development and the European Investment Bank.

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 experience and opinions of the key stakeholders in these countries' financial systems and private and public sectors. The Initiative brings together international financial institutions, home and host country supervisory authorities and the principal cross-border banking groups; it was established at the peak of the global financial crisis with the aim of preventing a sudden turn in the movement of capital and has proven to be a useful platform for cooperation between supervisory authorities for the better identification of systemic risks.

CNB representatives also participate in the work of an interdepartmental group for the coordination of activities within the 16+1 initiative, which promotes cooperation between 16 Central, Eastern and Southeastern European countries and China.

Activities related to the adoption of the euro

The Government of the Republic of Croatia officially adopted its Strategy for the Adoption of the Euro in the Republic of Croatia (hereinafter: the Eurostrategy) in May 2018 and established a National Council for Euro Adoption (hereinafter: National Council) responsible for the implementation of the Eurostrategy. The Governor of the CNB was appointed deputy head of the National Council. At the first meeting of the National Council held towards the end of November, line ministers reported on the efforts made in the area of structural reforms with the aim of strengthening the resilience and competitiveness of the Croatian economy to enhance its readiness for joining the monetary union.

In August 2018, the CNB organised a poll to gauge public opinion on the adoption of the euro in Croatia. This was the first poll in a series of similar surveys which will be carried out every six months. Information obtained by the public opinion poll is important to assess the level of support and to plan further informational activities. In addition to measuring the citizens' support for euro adoption, the poll is structured in such a way as to reveal how often citizens use the euro in everyday life, whether they consider themselves well-informed on the various aspects of euro adoption, whether they recognise the main benefits of euro adoption and what their greatest concerns are. The results of the poll carried out in August 2018 suggest that slightly over one half of Croatian citizens support euro adoption. The level of support would probably be even higher if the expectations of a surge in prices were

The results of the poll carried out in August 2018 suggest that slightly over one half of Croatian citizens support euro adoption.

not that deeply rooted. Even though data from other countries show that euro adoption had an insignificant effect on prices, many Croatian citizens fear that if there were a changeover to the euro, prices would go up substantially, and that, as a result, their standard of living would drop. As for the positive effects of euro adoption, the majority of respondents consider easier business operations and lower transaction costs the main advantages of euro adoption. Only a small percentage of citizens is aware of the advantage of currency risk elimination, although objectively, this would be the most significant benefit of euro adoption for Croatia. Interestingly, as much as 80% of respondents expect Croatia to adopt the euro over the next ten years.

The Governor and the competent vicegovernors held public presentations of the Eurostrategy in 17 county chambers of commerce and six business schools in Croatia.

Furthermore, numerous activities were carried out throughout 2018 to inform the public on the course of the euro adoption procedure and its possible effects. The Governor and the competent vicegovernors held public presentations of the Eurostrategy in 17 county chambers of commerce and six business schools in Croatia. This enabled CNB officials to meet with representatives of the business and academic community in almost all Croatian counties. The aim of the presentations was to inform the public of the advantages and disadvantages of euro adoption, explain the euro adoption procedure and describe economic policies and reforms contributing to the adoption of the euro. In the meetings, entrepreneurs showed their support for the efforts to adopt the euro, with most of them, particularly exporters, expecting euro adoption to significantly facilitate business and planning.

In addition to presenting the Eurostrategy to the public, CNB officials and other CNB employees held a number of lectures for pupils, students, teachers and experts from various areas of the economy as well as for other interested groups. Besides presenting the main conclusions of the Eurostrategy, the lectures were aimed at explaining the role of the CNB once Croatia joins the euro area. Even though Croatia will renounce its right to an autonomous monetary policy by adopting the euro, the CNB will continue to perform numerous responsible tasks. For example, as part of the Eurosystem, the CNB will actively participate in the creation and implementation of the common monetary

policy in the euro area, which was not previously the case. The Governor of the CNB will become a full member of the Governing Council of the European Central Bank (ECB), which takes all monetary policy decisions. Furthermore, the CNB will continue to implement macroprudential policy, manage international reserves, govern the payment system, regulate currency in circulation and, in cooperation with the ECB, perform tasks related to bank supervision and other tasks defined by the Act on the Croatian National Bank.

In the autumn of 2018, CNB officials held a number of meetings with representatives of EU institutions and euro area central banks, introducing them to Croatia's plans related to euro adoption. During the meetings, support was shown to Croatia on its path towards euro adoption provided that it continues its prudent economic policy and makes further efforts to implement structural reforms.

Human resources

The goal of human resource management at the Croatian National Bank 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. In 2018, the work on organisational design and job descriptions continued, and the processes of attracting, selecting and employing new staff members were intensified. Furthermore, additional improvements were made to the information system providing support to human resource management. A total of 545 employees participated in various educational programmes in Croatia and abroad.

Job definitions and organisational design

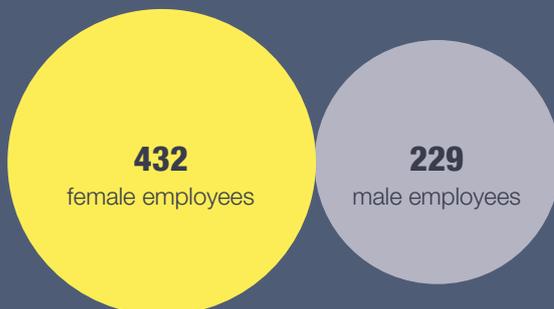
Activities related to amendments to the Regulation on the CNB organisational structure were undertaken in 2018 in order to optimise the organisational structure and processes and analyse and design operations. A revision of job descriptions continued at organisational unit level in order to create the professional and legal foundation for an easier adjustment to the requirements of business functions and their operational needs. These activities are continuously necessary to enable the easier management of the changes in the area of job definition and organisational design.

Recruitment and employment relationships

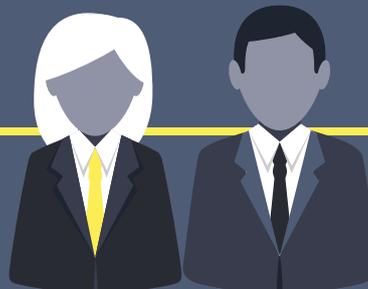
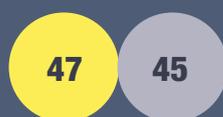
As at 31 December 2018, the Croatian National Bank had a staff of 661 employees, or 1% more than at the end of 2017. Of this number, 635 employees were in permanent employment and 26 in fixed-term employment.

Employee structure

Total number



Managing positions



Average age



Average total years of employment



Average work experience in the bank



2018	→	New employees	Termination of employment by mutual consent	Retirement
		51 ▲	8 ▼	20 ▼

The majority of total Croatian National Bank employees are women (432 employees or 65%). The Croatian National Bank is one of the rare central banks within the ESCB where, in the employment structure according to gender, there is a larger proportion of women; women also account for a large share in senior and middle management and in analysis and research positions.

Increased activity related to employment dynamics continued in the CNB in 2018. Due to an increase in the domestic and foreign demand for experts in the labour market, a number of experts have temporarily or permanently left the CNB to work for other employers. The downward trend in the number of candidates applying to external vacancy announcements also continued. The smaller number of candidates that met the requirements for advertised positions in some cases led to the cancellation of some vacancy notices and the need to repeat vacancy announcements, primarily in the area of information technology.

The average age of CNB employees is 45 years and they have an average total work experience of 22 years. The average work experience at the Bank is 16 years.

In 2018, 51 new employees were hired in the Croatian National Bank. The majority of new employees are economists.

Most new employees were hired at associate positions, followed by trainee and administrative positions.

Eight CNB employees terminated their employment by mutual consent in 2018, while 20 employees retired.

Employee development

A total of 545 employees participated in various forms of professional development and training in 2018, an increase of almost 4% over 2017.

Most of the employees participated in professional development programmes in Croatia and abroad (77%), followed by employees who completed a foreign language course (9%), mainly business or banking English, and employees who completed mandatory training programmes pursuant to regulations (9%). The remaining 5% of employees participated in competence development programmes (cooperation, result orientation and leadership), education courses (postgraduate and graduate) and a small number of employees took information technology courses.

Figure 22 Employment status of employees

SOURCE: CNB.

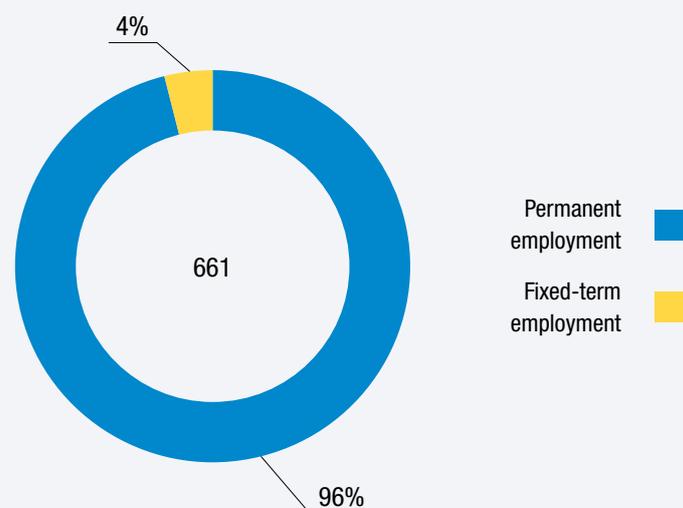
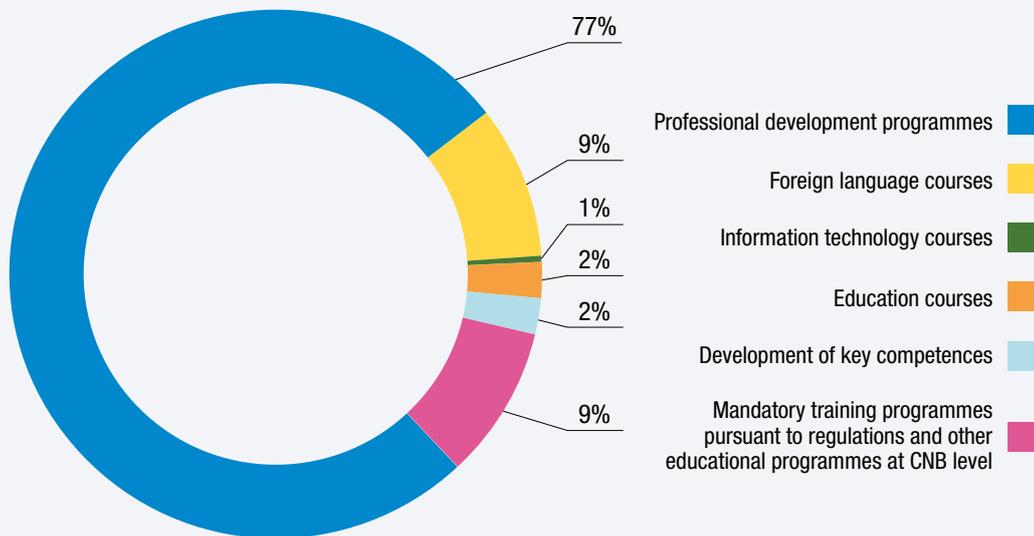


Figure 23 Employee development by type of education



SOURCE: CNB.

The number of employees participating in educational programmes is increasing noticeably

CNB employees most often participated in domestic educational programmes in accounting, payment operations, money market, prevention of money laundering and legal issues. The foreign educational programmes mostly attended by CNB employees were on the topics of macroeconomics, risk management, monetary policy implementation, bank supervision, financial markets and payment operations. CNB employees spent an average of two days participating in professional development programmes in 2018.

The CNB is constantly investing in the professional growth and development of its employees

In 2018, CNB employees participated in educational programmes organised by the ESCB, particularly in the area of central banking, law, accounting, etc.

The CNB also hosted a programme implemented in cooperation with the ESCB from the area of information technology, entitled “Information systems risk management framework (ISRM)”.

Bearing in mind the specific operational needs, in-house workshops on the application of the Code of Ethics of the CNB's employees were held over the past period. Interactive workshops, including a series of presentations and individual and group activities, were aimed at raising the employees' awareness on the desirable forms of professional and business conduct.

Developing an information system to support the human resource management function

In 2018, significant time and human resources were dedicated to developing the information system HRIS (Human Resource Information System), designed to support the human resource management function.

The new information system will enable the improvement and optimisation of business processes.

The new application should provide for connection with other application solutions offering support to the Bank's operation and the human resource management function, enable direct communication with various groups of users within the Bank and create improved options for administration, management and reporting. The reporting system and improved options of an analytical overview of data as well as the synthesis of information will contribute to a significant breakthrough in business decision making related to human resource management.

Preparations for the adjustment of bank supervision to future functioning within the Single Supervisory Mechanism of the European Central Bank

In order to prepare for the reorganisation of the Prudential Regulation and Supervision Area, a survey was carried out to examine the views and opinions of Sector employees regarding the various aspects of work in the Bank. The findings were presented to the CNB management and employees within the context of the planned reorganisation. In addition to the survey, an evaluation of competences and interest of employees was carried out in order to optimally allocate employees within the new organisation and to adjust the organisation of bank supervision to the requirements of functioning within the Single Supervisory Mechanism of the European Central Bank.

CROATIAN NATIONAL BANK • ANNUAL REPORT 2018

2018

The management and the internal organisation of the Croatian National Bank

Members of the Council of the Croatian National Bank

Boris Vujčić, Governor (until 8 July 2018 and from 13 July 2018)
Relja Martić, Deputy Governor (until 17 July 2018)
Sandra Švaljek, Deputy Governor (from 18 July 2018)
Tomislav Presečan, Vicegovernor (until 17 July 2018)
Vedran Šošić, Vicegovernor (until 17 July 2018)
Damir Odak, Vicegovernor (until 17 July 2018)
Michael Faulend, Vicegovernor
Bojan Fras, Vicegovernor
Neven Barbaroša, Vicegovernor
Slavko Tešija, Vicegovernor (from 18 July 2018)
Roman Šubić, Vicegovernor (from 18 July 2018)
Martina Drvar, Vicegovernor (from 18 July 2018)

Croatian National Bank management

Boris Vujčić, Governor (until 8 July 2018 and from 13 July 2018)
Relja Martić, Deputy Governor (until 17 July 2018)
Sandra Švaljek, Deputy Governor (from 18 July 2018)
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Neven Barbaroša, Vicegovernor
Slavko Tešija, Vicegovernor (from 18 July 2018)
Roman Šubić, Vicegovernor (from 18 July 2018)
Martina Drvar, Vicegovernor (from 18 July 2018)

Chief Economist	Vedran Šošić
Chief Operating Officer	Tomislav Presečan

Executive directors

Research Area	Ljubinko Jankov
Controlling and Accounting Area	Diana Jakelić
Information Technology Area	Mario Žgela
Support Services Area	Boris Zaninović
Central Banking Operations Area	Irena Kovačec
Communications Area	Alemka Lisinski
Statistics Area	Tomislav Galac
Prudential Regulation and Supervision Area	Željko Jakuš
Payment Operations Area	Ivan Biluš
International Relations Area	Sanja Tomičić



HNB

FINANCIAL STATEMENTS

For the year ended 31 December 2018

CROATIAN NATIONAL BANK

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INDEPENDENT AUDITOR'S REPORT

To the Council of the Croatian National Bank

Opinion

We have audited the financial statements of the Croatian National Bank („the Bank“), which comprise the statement of financial position as at 31 December 2018, and the income statement, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Bank as at 31 December 2018, and 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 (IFRSs).

Basis for opinion

We conducted our audit in accordance with the Audit Act and International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Bank in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) and we have fulfilled our ethical responsibilities in accordance with the IESBA Code. 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

Council of the Croatian National Bank is responsible for the preparation and fair presentation of the financial statements in accordance with IFRSs and for such internal control as 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, Council of the Croatian National Bank is responsible for assessing the Banks's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting.

The company was registered at Zagreb Commercial Court: MBS 030022053; paid-in initial capital: Kn 44,900.00; Board Members: Branislav Vrtačnik, Marina Tonžetić, Juraj Moravek and Dražen Nimčević; Bank: Zagrebačka banka d.d., Trg bana Josipa Jelačića 10, 10 000 Zagreb, bank account no. 2360000-1101896313; SWIFT Code: ZABHR2X IBAN: HR2723600001101896313; Privredna banka Zagreb d.d., Radnička cesta 50, 10 000 Zagreb, bank account no. 2340009-1110098294; SWIFT Code: PBZGHR2X IBAN: HR3823400091110098294; Raiffeisenbank Austria d.d., Petrinjska 59, 10 000 Zagreb, bank account no. 2484008-1100240905; SWIFT Code: RZBHR2X IBAN: HR1024840081100240905.

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INDEPENDENT AUDITOR'S REPORT (CONTINUED)

Auditor's 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 auditor's 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 ISAs 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 ISAs, we exercise professional judgment and maintain professional skepticism 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 Bank's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Council of the Croatian National Bank.
- Conclude on the appropriateness of Council of the Croatian National Bank 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 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 auditor's 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 auditor's report. However, future events or conditions may cause the 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 AUDITOR'S REPORT (CONTINUED)

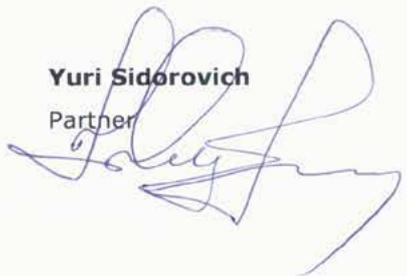
Auditor's Responsibilities for the Audit of the Financial Statements (continued)

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.



Branislav Vrtačnik
President of the Management
Board

Vanja Vlák
Certified Auditor



Yuri Sidorovich
Partner

Deloitte d.o.o.

Zagreb, 15 March 2019

Radnička cesta 80

10 000 Zagreb,

Croatia

INCOME STATEMENT

(All amounts are expressed in thousands of kuna)	NOTES	2018	2017
Interest and similar income	3a	725,700	692,031
Interest and similar expense	3b	(233,094)	(166,799)
NET INTEREST INCOME	3	492,606	525,232
Fee and commission income	4a	49,513	49,578
Fee and commission expenses	4b	(20,927)	(19,240)
NET FEE AND COMMISSION INCOME	4	28,586	30,338
Dividend income		5,111	6,652
Net investment result – equity method		3,407	1,792
Net result from financial assets at fair value through profit or loss	5	(76,623)	(116,849)
Net result from debt securities at fair value through other comprehensive income	6	53,330	–
Net exchange differences	7	(602,950)	(2,658,690)
Other income	8	5,634	6,324
OPERATING (EXPENDITURE)		(90,899)	(2,205,201)
Operating expenses	9	(373,964)	(346,505)
(Increase)/decrease in impairment losses and provisions	10	(3,510)	(2,525)
(LOSS)	35	(468,373)	(2,554,231)
– Covered from general reserves		468,373	2,554,231

The notes on pages 153 to 228 form an integral part of these financial statements.

STATEMENT OF COMPREHENSIVE INCOME

(All amounts are expressed in thousands of kuna)	NOTES	2018	2017
(LOSS)		(468,373)	(2,554,231)
OTHER COMPREHENSIVE INCOME/(LOSS)		(108,234)	184,389
<i>OTHER COMPREHENSIVE INCOME ITEMS THAT ARE OR WILL BE RECLASSIFIED TO PROFIT OR LOSS IN SUBSEQUENT PERIODS</i>		<i>(108,234)</i>	<i>184,389</i>
Gains/(losses) from remeasurement of financial assets available for sale (IAS 39)		–	184,389
Debt securities at fair value through other comprehensive income:			
Gains/(losses) from remeasurement		(52,609)	–
(Gains)/losses from trading transferred to profit or loss		(53,330)	–
Net changes in loss allowances for expected credit losses		(2,295)	–
TOTAL COMPREHENSIVE INCOME/(LOSS)		(576,607)	(2,369,842)

The notes on pages 153 to 228 form an integral part of these financial statements.

STATEMENT OF FINANCIAL POSITION

(All amounts are expressed in thousands of kuna)	NOTES	31/12/2018	31/12/2017
ASSETS			
Cash and current accounts with other banks	11	9,524,804	19,753,776
Deposits with other banks	12	11,426,141	2,418,675
Financial assets at fair value through profit or loss	13	39,709,543	27,680,857
Loans	14	2,029,317	1,286,777
Reverse repo agreements	15	21,278,988	17,643,742
Held-to-maturity investments	16	–	19,865,183
Debt securities at amortised cost	17	682,112	–
Balances with the International Monetary Fund	18	9,248,636	9,200,198
Financial assets available for sale	19	–	27,985,759
Debt securities at fair value through other comprehensive income	20	43,995,277	–
Equity securities at fair value through other comprehensive income – irrevocable election	21	60,218	–
Investments accounted for using the equity method	22	23,617	22,033
Accrued interest and other assets	23	2,577,237	8,435,474
Property, plant, equipment and intangible assets	24	579,046	584,297
TOTAL ASSETS		141,134,936	134,876,771
LIABILITIES			
Banknotes and coins in circulation	25	35,046,160	31,691,425
Due to banks and other financial institutions	26	69,807,221	64,073,140
Repo agreements	27	9,219,306	12,023,244
Due to the State and State institutions	28	2,898,000	2,949,201
Due to the International Monetary Fund	29	9,230,974	9,179,443
Accrued interest and other liabilities	30	461,838	704,405
TOTAL LIABILITIES		126,663,499	120,620,858
EQUITY			
Initial capital	31	2,500,000	2,500,000
Reserves	31	11,971,437	11,755,913
TOTAL EQUITY		14,471,437	14,255,913
TOTAL EQUITY AND LIABILITIES		141,134,936	134,876,771

The financial statements set out on pages 148 to 228 were approved on 15 March 2019 by:

Director of the Accounting Department:

Mario Varović



Governor:

Boris Vujčić



The notes on pages 153 to 228 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 RESERVES FOR FINANCIAL ASSETS AVAILABLE FOR SALE	FAIR VALUE RE-SERVE FOR DEBT SECURITIES AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME	REVALUATION RESERVES ON PROPERTY	TOTAL RESERVES	PROFIT OR LOSS FOR THE YEAR	TOTAL CAPITAL
AS AT 1 JANUARY 2017	2,500,000	13,849,266	(62,624)	–	339,113	14,125,755	–	16,625,755
Profit/(Loss)	–	–	–	–	–	–	(2,554,231)	(2,554,231)
Other comprehensive income	–	–	184,389	–	–	184,389	–	184,389
Total comprehensive income	–	–	184,389	–	–	184,389	(2,554,231)	(2,369,842)
Depreciation of revalued property	–	5,233	–	–	(5,233)	–	–	–
Loss covered from general reserves	–	(2,554,231)	–	–	–	(2,554,231)	2,554,231	–
AS AT 31 DECEMBER 2017	2,500,000	11,300,268	121,765	–	333,880	11,755,913	–	14,255,913
<i>THE EFFECT OF THE APPLICATION OF IFRS 9</i>	–	(16,231)	(121,765)	930,127	–	792,131	–	792,131
AS AT 1 JANUARY 2018	2,500,000	11,284,037	–	930,127	333,880	12,548,044	–	15,048,044
Profit/(Loss)	–	–	–	–	–	–	(468,373)	(468,373)
Other comprehensive income/(loss)	–	–	–	(108,234)	–	(108,234)	–	(108,234)
Total comprehensive income/(loss)	–	–	–	(108,234)	–	(108,234)	(468,373)	(576,607)
Depreciation of revalued property	–	5,233	–	–	(5,233)	–	–	–
Loss covered from general reserves	–	(468,373)	–	–	–	(468,373)	468,373	–
AS AT 31 DECEMBER 2018	2,500,000	10,820,897	–	821,893	328,647	11,971,437	–	14,471,437

The notes on pages 153 to 228 form an integral part of these financial statements.

STATEMENT OF CASH FLOWS

(All amounts are expressed in thousands of kuna)	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES		
Interest received	924,676	847,583
Interest paid	(251,999)	(172,801)
Fees and commissions received	49,010	48,858
Fees and commissions paid	(11,321)	(10,211)
Dividends received and share in profit	6,933	8,494
Other receipts	66,796	66,743
Expenses paid	(324,156)	(306,330)
Inflows/(outflows) in deposits and reverse repo agreements with other banks	(12,703,865)	(7,752,821)
Inflows/(outflows) in loans and reverse repo kuna agreements	(750,091)	(161,994)
Sale/(purchase) of held-for-trading securities	(12,131,436)	(3,998,648)
Inflows/(outflows) in assets under management with international financial institutions	24,523	13,943
Sale/(purchase) of securities held at amortised cost	(683,331)	–
Sale/(purchase) of securities held at fair value through other comprehensive income	4,073,147	–
Sale/(purchase) of held-to-maturity securities	–	1,356,677
Sale/(purchase) of securities available for sale	–	(1,656,846)
Inflows/(outflows) from other assets	(110,788)	(105,493)
Inflows/(outflows) in amounts due to the International Monetary Fund	(51)	(97)
Issuance of currency in circulation	3,354,736	3,777,469
Inflows/(outflows) in repo agreements and amounts due to banks and other financial institutions	8,760,785	15,912,943
Inflows/(outflows) in amounts due to the State and State institutions	(42,311)	(400,381)
Inflows/(outflows) in amounts due to the European Commission	(240,802)	(28,958)
Inflows/(outflows) in other liabilities	(22,442)	(31,363)
NET CASH FROM OPERATING ACTIVITIES	(10,011,987)	(7,406,767)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property, equipment and intangible assets	(30,056)	(29,066)
NET CASH FROM INVESTING ACTIVITIES	(30,056)	(29,066)
CASH FLOWS FROM FINANCING ACTIVITIES		
Payments of allocated profits to the State Budget	–	(33,690)
NET CASH FROM FINANCING ACTIVITIES	–	(33,690)
EFFECT OF CHANGES IN EXCHANGE RATES – POSITIVE/(NEGATIVE) EXCHANGE DIFFERENCES ON CASH AND CASH EQUIVALENTS	(174,602)	(304,224)
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	(10,216,645)	7,039,787
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	22,494,962	15,455,175
CASH AND CASH EQUIVALENTS AT END OF YEAR (NOTE 34)	12,278,317	22,494,962

The notes on pages 153 to 228 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. 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 in accordance with laws regulating credit institutions, credit unions, payment institutions, electronic money institutions and payment systems, foreign exchange operations and operations of authorised foreign exchange offices;
- Performing supervision and oversight in accordance with laws regulating the operations of credit institutions, credit unions, payment institutions and electronic money institutions and payment systems;
- Maintaining accounts of credit institutions and performing payment transactions on those accounts, issuing loans to, and receiving deposit funds from credit institutions;
- Regulating and improving the payment system;
- Performing tasks on behalf of the Republic of Croatia as defined by law;
- Promulgating regulations from its area of competence;
- Contributing to overall stability of the financial system; and
- 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 (until 8 July 2018 and as of 13 July 2018)
- Relja Martić, Deputy Governor (until 17 July 2018)
- D. Sc. Sandra Švaljek, Deputy Governor (as of 18 July 2018)
- M. Sc. Tomislav Presečan, Vicegovernor (until 17 July 2018)
- M. Sc. Vedran Šošić, Vicegovernor (until 17 July 2018)
- Damir Odak, Vicegovernor (until 17 July 2018)
- D. Sc. Michael Faulend, Vicegovernor
- Bojan Fras, Vicegovernor
- Neven Barbaroša, Vicegovernor
- M. Sc. Slavko Tešija, Vicegovernor (as of 18 July 2018)
- D. Sc. Roman Šubić, Vicegovernor (as of 18 July 2018)
- M. Sc. Martina Drvar, Vicegovernor (as of 18 July 2018).

1.2 Accounting standards

The 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, and 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 and changes in accounting policies

In 2016, 2017 and 2018, new standards and amendments to existing standards as well as interpretation of the International Financial Reporting Interpretations Committee with mandatory application in the EU for the annual periods commencing from 1 January 2018 were published, as presented in the following table.

OFFICIAL JOURNAL OF THE EU	STANDARD
OJ L 295, 29.10.2016	IFRS 15 – Revenue from Contracts with Customers (new)
OJ L 323, 29.11.2016	IFRS 9 – Financial Instruments (new)
OJ L 291, 9.11.2017	IFRS 4 – Insurance Contracts (amendments)
	IFRS 15 – Revenue from Contracts with Customers (amendments)
OJ L 34, 8.2.2018	Annual Improvements to IFRS Standards, 2014 – 2016 Cycle:
	IAS 28 – Interests in Associates and Joint Ventures (amendments)
	IFRS 1 – First-time Adoption of International Financial Reporting Standards (amendments)
OJ L 55, 27.2.2018	IFRS 2 – Share-based Payment (amendments)
OJ L 72, 15.3.2018	IAS 40 – Investment Property (amendments)
OJ L 87, 3.4.2018	IFRIC 22 – Foreign Currency Transactions and Advance Consideration

These standards and interpretation were applied in the compilation of the financial statements for 2018. The application of IFRS 9 – Financial Instruments has a significant impact on the financial statements of the Croatian National Bank, while the application of other above mentioned standards and interpretations does not have a significant impact on the financial statements of the Croatian National Bank.

The accounting policies of the Croatian National Bank applicable to reporting periods beginning on 1 January 2018 are different from the accounting policies applied in the preparation of the last annual financial statements of the Croatian National Bank due to the application of IFRS 9 – Financial Instruments. The Croatian National Bank did not restate the previous periods, but it debited the difference between the previous book value and the book value at the beginning of the reporting period to the general reserves of the Croatian National Bank.

The introduction of IFRS 9 – Financial instruments had an impact on the recognition, valuation and classification of the financial assets of the Croatian National Bank.

The Croatian National Bank classified its liabilities according to IAS 39 as other financial liabilities subsequently measured at amortised cost using the effective interest method, whereas according to IFRS 9 the Croatian National Bank classifies its liabilities as liabilities subsequently measured at amortised cost. Therefore, the introduction of IFRS 9 did not have any impact on financial liabilities.

1.2.1.1 Recognition, valuation and classification of financial assets according to IFRS 9

At initial recognition of financial assets, the Croatian National Bank measures these assets at their fair value.

Financial assets at fair value through profit and loss are initially measured at fair value without transaction costs, whereas for financial assets not designated 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.

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, all 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 financial assets.

The gross carrying amount of financial assets is the amortised cost of financial assets prior to loss allowance provisions.

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 to collect contractual cash flows;
- the business model to collect contractual cash flows and sell financial assets;
- other business models.

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 and that they comply with the conditions of the so-called SPPI test (Solely Payments of Principal and Interest) if the financial assets have the following characteristics:

- if they contain a fixed coupon;
- if the principal value is paid at the bond maturity date;
- if they cannot be redeemed before maturity; and
- if they have no linked options, such as conversion, call or put option.

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.

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 loss allowance gains or losses and foreign exchange gains and losses, until the financial asset is derecognised or reclassified.

All foreign exchange gains and losses on monetary assets are recognised in profit or loss.

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.

Interest calculated using the effective interest method is recognised in profit or loss.

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.

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.

Investment in equity instruments

The Croatian National Bank subsequently measures investments in equity instruments at fair value through 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.

Dividends on investment in equity instruments are recognised in profit or loss.

Investments in equity instruments include investments in BIS shares, SWIFT shares and ECB paid-up capital. For these investments the cost is the best estimate of fair value 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.

Impairment of financial assets

The Croatian National Bank recognises loss allowances for expected credit losses on a financial asset measured at amortised cost and at fair value through other comprehensive income, a lease receivable and a 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 book value 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 is 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 financial instruments with a significant increase in credit risk since initial recognition and the financial asset is considered credit impaired. 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 rating 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 criterion for the classification of a financial instrument in stage 1 is that the long-term credit rating of the financial instrument belongs to 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.

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
- 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 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

- contractual payments are more than 90 days past due.

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 level 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.

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.

1.2.1.2 The impact of the changes in the accounting policies on financial assets

The following table shows the impact of the changes in the accounting policies on the financial assets of the Croatian National Bank at the date of initial application of IFRS 9 – Financial Instruments.

(All amounts are expressed in thousands of kuna)

FINANCIAL ASSETS	NOTES	CLASSIFICATION ACCORDING TO IAS 39	NEW CLASSIFICATION ACCORDING TO IFRS 9	1/1/2018	
				CARRYING AMOUNT ACCORDING TO IAS 39	NEW CARRYING AMOUNT ACCORDING TO IFRS 9
Cash and current accounts with other banks	(a)	loans and receivables	amortised cost	19,753,776	19,753,018
Deposits with other banks	(b)	loans and receivables	amortised cost	2,418,675	2,418,416
Financial assets at fair value through profit or loss		fair value through profit or loss	fair value through profit or loss	27,680,857	27,680,857
Loans	(c)	loans and receivables	amortised cost	1,286,777	1,286,537
Reverse repo agreements	(d)	loans and receivables	amortised cost	17,643,742	17,642,889
Held-to-maturity investments	(e)	held-to-maturity	fair value through other comprehensive income	19,865,183	20,659,537
Balances with the International Monetary Fund	(f)	loans and receivables	amortised cost	9,200,198	9,200,198
Financial assets available for sale – debt instruments	(g)	available for sale	fair value through other comprehensive income	27,925,541	27,925,541
Financial assets available for sale – equity instruments	(h)	available for sale	fair value through other comprehensive income – irrevocable election	60,218	60,218
Other financial assets	(i)	loans and receivables	amortised cost	75,890	75,777

- (a) Cash and current accounts with other banks were initially classified as loans and receivables according to IAS 39, and according to IFRS 9 they are classified as financial assets at amortised cost.
- (b) Deposits with other banks were initially classified as loans and receivables according to IAS 39, and according to IFRS 9 they are classified as financial assets at amortised cost.
- (c) Loans were initially classified as loans and receivables according to IAS 39, and according to IFRS 9 they are classified as financial assets at amortised cost.
- (d) Reverse repo agreements were initially classified as loans and receivables according to IAS 39, and according to IFRS 9 they are classified as financial assets at amortised cost.

- (e) Debt securities, initially classified according to IAS 39 as held-to-maturity investments, the Croatian National Bank classified according to IFRS 9 as financial assets at fair value through other comprehensive income. It has been assessed that the objective of the business model for these debt securities is realised by collecting contractual cash flows and selling financial assets, for which reason debt securities held to maturity pursuant to IAS 39 are classified as debt securities at fair value through other comprehensive income pursuant to IFRS 9.
- (f) Balances with the International Monetary Fund were initially classified as loans and receivables according to IAS 39, and according to IFRS 9 they are classified as financial assets at amortised cost.
- (g) Debt securities, initially classified according to IAS 39 as financial assets available for sale, the Croatian National Bank classified according to IFRS 9 as financial assets at fair value through other comprehensive income.
- (h) As regards equity securities, initially classified according to IAS 39 as financial assets available for sale, the Croatian National Bank, when applying IFRS 9, made an irrevocable election to present subsequent changes in fair value within other comprehensive income. For these investments, the cost is the best estimate of fair value.
- (i) Other financial assets were initially classified as loans and receivables according to IFRS 39, and according to IFRS 9 they are classified as financial assets at amortised cost.

The following table shows the aligned book values of financial assets according to IAS 39 and IFRS 9 as at 1 January 2018.

(All amounts are expressed in thousands of kuna)

FINANCIAL ASSETS	CARRYING AMOUNT ACCORDING TO IAS 39 AS AT 31 DECEMBER 2017	ADJUSTMENT DUE TO THE APPLICATION OF IFRS 9				
		CLASSIFICA- TION	MEASURE- MENT	LOSS AL- LOWANCE	CARRYING AMOUNT ACCORDING TO IFRS 9 AS AT 1 JANUARY 2018	IMPACT ON GENERAL RESERVES AS AT 1 JANUARY 2018
CASH AND CURRENT ACCOUNTS WITH OTHER BANKS						
Opening balance	19,753,776	–	–	–	19,753,776	–
Loss allowance for expected credit losses	–	–	–	(758)	(758)	(758)
TOTAL CASH AND CURRENT ACCOUNTS WITH OTHER BANKS	19,753,776	–	–	(758)	19,753,018	(758)
DEPOSITS WITH OTHER BANKS						
Opening balance	2,418,675	–	–	–	2,418,675	–
Loss allowance for expected credit losses	–	–	–	(259)	(259)	(259)
TOTAL DEPOSITS WITH OTHER BANKS	2,418,675	–	–	(259)	2,418,416	(259)
LOANS						
Opening balance	1,286,777	–	–	–	1,286,777	–
Loss allowance for expected credit losses	–	–	–	(240)	(240)	(240)
TOTAL LOANS	1,286,777	–	–	(240)	1,286,537	(240)
REVERSE REPO AGREEMENTS						
Opening balance	17,643,742	–	–	–	17,643,742	–
Loss allowance for expected credit losses	–	–	–	(853)	(853)	(853)
TOTAL REVERSE REPO AGREEMENTS	17,643,742	–	–	(853)	17,642,889	(853)
HELD-TO-MATURITY INVESTMENTS						
Opening balance	19,865,183	–	–	–	–	–
Transfer:						
– to financial assets at fair value through other comprehensive income (debt instruments)	–	(19,865,183)	–	–	–	–
TOTAL HELD-TO-MATURITY INVESTMENTS	19,865,183	(19,865,183)	–	–	–	–

(All amounts are expressed in thousands of kuna)

FINANCIAL ASSETS	CARRYING AMOUNT ACCORDING TO IAS 39 AS AT 31 DECEMBER 2017	ADJUSTMENT DUE TO THE APPLICATION OF IFRS 9				
		CLASSIFICA- TION	MEASURE- MENT	LOSS AL- LOWANCE	CARRYING AMOUNT ACCORDING TO IFRS 9 AS AT 1 JANUARY 2018	IMPACT ON GENERAL RESERVES AS AT 1 JANUARY 2018
FINANCIAL ASSETS AVAILABLE FOR SALE						
Opening balance	27,985,759	-	-	-	-	-
Transfer:						
– to financial assets at fair value through other comprehensive income (debt instruments)	-	(27,925,541)	-	-	-	-
– to financial assets at fair value through other comprehensive income (equity instruments)	-	(60,218)	-	-	-	-
TOTAL FINANCIAL ASSETS AVAILABLE FOR SALE	27,985,759	(27,985,759)	-	-	-	-
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME						
Opening balance	-	-	-	-	-	-
Addition:						
– from held-to-maturity investments	-	19,865,183	794,354	-	20,659,537	-
– from financial assets available for sale (debt instruments)	-	27,925,541	-	-	27,925,541	-
– from financial assets available for sale (equity instruments)	-	60,218	-	-	60,218	-
TOTAL FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME	-	47,850,942	794,354	-	48,645,296	-
OTHER FINANCIAL ASSETS AT AMORTISED COST						
Opening balance	75,890	-	-	-	75,890	-
Loss allowance for expected credit losses	-	-	-	(113)	(113)	(113)
TOTAL OTHER FINANCIAL ASSETS AT AMORTISED COST	75,890	-	-	(113)	75,777	(113)
TOTAL	89,029,802	-	794,354	(2,223)	89,821,933	(2,223)

The effect of the application of IFRS 9 on the general reserves and fair value reserves of the Croatian National Bank is shown in the table below.

(All amounts are expressed in thousands of kuna)	EFFECT OF THE APPLICATION OF IFRS 9 ON CAPITAL AS AT 1 JANUARY 2018
GENERAL RESERVES	
Provisions for loss allowance for expected credit losses as at 1 January 2018	(16.231)
TOTAL	(16.231)
FAIR VALUE RESERVE FOR FINANCIAL ASSETS AVAILABLE FOR SALE	
Transfer to fair value reserves for financial assets at fair value through other comprehensive income	(121.765)
TOTAL	(121.765)
FAIR VALUE RESERVE FOR FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME	
Addition from fair value reserves for financial assets available for sale	121.765
Classification of investments held to maturity to financial assets at fair value through other comprehensive income	794.354
Provisions for loss allowance for expected credit losses as at 1 January 2018	14.008
TOTAL	930.127
TOTAL	792.131

1.2.2 Standards and interpretations published in the EU which were not applied in the preparation of the financial statements for 2018

In 2017, a new standard was published, and in 2018 amendments to the existing standard as well as interpretation of the International Financial Reporting Interpretations Committee with mandatory application in the EU for annual periods commencing from 1 January 2019 were published, as presented in the following table.

Official Journal of the EU	STANDARD
OJ L 291, 9.11.2017	IFRS 16 – Leases (new)
OJ L 82, 26.3.2018	IFRS 9 – Financial Instruments (amendments)
OJ L 265, 24.10.2018	IFRIC 23 – Uncertainty over Income Tax Treatments
OJ L 39, 11.2.2019	IAS 28 – Investments in Associates and Joint Ventures

The application of these standards will 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 2018 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 published 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 European Union. It is estimated that their application will not have a significant impact on the preparation of the financial statements of the Croatian National Bank.

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 debt securities in available for sale financial assets measured at fair value (for the year ended 31 December 2017), buildings measured at revalued amortised cost 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 presentational 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 2018, 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 significant judgements made by the management in applying the accounting policies and the key sources of estimation uncertainty were the same as those used in the preparation of the annual financial statements for 2017, except new judgements and estimates related to the provisions of IFRS 9, which are described in Note 1.2.1.

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 which 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

Financial assets are reviewed at each reporting date to determine whether there is objective evidence of impairment as described in the accounting policy *Impairment of financial assets* (Notes 1.2.1.1 and 2.6.4).

1.4.3 Estimation uncertainty relating to litigations and claims

The Croatian National Bank provided HRK 24,822 thousands (2017: HRK 24,822 thousands) in respect of liabilities for court cases. The management estimates these provisions as sufficient.

1.5 Changes in presentation of the Statement of Financial Position for 2017

Line items Deposits with other banks, Loans, Reverse repo agreements and Accrued interest and other assets within assets in the Statement of Financial Position are changed relative to the data published for 2017 in such a manner that, in accordance with the best reporting practice, the related accrued interest from line item Accrued interest and other assets were reclassified to line items Deposits with other banks, Loans and Reverse repo agreements.

Within liabilities in the Statement of Financial Position, change was made, in accordance with the best reporting practice, in line items Repo agreements, Due to the State and State Institutions and Accrued interest and other liabilities relative to the data published for 2017 in such a manner that the related accrued interest from line item Accrued interest and other liabilities were reclassified to line items Repo agreements and due to the State and State Institutions.

The effect of the reclassification on some line items of the Statement of Financial Position is shown below:

(All amounts are expressed in thousands of kuna)

	31/12/2017		
	PUBLISHED	INCREASE/(DECREASE) OF THE LINE ITEM DUE TO RECLASSIFICATION	RECLASSIFIED
ASSETS			
Deposits with other banks	2,418,253	422	2,418,675
Loans	1,265,448	21,329	1,286,777
Reverse repo agreements	17,641,746	1,996	17,643,742
Accrued interest and other assets	8,459,221	(23,747)	8,435,474
TOTAL ASSETS	134,876,771	–	134,876,771
LIABILITIES			
Repo agreements	12,022,248	996	12,023,244
Due to the State and State institutions	2,949,012	189	2,949,201
Accrued interest and other liabilities	705,590	(1,185)	704,405
TOTAL LIABILITIES	120,620,858	–	120,620,858
TOTAL EQUITY	14,255,913	–	14,255,913
TOTAL EQUITY AND LIABILITIES	134,876,771	–	134,876,771

Note 2 – Summary of significant accounting policies

2.1 Interest income and expense

Interest income also 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, financial assets at fair value through other comprehensive income and financial assets available for sale (for the year ended 31 December 2017) are recognised in the Income Statement using the effective interest method.

When calculating interest income, the effective interest rate is applied to gross carrying amount of financial assets, except in:

- a purchased or originated credit-impaired financial asset (for such financial assets the effective interest rate adjusted by credit risk is applied to 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 assets 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.

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 midpoint 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 gains or losses are included in unrealised income and expenses 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 2018 were as follows:

USD 1 = HRK 6.469192 (2017: HRK 6.269733)

EUR 1 = HRK 7.417575 (2017: HRK 7.513648)

XDR 1 = HRK 9.047556 (2017: HRK 8.996799).

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, valuation and classification of financial assets, starting from the financial statements for 2018, the Croatian National Bank applies the provisions of IFRS 9 – Financial Instruments (refer to Notes 1.2.1 and 37.1.3). In preparing the financial statements for 2017, the provisions of IAS 39 – Financial Instruments: Recognition and Measurement were applied.

2.6.1 Classification (for the year ended 31 December 2017)

2.6.1.1 Financial assets

Financial assets of the Croatian National Bank are classified into the following categories:

a) Financial assets at fair value through profit or loss

This category comprises marketable debt securities, acquired principally for the purpose of sale or repurchase in the near future. Assets under management with international institutions and precious metals are also included in this category.

b) Held-to-maturity investments

Included in this category are investments in debt securities that the Croatian National Bank has the ability and intends to hold to maturity.

c) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments, not quoted on an active market.

This category comprises cash, deposits with banks and financial institutions, reverse repo agreements, loans, trade and other receivables included in the financial assets.

d) Financial assets available for sale

Financial assets available for sale comprise debt securities, investments of the Croatian National Bank in equity securities of international financial institutions based on which the membership status in these institutions was realised, and the paid-up capital of the European Central Bank (ECB).

2.6.1.2 Financial liabilities

The Croatian National Bank classifies its financial liabilities as other financial liabilities.

2.6.2 Recognition and derecognition

The Croatian National Bank recognises and derecognises financial instruments on the settlement date.

2.6.3 Measurement (for the year ended 31 December 2017)

Financial instruments are measured initially at fair value plus, in the case of a financial asset or financial liability not designated at fair value through profit and loss, transaction costs.

Subsequent to initial recognition financial assets at fair value through profit or loss are measured at fair value. Gains and losses from changes in the fair value of these assets are recognised in the Income Statement.

Held-to-maturity securities comprise debt securities with fixed or determinable payments and fixed maturities. They are measured at amortised cost using the effective interest method less any impairment.

Loans and receivables are also measured at amortised cost using the effective interest rate method.

Financial assets available for sale are subsequently measured at fair value, except for investments in equity securities with no quoted price in an active market, and whose fair value cannot be reliably measured. Those investments are measured at cost. Gains or losses from changes in fair value (debt) of monetary assets available for sale are recognised directly in the fair value reserve in other comprehensive income and are disclosed in the Statement of Changes in Equity. Impairment losses, gains and losses from foreign exchange, interest income, interest expense if interest rates are negative, amortisation of premium or discount using the effective interest rates on debt assets available for sale are recognized in profit or loss.

Financial liabilities are classified as other financial liabilities and are subsequently measured at amortised cost using the effective interest rate method, with the exception of banknotes and coins in circulation which are measured at their nominal value.

2.6.4 Impairment of financial assets (for the year ended 31 December 2017)

Financial assets are reviewed at each reporting date to determine whether there is objective evidence of impairment.

a) Financial assets at amortised cost

If there is objective evidence that an impairment loss on loans and receivables or held-to-maturity investments carried at amortised cost has been incurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. The carrying amount of the asset is reduced through use of an allowance account and the amount of the loss is recognised in profit or loss. For calculating impairment loss on loans and receivables or held-to-maturity financial assets with variable interest rates, the contractual effective interest rate at the date of impairment is used as a discount rate.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised (such as an improvement in the debtor's credit rating), the previously recognised impairment loss is reversed by adjusting an allowance account. The amount of the reversal is recognised in profit or loss.

b) Financial assets available for sale

If there is objective evidence of impairment of financial investment, its new fair value is calculated to determine the amount of impairment.

When a decline in the fair value of an available-for-sale financial asset has been recognised in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss that had been recognised in other comprehensive income is reclassified from equity to profit or loss as a reclassification adjustment even though the financial asset has not been derecognised.

The amount of the cumulative loss that is reclassified from equity to profit or loss is the difference between the acquisition cost (net of any principal repayment and amortisation) and current fair value, less any impairment loss on that financial asset previously recognised in profit or loss.

Impairment losses recognised in profit or loss for an investment in an equity instrument classified as available for sale are not reversed through profit or loss, but are recognised as fair value reserve in other comprehensive income.

If, in a subsequent period, the fair value of a debt instrument classified as available for sale increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in

profit or loss, the impairment loss shall be reversed, with the amount of the reversal recognised in profit or loss. Impairment may be reversed only up to the amount of the previously reported impairment.

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 on the Statement of Financial Position.

Payments arising from those agreements are recognised as amounts due from other banks or 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 Balances with the International Monetary Fund

Balances with the International Monetary Fund (IMF) are denominated in Special Drawing Rights (XDR).

2.10 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.

2.11 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.

2.12 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's account at the Croatian Large Value Payment System (CLVPS) and in the account of the CNB in the TARGET2 system.

2.13 Taxation

In accordance with relevant legislation the Croatian National Bank is not subject to Croatian income tax.

2.14 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 accumulated depreciation for buildings, and any 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 following annual depreciation and amortisation rates are used:

ASSET CLASS	EXPECTED USEFUL LIFE IN 2018 (NUMBER OF YEARS)	EXPECTED USEFUL LIFE IN 2017 (NUMBER OF YEARS)
Buildings	20 – 50	20 – 50
Computers and computing infrastructure	5 – 8	5 – 8
Furniture and equipment	4 – 20	4 – 20
Motor vehicles	4	4
Software and licences	2 – 10	2 – 10

2.15 Impairment of non-financial assets

The carrying value of non-financial assets is assessed at the end of each reporting period to determine whether there is any indication that the asset may be impaired. If any such indication exists, the recoverable amount of that asset is estimated. For assets with indefinite useful life and intangible assets not yet available for use, recoverable amount is estimated on every reporting date.

An impairment loss is recognised if the carrying amount 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 the cash inflows from other assets or groups of assets.

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 the 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 time value of money and the risks specific to these assets.

An impairment loss recognised in prior periods is assessed at the end of each reporting period to determine if there is any indication that 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 since the last impairment loss was recognised. The increased carrying amount of an asset attributable to a reversal of an impairment loss shall not exceed the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the asset in prior years.

2.16 Employee benefits

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 accrue.

Liabilities for long-term employee benefits, such as jubilee rewards and statutory severance pay, 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.

2.17 Allocation of the surplus of income over expenditures and 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 Article 57 of the Act on the Croatian National Bank. The Council of the Croatian National Bank determines the amount of the surplus of income over expenditures to be allocated to general

reserves. 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 shall be 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 – Net interest income

(All amounts are expressed in thousands of kuna)	2018	2017
Interest and similar income	725,700	692,031
Interest and similar expenses	(233,094)	(166,799)
	<u>492,606</u>	<u>525,232</u>

a) Interest and similar income

(All amounts are expressed in thousands of kuna)	2018	2017
Foreign currency deposits	6,438	3,489
Held-for-trading securities	135,722	75,574
Held-to-maturity securities	–	213,312
Securities at amortised cost	2,431	–
Available-for-sale securities	–	270,096
Securities at fair value through other comprehensive income	432,487	–
Loans to domestic banks	16,028	4,494
Foreign currency reverse repo agreements	75,659	47,365
Kuna reverse repo agreements	–	12,790
Foreign currency repo agreements (negative interest)	54,382	56,822
Other	2,553	8,089
	<u>725,700</u>	<u>692,031</u>

Interest income is calculated using the effective interest rate method for all financial instruments other than securities held for trading.

b) Interest and similar expenses

(All amounts are expressed in thousands of kuna)	2018	2017
Foreign currency deposits (negative interest)	44,754	32,373
Foreign currency repo agreements	65,079	31,183
Foreign currency reverse repo agreements (negative interest)	121,741	100,004
State Budget deposits	1,171	2,704
Other	349	535
	233,094	166,799

Interest expenses are calculated using the effective interest method.

Note 4 – Fee and commission income

(All amounts are expressed in thousands of kuna)	2018	2017
Fee and commission income	49,513	49,578
Fee and commission expenses	(20,927)	(19,240)
	28,586	30,338

a) Fee and commission income

(All amounts are expressed in thousands of kuna)	2018	2017
Fees for the supervision of credit institutions	42,351	42,132
Other	7,162	7,446
	49,513	49,578

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 base, 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)	2018	2017
Securities deposit and custody costs	10,144	8,778
Obligatory contribution to EBA budget	3,806	3,498
Other	6,977	6,964
	<u>20,927</u>	<u>19,240</u>

Regulation (EU) No 1093/2010 establishing a European Supervisory Authority (European Banking Authority – EBA), defines that competent authorities shall 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 also 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 5 – Net result from financial assets at fair value through profit or loss

(All amounts are expressed in thousands of kuna)	2018	2017
Net securities trading result, including net changes in fair value of held-for-trading securities	(101,903)	(129,989)
Net result from assets under management with international financial institutions	25,391	13,404
Net result from revaluation of precious metals	(111)	(264)
	<u>(76,623)</u>	<u>(116,849)</u>

Note 6 – Net result from debt securities at fair value through other comprehensive income

(All amounts are expressed in thousands of kuna)	2018	2017
Net result from sale of debt securities	53,330	–
	<u>53,330</u>	<u>–</u>

In 2018, the Croatian National Bank generated gain from the sale of debt securities at fair value through other comprehensive income in the amount of HRK 53,330 thousands.

Note 7 – Net exchange differences

(All amounts are expressed in thousands of kuna)	2018	2017
Net unrealised exchange differences	(592,039)	(2,641,458)
Net realised exchange differences	(10,911)	(17,232)
	<u>(602,950)</u>	<u>(2,658,690)</u>

Decrease in the EUR/HRK exchange rate and increase in the USD/HRK exchange rate between the two reporting dates had the biggest effect on the net exchange differences.

Note 8 – Other income

(All amounts are expressed in thousands of kuna)	2018	2017
Sale of numismatics and investment gold	315	203
Other income	5,319	6,121
	<u>5,634</u>	<u>6,324</u>

Note 9 – Operating expenses

(All amounts are expressed in thousands of kuna)	2018	2017
Staff costs (Note 9.1)	173,649	168,188
Materials, services and administrative expenses	103,352	93,419
Costs of production of banknotes and coins of Croatian kuna	62,166	52,918
Depreciation and amortisation costs	34,797	31,980
	373,964	346,505

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.

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.

Note 9.1 – Staff costs

(All amounts are expressed in thousands of kuna)	2018	2017
Net salaries	85,121	82,048
Contributions from and contributions on salaries	46,675	44,939
Taxes and surtaxes	18,617	17,383
Other employee related expenses	23,236	23,818
	173,649	168,188

The average number of employees during 2018 was 659 (2017: 657). Total staff costs for 2018 amount to HRK 173,649 thousands, of which the amount of HRK 28,403 thousands relates to contributions for pension insurance (2017: HRK 168,188 thousands, of which HRK 27,556 thousands was related to contributions for pension insurance).

Note 10 – Increase/(decrease) in impairment losses and provisions

(All amounts are expressed in thousands of kuna)	2018	2017
IMPAIRMENT LOSSES		
Increase in impairment losses	–	9
	–	9
PROVISIONS FOR LOSS ALLOWANCES FOR EXPECTED CREDIT LOSSES		
New loss allowances for expected credit losses according to IFRS 9	20,390	–
Reversal of loss allowances for expected credit losses according to IFRS 9	(15,897)	–
	4,493	–
PROVISIONS FOR RISKS AND CHARGES		
New provisions	9,146	11,771
Released provisions	(10,129)	(9,255)
	(983)	2,516
	3,510	2,525

Movements in provisions for loss allowances for expected credit losses are presented in Note 37.1.3.

Note 11 – Cash and current accounts with other banks

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Cash on hand	1,286	1,052
Foreign currency cash in the CNB treasury vault	2,955,058	2,995,507
Current accounts with foreign banks	6,513,329	16,725,450
CNB account in TARGET2 system	55,428	31,767
	9,525,101	19,753,776
Loss allowance for expected credit losses	(297)	–
	9,524,804	19,753,776

The largest impact on the decrease in the item of Cash and current accounts with other banks came from the amounts of funds in current accounts with foreign banks, which stood at HRK 6,513,329 thousands and were down by HRK 10,212,121 thousands from the end of 2017 (31 December 2017: HRK 16,725,450 thousands).

The national component TARGET2-HR commenced work on 1 February 2016 (refer to Note 23).

Note 12 – Deposits with other banks

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Deposits with foreign central banks	11,297,498	2,284,149
Deposits with foreign commercial banks	130,025	125,558
Deposits with domestic commercial banks	5,368	8,968
	11,432,891	2,418,675
Loss allowance for expected credit losses	(6,750)	–
	11,426,141	2,418,675

Geographical concentration of deposits with other banks:

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Croatia	5,347	8,968
Europe	11,420,794	2,409,707
	11,426,141	2,418,675

The largest impact on the increase in the item of Deposits with other banks came from the deposits with foreign central banks, which stood at HRK 11,297,498 thousands and were up by HRK 9,013,349 thousands from the end of 2017 (31 December 2017: HRK 2,284,149 thousands).

Note 13 – Financial assets at fair value through profit or loss

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Held-for-trading securities (Note 13a)	38,407,144	26,419,157
Assets under management with international financial institutions (Note 13b)	1,296,161	1,255,353
Precious metals	6,238	6,347
	39,709,543	27,680,857

a) Held-for-trading securities

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
EUR-denominated securities	32,471,228	21,228,675
USD-denominated securities	5,935,916	5,190,482
	38,407,144	26,419,157

Held-for-trading securities include accrued interest in the amount of HRK 90,083 thousands at 31 December 2018 (31 December 2017: HRK 76,270 thousands).

b) Assets under management with international financial institutions

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
USD-denominated funds entrusted to the management of international financial institutions	1,296,161	1,255,353
	1,296,161	1,255,353

Note 14 – Loans

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Loans to domestic banks	2,029,851	1,286,731
Other loans	41	48
	<u>2,029,892</u>	<u>1,286,779</u>
Loss allowance for expected credit losses	(575)	(2)
	<u>2,029,317</u>	<u>1,286,777</u>

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 securities in the pool of eligible assets as at 31 December 2018 amounted to HRK 2,501,999 thousands (31 December 2017: HRK 1,591,196 thousands).

Note 15 – Reverse repo agreements

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Foreign currency reverse repo agreements	21,280,067	17,643,742
	<u>21,280,067</u>	<u>17,643,742</u>
Loss allowance for expected credit losses	(1,079)	–
	<u>21,278,988</u>	<u>17,643,742</u>

Investments in foreign currency reverse repo agreements amount to HRK 21,280,067 thousands, which is an increase of HRK 3,636,325 thousands from end-2017 when they stood at HRK 17,643,742 thousands.

Total fair value of collateral obtained by foreign currency reverse repo agreements (sovereign bonds of countries rated Aaa to Baa1, debt securities of international financial institutions rated Aaa to Aa1 and guaranteed bonds rated Aaa) as at 31 December 2018 amounts to HRK 21,584,610 thousands (31 December 2017: HRK 17,696,512 thousands).

Note 16 – Held-to-maturity investments

Held-to-maturity investments comprise the following:

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Debt securities	–	19,748,691
Accrued interest	–	116,492
	–	19,865,183

Note 17 – Debt securities at amortised cost

Investments in foreign currency debt securities at amortised cost comprise the following:

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Debt securities	679,403	–
Accrued interest	2,793	–
	682,196	–
Loss allowance for expected credit losses	(84)	–
	682,112	–

Note 18 – Balances with the International Monetary Fund

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Membership quota	6,490,722	6,454,341
Special Drawing Rights (XDR) and deposits	2,757,914	2,745,857
	9,248,636	9,200,198

Note 19 – Financial assets available for sale

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Debt securities	–	27,925,541
BIS shares	–	41,914
SWIFT shares	–	80
ECB paid-up capital	–	18,224
	–	27,985,759

Debt securities available for sale include accrued interest in the amount of HRK 161,286 thousands as at 31 December 2017.

Note 20 – Debt securities at fair value through other comprehensive income

Debt securities at fair value through other comprehensive income comprise the following:

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Debt securities	43,756,015	–
Accrued interest	239,262	–
	43,995,277	–

Note 21 – Equity securities at fair value through other comprehensive income – irrevocable election

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
BIS shares	41,914	–
SWIFT shares	80	–
ECB paid-up capital	18,224	–
	60,218	–

Equity securities comprise paid up capital of the European Central Bank (ECB), BIS shares and SWIFT shares. For these investments the cost is the best estimate of fair value because they do not have quoted market prices on an active market and their fair value cannot be reliably measured.

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 the option to use services which 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. In 2018, the Croatian National Bank received a dividend in the amount of HRK 5,111 thousands (2017: HRK 6,652 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 which the Croatian National Bank holds are fully paid in.

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 of the ECB's capital. Subscriptions depend on the shares which 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 national central bank outside the euro area is not entitled to receive an appropriate share of the profit distribution of the ECB, and there is no obligation to cover the loss of the ECB. Following the amendment to the ECB's capital key since 1 January 2014, the contribution of the CNB in the ECB capital amounts to 0.6023%. The CNB's share in issued and paid capital of the ECB amounts to EUR 65,199,017.58 and EUR 2,444,963.16 respectively.

Note 22 – Investments accounted for using the equity method

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Investment in Croatian Monetary Institute	23,617	22,033
	<u>23,617</u>	<u>22,033</u>

The investment of the Croatian National Bank in the Croatian Monetary Institute represents investment in an associate in accordance with IAS 28 and it is accounted for using the equity method. The portion of the Croatian National Bank share in the capital of the Croatian Monetary Institute is 42.6%.

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 with jubilee coins and with medals of gold and other precious metals, production of license plates and other registered activities associated with those listed here.

The following table presents summarised financial information of the Croatian Monetary Institute:

(All amounts are expressed in thousands of kuna)	2018	2017
TOTAL ASSETS	74,558	65,549
Non-current assets	25,464	21,060
Current assets	48,747	44,309
Prepaid expenses	347	180
TOTAL LIABILITIES	18,242	12,881
Long-term provisions	200	341
Current liabilities	18,032	12,528
Accrued expenses	10	12
EQUITY	56,316	52,668
TOTAL REVENUE	86,979	66,985
TOTAL EXPENSES	(77,314)	(61,768)
PROFIT BEFORE TAX	9,665	5,217
Income tax	(1,740)	(940)
PROFIT FOR THE FINANCIAL YEAR	7,925	4,277

The summarised financial information of the Croatian Monetary Institute for 2018 is presented based on the preliminary financial statements of the Croatian Monetary Institute for 2018 as the final official financial statements of the Croatian Monetary Institute for 2018 were not yet available at the time of preparation of these financial statements.

Note 23 – Accrued interest and other assets

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Accrued interest	10,742	11,104
Other participants funds in TARGET2	2,061,243	7,955,757
Prepaid expenses	431,888	377,101
Numismatics	12,415	12,496
Other assets	68,513	86,506
	2,584,801	8,442,964
Loss allowance for expected credit losses	(7,564)	(7,490)
	2,577,237	8,435,474

The major portion of prepaid expenses in the amount of HRK 418,184 thousands (2017: HRK 366.746 thousands) relates to the prepaid expenses of printing banknotes and minting coins.

Note 24 – Property, plant, equipment and intangible assets

(All amounts are expressed in thousands of kuna)	LAND AND BUILDINGS	COMPUTERS AND COMPUTING INFRASTRUCT.	FURNITURE AND EQUIPMENT	MOTOR VEHICLES	ASSETS UNDER DEVELOPMENT – PROPERTY, PLANT, EQUIPMENT	TOTAL PROPERTY, PLANT AND EQUIPMENT	SOFTWARE AND LICENCES	ASSETS UNDER DEVELOPMENT – TANGIBLE ASSETS	TOTAL INTANGIBLE ASSETS	TOTAL PROPERTY, PLANT, EQUIPMENT AND INTANGIBLE ASSETS
BALANCE AT 1 JANUARY 2017										
Cost or revaluation	498,520	167,941	41,746	10,066	20,877	739,150	88,987	18,351	107,338	846,488
Accumulated depreciation/amortisation	(20,951)	(120,738)	(34,178)	(9,980)	–	(185,847)	(69,971)	–	(69,971)	(255,818)
NET BOOK VALUE	477,569	47,203	7,568	86	20,877	553,303	19,016	18,351	37,367	590,670
FOR THE YEAR ENDED 31 DECEMBER 2017										
Opening net book amount	477,569	47,203	7,568	86	20,877	553,303	19,016	18,351	37,367	590,670
Additions					19,812	19,812	–	5,800	5,800	25,612
Brought into use	1,762	27,813	1,156	222	(30,953)	–	14,412	(14,412)	–	–
Net written off	–	(2)	(4)	–	–	(6)	–	–	–	(6)
Charge for the year	(8,159)	(17,046)	(2,224)	(57)	–	(27,486)	(4,493)	–	(4,493)	(31,979)
CLOSING NET BOOK AMOUNT	471,172	57,968	6,496	251	9,736	545,623	28,935	9,739	38,674	584,297
BALANCE AT 31 DECEMBER 2017										
Cost or revaluation	500,282	193,654	41,996	9,431	9,736	755,099	87,336	9,739	97,075	852,174
Accumulated depreciation/amortisation	(29,110)	(135,686)	(35,500)	(9,180)	–	(209,476)	(58,401)	–	(58,401)	(267,877)
NET BOOK VALUE	471,172	57,968	6,496	251	9,736	545,623	28,935	9,739	38,674	584,297
BALANCE AT 1 JANUARY 2018										
Cost or revaluation	500,282	193,654	41,996	9,431	9,736	755,099	87,336	9,739	97,075	852,174
Accumulated depreciation/amortisation	(29,110)	(135,686)	(35,500)	(9,180)	–	(209,476)	(58,401)	–	(58,401)	(267,877)
NET BOOK VALUE	471,172	57,968	6,496	251	9,736	545,623	28,935	9,739	38,674	584,297

(All amounts are expressed in thousands of kuna)	LAND AND BUILDINGS	COMPUTERS AND COMPUTING INFRASTRUCT.	FURNITURE AND EQUIPMENT	MOTOR VEHICLES	ASSETS UNDER DEVELOPMENT – PROPERTY, PLANT, EQUIPMENT	TOTAL PROPERTY, PLANT AND EQUIPMENT	SOFTWARE AND LICENCES	ASSETS UNDER DEVELOPMENT – TANGIBLE ASSETS	TOTAL TANGIBLE ASSETS	TOTAL INTANGIBLE ASSETS
FOR THE YEAR ENDED 31 DECEMBER 2018										
Opening net book amount	471,172	57,968	6,496	251	9,736	545,623	28,935	9,739	38,674	584,297
Additions					27,487	27,487	–	2,067	2,067	29,554
Brought into use	999	19,037	1,788	229	(22,053)	–	1,940	(1,940)	–	–
Net written off	–	–	(8)	–	–	(8)	–	–	–	(8)
Charge for the year	(8,191)	(19,532)	(2,178)	(103)	–	(30,004)	(4,793)	–	(4,793)	(34,797)
CLOSING NET BOOK AMOUNT	463,980	57,473	6,098	377	15,170	543,098	26,082	9,866	35,948	579,046
BALANCE AT 31 DECEMBER 2018										
Cost or revaluation	501,282	211,511	43,230	9,241	15,170	780,434	89,270	9,866	99,136	879,570
Accumulated depreciation/amortisation	(37,302)	(154,038)	(37,132)	(8,864)	–	(237,336)	(63,188)	–	(63,188)	(300,524)
NET BOOK VALUE	463,980	57,473	6,098	377	15,170	543,098	26,082	9,866	35,948	579,046

Revalued amounts of land and buildings were determined based on appraisals performed by independent experts in 2014. Valuation technique used to determine fair value was income approach. Certain significant inputs for valuation were not observable market data (Level 3 of fair value hierarchy). If the land and buildings were carried at cost less depreciation, their net book value as at 31 December 2018 would be HRK 135,333 thousands. Property, plant and equipment of the Croatian National Bank are not pledged, either as part of mortgage agreements or as a fiduciary relationship.

Note 25 – Banknotes and coins in circulation

(All amounts are expressed in thousands of kuna)

2018

2017

Banknotes and coins in circulation as at January 1	31,691,425	27,913,956
Increase/(decrease) of banknotes and coins in circulation during the year	3,354,735	3,777,469
BANKNOTES AND COINS IN CIRCULATION – TOTAL AS AT DECEMBER 31	35,046,160	31,691,425

IN HRK	NOMINAL VALUE	31/12/2018		31/12/2017	
		PIECES	VALUE IN THOUSANDS OF KUNA	PIECES	VALUE IN THOUSANDS OF KUNA
Coins	0.01	127,112,305	1,271	126,056,491	1,261
Coins	0.02	85,032,936	1,701	84,309,178	1,686
Coins	0.05	388,085,489	19,404	369,123,646	18,456
Coins	0.10	562,603,334	56,260	536,756,301	53,676
Coins	0.20	432,115,443	86,423	408,202,196	81,640
Coins	0.50	252,008,177	126,004	237,455,696	118,728
Coins	1	285,547,074	285,547	265,716,254	265,716
Coins	2	173,131,930	346,264	157,534,402	315,069
Coins	5	115,028,414	575,142	104,769,354	523,847
Coins	25	1,242,984	31,075	1,234,048	30,851
Banknotes	5	4,126,781	20,634	4,129,038	20,645
Banknotes	10	49,360,032	493,600	46,514,754	465,147
Banknotes	20	34,932,870	698,658	32,213,788	644,276
Banknotes	50	20,042,044	1,002,102	18,352,875	917,644
Banknotes	100	41,562,344	4,156,234	38,649,766	3,864,977
Banknotes	200	82,108,672	16,421,734	73,168,029	14,633,606
Banknotes	500	7,500,941	3,750,471	7,322,538	3,661,269
Banknotes	1,000	6,973,636	6,973,636	6,072,931	6,072,931
TOTAL			35,046,160		31,691,425

Note 26 – Due to banks and other financial institutions

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Kuna reserve requirements	23,482,632	22,148,237
Foreign currency accounts of TARGET2 system participants	2,061,243	7,955,757
Other deposits from domestic banks	44,210,060	33,874,005
Deposits from foreign banks and other financial institutions	72	72
Court-mandated deposits	53,214	95,069
	69,807,221	64,073,140

Due to banks and other financial institutions also comprises foreign currency accounts of participants in 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” (Note 11) and “Accrued interest and other assets” (Note 23).

Note 27 – Repo agreements

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Foreign currency repo agreements	9,219,306	12,023,244
	9,219,306	12,023,244

Total fair value of collateral given in repo agreements as at 31 December 2018 amounted to HRK 9,239,198 thousands (31 December 2017: HRK 11,884,102 thousands).

Note 28 – Due to the state and state institutions

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Domestic currency account balances	2,866,339	2,908,755
Foreign currency denominated deposit account balances	31,661	40,446
	<u>2,898,000</u>	<u>2,949,201</u>

Note 29 – Due to the International Monetary Fund

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Kuna-denominated bills of exchange	6,472,018	6,435,967
Net cumulative allocations	2,742,649	2,727,262
Other IMF's accounts	16,307	16,214
	<u>9,230,974</u>	<u>9,179,443</u>

The bills of exchange denominated in the Croatian kuna relate to the membership of the Republic of Croatia in the International Monetary Fund.

Note 30 – Accrued interest and other liabilities

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Accrued interest	17,647	10,692
Amounts due to employees	7,459	6,764
Taxes and contributions	6,478	7,014
Obligations to European Commission in EUR	793	768
Obligations to European Commission in HRK	334,614	575,492
Due to the Ministry of Finance	15,202	15,600
Trade payables	17,807	20,849
Long-term provisions for risks and charges	46,766	47,749
Other liabilities	15,072	19,477
	<u>461,838</u>	<u>704,405</u>

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.

Included in long-term provisions for risks and charges HRK 24,822 thousands (2017: HRK 24,822 thousands) are in respect of legal actions and HRK 21,944 thousands (2017: HRK 22,927 thousands) in respect of provisions for employee benefits.

The following tables present movements in long-term provisions for risks and charges:

(All amounts are expressed in thousands of kuna)	COURT CASES	EMPLOYEE BENEFITS	TOTAL
AS AT 1 JANUARY 2018	24,822	22,927	47,749
Released provisions	–	(10,129)	(10,129)
New provisions	–	9,146	9,146
Recognised in profit or loss	–	(983)	(983)
Amounts paid	–	–	–
AS AT 31 DECEMBER 2018	24,822	21,944	46,766
AS AT 1 JANUARY 2017	24,562	20,670	45,232
Released provisions	–	(9,255)	(9,255)
New provisions	260	11,512	11,772
Recognised in profit or loss	260	2,257	2,517
Amounts paid	–	–	–
AS AT 31 DECEMBER 2017	24,822	22,927	47,749

Note 31 – Equity

The equity funds of the Croatian National Bank consist of the capital and reserves.

The 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 decisions of the Council of the Croatian National Bank.

Total reserves as at 31 December 2018 amount to HRK 11,971,437 thousands, which is an increase of

HRK 215,524 thousands from 31 December 2017 when they stood at HRK 11,755,913 thousands. The effect of the application of IFRS 9 at 1 January 2018 resulted in an increase in total reserves in the amount of HRK 792,131 thousands, while other comprehensive loss in the amount of HRK 108,234 thousands and the coverage of losses for 2018 in the amount of HRK 468,373 thousands charged to general reserves had an impact on the decrease in general reserves.

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:

- 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 2018			
ASSETS			
Cash and current accounts with other banks	9,524,804	–	9,524,804
Deposits with other banks	11,420,794	5,347	11,426,141
Financial assets at fair value through profit or loss	38,407,144	1,302,399	39,709,543
Loans	–	2,029,317	2,029,317
Reverse repo agreements	21,278,988	–	21,278,988
Debt securities at amortised cost	–	682,112	682,112
Balances with the International Monetary Fund	2,753,217	6,495,419	9,248,636
Debt securities at fair value through other comprehensive income	43,995,277	–	43,995,277
Equity securities at fair value through other comprehensive income – irrevocable election	–	60,218	60,218
Investments accounted for using the equity method	–	23,617	23,617
Accrued interest and other assets	2,159,053	418,184	2,577,237
Property, plant, equipment and intangible assets	6	579,040	579,046
TOTAL ASSETS	129,539,283	11,595,653	141,134,936
LIABILITIES			
Banknotes and coins in circulation	35,046,160	–	35,046,160

(All amounts are expressed in thousands of kuna)	UP TO 12 MONTHS	MORE THAN 12 MONTHS	TOTAL
Due to banks and other financial institutions	69,807,149	72	69,807,221
Repo agreements	9,219,306	–	9,219,306
Due to the State and State institutions	2,898,000	–	2,898,000
Due to the International Monetary Fund	–	9,230,974	9,230,974
Accrued interest and other liabilities	461,215	623	461,838
TOTAL LIABILITIES	117,431,830	9,231,669	126,663,499
NET POSITION	12,107,453	2,363,984	14,471,437

Notes: According to convention, the amount of the kuna component of reserve requirements of HRK 23,482,632 thousands is stated in the position Due to banks and other financial institutions with a maturity of less than 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 tradability in the secondary market, regardless of their contractual maturities.

(All amounts are expressed in thousands of kuna)	UP TO 12 MONTHS	MORE THAN 12 MONTHS	TOTAL
AS AT 31 DECEMBER 2017			
ASSETS			
Cash and current accounts with other banks	19,753,776	–	19,753,776
Deposits with other banks	2,409,707	8,968	2,418,675
Financial assets at fair value through profit or loss	26,419,157	1,261,700	27,680,857
Loans	–	1,286,777	1,286,777
Reverse repo agreements	17,643,742	–	17,643,742
Held-to-maturity investments	3,402,220	16,462,963	19,865,183
Balances with the International Monetary Fund	2,741,186	6,459,012	9,200,198
Financial assets available for sale	27,925,541	60,218	27,985,759
Investments accounted for using the equity method	–	22,033	22,033
Accrued interest and other assets	8,068,728	366,746	8,435,474
Property, plant, equipment and intangible assets	200	584,097	584,297
TOTAL ASSETS	108,364,257	26,512,514	134,876,771

(All amounts are expressed in thousands of kuna)	UP TO 12 MONTHS	MORE THAN 12 MONTHS	TOTAL
LIABILITIES			
Banknotes and coins in circulation	31,691,425	–	31,691,425
Due to banks and other financial institutions	64,073,068	72	64,073,140
Repo agreements	12,023,244	–	12,023,244
Due to the State and State institutions	2,949,201	–	2,949,201
Due to the International Monetary Fund	–	9,179,443	9,179,443
Accrued interest and other liabilities	703,617	788	704,405
TOTAL LIABILITIES	111,440,555	9,180,303	120,620,858
NET POSITION	(3,076,298)	17,332,211	14,255,913

Notes: According to convention, the amount of the kuna component of reserve requirements of HRK 22,148,237 thousands is stated in the position Due to banks and other financial institutions with a maturity of less than 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 available for sale and at fair value through profit or loss are included in the period up to 12 months due to their high tradability in the secondary market, regardless of their contractual maturities.

Note 33 – Contingent liabilities and commitments and treasury inventory system

Legal actions: At 31 December 2018, 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 24,822 thousands (refer to Note 30).

Capital commitments: As at 31 December 2018, the capital commitments of the Croatian National Bank amounted to HRK 4,050 thousands (2017: HRK 2,178 thousands).

Treasury inventory system

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Banknotes and coins not in circulation	50,672,208	51,291,978
Inventory of government stamps and bill-of-exchange forms	141,629	174,938
	50,813,837	51,466,916

Note 34 – Cash and cash equivalents

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
Cash on hand (Note 11)	1,286	1,052
Foreign currency cash in the CNB treasury vault (Note 11)	2,955,058	2,995,507
Current accounts with foreign banks (Note 11)	6,513,329	16,725,450
Funds with the IMF	2,753,216	2,741,186
CNB account in TARGET2 system (Note 11)	55,428	31,767
	12,278,317	22,494,962

Note 35 – Result for the year

(All amounts are expressed in thousands of kuna)	31/12/2018	31/12/2017
(Shortfall between income and expenditures)/surplus of income over expenditures	(468,373)	(2,554,231)
Covered from general reserves	468,373	2,554,231
	–	–

The Croatian National Bank realised the shortfall between income and expenditures for the year 2018 in the amount of HRK 468,373 thousands. The financial result was mainly due to the impact of net unrealised exchange differences for 2018 which are negative and amount to HRK 592,039 thousands (refer to Note 7). The Croatian National Bank covers the shortfall between income and expenditures for 2018 in the amount of HRK 468,373 thousands from general reserves.

The Croatian National Bank realised the shortfall between income and expenditures for the year 2017 in the amount of HRK 2,554,231 thousands. The financial result was mainly due to the impact of net unrealised exchange differences for 2017 which are negative and amount to HRK 2,641,458 thousands (refer to Note 7). The shortfall between income and expenditures for 2017 in the amount of HRK 2,554,231 thousands was covered from general reserves.

Note 36 – Fair values of financial assets and liabilities

In the process of determination of the fair value of financial assets and liabilities a market approach is used as a valuation technique. As a part of a 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 which 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 GIPS standards (Global Investment Performance Standards). The input data used are observable market values (interest rates), which correspond to Level 2 of fair value hierarchy.

During the reporting period there were no reclassifications between the levels of fair value hierarchy.

a) 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)	31/12/2018		
	LEVEL 1	LEVEL 2	TOTAL
FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS			
<i>Foreign securities held for trading</i>			
Government securities	22,194,327	12,445,864	34,640,191
Guaranteed bonds	1,671,505	–	1,671,505
Securities of international financial institutions	1,448,282	–	1,448,282
Bank bonds with government guarantees	298,237	348,929	647,166
TOTAL SECURITIES HELD FOR TRADING (NOTE 13A)	25,612,351	12,794,793	38,407,144
<i>Assets under management with international financial institutions (Note 13b)</i>	1,296,161	–	1,296,161
<i>Precious metals</i>	6,238	–	6,238
TOTAL FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS	26,914,750	12,794,793	39,709,543

(All amounts are expressed in thousands of kuna)

	31/12/2018		
	LEVEL 1	LEVEL 2	TOTAL
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME			
<i>Foreign securities at fair value through other comprehensive income</i>			
Government securities	40,991,916	257,318	41,249,234
Securities of international financial institutions	2,221,105	–	2,221,105
Bank bonds with government guarantees	524,938	–	524,938
<i>Total debt securities at fair value through other comprehensive income (Note 20)</i>	<i>43,737,959</i>	<i>257,318</i>	<i>43,995,277</i>
TOTAL FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME	43,737,959	257,318	43,995,277
TOTAL	70,652,709	13,052,111	83,704,820

(All amounts are expressed in thousands of kuna)

	31/12/2017		
	LEVEL 1	LEVEL 2	TOTAL
FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS			
<i>FOREIGN SECURITIES HELD FOR TRADING</i>			
Government securities	15,972,972	7,542,913	23,515,885
Guaranteed bonds (public sector collateral)	858,415	–	858,415
Securities of international financial institutions	1,679,306	–	1,679,306
Bank bonds with government guarantees	302,922	62,629	365,551
<i>TOTAL SECURITIES HELD FOR TRADING (NOTE 13A)</i>	<i>18,813,615</i>	<i>7,605,542</i>	<i>26,419,157</i>
<i>Assets under management with international financial institutions (Note 13b)</i>	<i>1,255,353</i>	–	<i>1,255,353</i>
<i>Precious metals</i>	<i>6,347</i>	–	<i>6,347</i>
TOTAL FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS	20,075,315	7,605,542	27,680,857
FINANCIAL ASSETS AVAILABLE FOR SALE			
<i>FOREIGN SECURITIES AVAILABLE FOR SALE</i>			
Government securities	24,978,162	–	24,978,162
Guaranteed bonds (public sector collateral)	63,097	–	63,097
Securities of international financial institutions	2,201,256	–	2,201,256
Bank bonds with government guarantees	683,026	–	683,026
<i>TOTAL DEBT SECURITIES AVAILABLE FOR SALE (NOTE 18)</i>	<i>27,925,541</i>	–	<i>27,925,541</i>
TOTAL FINANCIAL ASSETS AVAILABLE FOR SALE	27,925,541	–	27,925,541
TOTAL	48,000,856	7,605,542	55,606,398

b) Financial assets and liabilities not measured at fair value

Debt securities held to maturity, classified as investment held to maturity pursuant to IAS 39, i.e. as financial assets at amortised cost pursuant to IFRS 9, are measured at amortised cost. The comparison of book and fair values is presented in the following table.

(All amounts are expressed in thousands of kuna)	DEBT SECURITIES	
	BOOK VALUE	FAIR VALUE
31/12/2018	682,112	693,107
31/12/2017	19,865,183	20,659,249

In determining the fair value of debt securities measured at amortised cost Level 1 of fair value hierarchy input data was used.

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. For these investments, the cost is the best estimate of fair value.

The fair values of remaining financial assets and liabilities of the Croatian National Bank are approximately equal to the accounting values due to the short maturities of the instruments.

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 guarantee 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.

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 with ratings from Aaa to Aa2, reverse repo agreements with commercial banks with ratings of 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.

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 differences are:

- Line item Deposits 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 in Notes 37.1.1 and 37.1.2 include accrued negative interest, included in line item Accrued interest and 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 Notes Maximum exposure to credit risk and credit risk by counterparty credit rating and in Geographical concentration of credit risk.
- Line item Reverse repo agreements from the Statement of Financial Position is divided per currency in Notes 37.1.1 and 37.1.2 and includes accrued negative interest presented in line item Accrued interest and other liabilities.
- Line item Other financial assets denominated in foreign currency and Other financial assets in kuna presented 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)	RATING (MOODY'S)	31/12/2018	31/12/2017
FOREIGN SECURITIES HELD FOR TRADING			
Government securities			
	Aaa	16,405,704	12,087,078
	Aa1	541,447	628,572
	Aa2	9,133,250	5,357,803
	Aa3	185,661	–
	A2	371,597	150,296
	Baa1	3,045,501	–
	Baa2	–	4,062,557
	Baa3	3,559,857	–
	AAA a	539,210	958,834
	AA+ b	37,247	–
	AA a	820,717	270,745
TOTAL GOVERNMENT SECURITIES		34,640,191	23,515,885
Guaranteed bonds			
	Aaa	1,671,505	858,415
Securities of international financial institutions			
	Aaa	248,105	249,899
	Aa1	1,051,631	1,278,014
	Bez rejtinga d	148,546	151,393
TOTAL SECURITIES OF INTERNATIONAL FINANCIAL INSTITUTIONS		1,448,282	1,679,306
Bank bonds with government guarantees			
	Aaa	423,764	75,910

(All amounts are expressed in thousands of kuna)	RATING (MOODY'S)	31/12/2018	31/12/2017
	Aa1	223,402	289,641
TOTAL BANK BONDS WITH GOVERNMENT GUARANTEE		647,166	365,551
TOTAL FOREIGN-CURRENCY DENOMINATED SECURITIES HELD FOR TRADING		38,407,144	26,419,157
FOREIGN-CURRENCY DENOMINATED SECURITIES HELD TO MATURITY			
Government securities			
	Aaa	–	1,405,283
	Aa1	–	3,313,934
	Aa2	–	7,335,811
	Aa3	–	5,069,818
	AAA c	–	143,615
	AA b	–	573,965
TOTAL GOVERNMENT SECURITIES		–	17,842,426
Securities of international financial institutions			
	Aa1	–	1,796,909
TOTAL SECURITIES OF INTERNATIONAL FINANCIAL INSTITUTIONS		–	1,796,909
Bank bonds with government guarantees			
	Aa1	–	225,848
TOTAL BANK BONDS WITH GOVERNMENT GUARANTEE		–	225,848
TOTAL FOREIGN-CURRENCY DENOMINATED SECURITIES HELD TO MATURITY		–	19,865,183
FOREIGN CURRENCY DEBT SECURITIES AT AMORTISED COST			
Government securities			
	Aaa	79,168	–
	AAA c	257,788	–
TOTAL GOVERNMENT SECURITIES		336,956	–
Securities of international financial institutions			
	Aaa	145,176	–
	Aa1	200,064	–
TOTAL SECURITIES OF INTERNATIONAL FINANCIAL INSTITUTIONS		345,240	–
Foreign currency debt securities at amortised cost		682,196	–
Expected credit losses		(84)	–
TOTAL FOREIGN CURRENCY SECURITIES AT AMORTISED COST		682,112	–

(All amounts are expressed in thousands of kuna)	RATING (MOODY'S)	31/12/2018	31/12/2017
FOREIGN SECURITIES AVAILABLE FOR SALE			
Government securities			
	Aaa	–	5,117,967
	Aa1	–	3,464,733
	Aa2	–	11,566,026
	Aa3	–	3,220,880
	A2	–	924,715
	AAA c	–	683,841
TOTAL GOVERNMENT SECURITIES		–	24,978,162
Guaranteed bonds	Aaa	–	63,097
Securities of international financial institutions			
	Aaa	–	1,442,983
	Aa1	–	758,273
TOTAL SECURITIES OF INTERNATIONAL FINANCIAL INSTITUTIONS		–	2,201,256
Bank bonds with government guarantees			
	Aa1	–	683,026
TOTAL BANK BONDS WITH GOVERNMENT GUARANTEE		–	683,026
TOTAL FOREIGN-CURRENCY DENOMINATED SECURITIES AVAILABLE FOR SALE		–	27,925,541
FOREIGN CURRENCY DEBT SECURITIES AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME			
Government securities			
	Aaa	6,583,197	–
	Aa1	6,861,422	–
	Aa2	19,250,254	–
	Aa3	6,203,176	–
	A2	891,057	–
	AAA c	830,818	–
	AA+ b	597,032	–
	AA a	32,278	–
TOTAL GOVERNMENT SECURITIES		41,249,234	–
Securities of international financial institutions			
	Aaa	1,469,999	–
	Aa1	751,106	–
TOTAL SECURITIES OF INTERNATIONAL FINANCIAL INSTITUTIONS		2,221,105	–

(All amounts are expressed in thousands of kuna)	RATING (MOODY'S)	31/12/2018	31/12/2017	
Bank bonds with government guarantees	Aa1	524,938	–	
TOTAL BANK BONDS WITH GOVERNMENT GUARANTEE		524,938	–	
Foreign currency debt securities at fair value through other comprehensive income		43,995,277	–	
Expected credit losses		(11,712)	–	
TOTAL FOREIGN CURRENCY DEBT SECURITIES AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME		43,983,565	–	
TOTAL FOREIGN CURRENCY SECURITIES		83,072,821	74,209,881	
Foreign currency reverse repo agreements				
	Aaa	7,395,964	6,254,989	
	Aa1	2,594,708	2,347,909	
	Aa2	3,146,014	6,800,228	
	Aa3	1,004,569	1,369,619	
	Baa1	5,440,351	–	
	AAA	c	777,228	538,858
	AA+	b	909,795	–
	AA	b	–	325,265
Foreign currency reverse repo agreements		21,268,629	17,636,868	
Expected credit losses		(1,079)	–	
TOTAL FOREIGN-CURRENCY REVERSE REPO AGREEMENTS		21,267,550	17,636,868	
Foreign currency deposits				
	Aaa	6,566,970	18,661,410	
	Aa1	70	68	
	Aa2	2,099,459	375,492	
	Aa3	510	1,270	
	A1	318	588	
	A2	9,193,360	–	
	A3	162	433	
	No rating	c	55	28
TOTAL DEPOSITS		17,860,904	19,039,289	
Deposits with international financial institutions	No rating	d	2,887,939	2,871,415
Foreign currency deposits		20,748,843	21,910,704	
Expected credit losses		(7,026)	–	
TOTAL FOREIGN CURRENCY DEPOSITS		20,741,817	21,910,704	

(All amounts are expressed in thousands of kuna)	RATING (MOODY'S)	31/12/2018	31/12/2017
Other foreign currency financial assets			
	Aa2	–	962
	Aa3	1,180	290
	A1	319	1,754
	A2	–	167
	Baa1	2,311	999
Other foreign currency financial assets		3,810	4,172
Expected credit losses		–	–
TOTAL OTHER FOREIGN CURRENCY FINANCIAL ASSETS		3,810	4,172
Loans in kuna			
	No rating	2,029,892	1,286,779
Expected credit losses		(575)	(2)
TOTAL LOANS IN KUNA		2,029,317	1,286,777
Kuna deposits			
Other deposits of domestic commercial banks			
	BBB– c	1,232	1,292
	No rating	4,136	7,677
Kuna deposits		5,368	8,969
Expected credit losses		(21)	–
TOTAL KUNA DEPOSITS		5,347	8,969
Other financial assets in kuna			
	No rating	55,700	79,209
Expected credit losses		(7,564)	(7,490)
TOTAL OTHER FINANCIAL ASSETS IN KUNA		48,136	71,719
TOTAL		127,168,798	115,129,089

^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.

37.1.2 Geographical concentration of credit risk

(All amounts are expressed in thousands of kuna)

INSTRUMENT	EURO AREA	OTHER	TOTAL
BALANCE AT 31 DECEMBER 2018			
Government securities	69.007.855	7.218.526	76.226.381
Guaranteed bonds	1.671.505	–	1.671.505
Securities of international financial institutions	3.522.728	491.899	4.014.627
Bank bonds with government guarantees	1.172.104	–	1.172.104
TOTAL FOREIGN CURRENCY SECURITIES	75.374.192	7.710.425	83.084.617
Foreign currency reverse repo agreements	11.885.761	9.382.868	21.268.629
Deposits	17.855.781	5.123	17.860.904
Deposits with international financial institutions	–	2.887.939	2.887.939
TOTAL FOREIGN CURRENCY DEPOSITS	17.855.781	2.893.062	20.748.843
Other foreign currency financial assets	–	3.810	3.810
Loans in Croatia	–	2.029.892	2.029.892
Kuna deposits	–	5.368	5.368
Other financial assets in kuna	–	55.700	55.700
TOTAL 31 DECEMBER 2018	105.115.734	22.081.125	127.196.859
BALANCE AT 31 DECEMBER 2017			
Government securities	59.506.904	6.829.569	66.336.473
Guaranteed bonds	921.512	–	921.512
Securities of international financial institutions	5.195.921	481.550	5.677.471
Bank bonds with government guarantees	1.274.425	–	1.274.425
TOTAL FOREIGN CURRENCY SECURITIES	66.898.762	7.311.119	74.209.881
Foreign currency reverse repo agreements	6.345.814	11.291.054	17.636.868
Deposits	19.032.426	6.863	19.039.289
Deposits with international financial institutions	–	2.871.415	2.871.415
Total foreign currency deposits	19.032.426	2.878.278	21.910.704
Other foreign currency financial assets	457	3.715	4.172
Loans in Croatia	–	1.286.779	1.286.779
Kuna deposits	–	8.969	8.969
Other financial assets in kuna	–	79.209	79.209
TOTAL 31 DECEMBER 2017	92.277.459	22.859.123	115.136.582

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 that 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 ECL calculation. In the pessimistic scenario, the PD/ECL value is 25% higher than in the real scenario, whereas in the optimistic scenario it is 25% lower than in the realistic scenario.

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 other contractual party and the exposure amount at the time of default. LGD determines the amount of the possible loss, that is, the part of the exposure that the CNB can lose.

PD is the probability of default of the other contractual party 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 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 table below shows the changes in reservations for expected credit losses in the reporting period:

(All amounts are expressed in thousands of kuna)

FINANCIAL ASSETS	LOSS ALLOWANCE FOR EXPECTED CREDIT LOSSES AS AT 1 JANUARY 2018	DECREASE IN LOSS ALLOWANCE DURING THE PERIOD	INCREASE IN LOSS ALLOWANCE DURING THE PERIOD	LOSS ALLOWANCE FOR EXPECTED CREDIT LOSSES AS AT 31 DECEMBER 2018
Cash and current accounts with other banks	758	(1,594)	1,133	297
Deposits with other banks	259	(7,024)	13,515	6,750
Loans	242	(339)	672	575
Reverse repo agreements	853	(4,687)	4,913	1,079
Debt securities at amortised cost	–	(9)	93	84
Financial assets at fair value through other comprehensive income – debt instruments	14,008	(3,763)	1,467	11,712
Other financial assets	7,603	(47)	8	7,564
TOTAL	23,723	(17,463)	21,801	28,061

Gains and losses on loss allowances are translated into kuna based on the exchange rate valid on the transaction date, while provisions for 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 provisions for loss allowances for expected credit losses in the reporting period is HRK 4,338 thousands. In the income statement, line item (Increase)/decrease in loss allowance and provisions shows an increase in loss allowances for expected credit losses in the amount of HRK 4,493 thousands (refer to Note 10), while net positive exchange differences in line items provisions for loss allowances for expected credit losses totalling HRK 155 thousands are shown in line item net unrealised exchange differences (refer to Note 7).

The following table shows loss allowances for expected credit losses by the stage of credit quality of financial instruments at the beginning and at the end of the reporting period.

(All amounts are expressed in thousands of kuna)

FINANCIAL ASSETS	LOSS ALLOWANCE FOR EXPECTED CREDIT LOSSES AS AT 1 JANUARY 2018			LOSS ALLOWANCE FOR EXPECTED CREDIT LOSSES AS AT 31 DECEMBER 2018		
	STAGE 1	STAGE 2	STAGE 3	STAGE 1	STAGE 2	STAGE 3
Cash and current accounts with other banks	758	–	–	297	–	–
Deposits with other banks	259	–	–	6,750	–	–
Loans	240	–	2	573	–	2
Reverse repo agreements	853	–	–	1,079	–	–
Debt securities at amortised cost	–	–	–	84	–	–
Financial assets at fair value through other comprehensive income – debt instruments	14,008	–	–	11,712	–	–
Other financial assets	113	–	7,490	74	–	7,490
TOTAL	16,231		7,492	20,569	–	7,492

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 2018, approximately 70% of net international reserves were liquid (2017: 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	1 TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 TO 5 YEARS	OVER 5 YEARS	TOTAL
BALANCE AT 31 DECEMBER 2018						
LIABILITIES						
Banknotes and coins in circulation	35.046.160	–	–	–	–	35.046.160
Due to banks and other financial institutions	69.807.149	–	–	–	72	69.807.221
Repo agreements	9.219.390	–	–	–	–	9.219.390
Due to the State and State institutions	2.898.000	–	–	–	–	2.898.000
Due to the International Monetary Fund	–	–	–	–	9.230.974	9.230.974
Accrued interest and other liabilities	400.752	24.556	46.766	–	623	472.697
TOTAL LIABILITIES	117.371.451	24.556	46.766	–	9.231.669	126.674.442
BALANCE AT 31 DECEMBER 2017						
LIABILITIES						
Banknotes and coins in circulation	31.691.425	–	–	–	–	31.691.425
Due to banks and other financial institutions	64.073.068	–	–	–	72	64.073.140
Repo agreements	12.023.913	–	–	–	–	12.023.913
Due to the State and State institutions	2.949.201	–	–	–	–	2.949.201
Due to the International Monetary Fund	–	–	–	–	9.179.443	9.179.443
Accrued interest and other liabilities	639.604	19.898	47.749	–	788	708.039
TOTAL LIABILITIES	111.377.211	19.898	47.749	–	9.180.303	120.625.161

Note 37.3 – Market risk

Market risk is the risk of fluctuations in fair value or future cash flows of a financial instrument due to changes in market prices. Market risk includes currency 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, which 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 the net international reserves, covering part of the reserves it manages in accordance with its own guidelines. 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) are managed passively, 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 3.6 billion.

37.3.1.1 Sensitivity analysis – impact of percentage fluctuations in exchange rates on the Income Statement

2018 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2018	USD	EUR
Exchange rate appreciation/depreciation	±5%	±1%
Impact of fluctuations in exchange rates on the Income Statement	816,681/(816,681)	1,010,146/(1,010,146)

The table above shows the sensitivity of the result of the CNB reported in the Income Statement for the year in the case of an increase/decrease in the EUR/HRK exchange rate by $\pm 1\%$ and in the case of an increase/decrease in the USD/HRK exchange rate by $\pm 5\%$. 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 result of the Income Statement if the Croatian kuna exchange rate appreciates against the relevant currency by the percentages specified above (i.e. the kuna value

depreciates in relation to the relevant currency), while the negative figure denotes a decrease in the result of the Income Statement if the Croatian kuna exchange rate depreciates against the relevant currency (i.e. the kuna value appreciates in relation to relevant currency).

In case of a 1% decrease in the EUR/HRK exchange rate as at 31 December 2018, the result of the CNB reported in the Income Statement for the year would be lower by approximately HRK 1,010,146 thousands, while for a 5% decrease in the USD/HRK exchange rate, the result would be lower by approximately HRK 816,681 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 relevant percentages.

2017 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2017	USD	EUR
Exchange rate appreciation/depreciation	±5%	±1%
Impact of fluctuations in exchange rates on the Income Statement	778,416/(778,416)	876,301/(876,301)

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	USD	XDR	OTHER FOREIGN CURRENCIES	HRK	TOTAL
BALANCE AT 31 DECEMBER 2018						
ASSETS						
Cash and current accounts with other banks	9,518,562	3,783	–	2,106	353	9,524,804
Deposits with other banks	10,986,223	434,571	–	–	5,347	11,426,141
Financial assets at fair value through profit or loss	32,471,228	7,232,077	–	–	6,238	39,709,543
Loans	–	–	–	–	2,029,317	2,029,317
Reverse repo agreements	20,841,834	437,154	–	–	–	21,278,988
Debt securities at amortised cost	682,112	–	–	–	–	682,112
Balances with the International Monetary Fund	–	–	9,248,636	–	–	9,248,636

(All amounts are expressed in thousands of kuna)	EUR	USD	XDR	OTHER FOREIGN CURRENCIES	HRK	TOTAL
Debt securities at fair value through other comprehensive income	35,634,483	8,360,794	–	–	–	43,995,277
Equity securities at fair value through other comprehensive income – irrevocable election	–	–	–	–	60,218	60,218
Investments accounted for using the equity method	–	–	–	–	23,617	23,617
Accrued interest and other assets	2,066,974	17	–	–	510,246	2,577,237
Property, plant, equipment and intangible assets	–	–	–	–	579,046	579,046
TOTAL ASSETS	112,201,416	16,468,396	9,248,636	2,106	3,214,382	141,134,936
LIABILITIES						
Banknotes and coins in circulation	–	–	–	–	35,046,160	35,046,160
Due to banks and other financial institutions	2,061,243	–	–	–	67,745,978	69,807,221
Repo agreements	9,091,635	127,671	–	–	–	9,219,306
Due to the State and State institutions	23,467	6,965	–	1,229	2,866,339	2,898,000
Due to the International Monetary Fund	–	–	9,230,974	–	–	9,230,974
Accrued interest and other liabilities	22,281	18	10,429	2	429,108	461,838
TOTAL LIABILITIES	11,198,626	134,654	9,241,403	1,231	106,087,585	126,663,499
NET POSITION	101,002,790	16,333,742	7,233	875	(102,873,203)	14,471,437

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.

(All amounts are expressed in thousands of kuna)	EUR	USD	XDR	OTHER FOREIGN CURRENCIES	HRK	TOTAL
BALANCE AT 31 DECEMBER 2017						
ASSETS						
Cash and current accounts with other banks	19,745,948	3,483	–	3,960	385	19,753,776
Deposits with other banks	2,284,149	125,558	–	–	8,968	2,418,675
Financial assets at fair value through profit or loss	21,228,675	6,445,835	–	–	6,347	27,680,857
Loans	–	–	–	–	1,286,777	1,286,777
Reverse repo agreements	15,266,795	2,376,947	–	–	–	17,643,742
Held-to-maturity investments	19,865,183	–	–	–	–	19,865,183

(All amounts are expressed in thousands of kuna)	EUR	USD	XDR	OTHER FOREIGN CURRENCIES	HRK	TOTAL
Balances with the International Monetary Fund	–	–	9,200,198	–	–	9,200,198
Financial assets available for sale	19,754,351	8,171,190	–	–	60,218	27,985,759
Investments accounted for using the equity method	–	–	–	–	22,033	22,033
Accrued interest and other assets	7,962,466	13	–	–	472,995	8,435,474
Property, plant, equipment and intangible assets	–	–	–	–	584,297	584,297
TOTAL ASSETS	106,107,567	17,123,026	9,200,198	3,960	2,442,020	134,876,771
LIABILITIES						
Banknotes and coins in circulation	–	–	–	–	31,691,425	31,691,425
Due to banks and other financial institutions	7,955,757	–	–	–	56,117,383	64,073,140
Repo agreements	10,480,300	1,542,944	–	–	–	12,023,244
Due to the State and State institutions	28,347	11,431	–	669	2,908,754	2,949,201
Due to the International Monetary Fund	–	–	9,179,443	–	–	9,179,443
Accrued interest and other liabilities	15,403	283	13,786	20	674,913	704,405
TOTAL LIABILITIES	18,479,807	1,554,658	9,193,229	689	91,392,475	120,620,858
NET POSITION	87,627,760	15,568,368	6,969	3,271	(88,950,455)	14,255,913

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 its 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 that serve as a long-term source of stable income and are 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 thus 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 is, 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, the 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, the CNB operates 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

2018 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2018	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	(445)/445	(3,602)/3,602

Should as at 31 December 2018 the entire USD yield curve increase by 1 basis point (0.01%), the result of the Croatian National Bank reported in the Income Statement for the year would be lower by approximately HRK 445 thousands, while in the case of the EUR yield curve increasing by 1 basis point, the result would be lower by approximately HRK 3,602 thousands.

For a 1 basis point decrease of the yield curve, the result reported in the Income Statement would be higher by approximately the same amounts.

Calculation methodology

The values of USD and EUR trade portfolios as at 31 December 2018 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.

2017 Sensitivity analysis

(All amounts are expressed in thousands of kuna)

2017	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	(409)/409	(2,626)/2,626

37.3.2.2 Interest rate risk analysis

(All amounts are expressed in thousands of kuna)	UP TO 1 MONTH	1 TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 TO 5 YEARS	OVER 5 YEARS	NON-INTEREST BEARING	TOTAL	AVERAGE EIR AS AT 31/12
BALANCE AT 31 DECEMBER 2018								
ASSETS								
Cash and current accounts with other banks	6,568,757	–	–	–	–	2,956,047	9,524,804	–0.53
Deposits with other banks	5,731,651	5,694,631	–	–	–	(141)	11,426,141	–0.31
Financial assets at fair value through profit or loss	38,317,061	–	–	–	–	1,392,482	39,709,543	0.12
Loans	–	–	–	2,015,500	41	13,776	2,029,317	1.24
Reverse repo agreements	16,816,159	4,463,460	–	–	–	(631)	21,278,988	–0.49
Debt securities at amortised cost	–	–	–	–	679,403	2,709	682,112	0.43
Balances with the International Monetary Fund	2,753,217	–	–	–	–	6,495,419	9,248,636	1.10
Debt securities at fair value through other comprehensive income	43,756,015	–	–	–	–	239,262	43,995,277	0.96
Equity securities at fair value through other comprehensive income – irrevocable election	–	–	–	–	–	60,218	60,218	–
Investments accounted for using the equity method	–	–	–	–	–	23,617	23,617	–
Accrued interest and other assets	–	–	–	–	–	2,577,237	2,577,237	–
Property, plant, equipment and intangible assets	–	–	–	–	–	579,046	579,046	–
TOTAL ASSETS	113,942,860	10,158,091	–	2,015,500	679,444	14,339,041	141,134,936	–
LIABILITIES								
Banknotes and coins in circulation	–	–	–	–	–	35,046,160	35,046,160	–
Due to banks and other financial institutions	2,061,243	–	–	–	–	67,745,978	69,807,221	–
Repo agreements	9,219,130	–	–	–	–	176	9,219,306	–0.69

(All amounts are expressed in thousands of kuna)	UP TO 1 MONTH	1 TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 TO 5 YEARS	OVER 5 YEARS	NON-INTEREST BEARING	TOTAL	AVERAGE EIR AS AT 31/12
Due to the State and State institutions	2,022,914	–	–	–	–	875,086	2,898,000	0.00
Due to the International Monetary Fund	2,742,648	–	–	–	–	6,488,326	9,230,974	1.10
Accrued interest and other liabilities	–	–	–	–	–	461,838	461,838	–
TOTAL LIABILITIES	16,045,935	–	–	–	–	110,617,564	126,663,499	–
NET POSITION	97,896,925	10,158,091	–	2,015,500	679,444	(96,278,523)	14,471,437	–

Notes: 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.

(All amounts are expressed in thousands of kuna)	UP TO 1 MONTH	1 TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 TO 5 YEARS	OVER 5 YEARS	NON-INTEREST BEARING	TOTAL	AVERAGE EIR AS AT 31/12
BALANCE AT 31 DECEMBER 2017								
ASSETS								
Cash and current accounts with other banks	16,757,217	–	–	–	–	2,996,559	19,753,776	–0.54
Deposits with other banks	1,545,474	864,070	–	–	–	9,131	2,418,675	–0.45
Financial assets at fair value through profit or loss	26,342,887	–	–	–	–	1,337,970	27,680,857	0.05
Loans	–	–	–	1,265,400	21,329	48	1,268,777	1.46
Reverse repo agreements	17,641,746	–	–	–	–	1,996	17,643,742	–0.45
Held-to-maturity investments	–	601,220	2,779,011	2,377,255	13,991,205	116,492	19,865,183	1.02
Balances with the International Monetary Fund	2,741,186	–	–	–	–	6,459,012	9,200,198	0.74
Financial assets available for sale	27,764,255	–	–	–	–	221,504	27,985,759	0.95
Investments accounted for using the equity method	–	–	–	–	–	22,033	22,033	–
Accrued interest and other assets	–	–	–	–	–	8,435,474	8,435,474	–
Property, plant, equipment and intangible assets	–	–	–	–	–	584,297	584,297	–
TOTAL ASSETS	92,792,765	1,465,290	2,779,011	3,642,655	14,012,534	20,184,516	134,876,771	–
LIABILITIES								
Banknotes and coins in circulation	–	–	–	–	–	31,691,425	31,691,425	–

(All amounts are expressed in thousands of kuna)	UP TO 1 MONTH	1 TO 3 MONTHS	3 MONTHS TO 1 YEAR	1 TO 5 YEARS	OVER 5 YEARS	NON-INTEREST BEARING	TOTAL	AVERAGE EIR AS AT 31/12
Due to banks and other financial institutions	7,955,757	–	–	–	–	56,117,383	64,073,140	–
Repo agreements	12,022,248	–	–	–	–	996	12,023,244	–0.68
Due to the State and State institutions	851,046	–	–	–	–	2,098,155	2,949,201	0.10
Due to the International Monetary Fund	2,727,262	–	–	–	–	6,452,181	9,179,443	0.74
Accrued interest and other liabilities	–	–	–	–	–	704,405	704,405	–
TOTAL LIABILITIES	23,556,313	–	–	–	–	97,064,545	120,620,858	–
NET POSITION	69,236,452	1,465,290	2,779,011	3,642,655	14,012,534	(76,880,029)	14,255,913	–

Note: 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 6,568,757 thousands (31 December 2017: HRK 16,757,217 thousands), and the part of the position Financial assets at fair value through profit or loss (floaters) in the amount of HRK 715,290 thousand (31 December 2017: HRK 490,604 thousands), as well as on the part of the position Due to the State and State institutions, amounting to HRK 2,022,914 thousands (31 December 2017: HRK 851,046 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

2018 Sensitivity analysis – funds entrusted to the management of international financial institutions

(All amounts are expressed in thousands of kuna)

2018

Financial assets price exposed to price risk increase/decrease	±1%
Effect of change in the level of price on the Income Statement	12,962/(12,962)

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 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 if prices of financial instruments fall.

In the case of increase in prices of a financial instrument by 1% compared to the prices recorded on 31 December 2018, the result of Croatian National Bank in the Income Statement would be higher by approximately HRK 12,962 thousands, while the fall in prices by 1% would result in the Income Statement being lower by approximately HRK 12,962 thousands.

2018 Sensitivity analysis – precious metals

(All amounts are expressed in thousands of kuna)

2018

Financial assets price exposed to price risk increase/decrease	±5%
Effect of change in the level of price on the Income Statement	312/(312)

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 $\pm 5\%$.

A positive number implies an increase in the Income Statement 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 if prices of financial instruments fall.

In the case of increase in prices of precious metals by 5% compared to the prices recorded on 31 December 2018, the result of the Croatian National Bank in the Income Statement would be higher by approximately HRK 312 thousands, while the fall in prices by 5% would result in the Income Statement being lower by approximately HRK 312 thousands.

Calculation methodology

Investments in financial assets exposed to price risks as at 31 December 2018 in the balance sheet has been increased or reduced by the selected percentage change in the price of financial instruments.

2017 Sensitivity analysis – funds entrusted to the management of international financial institutions

(All amounts are expressed in thousands of kuna)

2017

Financial assets price exposed to price risk increase/decrease	±1%
Effect of change in the level of price on the Income Statement	12,554/(12,554)

2017 Sensitivity analysis – precious metals

(All amounts are expressed in thousands of kuna)

2017

Financial assets price exposed to price risk increase/decrease	±5%
Effect of change in the level of price on the Income Statement	317/(317)

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 key management of the Croatian National Bank. 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 at 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)

	2018		2017	
	STATE	STATE ENTITIES	STATE	STATE ENTITIES
ASSETS				
Accrued interest and other assets	1,788	246	1,773	370
TOTAL	1,788	246	1,773	370
LIABILITIES				
Deposits	2,174,061	723,938	996,084	1,952,929
Accrued interest and other liabilities	–	–	189	–
TOTAL	2,174,061	723,938	996,273	1,952,929
REVENUES				
EXPENDITURE				
Interest and similar expenses	1,171	–	2,704	–
TOTAL	1,171	–	2,704	–

State bodies that are considered related parties are the State Agency for Deposit Insurance and Bank Resolution and the Croatian Health Insurance Fund.

b) Associated entities

The investment of the Croatian National Bank in the Croatian Monetary Institute represents the investment in an associate in accordance with IAS 28. The share of ownership of the Croatian National Bank in the Croatian Monetary Institute capital is 42.6%. Detailed disclosures on the investment in an associate are presented in Note 22.

Relations with the Croatian Monetary Institute are presented in the following table:

(All amounts are expressed in thousands of kuna)	2018	2017
ASSETS		
Investments accounted for using the equity method	23,617	22,033
Other assets	14,846	9,013
TOTAL	38,463	31,046
LIABILITIES		
Other liabilities	167	1
TOTAL	167	1
REVENUES		
Gains in the alignment of investments in the Croatian Monetary Institute	3,407	1,792
Other income	76	33
TOTAL	3,483	1,825
EXPENDITURE		
Minting of Kuna and Lipa coins*	76,386	63,044
Other	124	–
TOTAL	76,510	63,044

* 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 9).

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, 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.

Short-term compensations to the key management of the Croatian National Bank for 2018 amounted to HRK 8,731 thousands, of which HRK 1,235 thousands refers to pension insurance contributions (2017: HRK 8,967 thousands, of which HRK 1,243 thousands refers to pension insurance contributions).

Note 39 – Events after the reporting period

After 31 December 2018 there were no significant events that would have an impact on the financial statements of the Croatian National Bank.

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