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Financial stability report / Central Bank of Bosnia and Herzegovina. 2021

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Financial Stability Report 2021

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IE	Ireland
IT	Italy
PT	Portugal
SK	Slovakia

ABBREVIATIONS

BARS	Banking Agency of RS
BH	Bosnia and Herzegovina
BHAS	BH Agency for Statistics
BIS	Bank for International Settlements
BLSE	Banja Luka Stock Exchange
CAR	Capital adequacy ratio
CBBH	Central Bank of Bosnia and Herzegovina
CET 1	Common Equity Tier 1
CHF	Swiss franc
CRC	Central Registry of Credits
ECB	European Central Bank
EUR	Euro
EU	European Union
FBA	Banking Agency of FBH
FBH	Federation of BH
FED	Federal Reserve System
GDP	Gross domestic product
Guide	Financial Soundness Indicators Compilation Guide, IMF 2019
HHI	Herfindahl-Hirschman's Index
IMF	International Monetary Fund
KM	Convertible mark
MCO	Microcredit organizations
MFT of BH	Ministry of Finance and Treasury of Bosnia and Herzegovina
NPL	Non- performing loans
OPEC	Organization of the Petroleum Exporting Countries
ROAA	Return on average assets
ROAE	Return on average equity
RS	Republika Srpska
RTGS	Real Time Gross Settlement
SASE	Sarajevo Stock Exchange
SRTA	Single Registry of Transactions Accounts
S&P	Standard and Poor's
USA	United States of America
USD	United States dollar
WEO	World Economic Outlook
WTO	World Trade Organization

INTRODUCTION

The Central Bank of Bosnia and Herzegovina (CBBH) understands financial stability as a situation in which a financial system can absorb shocks without any significant disturbances in its current and future operations and whose functioning does not have negative effects on the economy.

The CBBH's authority to monitor the stability of the financial system derives indirectly from the Law on the CBBH. The CBBH plays an active role in the development and implementation of the policy of stability and sustainable economic growth of BH, through ensuring the stability of the domestic currency and overall financial and economic stability in the country. One of the CBBH's main tasks is to establish and maintain the appropriate payment and accounting systems as part of the financial infrastructure. The CBBH contributes to the preservation of financial stability through its authority established by law to coordinate the activities of Entity banking agencies. In accordance with the decision of the Governing Council, the CBBH participates in the work of international organisations aimed at consolidating financial and economic stability through international monetary cooperation. The activities of the CBBH in the field of monitoring the stability of the financial system also include specialised communication with relevant international and domestic institutions, which ensures the continuity of the process of monitoring systemic risks. CBBH contributes to the preservation of the financial stability through its membership in the Standing Committee for Financial Stability of BH.

By publishing the Financial Stability Report, the CBBH strives to contribute to financial stability in BH through:

- Improving understanding and encouraging dialogue about risks for financial intermediaries in the macroeconomic environment;
- Warning financial institutions and other market participants about the possible collective impact of their individual actions;
- Creating consensus on financial stability and improving the financial infrastructure.

Although the focus of this report is on the events of 2021, its scope has been extended to include the most important events from the first half of 2022, in accordance with the available data at the time of writing this document. The Financial Stability Report for 2021 is organised by chapter as follows. The summary highlights the most important risks to the financial system stability. The first chapter presents the main trends and risks from the international environment. As part of this chapter, the main risks from the EU and the euro area are highlighted, and their effects on the banking sector and the real economy of this geographical area are described, with a focus on risks that can have an impact on the banking sector and the BH real economy. The second chapter provides an overview of trends and potential risks from the domestic environment that are reflected in the functioning of the BH financial system, including an overview of the fiscal sector main trends and risks. The third chapter illustrates the effects of the risks identified in the previous chapters on claims from the households. The fourth chapter focuses on the effects of identified risks on the sector of legal entities. In the fifth chapter, the effects of risk on the financial sector stability are assessed, with a focus on the banking sector. The sixth chapter illustrates the main trends in financial infrastructure: payment systems and regulatory framework. The Financial Stability Report for the year 2021 contains six text boxes: Assessment of the main macro-financial risks to financial stability, Construction sector and the real estate market, Ukraine war impact on the BH banking sector, Assessment of the financial cycle for BH, Network analysis of systemic risk spillovers and Stress tests.

Finally, it should be emphasised that this Report deals exclusively with matters of importance for systemic risk because, in accordance with the laws in force in BH, the supervision of the operations of financial intermediaries is to be performed by the competent financial sector supervisors. Its main purpose is to indicate the risks coming from the financial system, as well as the macroeconomic environment, and assess the system's ability to absorb these shocks.

EXECUTIVE SUMMARY

The main characteristics of the global economy in 2021 are: the recovery of economic activity in all countries of the world after the lifting of the restrictive measures that during the corona virus pandemic led to a halt in economic and social activities at the global level, accelerated and strong inflation growth in the second part of the year, driven by the growth of energy and food prices at the world level due to increased demand and continuous disruptions in supply chains, the growth of public debt generated by extensive fiscal support, and the continued implementation of the expansive monetary policy of the leading central banks. In late 2021, geopolitical risks increased due to the renewed deterioration of relations in the Russian-Ukrainian crisis, which culminated already in February 2022 with the beginning of the war in Ukraine, and led to further strengthening of global inflationary pressures and pessimism regarding the expected economic growth in the coming periods. Due to a new inflationary shock at the beginning of 2022, earlier expectations that inflation could be of a short-term and transitory character were corrected, leading to a tightening of the monetary policies of the leading central banks, and a successive increase in benchmark interest rates. The ECB resisted pressure for the longest time, but it is now certain that there will be a series of interest rate hikes by this monetary authority in the second half of 2022.

The key risks to the financial stability of the euro area are: high level of public debt, over-indebtedness of the non-financial sector and the households, rapidly growing real estate prices, high inflation rates, which, along with the expected rise in interest rates, emphasize the risk of inability to regularly service debt in the long term. As a result, we can expect an increase in credit risk in banks, and further pressure on their capitalisation and already low profitability.

Risks from the domestic macroeconomic environment weakened during 2021, given that the recovery of economic activity was stronger than originally expected. Significant growth in industrial production and exports was recorded, and improvements in the labour market and strengthening of activity in the real estate market are also visible. Positive macroeconomic circumstances have significantly reduced the fiscal deficit of the general government sector and influenced the improvement of the country's balance of payments position. International rating agencies have kept BH's long-term credit rating unchanged, stressing that the moderate level of public debt and fiscal restraint in recent years provides sufficient fiscal space for responses to economic shocks. It is expected that the consequences of the negative trends on the world markets of energy, food and production materials, which followed the outbreak of war in Ukraine, will partly spill over into the domestic economy, and the projections of medium-term real GDP growth have also been revised downwards.

The recovery of economic activity, along with improved indicators from the labour market and increased inflows based on remittances from abroad, mitigated the risks in the household sector. Favourable borrowing conditions at banks had a positive impact on the growth of demand for loans and the recovery of credit activity in this sector. Deposits registered a strong growth, but it was mainly generated by the growth of funds in transaction accounts and demand deposits. The trend of improvement of the quality of credit portfolio in the household sector continued, however, in the coming period, an increase in credit risk is expected. The rise in interest rates will cause an increase in obligations based on existing credit debts, while at the same time the slowdown in economic growth followed by a strong increase in inflation will put pressure on the weakening of the disposable income of households.

The total indebtedness of the sector of non-financial companies to domestic financial intermediaries in 2021 recorded a slight increase. The recovery of economic activity in BH was not accompanied by stronger credit activity in the sector of non-financial companies. In the financing of business activities, the corporate sector, as in previous years, relied mostly on credit support from banks. Average interest rates on loans remained at low levels, which enabled companies to borrow on relatively favourable terms. Positive developments in the domestic macroeconomic environment, as well as measures that were in force throughout 2021 and taken by banks towards clients in order to mitigate the negative consequences of the pandemic, contributed to preserving a low level of credit risk in the sector of non-financial companies. However, with the slowdown of the economic recovery at the end of the year, there is a noticeable strengthening of the credit risk in the corporate sector, which is reflected in the slight deterioration of the quality of the credit portfolio in the last quarter. The continued weakening of economic activity along with the expected rise in interest rates in the coming period will contribute to the further growth of credit risk arising from the corporate sector.

The banking sector has successfully amortized the risks related to the corona virus pandemic thanks to good financial soundness and measures taken by the regulator to mitigate and recover from the negative economic consequences of the pandemic. The banking sector of Bosnia and Herzegovina remained adequately capitalized in 2021, asset quality indicators improved, and a significant increase in profitability and liquidity indicators was recorded. The credit activity recovery has slowed down, as indicated by the values of the financial cycle indicators. The dynamic growth of deposits of domestic resident sectors continued, but the prolonged period of low interest rates influenced a further reduction of the average maturity of deposits, posing a growing risk arising from the maturity structure of financing sources. The crisis from the beginning of 2022 resulting from the sanctions imposed by the EU on Russian-owned banks was overcome by the quick and successful intervention of domestic regulators. Risk of a potential sudden and uncontrolled withdrawal of households' deposits from banks, which could have led to a financial crisis, was prevented. As a result of the slowdown in economic recovery, in the coming period, risks can be expected to increase, namely the risk that has been identified as the most significant one in the domestic banking sector, credit risk. The expected growth of interest rates and negative macroeconomic trends will, to a certain extent, put pressure on the ability to further borrow and regularly service debts in both key segments of the domestic private sector. Nevertheless, good capital positions and high liquidity of the banking sector leave enough room for banks to absorb risks. The results of stress tests further indicate that the banking sector is able to amortize very strong macroeconomic shocks.

In 2021, the Central Bank of BH fulfilled its legal obligation to maintain appropriate payment systems. Payment transactions were carried out smoothly through gyro-clearing and real-time gross settlement (RTGS) systems. The Central Registry of Credits (CRC) and the Single Register of Accounts of Business Entities (SRABE) were maintained, and the execution of transactions through the international clearing of payments with foreign countries proceeded smoothly.

In 2021, domestic institutions continued with the adoption of new by-laws, which considerably completed the key set of regulatory regulations within the entity laws on banks. Formal recognition of several-year long process of implementing reforms in the field of banking regulation and bank supervision was received at the end of the year in the form of a decision of the European Commission, which confirmed the equivalence of the supervisory and regulatory framework in BH with EU provisions. The institutional and regulatory framework for the banking system in Bosnia and Herzegovina was assessed as advanced, harmonised and regulated according to the rules that are also applied in the EU. Temporary measures for the banking sector, the leasing sector and microcredit organisations, which were aimed at mitigating the negative economic consequences of the corona virus were lifted during the first half of 2022.

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TRENDS AND RISKS FROM THE INTERNATIONAL ENVIRONMENT

1. Trends and Risks from the International Environment

The main characteristics of the global economy in 2021 are: the recovery of economic activity in all countries of the world, thanks to the lifting of restrictive measures introduced earlier with the aim of fighting the coronavirus pandemic, and the rapid and significant growth of inflation rates in the second part of the year due to the rise in energy and food prices on a global level. As a result of extensive fiscal support, the level of public debt has risen significantly around the world.

In 2021, the world economy will recover from the crisis caused by the coronavirus pandemic, which led to a sharp decline in economic activity in 2020. The global economy recovery, supported by strong measures of fiscal policy and expansive monetary policy, and due to progress in the vaccination process, began to slow down in the third quarter due to increasingly pronounced disruptions in global supply chains, and a repeated period of high numbers of people infected with the corona virus, which was followed by the re-introduction of measures to close certain economies in the fourth quarter of 2021. Financial conditions remained favourable, despite continuous market expectations of monetary policy normalisation due to strengthening inflation. At the end of 2021, there was a strengthening of geopolitical risks due to the renewed tightening of relations in the Russian-Ukrainian crisis.

At the beginning of 2022, war broke out in Ukraine, which soon caused multiple negative effects on the world economy, especially the euro area economy. The war damaged global trade, the food supply, and consequently led to an increase in food prices, as well as the prices of fuel and other goods, which further led to a decrease in the disposable income of the households. The inflation rate has already recorded growth during 2021 as a result of increased demand, caused by the recovery of the economy and continuous disruptions in supply chains on the supply side, but the war further accelerated it. The increase in inflation, as a rule, leads to a significant increase in interest rates by central banks and a tightening of monetary conditions. The rise in interest rates occurs in the context of increased external debt of a large number of countries as a result of fiscal measures to mitigate the pandemic. There is turbulence in the financial markets, which is reflected in the rapid decline of stock prices, and the sudden strengthening of the exchange rate of the American currency, which further increases inflationary pressures in countries whose currency depreciates. Due to all of the foregoing, in April 2022, the IMF significantly lowered its economic growth forecasts for 2022 and 2023 compared to the previous periods when projections were made.

1.1. Trends in the international environment

After a strong contraction of global economic activity caused by the outbreak of the coronavirus pandemic was recorded in 2020, economic recovery takes place in 2021. In 2021, a growth of economic activity of 6.1% was recorded at the global level, with developed countries recording a growth of 5.2%, while in the group of developing countries a slightly stronger growth of economic activity was recorded, which amounted to 6.8 % (Table 1.1). The greatest growth in economic activity in the group of developed countries in 2021 was recorded by Great Britain, with a growth rate of 7%, followed by the USA with a growth rate of 5.7%, and the euro area countries with a growth rate of 5.3%. On the other hand, India recorded the highest growth among developing countries, with a rate of 8.9%, followed by China with a growth rate of 8.1%.

According to IMF projection from April 2022, the global economy is expected to grow by 3.6% in the current year and in 2023. The April projection indicates an expected slowdown in global growth, which is projected at a rate of 3.3% in the medium term. The projections are based on the assumptions that the war in Ukraine will remain limited only to the territory of Ukraine, and that future sanctions against Russia will not include the energy sector, as well as that the economic impact of the coronavirus pandemic will decrease during 2022. Global output and employment are expected to remain below pre-pandemic levels until 2026 in most countries. Strong inflationary pressures will last longer than was forecast before the start of the war in Ukraine.

Table 1.1: Real GDP, Annual Growth Rate

	Real GDP, annual growth rate					Change relative to the October 2021 projection	
	2019	2020	2021	2022	2023	2021	2022
The World	2.9	-3.1	6.1	3.6	3.6	0.2	-1.3
Developed economies	1.7	-4.5	5.2	3.3	2.4	0.0	-1.2
USA	2.3	-3.4	5.7	3.7	2.3	-0.3	-1.5
EU	2.0	-5.9	5.4	2.9	2.5	0.3	-1.5
Euro area	1.6	-6.4	5.3	2.8	2.3	0.3	-1.5
Great Britain	1.7	-9.3	7.4	3.7	1.2	0.6	-1.3
Japan	-0.2	-4.5	1.6	2.4	2.3	-0.8	-0.8
Developing countries and emerging markets	3.7	-2.0	6.8	3.8	4.4	0.4	-1.3
Russia	2.2	-2.7	4.7	-8.5	-2.3	0.0	-11.4
China	6.0	2.2	8.1	4.4	5.1	0.1	-1.2
European developing countries and emerging markets	2.5	-1.8	6.7	-2.9	1.3	0.7	-6.5
Main foreign trade partners							
Germany	1.1	-4.6	2.8	2.1	2.7	-0.3	-2.5
Croatia	3.5	-8.1	10.4	2.7	4.0	4.1	-3.1
Serbia	4.3	-1.0	7.4	3.5	4.0	0.9	-1.0
Italy	0.5	-9.0	6.6	2.3	1.7	0.8	-1.9
Slovenia	3.3	-4.2	8.1	3.7	3.0	1.8	-0.9
Austria	1.5	-6.7	4.5	2.6	3.0	0.6	-1.9
Montenegro	4.1	-15.3	12.4	3.8	4.2	5.4	-1.8

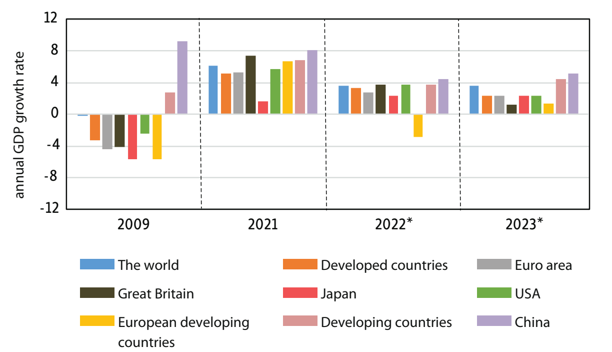
Source: World Economic Outlook, IMF, April 2022, CBBH calculation

The global economy recorded a strong recovery in 2021 (Graph 1.1), although there are noticeable differences between the recovery speed in developed and developing countries. Expectations regarding the continuation of the recovery in 2022 have been revised downwards, due to the renewed slowdown in economic activity that occurred after the outbreak of the war in Ukraine. The Chinese economy continued to recover strongly in the first half of 2021, and annual GDP growth of 18.3% was recorded in the first quarter, while in the second quarter it was 7.9%. In the second half of the year, a significant slowdown in economic activity was recorded, due to problems in the construction sector, repeated economic closures due to a new wave of the pandemic and a decrease in consumption. Nevertheless, the annual growth of China's economy in 2021 reached 8.1% and exceeded the forecast growth of 6% thanks to the significant growth of exports. In 2022, China again introduced measures to close the economy in the fight against the corona virus, which led to concerns about possible further interruptions in the delivery of goods, as well as a reduction in consumption. It is predicted that the mentioned measures will result in a sharp slowdown of the Chinese economy in the second quarter of 2022, and that there will be a modest recovery in the second half of 2022. In addition to the foregoing, it is also expected that external demand, especially from the euro area, will weaken due to the war in Ukraine.

In 2021, the US economy recorded the highest growth since 1984, thanks to the government's strong support by aid packages aimed to mitigate the negative economic effects of the corona virus pandemic. The US economy grew rapidly in the first quarter of 2021 at a rate of 6.4% compared to the first quarter of the previous year, and 4.3% compared to the fourth quarter of 2020, stimulated by additional packages of fiscal support to the households and businesses, and the opening of the economy due to the large increase in the number of vaccinated households and the consequent decrease in the number of people infected with the corona virus. Growth also continued in the second half of the year, and an annual growth rate of 6.9% was recorded in the fourth quarter. Output has almost reached pre-pandemic levels, and the unemployment rate has returned to the level of the end of 2019. In 2022, strong price growth poses the biggest risk to the US economy, and there are new concerns related to the war in Ukraine and China's economic shutdown. The priority of US economic policy is to effectively slow down price growth without causing a recession, through monetary policy measures. However, the benchmark interest rate raised only in the first quarter of 2022, at a time when a negative annual real GDP growth rate of -1.5% was recorded. According to preliminary data, economic recovery was also absent in the second quarter of 2022, and the contraction of the real estate market, the slowdown of the labour market, and the decrease in real wages are evident. All of the above leads to concerns about a possible recession in the US economy.

In 2021, the euro area economy recovered at a faster pace than expected and recorded a strong growth of around 5.2%, after a significant decline recorded in 2020. The improvement of the epidemiological situation and the lifting of restrictive measures led to an increase in consumption and an increase in GDP, which in the third quarter reached the pre-pandemic level. However, the supply could not keep up with the increased demand: labour shortages and interruptions in the supply chains led to a rise in prices, which was also contributed to by a significant increase in energy prices, especially natural gas and electricity. With the appearance of a new wave of the coronavirus pandemic in the fourth quarter of 2021, caused by a new strain of the Omicron virus, economies closed again, and consequently GDP growth slowed down. The beginning of 2022 is marked by the strengthening of the economic activity of the euro area, with the improvement of consumption and investments, but already in the first quarter there is a new shock associated with the beginning of the war in Ukraine, which leads to a strong jump in energy and commodity prices, and a decrease in trade with Russia from which the euro area countries import the largest part of oil and natural gas. As a result, the IMF's economic growth forecast for the euro area was revised downwards in April 2022.

Graph 1.1: Annual Growth Rates of GDP, by Groups of Countries



Source: IMF (WEO, April 2022)

The monetary policy of the leading central banks remained stimulating in 2021, with increased pressure to begin normalisation due to a significant increase in inflation, with many quantitative easing programmes reduced or completely ended. At the beginning of 2022, some central banks started raising benchmark interest rates, and in accordance with the announced policies and measures, the continuation of the normalisation of the monetary policy of the leading central banks and the continuation of the increase of benchmark interest rates can be expected in the further course of 2022. The Bank of England was the first of the world's leading central banks to increase the benchmark interest rate from the level of 0.1% to 0.25% in December 2021, when it ended its quantitative easing programme, which was followed by another increase to the level of 0.5% in February 2022. The benchmark interest rate was then increased to 0.75% in March 2022, and to the level of 1% in May of the same year, in order to bring inflation closer to the target level. Inflation reached 9% in April, which is the highest level recorded in the last forty years.

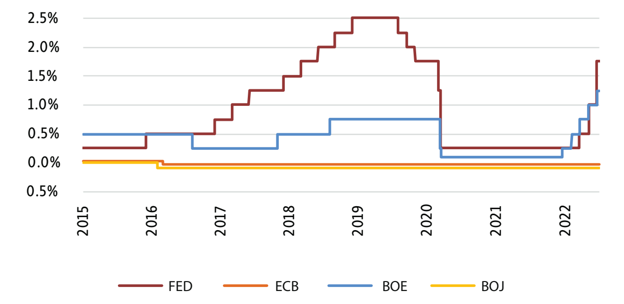
On the other hand, the FED and ECB kept the benchmark interest rates unchanged during 2021. However, at the meeting in March 2022, the FED already decided to increase the benchmark interest rate by 25 basis points (range 0.25%-0.50%), and to stop buying assets under the quantitative easing programme, due to the increasing inflation growth, far above the target level. At the May session, the benchmark interest rate was additionally increased by 50 basis points (range 0.75%-1.00%), and the reduction of the FED's balance sheet was announced starting 1 June 2022. The FED's decision at the meeting in June to raise the benchmark interest rate by 75 basis points (range 1.50%-1.75%) was aimed at stopping further accelerated inflation growth, despite expectations that there will be a slowdown in the economy and an increase in unemployment in the coming months. The FED has announced a further increase in this rate at the next meetings, so it is expected that the benchmark interest rate will be around 3.4% by the end of 2022.

In 2021, the ECB carried out three additional long-term bank refinancing operations as part of the programme (TLRTO III) with even more favourable financing conditions, and in July 2021 it announced a revision of its strategy and changed the definition of the target level of inflation (from the previous annual level of " below, but close to 2%", to the target inflation level of 2% in the medium term) in order to increase the flexibility to maintain a stimulating monetary policy for a longer period of time. At the meeting held in March 2022, the ECB kept the main interest rates unchanged and announced that it will end the purchase of bonds under the pandemic PEPP programme at the end of March. Also, the ECB announced the monthly amounts of asset purchases of the non-pandemic quantitative easing programme, which continued to be carried out on a reduced scale until the end of June 2022. The Governing Council of the ECB announced at its June session that from 1 July 2022, it will no longer carry out net purchases as part of the bond purchase programme, and that it intends to increase benchmark interest rates by 25 basis points at the meeting to be held in July, which will be followed by another increase in September. The ECB expects that in the period after September, it will continue with a gradual and continuous further increase in interest rates, depending on new data and estimates of inflation trends in the medium term, with the aim of achieving an inflation level of 2%.

In the course of 2021 and the first half of 2022, the Bank of Japan kept the expansionary monetary policy and the benchmark interest rate unchanged, at the level of -0.1%, in response to weak demand, and emphasized that the increase in the price of some goods, especially energy, should be preferably responded to with measures other than monetary policy. Although core consumer prices grew at an annual rate of 2.1% (as of April 2022), the Bank of

Japan believes that inflation will not be maintained around the target of 2% in the long term and that price increases caused by higher costs of energy and raw materials are of a temporary nature.

Graph 1.2: Trend of Benchmark Interest Rates of Leading Central Banks



Note: The graph shows the upper limit of the FED benchmark interest rate interval;
The World Health Organisation declared the pandemic of coronavirus in March 2020;
Bank of England in December 2021 was the first of the key central banks to raise the benchmark interest rate.

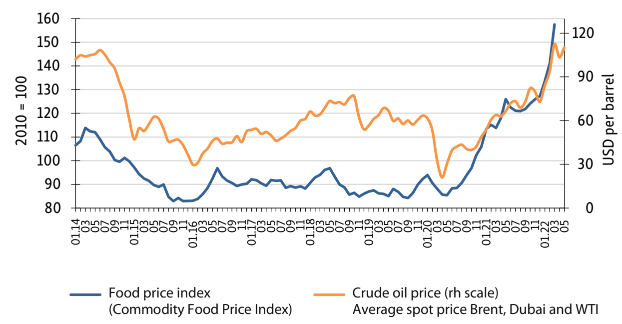
Source: FED, ECB, BOE, BOJ

The price of crude oil recorded a significant increase in 2021 compared to the previous year, as the recovery of the global economy led to an increase in demand that exceeded supply. In the first three months of 2021, the price of oil recorded an increase, and reached a level of around USD 63 per barrel, mainly due to increased optimism about vaccination, expectations that stimulating measures in the USA will increase the demand for oil, but also due to the decision of major OPEC member producers - to reduce the volume of supply in 2021 in order to encourage the growth of oil prices, after the decline recorded in the previous year. Global production grew more slowly than demand, which caused oil prices to continue to rise in the second quarter. Oil production could not keep up with the level of demand, given that since the fall in oil prices in 2014, as well as during the pandemic, investments in oil extraction have been reduced, which was additionally reinforced by the process of switching to renewable energy sources. The aforementioned disproportion between supply and demand leads to a significant jump in oil prices in the third quarter of 2021. The price of crude oil increased by about 50% during 2021 compared to the previous year. The first half of 2022 brought a further increase in oil prices, due to the outbreak of the war in Ukraine, which led to interruptions in oil production and trade, as well as sanctions on the import of crude oil and certain oil derivatives from Russia, introduced by EU countries. The import of crude oil that is delivered via pipelines to those EU member states that, due to their geographical position, are particularly dependent on Russian supplies and have no viable alternative, is temporarily exempted from the aforementioned sanctions. The price of crude oil exceeded 100 dollars per barrel for the first time in several years. Already high crude oil prices rose further when China began easing coronavirus restrictions in late May 2022, while the EU announced plans to cut Russian oil imports by 90% by the end of the year.

Natural gas prices recovered strongly in 2021, reaching a ten-year high in North America and a record level in Asia and Europe. The significant increase in natural gas prices is the result of a combination of factors: natural gas demand growth in 2021 was higher than expected due to a strong economic recovery and cooler weather, while natural gas supply was hampered by several planned and unplanned shortages along of the entire supply chain. The war in Ukraine caused a crisis in energy supply, so the high prices and problems from the second half of 2021 were further intensified. Natural gas prices in mid-2022 recorded a jump of almost 50% compared to the same period of the previous year.

The prices of other raw materials without energy also recorded growth, initially under the influence of the lifting of measures to prevent the spread of the coronavirus pandemic. Food prices have recorded constant growth since June 2020, and in March 2021 they reached their highest level in almost seven years. The biggest increase in food prices in 2021 was in the group of vegetable oils, meat and dairy products, reflecting the increased demand, especially the increase in imports from China. The war in Ukraine, which is one of the largest exporters of wheat and other grains, has led to a sharp rise in food prices. The World Bank predicts that wheat prices will rise by more than 40%, reaching a record high in 2022, which will put pressure on developing economies that rely on wheat imports, especially from Russia and Ukraine. Prices of metal are also forecasted to rise by 16% in 2022, before easing in 2023 to remain at elevated levels nevertheless. Also, the increase in the prices of certain intermediate goods leads to a chain increase in the prices of other goods for the production of which they are used (e.g. higher natural gas prices raise the prices of artificial fertilizer production, which puts pressure on the prices of agricultural products).

Graph 1.3: Food and Oil Prices

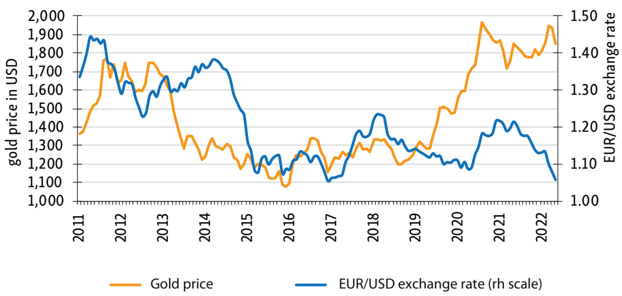


Source: the World Bank

Trends on the world foreign exchange markets in 2021 are also marked by the impact of rising inflation, related announcements of changes in monetary policy by leading central banks, and unfavourable trends in the international environment in late 2021 and at the beginning of 2022. The euro has weakened against the US dollar in 2021 due to the stronger growth of the US economy, including a faster increase in the inflation rate than was the case in the euro area, and the earlier tightening of monetary policy by the FED compared to the ECB. In 2022, the dollar continued to strengthen under the influence of rising inflation and a series of increases in the benchmark interest rate by the FED, with further increases expected at each subsequent session in 2022 (Graph 1.4).

After significant growth in 2020, the price of gold remained at a relatively high level in 2021. With occasional price fluctuations due to the volatility of the demand for safe types of assets during the year, the average price of gold recorded a slight increase in 2021. The average price of gold in 2021 was $1,799.6 per ounce, which is by 1.7% higher than the average price of gold in 2020. At the beginning of 2021, owing to the progress of the vaccination process, the investment climate began to normalise, which led to a gradual decline in the price of gold. However, the decrease in the price of gold was halted under the influence of uncertainty related to the emergence of new strains of the corona virus, the increasingly emphasised risks of inflation growth and the strengthening of consumer demand for gold. At the beginning of 2022, the price of gold recorded a significant increase, due to the increase in demand for safer types of assets, which corresponds to the beginning of the war in Ukraine. How strong the influence of the dollar exchange rate and the monetary policy of the American central bank on the price of gold is best illustrated by the situation in May, when the dollar exchange rate reached a twenty-year high, the price of gold fell to a three-month minimum. At the beginning of June, the price of gold rose again, then the price recorded a fall due to the expectation of a further increase in the FED reference interest rate of 75 basis points.

Graph 1.4: Gold Price and EUR/USD Exchange Rate



Source: World Bank, Bloomberg

1.2. Survey of the main risks in the EU and the euro area

The most significant risk in 2021 was rising inflation, i.e. the possibility that problems in supply chains and the rise in energy prices last longer than expected, and accordingly, the effects of a potential earlier increase in benchmark interest rates on the economies of the euro area. This risk increased further strongly after the outbreak of war in Ukraine, due to which the ECB decided to normalise monetary policy earlier than expected. Also, although the immunisation process led to the suppression of the pandemic and the recovery of the world economy, new strains of the corona virus and new waves of the pandemic posed a risk to the economy of the EU and the euro area in the course of 2021.

The key risks to financial stability are: high level of corporate debt and increased public debt, rapidly growing real estate prices, over-indebtedness of the non-financial sector and the households, and increased risk regarding the regular servicing of obligations in the long term due to rising interest rates and the abolition of government support measures, high inflation rates, and high inflationary expectations, as well as low profitability of banks.

1.2.1. Effects on the banking sector

The banking sector has shown resilience during the crisis caused by the corona virus pandemic, thanks to the good capital positions built up after the 2008 financial crisis. The adoption of a package of measures by the European Commission to facilitate the operation of banks during the pandemic, as well as strong government support to companies, contributed significantly to mitigating the negative effects of the pandemic on the banking sector. Euro area banks were adequately capitalized, and the common equity tier ratio (CET1) for systemically important institutions at the end of the fourth quarter of 2021 was 15.2%. Retained earnings and lower average risk weights had a positive impact on capitalisation indicators. Based on the ECB analyses, by creating several scenarios related to the war in Ukraine, it was estimated that the banking sector of the euro area would remain resilient even in an adverse scenario based on the assumptions of the continuation of the war in Ukraine and the associated negative macroeconomic effects.

The profitability of euro area banks recovered in 2021 due to lower provisioning costs for expected credit losses and higher operating income, but it still depends on the continuation of the overall economic recovery. The total return on equity (ROE) of systemic banks in the euro area is 6.6%, and records a significant increase compared to the previous year when it was 1.7%. Pre-pandemic structural challenges, such as low-cost efficiency and limited diversification of income sources, are still present. Euro area banks are also faced with a growing need to carry out digital transformation, and to manage the implications of the transition to a green economy. Although the euro area banking system has shown resilience in the worsening macroeconomic conditions caused by the war in Ukraine, indirect effects of the war, such as disruptions in supply chains and price increases, could have a negative impact on business operations and household disposable income, which would increase credit risk for banks. Also, the rise in interest rates could expose banks to increased credit risk from the non-financial sector. Therefore, the most significant risk for banks' operations is a possible decrease in profitability in conditions of increased credit risk. In addition, the strong growth of residential real estate prices in the EU, due to the strong demand for residential mortgage loans, especially in some EU member states, may lead to a strengthening of credit risk if there is a sudden downward correction of real estate prices in the coming period.

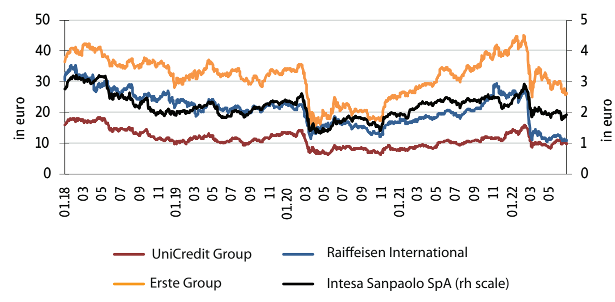
The quality of banks' assets improved in 2021, primarily under the influence of the improvement in the quality of the loan portfolio. In the fourth quarter, the share of non-performing loans in total loans decreased to 2.1%, due to the sale and securitization of loan portfolios. The recovery of credit quality was recorded in most industries in the sector of non-financial businesses, as well as in the household sector. The risks associated with the end of pandemic support for businesses have not materialised, although most of the moratoriums have expired. However, companies from certain industries that were particularly affected by the pandemic recorded a significant decrease in profitability. In addition to the existing vulnerabilities, the slowdown in economic activity and the continuation of inflationary pressures lead to a strengthening of the risk to the asset quality of the banking sector of the EU and euro area countries.

The credit ratings of banking groups operating in BH were confirmed in 2021, while the outlook was improved from negative to stable and positive. Rating agency S&P revised the outlook of Intesa Sanpaolo and UniCredit S.p.A twice during the year, from negative to stable, then to positive with the explanation that economic risks for Italian banks are decreasing thanks to improved economic conditions and growth projections for the next two years. In May 2021, the rating agency Moody's confirmed the credit rating of UniCredit Bank with a stable outlook, as well as the rating of Intesa Sanpaolo Bank whose outlook was changed from negative to stable. In September 2021, Moody's raised the long-term credit rating of Raiffeisen Bank to A2 from A3, with the assessment that the financial strength and resilience of this group has improved, and that the group's credit quality and good capitalisation have been maintained, thus protecting profitability in challenging business conditions. At the end of the year, the S&P rating agency revised Erste Group's credit rating up by one step, to A+ from A with a stable outlook, as a result of changes in its methodology and the assessment that this banking group has built solid additional capacities to absorb losses. The credit ratings of other banking groups remained unchanged. In May 2022, the rating agency S&P confirmed the credit rating of Raiffeisen Bank A- and maintained its negative outlook, despite the impact of the war in Ukraine on this bank, because it estimates that Raiffeisen Bank will successfully absorb the economic effects of the war and related political interventions. The group's profit in Russia accounted for 18% of its total profit in 2021, and lending accounted for 4% of total lending. According to this rating agency, the economic crisis and the effects of sanctions in Russia will lead to a decrease in profitability and a deterioration in the quality of the Raiffeisen group's assets. Rating agency Moody's also confirmed the rating of Raiffeisen bank at level A2 with a stable outlook.

Euro area bank stock prices returned to pre-pandemic levels in 2021. The business results were better than expected, which resulted in the return of investor confidence and the formation of the opinion that the banking sector successfully overcame the initial challenges related to the corona virus pandemic. Also, the cancellation of recommendations for the suspension of dividend payments, which the ECB adopted in October 2021, is an additional motive for investing.

When it comes to banking groups operating in Bosnia and Herzegovina, UniCredit S.p.A recorded the largest increase in the value of its shares by 77% compared to the previous year, followed by Erste Group and Raiffeisen Bank International AG by 66% and 55%, respectively, while Intesa Sanpaolo S.p.A. recorded a 19% increase in the value of shares. After the outbreak of the war in Ukraine, at the beginning of 2022, the banking sector of the euro area came under new pressure, and the share prices of banking groups recorded a significant fall. However, share prices soon recovered, given that only a few banks had significant exposures to Russia and Ukraine. However, share prices of banking groups remained at somewhat lower levels, due to increased risks associated with the war in Ukraine.

Graph 1.5: Trend of Local Banks' Mother Banks' Stock Prices



Source: Bloomberg

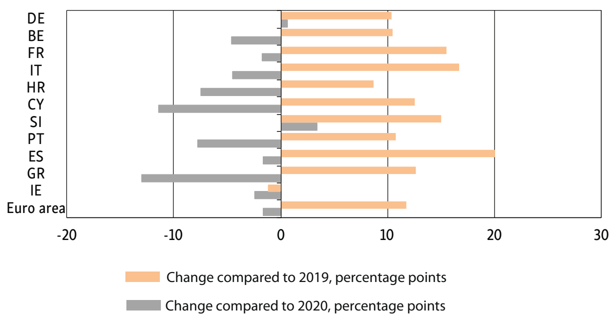
1.2.2. Effects on the real sector

One of the biggest risks that the euro area faced in 2021 which also marks the year 2022 as well is the risk of a significant increase in inflation. After a long series of years when low inflation rates and deflationary pressures were recorded in recent years, in the euro area from the middle of 2021 a rapid and unexpected price increase was recorded, especially in energy, services, food and industrial products, caused by a rapid increase in demand from one and bottlenecks in supply chains on the other hand. The recovery of the euro area slowed down in 2022 after the outbreak of the war in Ukraine, and due to the continued rise in inflation rates, which led to the strengthening of concerns about the possible outbreak of recession.

Fiscal support measures that euro area member countries implemented to support their economies in pandemic conditions were largely withdrawn in 2021, with the weakening of the pandemic and the resumption of economic activity. The budget deficit of the euro area countries in the fourth quarter of 2021 amounted to 3.6% of GDP, which represents a significant decrease compared to the previous year when it amounted to 7.5% of GDP. The ratio of the budget deficit to GDP was reduced due to a higher increase in income in relation to the growth of budget expenditures, as well as a higher realised growth of GDP compared to the previous period. The public debt of the euro area member countries was reduced from 97.2% in 2020 to 95.6% at the end of 2021, owing to the strong increase in GDP. However, the normalisation of monetary policy and the rise of interest rates will put pressure on the fiscal position in the coming period, given that certain countries of the euro area have a need for debt refinancing in the next two years.

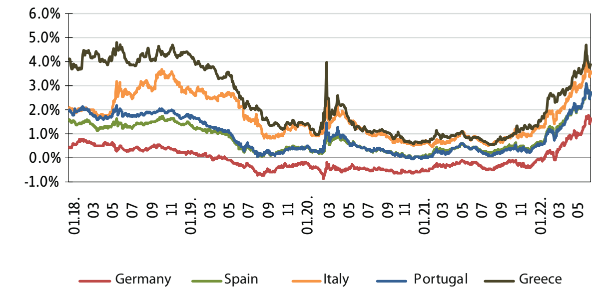
Immediately after the outbreak of war in Ukraine, volatility increased on the financial markets, and investors sought safer investments, which led to a short-term rise in bond prices, i.e. a fall in yields. However, soon there was a strong rise in the yields on the bonds of the euro area countries after the ECB signalled a series of interest rate hikes starting July with the aim of curbing record high inflation. A significant jump in yields was recorded on the bonds of the peripheral countries of the euro area, which led to concerns about the widening gap between the yields on the bonds of southern European countries and Germany and related risks of financial fragmentation. The risk of fragmentation is the risk of uneven transmission of the normalisation of the ECB's monetary policy in the countries that make up the euro area. In response to growing risks, the ECB announced in June 2022 the creation of a new instrument to combat divergences in borrowing costs, in order to reduce the difference in bond yields of core and peripheral euro area countries.

Graph 1.6: Public Debt Changes as Per Cents of GDP in 2021



Source: Eurostat, calculation by the CBBH

Graph 1.7: 10-year Government Bond Yield's



Source: Bloomberg

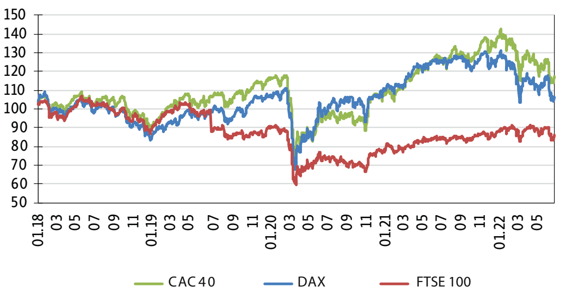
The recovery was also reflected in the conditions at fixed income market. Yields on government bonds of most euro area countries recorded growth. However, the strengthening of the risk of fragmentation of market yields and stronger growth of the yields of the peripheral countries of the euro area compared to the yields of the base countries were emphasized again. Yields on German 10-year government bonds increased by 387 basis points at the end of 2021 compared to the end of 2020, to the level of -0.182%. At the same time, yields on Italian bonds increased by 627 basis points compared to the end of the previous year and amounted to 1.17%. Ten-year bond yields of Greece, Spain and Portugal also recorded strong growth in the same period (Graph 1.7). The first half of the year was marked by the beginning of economic recovery, after the discovery of a vaccine against the corona virus, which stimulated investors' appetite for riskier assets, however, in the second half of the year, inflationary pressures also affected the financial markets of the euro area. Inflation, expectations related to growth dynamics and the speed of normalisation of monetary policy influenced the growth of yields on bonds of euro area countries.

In the course of 2021, the rating agencies confirmed the credit ratings of most euro area countries, and revised the outlook for the credit rating upwards. In the course of 2021, the S&P agency revised the outlook for the credit rating of Cyprus, Estonia, Greece and Italy to positive. The S&P agency increased Greece's long-term credit rating from BB- to BB with a positive outlook, as a result of expectations that the government will accelerate structural reforms and budget consolidation with its policies, supported by significant funds from the EU crisis recovery fund in the form of grants and loans. In December 2021, the Fitch agency increased Italy's credit rating by one level to BBB with a stable outlook, based on the faster growth of the Italian economy in 2021 than previously expected, with growth rates that were higher than the growth rates of the euro area.

At the beginning of 2022, rating agency Fitch increased the outlook for Greece's credit rating from stable to positive. In the first half of 2022, the rating agency S&P increased the credit rating outlook for Austria from stable to positive, Spain from negative to stable, and increased the long-term credit rating of Greece from BB to BB+ with a stable outlook.

During 2021, stock market indices recorded growth to pre-pandemic values. (Graph 1.8). There was also a gradual recovery of the values of the main stock market indices of the euro area thanks to the strong recovery of economic activity in 2021. The outbreak of war in Ukraine led to an increase in volatility in the markets, and a drop in the value of stock indices. However, this reaction was short-lived, given that the index values recovered already in March 2022. However, due to concerns over a possible scenario of reduced growth of economic activity and an increase in the inflation rate, as well as the response of central banks, the value of riskier assets again fell in April and May.

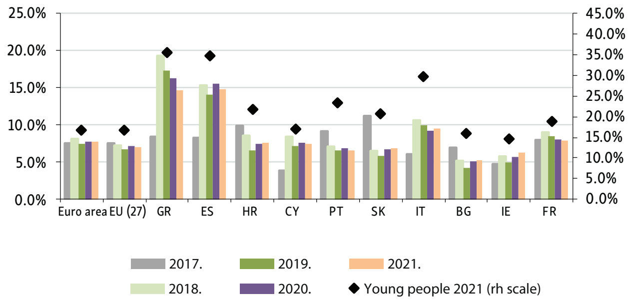
Graph 1.8: Trend of Main Market Indices



Source: Bloomberg, calculation by the CBBH, average value of market indices in 2017 = 100

The recovery of economic activity in the euro area countries led to a fall of the unemployment rate, which in the third quarter of 2021 reached the pre-pandemic level. The unemployment rate in the euro area countries was 7% at the end of 2021 and was reduced by 1.2 percentage points compared to the previous year. The youth unemployment rate, which was particularly affected by the pandemic, also fell significantly, to a historically low level of 14.9%. The increase in unemployment during the pandemic was not proportional to the large decrease of output, thanks to the quick and significant reaction both at the EU level and at the national levels. The labour market recovered very quickly in 2021, thanks to the vaccination that enabled increased mobility, and the demand for labour experienced a strong jump, and soon there was a shortage of labour in numerous industries, which may be the result of a mismatch of worker qualifications and the demands of the jobs they perform, triggered by the pandemic, and possible changes in workers' preferences, as well as the extended use of unemployment benefits that can lead to postponing job searches.

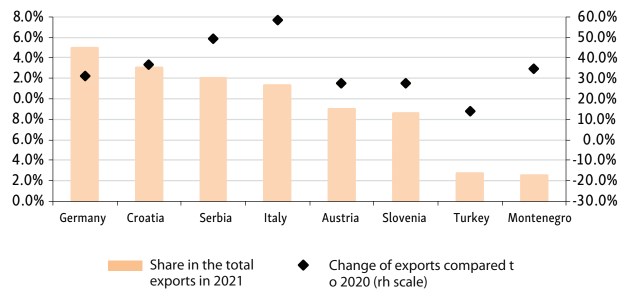
Graph 1.9: Unemployment Rate in the EU



Source: Eurostat

During 2021, there was also a strong recovery of world trade, and therefore of BH's foreign trade exchange. In 2021, the total export from BH amounted to KM 14.3 billion and recorded an increase of 35.7% compared to the previous year, while the total import amounted to KM 21.6 billion, which is by 27.9% more than in the previous year. The coverage of imports by exports increased compared to the previous year and amounted to 66.1%, while the foreign trade goods deficit amounted to KM 7.3 billion compared to KM 6.4 billion in 2020. Total exports to EU countries increased by 36.4% compared to 2020 and amounted to KM 10.4 billion. Exports have increased to all countries that are the main foreign trade partners of Bosnia and Herzegovina. The direct effects of the war in Ukraine on BH trade are small, given that trade with Ukraine has a very small share in BH's total trade, while in trade with Russia, BH is a net importer, and the largest part of imports from Russia (80%) refers to the import of oil and gas. However, indirect effects are more significant, through imports from Croatia and Serbia, especially oil and gas, which make up a significant share of the total imports to BH.

Graph 1.10: BH Exports to Main Trade Partner Countries



Source: BHAS, calculation by the CBBH

Centralna banka
BOSNE I HERCEGOVINE
Централна банка
БОСНЕ И ХЕРЦЕГОВИНЕ

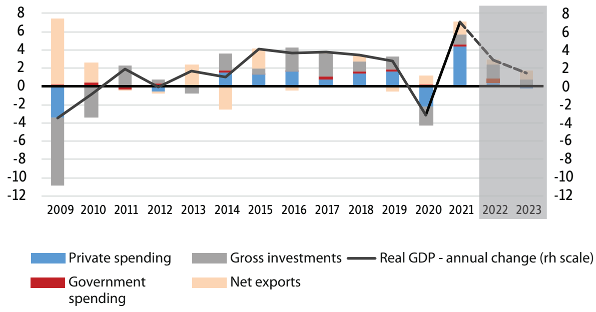
MACROECONOMIC
TRENDS AND RISKS IN BH

2. MACROECONOMIC TRENDS AND RISKS IN BH

After a strong recession in the previous year, positive trends were recorded in all segments of the BH economy in 2021, which are reflected in a significant recovery of economic activity, growth in industrial production and exports, a moderate increase in employment and average wages, a recovery in the real estate market, and a record increase in tax income, and in improvement of the country's fiscal position. The increased economic activity was also reflected in the improvement of the balance of payments position, and in the mitigation of the country's external vulnerabilities. On the other hand, along with the recovery of economic activity, the second part of 2021 was also marked by accelerated growth in consumer prices, due to disruptions in supply chains at the global level, and inflationary pressures in BH were further increased in 2022 after the outbreak of war in Ukraine. The strong growth of inflation represents a key risk for many segments of the BH economy, which is the reason why the economic activity is expected to slow down in the year to come, primarily as a result of a decrease in disposable income and personal consumption, as well as an impact on financial stability, through the growth of credit risk in the banking sector.

The post-pandemic year 2021 was characterised by the recovery of economic activity in BH, and the recorded economic growth of 7.1% significantly exceeded the initial forecast. PThe gradual lifting of restrictive measures due to the improvement of the epidemiological situation and increased consumer optimism led to a record growth of economic activity in the second quarter (11.6% on an annual basis). The recorded growth was 30 bp higher than the real economic growth from the first quarter of 2007 (11.3%), which was considered a record high up to this point. Most of the leading economies also recorded double-digit growth rates during the second quarter, with continued recovery in the second part of the year, at a slightly lower intensity though. What is common to all countries is that the record high GDP growth is dominantly the result of an extremely low statistical base from the previous year, i.e. a record low level of economic activity in a period that was characterised by major restrictions in order to suppress the uncontrolled spread of the corona virus. As a result of the weakening of the influence of the base effect and the strengthening of inflationary pressures, the growth of real GDP in BH started to slow down in the second part of 2021. It is worth noting that all GDP components contributed to the recovery of economic activity, with private consumption making the biggest contribution to economic growth in 2021 (contribution of 4.3 percentage points). Under the influence of the recovery of external demand, record export activity was achieved in 2021, but due to the simultaneous strong growth of imports of goods and services, the net trade balance of goods and services did not have a more pronounced positive contribution to GDP (1.5 percentage points). The recovery of domestic demand was to the greatest extent a reflection of the previously postponed households' consumption from accumulated savings and from the inflows of remittances from abroad after the easing of restrictive measures. Gross investments recorded a recovery after a sharp decline in the previous year, but their contribution to economic growth remained modest (Graph 2.1).

Graph 2.1: GDP of BH (Annual Change and Contribution to Growth by Categories)

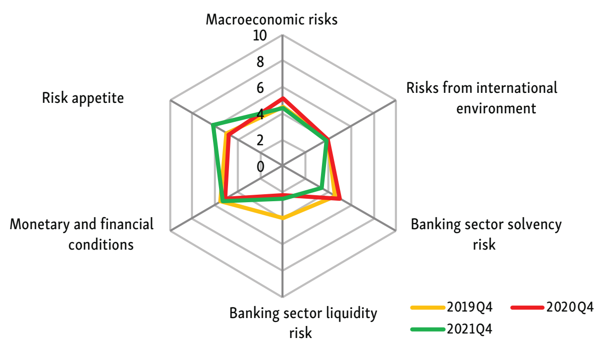


Source: the BHAS, the CBBH
* For 2022 and 2023 projections of the CBBH

Text Box 1: Assessment of the main macro-financial risks to financial stability

The assessment of the main macro-financial risks that may arise in the real, fiscal, external or financial sector or as a result of their mutual connection, as well as the assessment of monetary and financial conditions and risk appetite, was done on the basis of a quantitative tool (Dashboard), and for the first time published in the 2017 Financial Stability Report. Risk assessment is based on simplified standardisation and ranking of the positions of a comprehensive set of indicators that represent the basis for quantifying the synthetic assessment of the degree of risk from different segments of the system. A score in the range of 1-5 represents an extremely low to slightly moderate degree of exposure to risks; score in the range of 5 - 8 moderate to slightly high degree of exposure to risks; a score in the range of 8 - 10 represents a high degree of risk exposure. The ranking of scores for monetary and financial conditions and risk appetite moves in the opposite direction, i.e. an increase in the distance from the center of the graph represents an improvement in monetary and financial conditions, i.e. an increase in the investors' risk appetite.

Graph TB 1.1: Macrofinancial Risks Chart



Source: CBBH

The total exposure of the financial system to macro-financial risks in 2021 decreased under the influence of the recovery of the global and domestic economy after the lifting of restrictive measures and the gradual normalisation of business activities in all spheres of economy. The reduction of macroeconomic risks was positively influenced by the strong growth of domestic economic activity, followed by the recovery of the labour market and a slight increase in employment. Further on, the reduction of risks related to the fiscal sector was reflected in the record growth of budget revenues and the lower level of the budget deficit compared to the previous year. Additionally, the more favourable current account balance contributed to reduction of macroeconomic risks. On the other hand, the growth of inflation, which has accelerated since the second half of 2021, and the lowered projections of economic growth for the next two years indicate a significant increase in risk that will adversely affect many segments of the BH economy in the coming period.

A synthetic assessment of the impact of the risk of spillover of shocks from the international environment on the domestic economy is obtained on the basis of indicators that measure trade and financial linkages in the economy. The overall risks coming from the international environment have been slightly mitigated, which is a reflection of the economic recovery of BH's main trading partners and the increase in the level of the country's foreign exchange reserves. At the same time, stronger trade linkages, which are reflected in a significant increase in the volume of foreign trade exchange in 2021, have increased risks from the international environment in terms of spillover to the domestic economy, bearing in mind the expected decrease in external demand in the coming period.

The solvency risk of the banking sector, which is measured by indicators of financial soundness and the level of indebtedness of the corporate sector and the households, was significantly reduced in 2021. All indicators of financial soundness in 2021 are at a satisfactory level, with an improvement in banks' capital positions, a significant recovery of the profitability of the banking sector and a reduction in exposure to foreign exchange risk. At the same time, the level of indebtedness of the household sector and non-financial companies, which is observed in relation to GDP, was significantly reduced, leading to an improvement in the overall scoring in the solvency segment.

Liquidity risk remains extremely low and reflects the high liquidity of the banking sector. The growth of the liquidity indicator, which continued in 2021, is primarily caused by the continuation of the trend of increasing deposits on transaction accounts and demand deposits. However, there is concern that the extremely unfavourable term structure of the source of funds in a certain sense affects the limited credit growth in BH, especially taking into account the extremely favourable monetary and financial conditions, which have further improved this year. Interest rates in Bosnia and Herzegovina were at historical lows in 2021, which, along with rising inflation, led to an additional decrease in real interest rates. Despite this, no significant growth of credit to the private sector was recorded, and under average credit activity is also pointed by the value of the private credit- to-GDP gap indicator, which is deep in negative territory (Detailed description is given in the Text Box 3 – Assessment of the financial cycle for BH).

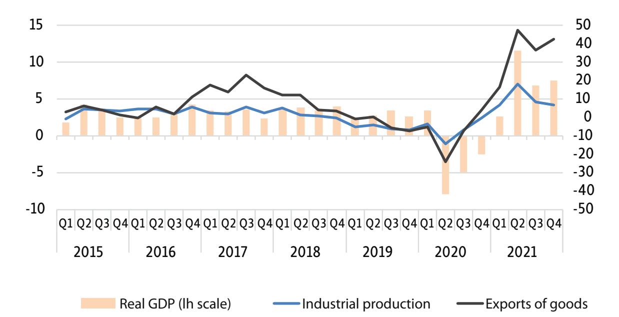
Improved macroeconomic conditions in 2021, along with the already mentioned record low interest rates and the limitation of alternative forms of investment, influenced the increased risk appetite of investors. An increase in the volume of turnover and prices on the real estate market was recorded, and the values of the stock market indices recovered, despite the reduced volume of turnover on both BH stock exchanges. Increased inflows from direct foreign and portfolio investments, in relation to GDP, also reflect the increased risk appetite of investors in 2021.

In 2021, the highest increase in the volume of economic activity was achieved by activities that during the corona crisis were carried out at a reduced capacity due to restrictive measures (Wholesale and retail trade, transportation and storage, and Hospitality and catering activities)[1]. From the aspect of financial stability, it is important to point out that in these activities there was no increase in credit risk and no deterioration in the quality of the credit portfolio thanks to the measures of entity governments and regulators that were applied to recover from the negative economic consequences of the pandemic throughout 2021. Furthermore, strong growth in real economic activity in 2021 was recorded in the manufacturing industry and the financial sector, while real growth in the construction sector slowed down compared to the previous year (see Text Box 2). The recovery of industrial production that began in the last quarter of 2020 was accompanied by a strong growth in the exports of goods throughout the year (Graph 2.2). However, in the first quarter of 2022, there was a slowdown in the growth of industrial production, given that interruptions in the supply chains of finished products and raw materials, which began even before the corona crisis, and the increased inflationary pressures present from the middle of 2021 burden the operations of a large number of industries. Disruptions in the global raw materials and energy markets as a direct consequence of the war in Ukraine are spilling over to the EU countries, the main foreign trade partners of Bosnia and Herzegovina, as well as to our country through a wide range of channels. In such circumstances, according to CBBH projections, a decrease in foreign and domestic demand is projected, as well as a slowdown in economic growth in 2022. The contraction of industrial production, which is largely export-oriented, along with the assumed decrease in external demand, will lead to a slowdown in the dynamics of export growth in the year to come. However, due to a sharper decline in imports, net exports are expected to have a slight positive contribution to economic growth in 2022. The expected decrease in private consumption, as a key category that will affect the slowdown in the growth of economic activity in 2022, is caused by a deterioration in the standard of living due to a strong increase in the cost of living, and due to a slowdown in the dynamics of the inflow of remittances from abroad. The growing risks in the external and domestic macroeconomic environment, along with the already existing problems faced by numerous production activities, are already

[1] Described in more detail in Chapter 4. Corporates

spilling over to the banking sector in the form of increased credit risk, which could lead to a significant deterioration in the quality of the credit portfolio in the coming period.

Graph 2.2: GDP, Exports of Goods and Industrial Production (% of Annual Change)

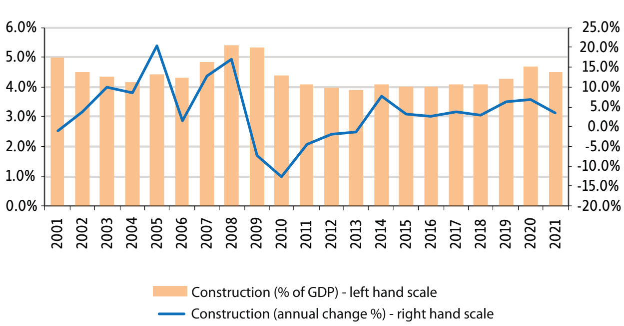


Source:the BHAS, the CBBH

Text Box 2: The construction sector and the real estate market

Construction represents one of the most important branches of the BH economy. In the period from 2001 to 2008, the construction industry recorded significant annual growth rates, bearing in mind that only at the beginning of the 2000s were more significant activities initiated in this sector. During this period, the activity of the construction sector doubled, and by the end of 2008, the share of construction in GDP reached the level of 5.4%. After 2008, there was a period of five-year recession for the construction industry (2009-2013), and as a result, the share in GDP decreased, amounting to only 3.9% at the end of 2013. After this period, activities in the construction sector gradually recovered, and this sector has been a stable component of economic growth for a number of years, with an average share of around 4% in GDP (Graph TB 2.1).

Graph TB 2.1: Structure and Annual Changes of Construction within GDP

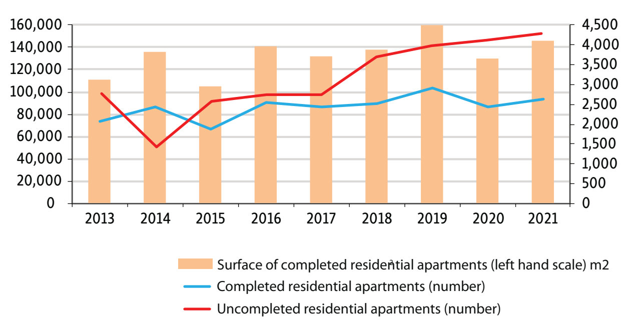


Source: the BHAS

After somewhat higher growth rates were recorded in the construction sector in 2019 and 2020, economic activity in this sector slowed down in 2021. Given that in the field of high-rise construction there is a larger amount of data available than in the field of civil engineering, the review of the construction sector is focused on the field of high-construction, that is, the residential real estate market. It should certainly be kept in mind that according to the data of the Agency for Statistics (data on production in construction), the field of high-rise construction is a smaller part of the construction sector, which accounts for about 40% of the total sector.

The restrictions aimed at preventing the spread of the corona virus, which were introduced during 2020, briefly stopped the expansive trend in the real estate market from previous years, the peak of which was in 2019. This primarily refers to the number of completed and sold apartments; while on the other hand, real estate prices have continued their upward trend, whether they are old buildings or new buildings. The fall in the number of completed and sold apartments was the result of extraordinary circumstances stemming from restriction, and not a reflection of economic imbalance reflected in the decreased demand for real estate. Therefore, there was no negative correction of apartment prices on the supply side, because it was only a case of temporarily delayed demand. Already at the moment when the restrictive measures were eased, the real estate market first stabilised, then continued to record renewed growth, approaching the values reached during the record-breaking year 2019. Although it did not reach the pre-pandemic level, the number of completed apartments in 2021 increased by 8.2%, while the total newly built area increased by 12% (Graph TB 2.2). An increase in the volume of sales of new construction real estate was also recorded, whereby 18.3% more residential units were sold, while the area of sold residential space was 14.6% higher compared to 2020.

Graph TB 2.2: Statistical Indicators in the Field of Residential Construction

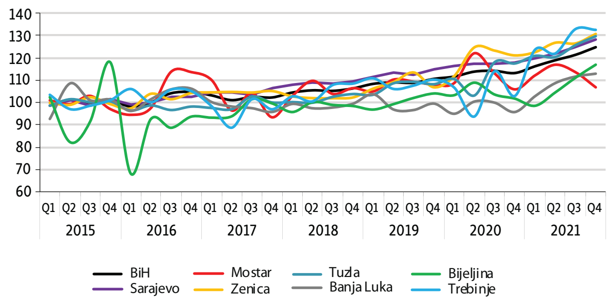


Source: the BHAS

Similar trends are recorded in the matter of existing housing construction, wherein, according to the available data, slightly lower growth rates were recorded. Namely, the turnover volume of old construction real estate, measured by the area of sold residential space in a sample of seven BH cities for which data is available, recorded a slightly more modest growth of 2.2%, according to which the level of volume of sales from the period from 2016 to 2019 has not been reached. In five cities from the sample, an increased volume of sales of old construction properties was recorded compared to 2020. It is interesting to point out that, apart from Trebinje, a slightly lower volume of sales in relation to the area of sold real estate in comparison to 2020 was also recorded in Sarajevo, which is largely a consequence of developments in one Sarajevo municipality. Namely, in the Municipality of Centar, a record high volume of turnover was achieved in 2020, and it is the only municipality in which, during the pandemic, a higher turnover of real estate was recorded, both in terms of the number of residential units *and the area of sold residential space. Although in 2021 the volume of realised real estate turnover in this municipality is higher compared to the periods before the pandemic, the level of 2020 has not been reached, and despite the growth of turnover in other Sarajevo municipalities in 2021, the entire volume of turnover in the City of Sarajevo was lower by 1.7%.*

The demand for real estate did not decrease even during the coronavirus pandemic. Moreover, even in the crisis period, investing in real estate proved to be an attractive investment in terms of long-term investment security. As a result, real estate prices did not show sensitivity to shocks in the short term. Due to higher demand than the supply of residential real estate, real estate prices of both new and old buildings continued their upward trend in 2021. Real estate prices of old residential construction in 2021 increased in all cities for which data were included in the creation of the real estate price index[2], with the exception of Mostar, where real estate prices stagnated on an annual basis, while quarterly data show the greatest fluctuations and decline, both in prices and in the volume of sales in the second part of 2021 (Graph TB 2.3). The average price per square meter in new construction, according to official data from the BH Statistics Agency, in the fourth quarter of 2021 reached a record level of KM 1,905 and is 10.5% higher than the average price per square meter from the fourth quarter of 2020.

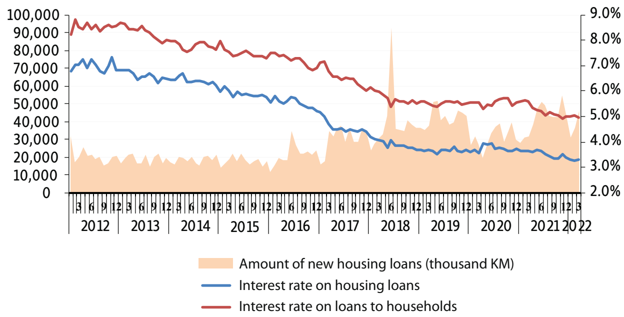
Graph TB 2.3: Real Estate Price Index



Source: the CBBH

Positive trends on the real estate market in BH, in terms of continuously strong supply and demand, which raises the price level of real estate, at first glance seem inconsistent with the overall economic trends in BH. This primarily refers to the fact that the strong increase in real estate prices is not accompanied by a significant strengthening of the BH economy, and above all labour market indicators (unemployment and average wages), as well as the purchasing power of BH citizens. Therefore, it is necessary to consider a wide spectrum of factors arising from the external factors on the one hand, while on the other hand they arise from the unique characteristics of the BH economy, which make the real estate market in BH specific and explain its positive trends. When it comes to external factors, it should be taken into account that the monetary conditions from the EU, which in recent years have been reflected in low or negative interest rates, have spread to financial sector of BH (reduction of active and passive interest rates). The decrease in interest rates on loans has resulted in an increased demand for housing loans in the last few years, and consequently in the strengthening of activities in this segment of retail loans (Graph TB 2.4).

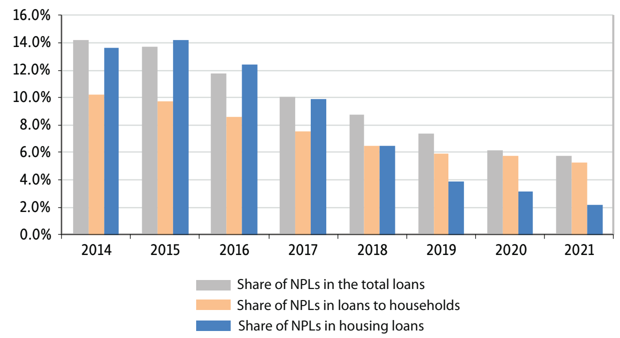
Graph TB 2.4: Terms of Financing in Real Estate Market



Source: the CBBH

From the banks' point of view, the real estate market has become one of the safest areas for loan investments in terms of the loan portfolio quality. Namely, the level of non-performing loans in total housing loans is far below the average level of non-performing loans in the retail sector as well as total non-performing loans for the BH banking sector (Graph TB 2.5).

Graph TB 2.5: The Share of Non-performing Loans (NPL) in the Total Loans



Source: the FBA, the BARS, the CBBH

The specificity of the BH economy is also reflected in the fact that due to insufficient development of the capital market and investment opportunities, investing in real estate is still considered one of the safest long-term investments. These two factors are of essential for understanding the constantly high demand for real estate in Bosnia and Herzegovina, and why it is difficult to expect a reversal of the trend in the short term. In addition, economic practice shows that prices on the real estate market react with a significant delay compared to other economic segments, so a considerably longer period of economic instability is needed for a negative correction to occur in the real estate market. Taking into account the foregoing factors, there is a rational explanation why the indicators of the real estate market grow faster than most other segments of the

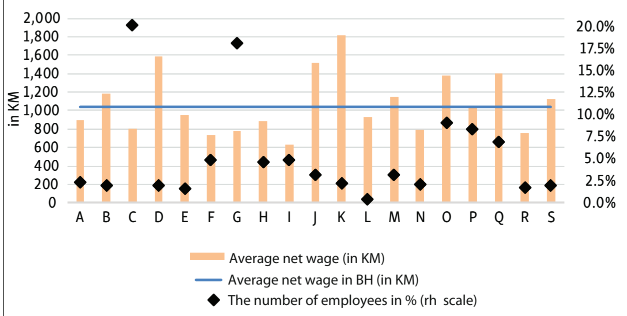
[2] The geographic coverage for the calculation of the real estate price index has been extended to include three new cities from 2021: Banja Luka, Bijeljina and Trebinje. Data for these cities are available from the beginning of 2015. The real estate price index was created only for real estate in residential buildings (private houses are not included) from the existing housing stock. Data from the Decision on the estimated value of real estate, on the basis of which real estate sales tax is calculated, were used to create the Fisher index. The year 2015 was taken as the base period. The real estate price index for the City of Sarajevo does not include the Municipality of Stari Grad, which has not responded to the call for data since 2008.

BH economy. However, potential risks for both the real estate market and the overall financial stability in BH are hidden in these factors. First, the era of loose monetary policy is coming to an end, which will lead to higher interest rates and a possible decrease in demand for this type of loan. Housing loans, which make up 11% of total loans and 23% of loans to households, could find themselves under some pressure and with a reduced amount of investment. On the other hand, expectations related to inflationary trends, which apply to all sectors, including construction materials and construction land, will keep real estate prices on a rising curve, regardless of the shift in the demand curve in a negative direction. A possible long period of such an economic scenario (reduced demand with high price level) would certainly not be sustainable, so there would be economic shifts and a search for a new balance between these two variables. In this context, it would be possible to expect either a price correction or a reduction in supply on that market, which would end the multi-year continuous growth. However, in order for this scenario to be realised, the materialisationof a wide range of negative factors is necessary, which together would lead to a drastic decrease in demand on this market.

The recovery of economic activity had a positive effect on the labour market, which was reflected in an increase in average wages and a slight increase in the number of employees in almost all business activities in 2021. The average nominal salary was higher by 5.5% at the end of 2021 compared to the end of the previous year, and at the beginning of the third quarter it exceeded the amount of KM 1,000 for the first time. The total number of employed persons at the end of the year was higher by 2.6% compared to the end of the previous year, and the most pronounced growth of employed persons was recorded in industrial activities and other activities. The recovery of the labour market is also visible in the number of newly employed persons, which in 2021 was significantly lower compared to the pre-pandemic 2019.

Despite the positive trends, the labour market in BH is still burdened with structural problems, which is why it represents a source of potentially numerous risks both for economic activity through the channel of disposable income and personal consumption, and for financial stability, through the impact on the growth of risks in the banking sector. The key structural problem in the labour market is the fact that more than half of all employed persons still work in economic sectors where the average net salary is below the overall average (Graph 2.3). This risk is further increased in 2021, given that due to the strong growth of inflation, the growth of real wages slowed down in the second part of the year, and in many industries, a decline in real wages was recorded on an annual basis. The purchasing power of the households still depends to a significant extent on the inflow of remittances from abroad. At the end of 2021, inflows based on personal transfers amounted to KM 3.04 billion or 8.2% of GDP, which is 79 bp more than the previous year, when a record low amount of personal transfers in relation to GDP was recorded. Risks related to the reduction of disposable income due to increased inflationary pressures were mitigated to a certain extent by inflows based on personal transfers. However, the growing inflation that continued in the first part of 2022, despite the growth of nominal wages (the annual growth of the average nominal wage in April 2022 was 9.9%) adversely affects real incomes, which on the one hand spills over to reduction of domestic consumption and slowing down of economic growth in BH, and on the other hand, the banking sector in the form of a potentially difficult ability to repay loans and a reduction in savings.

Graph 2.3: Labour Market at 2021 End

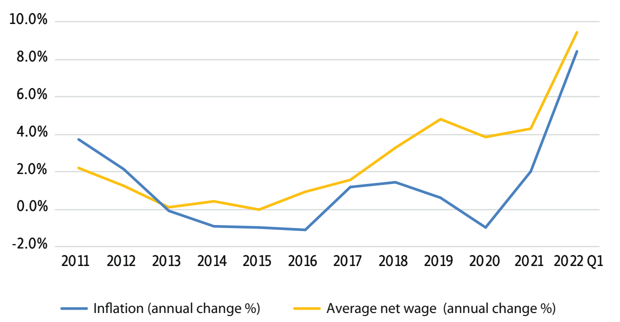


Source: the BHAS, the CBBH

Legend:
A - Agriculture, forestry, fishing
B - Mining and quarrying
C - Manufacturing industry
D - Production and supply of electric energy, gas, steam and air conditioning
E - Water supply, sewerage, waste management, and environment remedial activities
F - Construction
G - Wholesale and retail trade, repair of motor vehicles and motorcycles
H - Transportation and warehousing
I - Accommodation and catering
J - Information and communication
K - Financial and insurance activities
L - Real estate business
M - Professional, scientific and technical activities
N - Administrative and auxiliary service activities
O - Public administration and defence, mandatory social insurance
P - Education
Q - Health and social care
R - Art, entertainment and recreation
S - Other service activities

Consumer prices in Bosnia and Herzegovina were in deflationary territory in the first half of 2021, but the inflationary shock in the second half of the year neutralized the deflation, resulting in the highest increase in average prices at the annual level recorded since 2012 (Graph 2.4). The average growth of consumer prices in 2021 was 2%, and inflationary pressures intensified in the first part of 2022. The growth in consumer prices was widespread among almost all categories of the consumer price index, with the growth in transport, food and beverage prices standing out in particular. The exceptions are the Footwear and Clothing and Communications sections, which had a deflationary effect on average prices in 2021. In the first quarter of 2022, the average inflation rate compared to the same period in 2021 was 8.4%, which was largely caused by disruptions in the global raw materials and energy markets after the outbreak of war in Ukraine, as well as by disruptions in supply chains and shortages in certain intermediate goods. In the period to come, negative risks related to the duration of inflation prevail, primarily due to the fact that it is impossible to predict the length and course of the war in Ukraine, as well as the effects on the supply and demand side of global markets. In addition to external factors that affect inflationary pressures, the pressure on the growth of production costs and numerous structural problems in the energy sector that can cause a significant increase in electricity prices on the domestic market contribute to the uncertainty regarding inflation trends in BH[3], which further increases concerns about future disposable income which is already heavily affected by the inflationary shock and is at very low levels.

Graph 2.4: Net Wages and Inflation



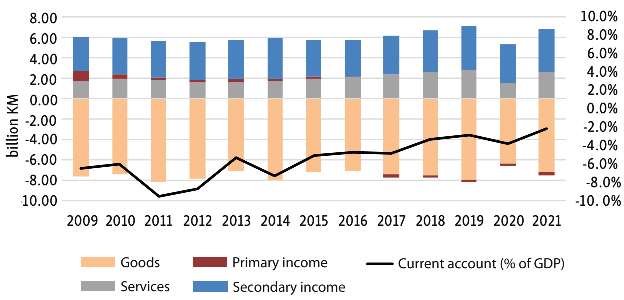
Source: the BHAS

Favourable macroeconomic trends during 2021 were reflected in the improvement of the balance of payment position of BH. The current account deficit at the end of 2021 amounted to KM 801.8 million (2.15% of GDP) and is lower by KM 484.1 million, and in relation to GDP is lower by 1.6 percentage points compared to the previous year. Looking at the structure of the current account, a deepening of the goods deficit was recorded, as a result of stronger growth in imports compared to the growth in exports of goods. However, a lower current account deficit was recorded compared to the previous year thanks to the recovery of key surplus categories, primarily services and secondary income.

In 2021, inflows from services are higher by 71.4% compared to the previous year. A key impact on growth of services comes from an increase in inflows in the tourism sector and transport services due to the improved epidemiological situation and the easing of restrictive measures regarding limited movement. Also, a strong growth in inflows of remittances from abroad was recorded as part of secondary income (KM 3.04 billion), and observed on an annual level, the amount of inflows based on personal transfers exceeded the level from the pre-pandemic year 2019 (Graph 2.5).

[3] Detailed description in the Annual Report of the CBBH for 2021 (https://www.cbbh.ba/Content/Archive/36).

Graph 2.5: Structure of BH Current Account



Source: the BHAS, the CBBH, calculation by the CBBH

From the point of view of financial stability, the sources of financing the current account deficit are particularly important and still considerably exceed the current account deficit. In addition to the recorded increase in inflows of direct foreign investments, which amounted to KM 869.9 million in 2021, the pressure on financing the current account deficit in 2021 was additionally eased by funds from the SDR allocation in the amount of about KM 600 million, remitted in the third quarter[4]. Accordingly, the allocation of SDR funds had a positive effect on the growth of reserve assets, i.e. foreign exchange reserves of the CBBH. At the same time, the net foreign financing of the government sector, commonly used to finance the current account deficit, was significantly lower compared to the previous year, despite the new entity issue of Eurobonds on the international capital market.

Bearing in mind the growing risks in the macroeconomic environment in the coming period, a deepening of the current account deficit can be expected, especially if, due to increased external vulnerabilities in the circumstances of the emerging crisis, there is a deterioration of key surplus balance of payments categories. In this context, pressure can be expected on the side of the financial account through the reduction of direct foreign investments, so the growth of public debt can be expected in 2022.

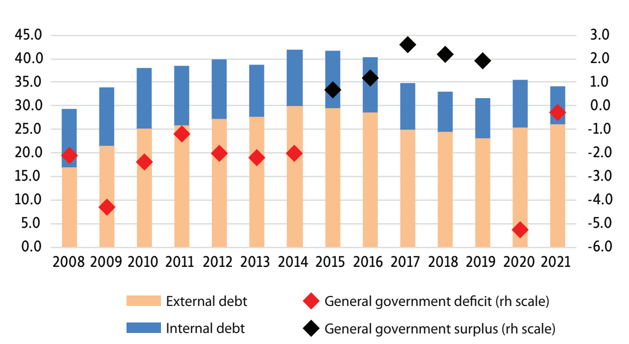
The recovery of the BH economy had a positive effect on the fiscal indicators in 2021, and thanks to the record growth in revenues of the general government sector, a significantly lower fiscal deficit was recorded at the BH level compared to the previous year. The growth of external indebtedness of the government sector in 2021, however, indicates certain vulnerabilities of the fiscal sector in BH. Nevertheless, the risk to the stability of public finances is assessed as moderate in the medium term, given that BH is a moderately indebted country. As a reflection of improved economic conditions and the recovery of private consumption, the general government

[4] In August 2021, the Board of Governors of the IMF decided on the allocation of SDRs to all member countries in accordance with their participation in the capital to help overcome the crisis caused by the COVID-19 pandemic. The total value of the allocation of funds to all countries was about SDR 456 billion, which is the equivalent of about USD 650 billion. BH was allocated an amount of SDR 254.2 million, which is 0.06% of BH's quota in the total amount of IMF capital.

sector collected a record amount of revenue in 2021, which was dominantly influenced by the growth of indirect tax revenues. The total revenues of the general government sector in 2021 amounted to KM 16.06 billion and increased by KM 1.62 billion (11.3%) compared to the previous year. In addition to the strong recovery of private consumption and the service sector, the significant growth of inflation that affected the increase of the tax base in the second part of 2021 contributed to the growth of realised revenues in the budgets of Entity governments. Revenues from indirect taxes at the end of 2021 amount to a record KM 6.94 billion, which represents an increase of KM 1.01 billion or 17.2% compared to the same period of the previous year. Along with the growth in income from indirect taxes, there was also growth in income from direct taxes, as well as growth in other categories on the income side. At the same time, the total expenditures of the BH general government sector at the end of the year amounted to KM 14.8 billion, and a moderate increase in expenditures was achieved in the amount of KM 322.1 million or 2.2%. With investments in fixed assets (net acquisition of non-financial assets) that amounted to KM 1.37 billion, the general government sector of BH recorded a fiscal deficit at the end of 2021 in the amount of KM 110.6 million or 0.3% of GDP.

In the third quarter of 2021, IMF funds were transferred to help overcome the crisis caused by the COVID-19 pandemic, which reduced the needs of Entity governments for borrowing on domestic markets. Additionally, in the first half of 2021, the Government of Republika Srpska borrowed on the international capital market, so that at the end of the year, a decrease in the internal debt in BH was recorded. The growth of public indebtedness was caused by the growth of external indebtedness, but despite the recorded growth of public debt, the strong economic recovery reduced the ratio of public debt to GDP in 2021 (Graph 2.6).

Graph 2.6: BH Public Debt and Budget Balance (% of GDP)



Source: the BHAS, the CBBH, MFT B&H

The total public debt of BH at the end of 2021 was KM 12.82 billion or 34.3% of GDP. The increase in public debt in 2021 was the result of an increase in external indebtedness in BH in the amount of KM 999.5 million (11.5%), while the internal debt decreased by KM 376.5 million (10.8%). Of the total funds committed in 2021, the most important external debt relates to the issue of Eurobonds by the government of RS on the London Stock Exchange (in the amount of about KM 600 million), and to the funds of the 1st tranche of the European Commission provided with the aim of macro-financial assistance to countries in the enlargement and neighbourhood partners program, as support for economic stabilisation and the reform programme (in the amount of KM 242.4 million). On the domestic market, in the course of 2021, the two BH Entities issued a total of KM 350.2 million of debt securities, which is a lower value of issues on the local capital market than in the pre-pandemic year of 2019[5]. . Given that until now the Entity governments were the main drivers of activity on the domestic capital markets, the reduction of the primary public debt market was also reflected in the decline in turnover on the BH stock exchanges, which was almost halved in 2021.

The banking sector remained one of the largest creditors of the government sector, wherein the total exposure of the banking sector to all levels of government in 2021 increased only slightly compared to the previous year. The exposure to government securities in 2021 increased by KM 55 million and represents 5% of total assets, while commercial bank loans placed in the government sector recorded quite a slight growth in the last year and made up 2.8% of the total assets of the BH banking sector. In the first quarter of 2022, governments continued to record strong growth in budget revenues, which is why they have lower borrowing needs, and the exposure of the banking sector to the government sector slightly decreased (Table 2.1.).

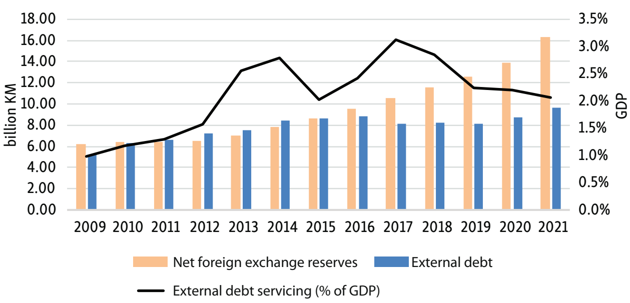
[5] The amount includes the values of bonds and treasury bills issued by the FBH and the RS on the domestic capital markets.

Table 2.1: Commercial Banks' Claims on Government Sector

Claims	2016	2017	2018	2019	2020	2021	March 2022
Central government	**0.2**	**0.1**	**0.1**	**0.1**	**11.6**	**16.1**	**13.2**
Loans	0.0	0.0	0.0	0.0	11.6	16.1	13.2
Securities	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Entity level government	**1,633.3**	**1,624.8**	**1,735.3**	**2,006.8**	**2,439.4**	**2,474.8**	**2,457.1**
Loans	424.6	410.0	517.3	580.1	605.7	584.6	555.6
Securities	1,208.7	1,214.9	1,218.0	1,426.6	1,833.7	1,890.1	1,901.5
Canton government	**218.2**	**206.2**	**160.5**	**127.2**	**90.0**	**134.8**	**122.5**
Loans	218.2	200.2	154.5	114.5	80.9	125.7	120.1
Securities	0.0	6.0	6.0	12.7	9.1	9.1	2.5
Municipality government	**282.2**	**293.1**	**295.6**	**308.7**	**350.7**	**332.1**	**332.7**
Loans	280.2	291.0	285.7	297.7	341.0	323.8	324.4
Securities	2.0	2.1	9.9	11.0	9.8	8.4	8.4
TOTAL	**2,133.9**	**2,124.2**	**2,191.5**	**2,442.7**	**2,891.7**	**2,957.8**	**2,925.6**
Loans	923.2	901.2	957.5	992.3	1,039.2	1,050.2	1,013.2
Securities	1,210.7	1,223.0	1,234.0	1,450.4	1,852.6	1,907.6	1,912.4

Although they are not directly applicable, nor are the data necessarily completely comparable, based on the Maastricht criteria regarding public indebtedness, BH belongs to the group of moderately indebted countries. The share of debt in GDP was reduced by 1.3 percentage points compared to the previous year (from the level of 35.6% at the end of 2020 to the level of 34.3% at the end of 2021) thanks to the recovery of economic activity in 2021. The increase in indebtedness with international financial creditors was, among other things, one of the generators of the growth of foreign exchange reserves together with the transferred funds of the IMF based on the allocation of SDRs, which are not treated as external debt. At the end of 2021, the foreign exchange reserves of the CBBH reached a record nominal value of KM 16.35 billion or 43.8% of GDP, which is also the historically highest share of foreign exchange reserves in GDP.

Graph 2.7: Foreign Exchange Reserves and External Debt



Source: the BHAS, the CBBH

Despite the recovery of economic activity and the reduction of risks coming from the domestic macroeconomic environment, international credit agencies kept the credit rating of BH at the same level as the previous year. The international rating agency Standard and Poor's (S&P) confirmed the "B" credit rating of BH with a stable outlook at the beginning of February 2022, and the international rating agency Moody's Investor Service also confirmed that the credit rating of BH remains "B3" with a stable outlook. The stable outlook reflects the balance between the risks brought by the negative political situation on the one hand and the economic recovery, the improvement of the external position and the resilience of the banking sector on the other hand. The rating agency S&P believes that the downgrading of BH's credit rating may occur if the political situation in BH worsens, which would negatively affect the established debt servicing mechanisms and economic policy and growth. On the other hand, analysts state that, among other things, the low level of general government debt and fiscal restraint in recent years provide fiscal space to respond to economic shocks.

Fiscal stability indicators in 2021 point to a reduction in risk, which is fully expected given the reduction in overall macroeconomic risks. According to the fiscal sustainability risk calculation, all risk indicators in 2021 are in the safe area according to the defined reference levels, with a noticeable improvement in the value of the indicators compared to 2020 (Table 2.2). The exception to the safe zone is the cyclically adjusted primary balance (% of potential GDP), which in the previous year recorded a drastic deterioration as a result of the realised fiscal deficit and a strong fall in GDP. In 2021, the value of this indicator improved significantly and approached the border of the safe area, bearing in mind that the general government sector achieved a significantly lower fiscal deficit, and the indicator can be expected to enter the safe area, given that the realised growth of real GDP was significantly higher from the originally projected[6].

As a result of the lower realised fiscal deficit, a decrease in the financing needs of the general government sector was recorded. The recovery of economic activity influenced the improvement of the public debt as a percentage of GDP indicator, which is lower, compared to the previous year. Given that the growth of public debt in 2021 was the result of increased external indebtedness at international financial institutions (loans with a long-term repayment period), the amount of short-term debt as a percentage of foreign exchange reserves was reduced. In addition, the significant growth of foreign exchange reserves in 2021 contributed to the improvement of the indicator.

Table 2.2: Indicators of Fiscal Sustainability Risk

Indicator	Safe area	Benchmark level	Level in BH	Changes compared to the previous year
r - g1	<	1.1	-2.18	0.48
Public debt of general Government sector (% of GDP)	<	42.8%	34.3%	-1.3%
Cyclically adjusted primary balance (% of potential GDP)2	>	-0.50%	-0.7%	2.4%
Financing needs (% of GDP)	<	20.6%	4.3%	-5.1%
Share of short-term debt in the total debt, remaining maturity	<	44.0%	11.7%	0.2%
Debt denominated in foreign currency (non-euro)3	<	40.3%	27.4%	-2.1%
Average maturity of public debt (years)	>	2.3	6.0	-0.31
Short-term foreign public debt (% of foreign currency reserves),remaining maturity	<	61.8%	4.4%	-0.6%

[6] The value of the indicator for 2021 is the projection of the IMF.

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БОСНЕ И ХЕРЦЕГОВИНЕ

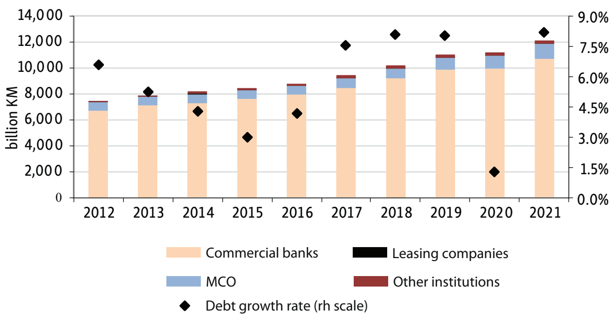
HOUSEHOLDS

3. HOUSEHOLDS

The positive trends recorded in almost all segments of the domestic economy reduced the vulnerability of the household sector in 2021. The recovery of economic activity after the lifting of restrictive measures increased the households' propensity to spend. Improved indicators from the labour market and increased inflows based on remittances from abroad, also contributed to the growth of personal consumption. The increase in household indebtedness was mostly caused by an increase in bank loan indebtedness. Favourable financing conditions and the continued trend of low active interest rates had a positive impact on the growth of demand for loans, although credit activity in the household sector has not yet reached the pre-pandemic level. The trend of improving quality of the household sector credit portfolio continued as a result of the permanent and accounting write-off of non-performing loans. In addition, the good quality of the household sector credit portfolio was maintained thanks to the regulatory measures implemented by the banks to recover from the negative consequences of the pandemic, which were in effect throughout 2021. After the slowdown in the growth of household deposits in the previous year, in 2021 household deposits once again recorded a strong growth. Deposits growth was largely driven by the growth of funds in transaction accounts and demand deposits. Due to the uncertainty brought about by the pandemic, households were not prone to contract new time deposits or were no longer able to save due to the decrease in their income, which, along with historically low passive interest rates, influenced the decline in time deposits. An expected increase in interest rates coupled with strong inflationary pressures, causing the decrease of disposable income, pose a growing credit risk in the household sector in the coming period.

After the shock caused by the corona virus pandemic, which affected the reduction of consumption and indebtedness of the households in the previous year, in 2021, an increase in indebtedness of the household sector was recorded, which was stimulated by the increase in consumption in this sector and more favourable conditions on the labour market due to the recovery of economic activity. The total indebtedness of the households at the end of 2021, according to data from the CRC, amounted to KM 12.08 billion and compared to the end of the previous year, it increased by 8.2%. Traditionally, the largest part of household indebtedness refers to indebtedness for loans in commercial banks, which in 2021 recorded a growth of 7.7% compared to the previous year. Indebtedness of these financial institutions accounts for 88.8% of the total indebtedness, which continues to make the biggest contribution to the growth of the total indebtedness of the households. Household indebtedness with microcredit organisations has also increased, and according to data from CRC, compared to the previous year, it is 13.6% higher. The six-year trend of debt growth at microcredit organisations indicates that there is still a significant number of households that are unable to meet the conditions for granting loans in commercial banks. Such households are forced to borrow under significantly less favourable conditions and at much higher interest rates from microcredit organisations which have more flexible loan approval policies. The indebtedness of households to leasing companies in 2021 is also somewhat higher, however these institutions have a negligible share of only 0.3% in the total indebtedness of households (Graph 3.1).

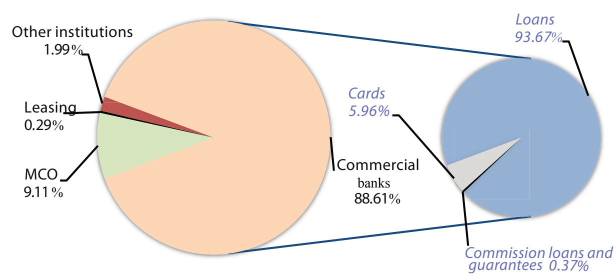
Graph 3.1: Household Debt towards Financial Institutions



Source: CRC, calculation by the CBBH

The structure of indebtedness of households in commercial banks by type of indebtedness did not change significantly in the past period, wherein in 2021 an increase was registered in all types of receivables, except for commission loans and guarantees. The growth of total receivables from the households mostly results from the increase in indebtedness of the households for classic loans from commercial banks. Compared to the previous year, these receivables recorded an increase of 6.1%, thus continuing their long-standing growing trend. The share of indebtedness due to traditional loans in the total indebtedness of households is still by far the largest and amounts to 93.67%, wherein the participation of traditional loans in the total indebtedness of households has slightly decreased in 2021, due to the slightly faster growth of other types of household receivables (Graph 3.2).

Graph 3.2: Household Debt by Institutions and Type of Debt, 2021



Source: CRC, calculation by the CBBH

In 2021, a slight decrease in the active number of payment cards was recorded. However, as a reflection of improved macroeconomic conditions and the increased propensity of the households to spend, an increase in the total withdrawn part of the limit per card, the approved limit, as well as the average indebtedness of the households per payment card was recorded. The number of registered payment cards in 2021 is slightly lower (0.8%) compared to the previous year, which is mostly a consequence of the decrease in the number of debit cards with an allowed overdraft, that is, an approved limit. Although the approved credit card limit decreased slightly (0.3%), the total amount of the approved limit of all active cards recorded a slight growth of 0.4%, while the used part of the limit increased by 10.7%. (Table 3.1)[7]. The multi-year trend of reducing the average credit card indebtedness of the households was stopped in 2021, when the average credit card indebtedness increased by 28%. Despite the high costs associated with this type of borrowing, the households' increased propensity for consumption in 2021 resulted in a significant increase in the amount of indebtedness based on credit cards and cards with deferred payment, while indebtedness on debit cards was slightly reduced compared to the previous year. The largest increase in the amount of debt was registered with cards with deferred payment (30.3%). Considering that the limit for debit cards is most often determined by the level of average monthly income, the withdrawn part of the limit per card can be used as an indicator of the households' consumption in relation to the level of their income. The average debt on debit cards at the end of 2021 was KM 515, which represents 50.3% of the average net salary in 2021.

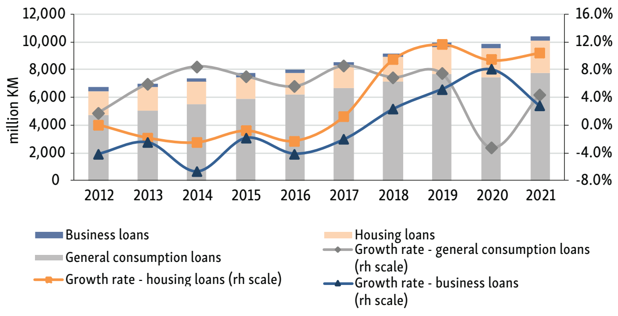
Table 3.1: Claims on Households, Cards

	Number of active cards		Approved amount		Used amount		Debt per card	
	2021	Annual change	2021	Annual change	2021	Annual change	2021	Annual change
Debit cards	703,624	-2.1%	861,888,630	0.2%	362,185,085	-0.2%	515	1.9%
Credit cards	265,430	1.5%	357,015,022	-0.3%	219,980,572	29.9%	829	28.0%
Deferred payment cards	147,350	1.3%	162,803,908	2.7%	48,031,150	30.3%	326	28.6%
TOTAL	**1,116,404**	**0.7%**	**1,381,707,560**	**2.6%**	**630,196,807**	**10.7%**	**1,669**	**58.5%**

In 2021 a growth in indebtedness was registered for all types of loans. As in previous years, the structure of receivables from households is dominated by loans for general consumption, which also include receivables from all types of cards. In addition, the dynamic growth of loans for housing construction continued, so that for the fourth year in a row, these loans recorded an increase in the share of total household loans. The economic recovery from the recession caused by the corona virus pandemic resulted in an increase in the households' demand for housing loans. In 2021, housing loans recorded a growth of 10.4% compared to the previous year, and their share in total household loans continued to grow for the fourth year in a row and at the end of the year it was 22.7%. The described trends in the real estate market (see Text Box 2) and the fall in interest rates on housing loans in the last few years affect the growth of demand for housing loans. In addition, loans for general consumption have recently been used to a much lesser extent to finance housing needs, which has led to a change in the trend in demand, i.e. a strengthening of the demand for housing loans. Namely, in previous years when there were no restrictions on the duration and amount of non-purpose and refinancing loans, these loans were largely used to finance housing needs due to more favourable conditions, i.e. the fact that they did not have to be collateralised. After the several-year trend of growth of indebtedness of the households based on general consumption stopped in the previous year, loans for this purpose grew at a rate of 4.3% in 2021, due to the improvement of economic conditions and the recovery of personal consumption. However, the growth of loans for general consumption can only be partially attributed to improved macroeconomic conditions, and it should be noted that a large number of households finance their current life needs with the help of these loans, approved card overdrafts, non-purpose or consumer loans. Household indebtedness based on loans for business activities in 2021 continues to record a modest share in total household indebtedness and amounts to 2.7%.

[7] During the analysis, debit cards without an approved overdraft amount and for which there is no indebtedness of the households, and which the banks recorded in the CRC, were not taken into account.

Graph 3.3: Loans to Households by Purpose and Credit Growth

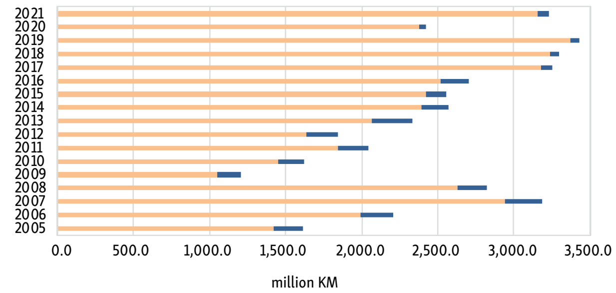


Source: the FBA and the BARS, calculation by the CBBH

Although, due to the improvement of economic conditions in the country after the corona crisis, there was a significant increase in the demand for loans, the intensity of credit activity in the household sector is still weaker compared to the pre-pandemic year 2019. According to CBBH data, in 2021, KM 3.23 billion of newly approved loans to households were recorded, which represents an increase of 33.4% compared to the previous year, but compared to 2019, the amount of newly approved loans was 5.9% lower. Previously approved rescheduled loans, as well as approved refinancing loans, are kept in the records under newly approved loans, while loans under moratoriums were not recorded as newly approved loans. In 2021, KM 809.9 million more loans were approved or rescheduled in the household sector than in 2020, with the increase being recorded exclusively in the segment of long-term loans (Graph 3.4). Although the recovery of personal consumption led to the recovery of lending activity in the household sector, a slowdown in lending activity in this sector is expected in the coming period, despite the optimistic expectations of banks regarding the demand for loans in the short term. Strong inflationary pressures and the weakening of the households' disposable income, as well as the expected growth of interest rates in the coming period, will again reduce the propensity to spend and the demand for loans. In such circumstances, risk growth in the household sector is also expected. In the case of loans with a contracted variable interest rate, interest rates will be adjusted upwards. Although initially no significant increase in the amount of debt repayment growth is expected, due to the decrease in the disposable income of households, debt servicing capacity of households may become reduced, thus an increase in credit risk is likely.

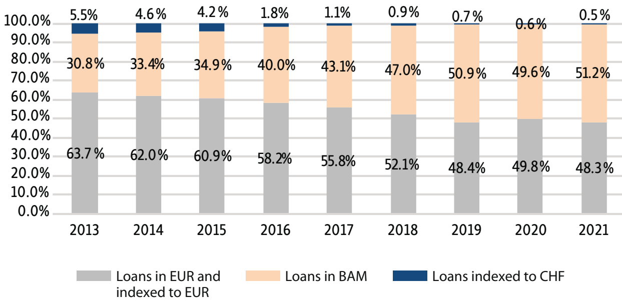
In the currency structure of household loans, the share of loans with a currency clause in euro in total loans continued to decrease gradually. Taking into account the existing regime of the currency board in BH and the determination to maintain it in the future period, liabilities indexed to euro do not pose a currency risk. In recent years, excluding the previous recession year, there has been a noticeable trend of decreasing the share of loans in foreign currency and indexed loans in total loans to households, which continued in 2021, which further reduces this risk. According to data from CRC, loans in EUR currency and loans with a currency clause in EUR grew at an annual rate of 2.9% in 2021, while loans in KM recorded an increase of 9.5%. The share of loans to households in foreign currencies and with a currency clause decreased from 49.8% at the end of 2020 to 48.3% of total loans to households at the end of 2021 (Graph 3.5).

Graph 3.4: New Loans to Households



Source: the CBBH, calculation by the CBBH

Graph 3.5: Currency Structure of Loans to Households



Source: CRC

In 2021, a slight decrease in short-term loans was recorded, while long-term loans recorded an increase in all maturity buckets, except for the loans classified in the 3 to 5 years maturity bucket. Compared to the end of 2020, household indebtedness in EUR and with a currency clause in EUR grew at a rate of 2.9%, while indebtedness based on loans in BAM, after a decrease in the previous year, recorded an increase of 9.5%. Analysing the maturity structure, households are most indebted in loans with a contractual maturity of over ten years, followed by loans with a maturity of five to ten years, which can also be linked to the increase in housing loans. The remaining indebtedness for loans up to one year is 0.4% lower than at the end of the previous year. Short-term and long-term loans to households in local currency up to five years also recorded a decline this year (Table 3.2).

Table 3.2: Loans to Households, Maturity and Currency Structure

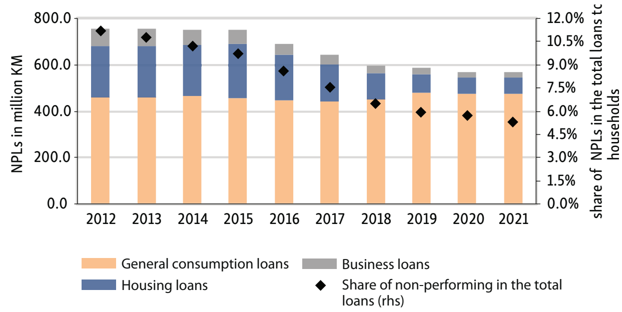
Remaining debt and due uncollected principal, thousand KM

Maturity / Currency	BAM		Foreign currency loans and indexed loans				TOTAL	
			EUR		Other loans in foreign currency			
	2021	Annual change	2021	Annual change	2021	Annual change	2021	Annual change
Up to 1 year	57,325	-0.2%	4,783	-3.0%	0	0.0%	62,109	-0.4%
1 - 3 years	198,585	-1.1%	59,515	6.7%	3,396	2.6%	261,496	0.6%
3 - 5 years	498,968	-2.5%	101,544	5.6%	26,980	3.9%	627,492	-1.0%
5 - 10 years	1,967,673	6.5%	938,534	-8.9%	16,473	-13.5%	2,922,680	0.9%
Over 10 years	2,346,143	16.6%	3,683,409	6.3%	2,381	-54.3%	6,031,933	10.0%
TOTAL	**5,068,694**	**9.5%**	**4,787,785**	**2.9%**	**49,230**	**-8.0%**	**9,905,710**	**6.1%**

The level of non-performing loans in the total loans of the household sector continued to decrease in 2021, for the ninth year in a row. The share of non-performing loans in total loans at the end of 2021 decreased compared to the previous year by 47 bp and amounted to 5.3%. In 2021, there was an increase in credit placements to households, which, while maintaining the existing classification of loans under temporary measures and reducing the amount of non-performing loans, contributed to the improvement of the indicator of non-performing loans to total loans (Graph 3.6). The improvement in the performance of the loan portfolio in the household sector in the past years was the result of activities carried out by banks, such as accounting and permanent write-off of non-performing loans and more efficient credit risk management.

Analysing the trends in non-performing loans, only non-performing loans in the category of loans for general consumption recorded a slight increase (KM 975.6 thousand or 0.2%) at the end of 2021 compared to the end of the previous year. Non-performing loans in the category of loans for housing construction continued their downward trend and in the observed period were lower by KM 16.1 million or 23.9%, while non-performing loans in the category of loans for business activity decreased by KM 2.3 million or 9.8%.

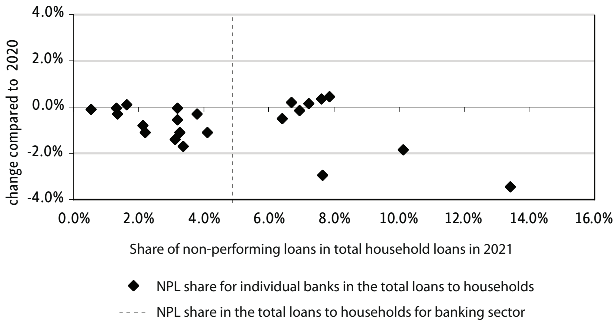
Graph 3.6: Non-performing Loans by categories



Source: the FBA, the BARS calculation by the CBBH

Given the quality of the credit portfolio in the household segment by individual banks, it can be seen that the share of non-performing loans in total household loans decreased in 2021 at most banks in the sector, including banks with the highest concentration of non-performing loans (Graph 3.7). However, some banks recorded an increase in non-performing loans in the categories of general consumption, as a result of the materialization of previously accumulated credit risk in banks that in the past years approved non-purpose and refinancing loans with lenient criteria. The excessive indebtedness of some households was unsustainable from the aspect of the income they generate. The announced increase in the reference interest rate of the ECB will also affect the increase in the EURIBOR rate, which is an integral part of the interest rate on loans contracted with a variable interest rate, and accordingly the increase in interest rates in the banking sector of BH. The growth of interest rates additionally decreases the households' debt servicing capacity, and in the coming period it is possible to expect a deterioration in the quality of the loan portfolio of the household sector.

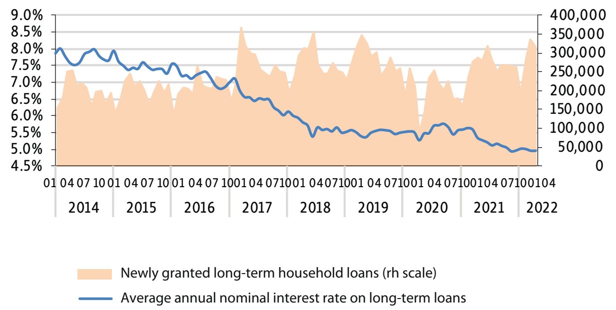
Graph 3.7: Non-performing in the Total Loans to Households, by Banks



Source: the FBA, the BARS
calculation by the CBBH

The conditions for household funding in 2021 remained favourable, and interest rates on loans to households decreased during the year, and the same trend continued in the first quarter of 2022. The average nominal interest rate on long-term loans in 2021 was 5.22% and is 34 basis points lower than the previous year. During the first three months of 2022, the average weighted interest rate on long-term loans recorded an additional drop to the level of 4.97% (Graph 3.8). More favourable borrowing conditions for households in the previous few years partly contributed to the growth in the demand for loans, which, due to the negative effects of the corona virus pandemic in 2020, was significantly reduced, but despite the growth of personal consumption in 2021, it still has not fully recovered.

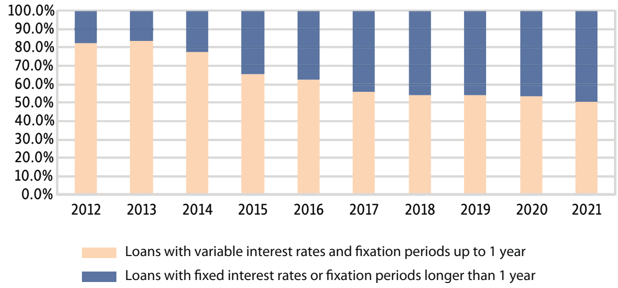
Graph 3.8: New Long-term Loans and Average Weighted Interest Rates



Source: the CBBH, calculation by the CBBH

Given that the ECB has announced an increase in reference interest rates in 2022, an increase in interest rates can be expected, both in the euro zone and in Bosnia and Herzegovina. The exposure of households to the risk of changes in interest rates is significant, given that loans approved with a variable interest rate or with a fixed interest rate period of up to one year prevail in total loans to households. Considering the decrease in household disposable income, the increase in interest rates would represent a significant burden for some households and would make it even more difficult to repay loan liabilities. The interest rate risk of borrowers in the household sector was partially mitigated by the increased volume of lending at a fixed interest rate or by extending the interest rate fixation period. Also, when rescheduling previously approved loans, contracts are often concluded with more favourable conditions for the client, among which is the fixing of the interest rate, which was variable until then. The trend of reducing the share of loans with a variable interest rate or a fixation period of up to one year in newly approved household loans continued in 2021, which indicates that citizens also have a perception of currently low interest rates and expect them to increase in the coming period. In 2021, these loans accounted for 50.2% of the total newly approved loans to households, which is 3.5 percentage points less compared to the end of 2020, while compared to the pre-pandemic 2019, the share of these loans is less by 3.9 percentage points (Graph 3.9).

Graph 3.9: Newly Granted Loans according to the Interest Rate Fixation Period

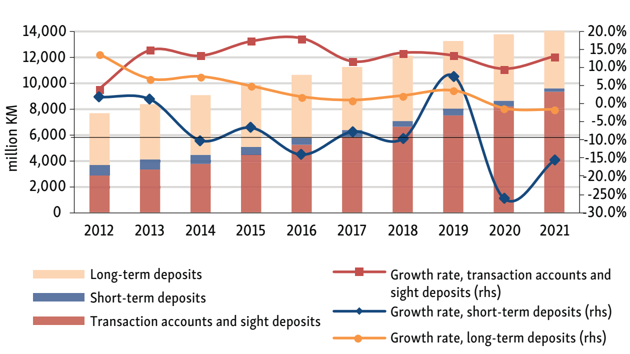


Source: the CBBH, calculation by the CBBH

In 2021, a decrease in short-term and long-term term deposits of households was recorded, but total deposits of households continued their upward trend due to the increase in funds on transaction accounts and the growth of demand deposits. According to CBBH data, household deposits at the end of the year amounted to KM 14.7 billion, which is 6.8% more than the amount of household deposits at the end of 2020. The biggest contribution to the growth of total household deposits, both in absolute and relative terms, is the growth of funds on transaction accounts, which recorded an increase of 19.4%, as well as the growth of demand deposits, which grew at a rate of 5.2%. Due to the uncertainty brought by the pandemic, households were not prone to sign new deposit contracts or were no longer able to save due to the decrease in their income, so they kept some of the due term funds as demand deposits or directed them to consumption. This led to a decline in short-term and long-term term deposits of households. The decline of short-term time deposits for a period of up to one year was particularly pronounced, recording a decrease of 15.5% in 2021. Also, long-term deposits with a term of over one year were lower by 1.7% compared to 2020 (Graph 3.11).

According to the data of the Deposit Insurance Agency of BiH for 2021, in the categories of deposits that exceed the amount of the insured savings deposit of KM 50 thousand, a significantly higher growth is recorded compared to the categories of deposits up to KM 50,000. Deposits in the categories over KM 50,000 have grown in the observed period compared to 2020, both in terms of the number of concluded deposit contracts (7.4%) and the amount of being termed, (7.4%). On the other hand, although there was no decrease in the total value of deposits up to KM 50 thousand, since the beginning of the pandemic, a decrease in the number of deposits in this category by as much as 21.1% was recorded, which indicates that a significant number of households that had deposits of lower amounts was forced to use them to cover current expenses in extraordinary circumstances. Only a small number of households has a significant surplus of liquid assets, given the fact that of the total number of deposit accounts only 2.4% refer to deposits over KM 50 thousand. Among deposit accounts up to KM 50 thousand, which include all current accounts of households, deposit accounts with lower amounts of funds[8], prevail.

Graph 3.10: Household Deposits by Maturity

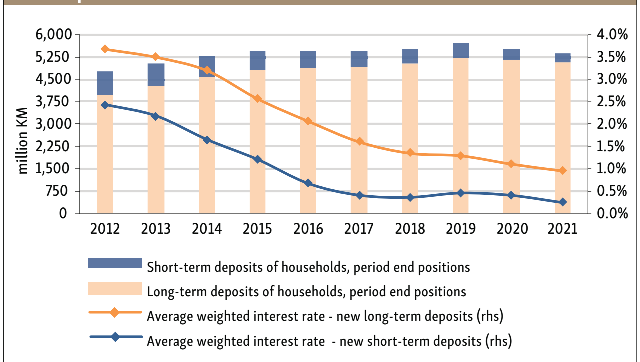


Source: the CBBH, calculation by CBBH

Household deposits recorded a significant decline in the first quarter of 2022, when funds were withdrawn from banks, following the outbreak of the war in Ukraine and the problems faced by the Russian group Sberbank (see Text box 3: Impact of the war in Ukraine on the banking sector of BH). Total household deposits decreased by 1.6% in February compared to the previous month. This trend continued in March, when the household deposits fell by KM 963.6 million or 6.5% compared to January 2022. In the observed period, there was a significant decline in all types of household deposits (transaction accounts, demand deposits, short-term and long-term deposits). However, already in April, the level of household deposits stabilized and remained at the end-of- -first-quarter of 2022 level.

Interest rates on household deposits, which have been at extremely low levels for the last five years, continued to fall slightly during the year, and at the end of 2021 were at historical minimums. The average weighted interest rate on household deposits with a contractual maturity (term deposits) in 2021 was 0.86%, while the average weighted interest rates on long-term and short-term household deposits were lower by 15 and 16 basis points, respectively (Graph 3.11).

Graph 3.11: Term-deposits of Households and Interest Rates on Deposits



Source: the CBBH, calculation by CBBH

[8] The average amount of funds in deposit accounts in the category of deposits up to KM 50 thousand at the end of 2021 amounted to KM 3,081.8.

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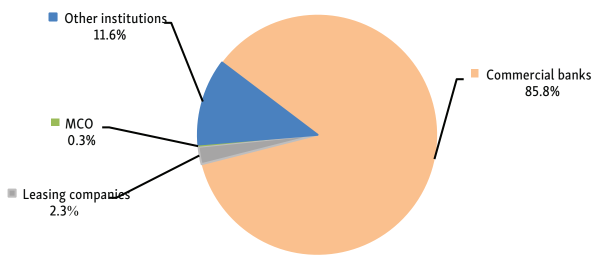
CORPORATES

4. CORPORATES

The total indebtedness of the sector of non-financial companies to domestic financial intermediaries slightly increased in 2021, despite the significant strengthening of the export activity of domestic economic entities and growth of the volume of industrial production. An increase in business income was recorded, as a result of the postpandemic gradual normalization of corporates business activities. The recovery of economic activity in BH was not accompanied by stronger credit activity in the sector of non-financial companies. In financing business activities, the corporate sector, as in previous years, relied mostly on credit support from banks. Average interest rates on loans remained at low levels, which enabled companies to borrow on relatively favourable terms. Positive developments in the domestic macroeconomic environment, as well as the temporary measures of the regulator that were in force throughout 2021, contributed to maintaining a low level of credit risk in banks. However, due to the slowdown of economic recovery and the strengthening of inflationary pressures, there was an increase in risk in the corporate sector at the end of the year. The increased risk was materialized in the last quarter of 2021 and slight deterioration in the quality of the credit portfolio was recorded. The expected increase in interest rates could add to the growth of credit risk in the corporate sector in the coming period.

The total indebtedness of the sector of non-financial companies to domestic financial intermediaries increased slightly in 2021. According to data from the CRC, the total indebtedness of legal entities to all groups of financial intermediaries at the end of 2021 amounts to KM 13.7 billion and is higher by a modest 2.5% compared to the previous year. Measured as a share in GDP, the total indebtedness of companies to all groups of financial intermediaries' amounts to 36.9% of GDP. Traditionally, the indebtedness of the corporate sector on the domestic financial market mostly relates to indebtedness to the banking sector, while borrowing on the capital market is still insignificant. The indebtedness of legal entities in the banking sector accounts for 85.8% of the total debt towards all financial intermediaries in BH (Graph 4.1).

Graph 4.1: Claims on Companies by the Type of Debt at 2021 End



Source: CRC

According to CRC data, the total debt of legal entities to banks in BH at the end of 2021 is KM 11.8 billion or 31.9% of GDP. The share of legal entities debt to microcredit organizations and leasing companies is still inconsiderable in total debt.

The recovery of economic activity in BH was not accompanied by more intense lending activity in the sector of non-financial companies. During 2021, commercial banks in BH granted KM 3.29 billion of new loans to the sector of non-financial private companies, which is 5.1% less compared to the previous year. Uncertainty and threats to business due to the consequences of the pandemic largely affected the structure and volume of credit activity. Judging by credit activity, it can be concluded that the recovery of economic activity was mainly achieved by employing existing capacities and restarting the business activities of companies. Lending growth was somewhat more intense in the category of short-term loans of smaller amounts (up to EUR 0.25 million), and in the category of long-term loans of amounts from 0.25 to 1 million KM.

Financing of larger investment projects in the sector of non-financial companies remained modest, and the amount of newly approved long-term placements in the categories over 1 million euros in 2021 is noticeably lower than in 2020. The subdued growth of credit activity in the sector of non-financial companies can be partly attributed to the tightening conditions for lending to non-financial companies during 2021, excluding the last quarter.[9] Also, the unfavourable term structure of domestic sources of financing in banks, to a certain extent, represents a limiting factor for more intensive credit activity.

As a result of the gradual normalization of the corporates operations after the pandemic caused by the corona virus, the corporates operating income increased during 2021. The total income of BH companies, according to Bisnoda – an agency engaged in providing business, credit capacity and financial information on companies, in 2021, amounted to KM 80.24 billion and has been higher by KM 16.4 billion, i.e. by 25.6% compared to the previous year, while compared to the pre-pandemic year of 2019, business income increased by KM 12.9 billion, i.e. by 19.2% (Table 4.1). A strong shock to business operations caused by restrictive measures in the course of 2020 resulted in a fall of business income of companies in almost all activities. As expected, the activity of Hotels and catering in 2020 had recorded the largest decrease in income of 27%. In 2021, after the gradual improvement of the epidemiological situation, and the lifting of restrictive measures, there was a renewed increase in the business income of companies from the above-mentioned activity (34%). It is worth noting that in

[9] The Central Bank of BH conducts a quarterly Survey on the credit activity of banks in BH, which is available on the CBBH website (https://cbbh.ba/Home/GetTableAttachment?contentId=19ee7d89-ff86-4784-855d-ae872f0dbe8f&lang=bs).

2021, company income from almost all activities exceeded the level from the pre-pandemic 2019. The recovery of industrial production that began in the last quarter of 2020 and continued throughout 2021 was accompanied by a strong growth in the business income of companies from the Manufacturing industry. Companies from this activity achieved a growth in business income that was higher by 33.4% compared to the previous year, and by 25.9% compared to the pre-pandemic 2019. The economic recovery stimulated the rise in the prices of energy and other raw materials, which in mid-2021 began to spill over into the rise in production prices. Disruptions in the supply chains of finished products and raw materials, which began even before the corona crisis, together with strong inflationary pressures burden the operations of many companies, which is why the growth of industrial production slowed down in the first quarter of 2022. The risks for the operations of many non-financial companies have been further increased due to the growth of global risks associated with the start of the war in Ukraine, where the risk of a strong and uncontrolled increase in the prices of energy and raw materials dominates. Special pressure is expected in the operations of companies from the manufacturing industry, due to disruptions in the availability of certain raw materials and intermediate products, which will certainly be reflected in the reduction of their business income.

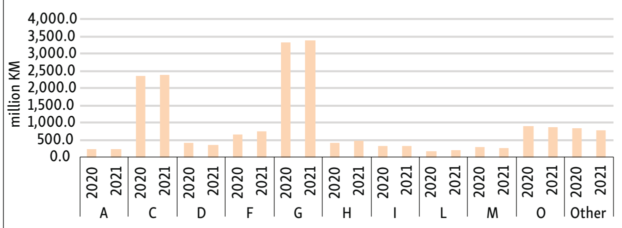
Table 4.1 : Business Income of Corporates. per Activities

Activity	Business income, million KM		
	2019	2020	2021
A- Agriculture	1,103.45	1,155.62	1,196.60
B- Mining	1,091.84	1,068.26	1,027.84
C- Manufacturing industry	15,868.89	14,970.85	19,979.93
D-Production and supply of electric energy	4,072.76	3,780.20	5,087.96
E- Water supply. waste water management	775.87	762.40	1,084.88
F- Construction	2,565.13	2,474.70	3,967.63
G- Wholesale and retail trade	31,532.16	29,607.97	34,639.44
H- Transportation and warehousing	2,886.56	2,695.83	3,000.49
I- Accommodation and catering	511.47	374.44	502.79
J- Information and communication	1,869.39	1,691.09	2,758.13
K- Financial and insurance activities	358.02	352.72	403.14
L- Real estate business	1.61	1.62	346.42
M- Professional. scientific and technical activities	1,716.42	1,711.52	2,143.56
N- Administrative and auxiliary service activities	89.55	223.14	613.01
O- Public administration and defence	78.39	54.27	107.59
P- Education	141.83	136.33	144.99
Q- Health and social care	2,027.07	2,188.70	2,494.74
R- Art. entertainment and recreation	520.10	475.00	632.46
S- Other service activities	106.73	114.69	112.35
T- Activities of households as employers	0.03	0.06	0.00
U- Activities of extraterritorial organizations and bodies	0.08	0.05	0.00
TOTAL	**67,317.35**	**63,839.46**	**80,243.95**

Source: Bisnode

In 2021, as a result of the recovery of economic activity in BH, growth in gross value added was recorded in almost all activities, while the exposure of the banking sector to most activities did not increase significantly compared to the previous year. The exposure of the banking sector in Bosnia and Herzegovina is largest towards companies from Trade and Manufacturing industries, and the banking sector claims onto companies from these two activities make up 52% of total claims. Due to the recovery of economic activity after the weakening of the corona virus pandemic, there was also an increase in the gross value added in Trade (15.9%) and Manufacturing (8.3%). An increase in the credit indebtedness of companies from these activities was also recorded, however, the growth in indebtedness was quite modest. Companies from the Trade activity recorded debt higher by 2.24%, while Manufacturing industry companies' debt increased by 1.13% compared to the previous year. A significant increase in indebtedness was also recorded by companies in Real estate business and Transportation and storage industry by 14.3% and 15%, respectively. On the other hand, in most activities that recorded a decline in gross value added in 2021, there was a reduction in indebtedness (Graph 4.2).

Graph 4.2: Claims on Companies by the Selected Activities in 2020 and 2021

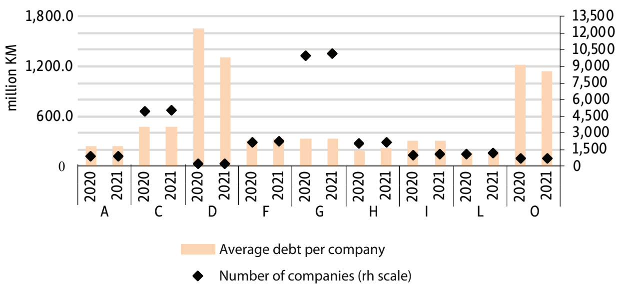


Source: the FBA, the BARS, calculation by the CBBH

Legend:
A - Agriculture, forestry, fishing
C - Manufacturing industry
D - Production and supply of electric energy, gas, steam and air conditioning
E - Snabdijevanje vodom; uklanjanje otpadnih voda, upravljanje otpadom, te djelatnosti sanacije okoliša
F - Construction
G - Wholesale and retail trade, repair of motor vehicles and motorcycles
H - Transportation and warehousing
I - Accommodation and catering (hotel and catering industry)
K - Financial and insurance activities
L - Real estate business
M - Professional, scientific and technical activities
O - Public administration and defence, mandatory social insurance
E - Water supply, sewerage, waste management, and environment remedial activities
J - Information and communication
N - Administrative and auxiliary service activities
P - Education
Q - Health and social care
R - Art, entertainment and recreation
S - Other service activities

Along with the recovery of economic activity, there is also an evident growth in the number of companies from activities that were operating at a reduced capacity during the corona crisis due to restrictive measures. The largest growth in the number of companies was recorded in the activities R (Art, entertainment and recreation), and activities G (Wholesale and retail trade) and C (Manufacturing industry). Due to the growth in the number of companies in the observed activities, a decrease in average indebtedness was recorded (Graph 4.3)[10].

Graph 4.3: Average Debt of Companies by the Selected Activities



Source: the FBA, the BARS, the BHAS, calculation by the CBBH

In 2021, there was a slight increase in debt based on classic loans, while a decrease in long-term loans in all maturity buckets was recorded, except for loans classified in the 3 to 5 years maturity bucket. The total debt of the company based on classic loans at the end of 2021 is higher by 1.4% compared to the previous year. In the corporate sector, according to the contracted maturity, as in previous years, long-term loans prevailed, which at the end of the year make up 91.9% of total loans, and their share in total corporate loans is lower by 1.1 percentage points compared to the previous year. According to data from the CRC, in 2021 there was a reduction in debt based on classic loans in the maturity buckets of 1 to 3 years, 5 to 10 years and over 10 years, while in the category of loans with 3 to 5 years maturity there was an increase in debt by 9.2%. At the same time, loans with a contracted maturity of up to 1 year recorded an increase by 16.8% in 2021 compared to the previous year (Table 4.2). The modest increase in indebtedness of companies in the classic loan category, with a tendency of decrease in long-term indebtedness, most evident in the category of loans with a maturity over 10 years (where there was a decrease in indebtedness by 4.2%), indicates the insufficient financing of significant investment projects.

[10] Data on the number of companies were taken from the Agency for Statistics of BiH from the Information Unit of the Statistical Business Register on 12/31/2021, and refer to the number of companies on 06/30/2020 and 06/30/2021.

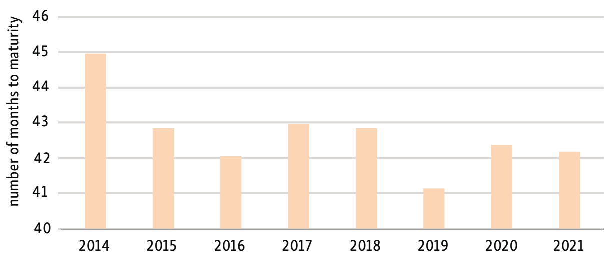
Table 4.2 : Loans to Corporates, Maturity and Currency Structure of the Remaining Debt thousand KM

Maturity	Remaining debt and due uncollected principal					
	BAM	Foreign currency loans and indexed loans				
		EUR	CHF	USD	KWD	TOTAL
Up to 1 year	403,591	251,914	0	9,486	0	**664,991**
1 to 3 years	780,414	430,137	0	18,469	0	**1,229,019**
3 to 5 years	937,675	606,804	226	0	450	**1,545,154**
5 to 10 years	1,596,475	1,943,056	298	0	485	**3,540,314**
Over 10 years	400,333	831,133	23	350	32	**1,231,870**
TOTAL	**4,118,487**	**4,063,043**	**546**	**28,305**	**967**	**8,211,348**

Source: CRC

Weighted average maturity of the loans[11] in the corporate sector, calculated according to the remaining maturity at the end of 2021, is 42.2 months and is practically the same as the one in 2020 (Graph 4.4).

Graph 4.4: Average Loan Maturity

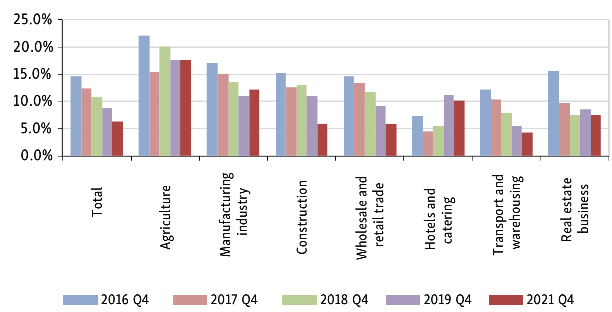


Source: CRC, calculation by the CBBH

The credit risk of the corporate sector in 2021 was reduced compared to the previous year, but starting from the last quarter of 2021, there was a slight increase in risk due to the strengthening of risks in the macroeconomic environment. The share of non-performing loans in total loans in the corporate sector at the end of 2021 was 6.2%, which is 20 basis points less than the previous year. In the previous periods, activities were undertaken by banks to solve the problem of non-performing loans by selling part of the portfolio of non-performing loans to asset management companies, as well as by permanently writing off non-performing loans. The implementation of regulatory provisions that include the accounting write-off of balance sheet exposures significantly influenced the continuous improvement of this indicator from the beginning of 2020. Also, the measures of the Banking Agencies, which were aimed at mitigating the negative consequences of the pandemic and which were in force throughout 2021, preserved the quality of the credit portfolio in the corporate sector. However, in the fourth quarter, a slight increase in non-performing loans was recorded in this sector, primarily as a result of the difficulties in operations of companies from the manufacturing industry. Disruptions in global supply chains and rising inflation, which spilled over into the rise in production prices, led to issues in the operations of many companies and difficult debt servicing for those companies that were not able to fully transfer the increase of costs to end consumers.

Decrease in non-performing loans in total loans was recorded in 2021 in almost all groups of economic activities, except in the activities of Manufacturing industry and Agriculture (Graph 4.5).

Graph 4.5: Share of Non-performing Loans in the Total Loans to Companies, by Activities



Source: the FBA and the BARS, calculation by the CBBH

Disruptions in global supply chains, which have been further intensified by the introduction of sanctions and the interruption of trade flows between certain EU countries and Russia, encourage a shortage of intermediate products and make the delivery of goods more expensive, creating

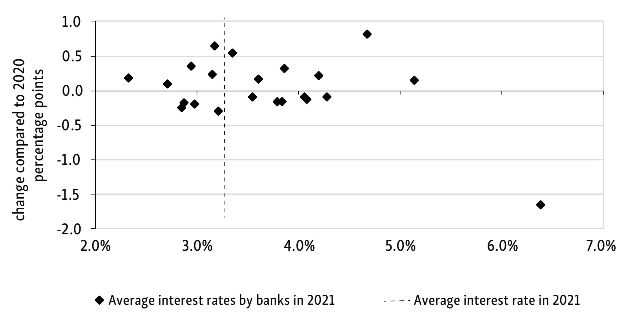
[11] When calculating the average maturity of the loans, data on loans at the end of the year that commercial banks report to the CRC were used. The loan average maturity at the end of each year was calculated as a weighted average of the remaining maturity, where the remaining debt for each individual loan was used as a weight.

a great burden for the operations of companies from the manufacturing industry. Due to the structural disturbances in the energy market and the strong growth in production prices that continued in the first part of 2022, additional issues in operations are highly likely, as well as continued growth of credit risk in the corporate sector. In conditions of growing inflation, a tightening of monetary policy is expected, i.e. an increase in ECB interest rates, which will lead to an increase in interest rates in the European banking market, and indirectly in the banking market of BH. The rise in interest rates will increase the cost of new borrowing, as well as the burden of repayment of the existing debt for a certain number of companies.

Compared to the previous year, the exposure of the corporate sector to currency risk did not change significantly. The currency risk for exposure in euros in the current monetary regime does not represent a significant source of risk for the company's operations. Corporate debt based on classic loans denominated or indexed in the euro currency, at the end of 2021, amounts to 49.5% of the total claims of banks on the corporate sector. Compared to the previous year, their share decreased by 4.2 percentage points. At the same time, the share of loans approved in local currency increased by 4.6 percentage points, thus, at the end of 2021, the rest of the debt based on these loans made up 50.1% of the total indebtedness of the corporate sector. The share of debt denominated in other currencies is only 0.3%. According to the maturity categories, in the maturity buckets up to 1 year and from 1 to 3 years, the largest part of the debt is denominated in KM currency, while in all other maturity buckets the largest part of the debt is denominated in euro.

Interest rates on newly approved loans in the sector of non-financial companies remained at the level of the previous year. According to CBBH data, the average interest rate[12] in the sector of non-financial companies was 3.32% in 2021. Half of the banks in the system recorded a slight decrease of the average interest rate, while the majority of banks whose interest rates were lower than the average of the system, recorded a slight increase of the average interest rate (Graph 4.6). In 2021, the average interest rate on newly approved loans in domestic currency is higher by 10 basis points compared to the previous year and amounts to 3.21%, while the average interest rate on newly approved loans indexed in foreign currency has decreased by 9 basis points and amounts to 3.83%. Long-term borrowing by companies in domestic currency is still more favourable, and the average interest rates on long-term loans in domestic currency and loans indexed in foreign currency were 3.35% and 3.79%, respectively.

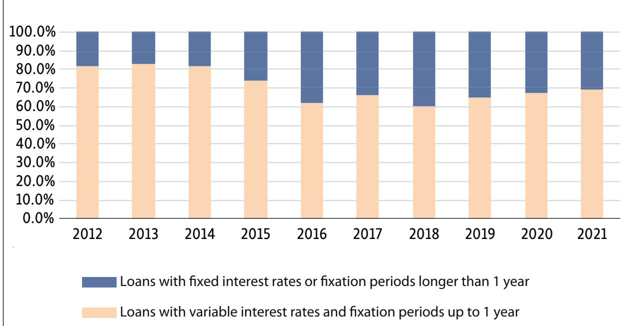
Graph 4.6: Interest Rates on Loans to Companies, by Banks



Source: the CBBiH, calculation by the CBBiH

During 2021, there was a mild increase in the interest rate risk exposure of the corporate sector, due to a slight increase in dynamics of borrowing at a variable interest rate. In the structure of newly approved loans during 2021, an increase in the share of loans with a variable interest rate, i.e. an initial period of interest rate fixation of up to 1 year was recorded to 68.9%, which is 1.7 percentage points higher compared to the previous year (Graph 4.7). In the last three years, there has been a gradual increase in demand for contracting long-term loans with a variable interest rate, which can be linked to companies' business plans, and the cash flows used to service the liabilities. In an environment of an expected increase of the ECB reference interest rates and interest rates on the European banking market, an increase in the domestic banking market interest rates can also be expected. Companies which fail to adapt their operations to the new conditions in the macroeconomic environment could face difficulties in regular debt repayment. Consequently, there will also be an increase in credit risk in the banking sector, given that the quality of the credit portfolio is very sensitive to changes in macroeconomic conditions.

Graph 4.7: Newly Granted Loans according to the Interest Rate Fixation Period



Source: CBBH, calculation by the CBBH

[12] Official interest rates are regularly published at web page of the CBBH, and the calculation is done for the analytical needs, i.e. the weighting of the interest rates by the volume of approved loans of all categories.

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FINANCIAL INTERMEDIARIES

5. FINANCIAL INTERMEDIARIES

In 2021, the growth of assets of all financial intermediaries was again dynamized, but the structure of the financial sector did not change compared to previous years.

The total assets of financial intermediaries in 2021 recorded a growth of 8.1%, with the banking sector still having a dominant share in the total assets of financial intermediaries (Table 5.1).

Table 5.1: The Financial Intermediaries Assets Value

	2019		2020		2021	
	Value, million KM	Share, %	Value, million KM	Share, %	Value, million KM	Share, %
Banks [1)]	32,508.2	88.7	32,905.0	88.8	35,442.1	88.4
Leasing companies [1)]	323.7	0.9	343.8	0.9	373.7	0.9
Microcredit organisations [1)]	991.0	2.7	1,078.0	2.9	1,162.3	2.9
Investment funds [2)]	852.1	2.3	811.8	2.2	947.1	2.4
Insurance and reinsurance companies [3)]	1,966.9	5.4	1,911.0	5.2	2,190.1	5.5
Total	**36,641.9**		**37,049.6**		**40,115.3**	

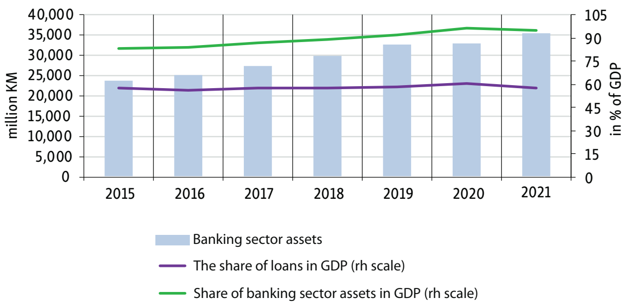
Source:
1 - FBA and BARS
2 - FBH and RS Commissions for Securities
3 - Entities' Agencies for Supervision of Insurance Companies. BH Insurance Agency
Calculation by CBBH

5.1. Banking sector

The banking sector has successfully amortized the risks related to the corona virus pandemic thanks to good financial soundness, primarily a significant level of capitalization and liquidity, as well as the measures of the regulator to mitigate and recover from the negative economic consequences of the pandemic. Economic growth in 2021 contributed to the re-establishment of regular bank operations and the recovery of profitability and lending activity. Credit growth rates imply a still sluggish credit activity. Also, financial cycle indicators point to the negative stage of the financial cycle, and currently no signs of financial sector overheating are visible. On the side of funding resources, the dominance of deposits of resident sectors, which recorded dynamic growth, continues to strengthen. The prolonged period of low deposit interest rates influenced the further reduction of the average maturity of deposits, posing a growing risk arising from the maturity structure of funding resources. Interest rates on loans were kept at low levels, however, in the first part of the year, bank-lending terms were slightly tightened. The crisis from the beginning of 2022, resulting from the sanctions imposed by the EU on Russian-owned banks, was overcome by the quick and successful intervention of domestic regulators. Risk of a potential sudden and uncontrolled withdrawal of households' deposits from banks, which could have led to a financial crisis, was prevented. The expected slowdown in economic growth in the coming years, along with strong inflationary pressures, that were especially emphasized after the start of the war in Ukraine, could lead to an increase in credit risk in banks, given that the quality of the loan portfolio is very sensitive to worsening of macroeconomic conditions. In addition, the growth of credit risk will indirectly be affected by the announced increase in ECB reference interest rates. The rise in the price of money on the European markets will spill over to the domestic market and put pressure on the growth of interest rates in the country, leading to an increase in resident sectors liabilities on loans contracted with a variable interest rate. The results of the conducted stress tests showed that the banking sector is capable of amortizing extreme macroeconomic shocks.

The recovery of economic activity in 2021 was achieved to a significant extent by restarting the economy and employing existing capacities, bearing in mind that the growth dynamics of the credit portfolio, a key component of the balance sheet of banks from which domestic sectors are financed, was quite slow. The achieved growth of total assets and loans was lower compared to the growth of nominal GDP in 2021, which is why the values of banking sector assets expressed as a percentage of GDP and loans expressed as a percentage of GDP are lower compared to the previous year by 106 bp and 268 bp, respectively. At the end of 2021, the share of assets in nominal GDP was 95%, while the share of loans in nominal GDP was 57.9% (Graph 5.1).

Graph 5.1: Assets and Loans in Per Cents of GDP



Source: the FBA and the BARS, the BHAS, calculation by the CBBH

The private sector deposits have been the dominant generator of growth in the balance sheet since the beginning of the global COVID-19 pandemic, with a particular growth of value of a smaller number of higher amount deposits from household and corporate sectors. Such developments are obviously the result of delayed investments and consumption, characteristic for this type of crisis. Household deposits, which for a certain period of time have recorded continuous growth and became the dominant source of funding in the banking sector of BH, are very unstable in crises and their outflows can occur very easily. Thus, at the beginning of 2022, we witnessed a strong withdrawal of household deposits, due to shock caused by the beginning of war in Ukraine, which, however, was only of a temporary nature and did not lead to significant disturbances in the functioning of the banking sector of BH (Text Box 3).

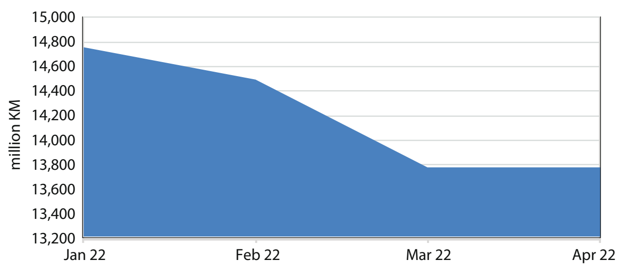
Text Box 3: The impact of the war in Ukraine on the banking sector of Bosnia and Herzegovina

The most significant exposure of the banking sector of BH to Russia is reflected in full ownership of Sberbank Europe AG in both Sberbanks, which at the time of the declaration of war in Ukraine operated in our country as separate legal entities. The total value of the assets of these two banks at the end of 2021 amounted to KM 2.7 billion and represented 7.7% of the total assets of Bosnia and Herzegovina banking sector. Other banks in Bosnia and Herzegovina had almost no direct business activities with Russia. The total claims of the domestic banking sector towards Russia, according to data from the end of 2021, amounted to an inconsequential KM 2.9 million.

With the introduction of sanctions against Russia at the end of February 2022, the operations of Sberbank Europe became dysfunctional in just a few days, resulting in a structural liquidity crisis of the entire banking group. After the ECB's announcement that Sberbank Europe AG was failing, a significant outflow of deposits followed from both Sberbanks operating in Bosnia and Herzegovina. Immediately after the exclusion of the banks from the SWIFT system, the Entities' Banking Agencies took over the management of these banks in BH, and initiated the restructuring processes over them. The processes were successfully completed in record time and both banks continued to operate as separate legal entities, majority-owned by domestic banks. The solid indicators of financial soundness recorded by the banks in previous periods certainly contributed to the favourable and quick outcome. As of March 4, 2022, all obstacles and risks related to sanctions and business continuity of both Sberbanks that operated in Bosnia and Herzegovina have been removed. Ownership of Sberbank BiH d.d. Sarajevo was taken over by the company "ASA FINANCE" d.d. Sarajevo, and the bank has continued to operate under the name ASA Banka Naša i snažna d.d. Sarajevo, while ownership of Sberbank a.d. Banja Luka was taken over by Nova Banka a.d. Banja Luka, and the bank now operates under the name Atos Bank a.d. Banja Luka.

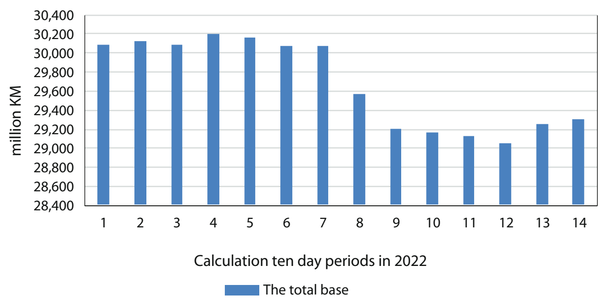
The banks' reserve requirements base trends in the period of the materialization of the liquidity shock were under the dominant influence of the change in the level of household deposits in banks. Given the frequency of reserve requirements data at the decade level, it can serve as a good illustration for monitoring the dynamics of deposit withdrawals (Graphs: TB 3.1 and TB 3.2).

Graph TB 3.1: Household Deposits



Source: the CBBH

Graph TB 3.2: Required Reserve Base

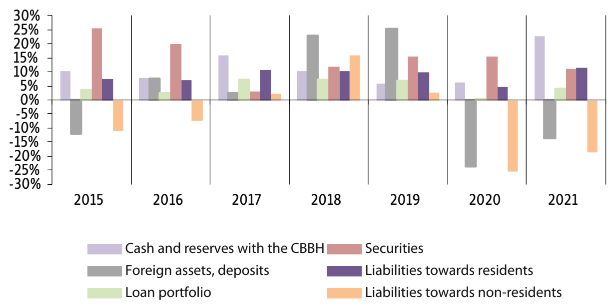


Source: the CBBH

After the initial withdrawal of deposits from Sberbank in the first decade of March (5%), which was a consequence of the market's current reaction to a strong shock, the total level of deposits in banks did not change significantly, which indicates that deposits were transferred to other banks. However, in the second decade of March, when the outflow of deposits from Sberbank increased by an additional 21%, a significant decrease *in deposits was also noticeable at the level of the banking sector. Crowding in banks, uncertainty regarding the preservation of stable operations of two Sberbanks, caused a certain level of panic and caused some households to withdraw deposits. A slightly more intense withdrawal of deposits from the banking system continued in the third decade of March, even though the level of deposits stabilized in Sberbanks during that period. In May, the growth of deposits at the system level was recorded again. The withdrawal of deposits from the banking sector has only had a short-term character, without negative consequences to the stability of the financial system.*

The strong growth of cash and reserves with the CBBH, a further decline in foreign deposits, and a slight increase in the value of the loan portfolio are the key trends in bank assets in 2021. In the structure of liquid assets, in addition to the strong growth of funds in reserve accounts with the CBBH (23.6%), there was also a strong growth of cash in bank vaults (20.4%), whereby banks strive to eliminate part of the costs they bear based on negative fees to excess funds above the required reserve. The growth rate of the loan portfolio amounted to 4.1%, with the household sector lending making the greatest share in it. At the same time, on the funding side, the trend of growth in deposits of domestic resident sectors continued, as did the reduction of liabilities towards non-residents. In 2021, liabilities to residents recorded a dynamic growth once more, amounting to 11.3% at the end of the year. The increase in liabilities to residents was achieved to the greatest extent through the growth in deposits of households, private non-financial companies and government institutions. At the same time, the reduction of liabilities towards non-residents continued for the second consecutive year. The annual growth rate of the securities portfolio is 11.2%, and as in previous years it was achieved, to the greatest extent, through bank investments in Entities' government securities (Graph 5.2).

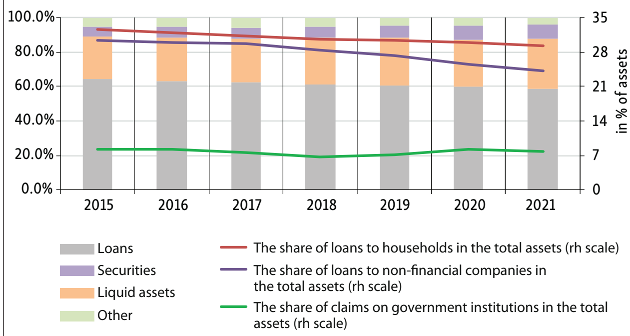
Graph 5.2: Changes of the Most Important Items of Banking Sector Balance Sheet



Source: the FBA and the BARS, calculation by the CBBH

After an absence of credit growth in the previous year, in 2021 there was a gradual recovery of credit activity. Nevertheless, the intensity of credit activity was still significantly weaker compared to the pre-crisis period, whereby credit activity in the sector of non-financial companies remained subdued. In 2021, credit growth in the amount of KM 845 million or 4.1% was recorded, but the share of loans in total assets continued to decrease (Graph 5.3). The share of total loans in the assets of the banking sector is 60.9%, and is lower by 2.2 percentage points compared to the previous year. The balance of total loans at the end of the year amounted to KM 21.6 billion, and out of the total loans, KM 10.41 billion or 48.2% refers to loans to households, KM 8.59 billion, or 39.8% to loans placed with private non-financial companies, while KM 854.8 million or 4% refers to loans to government institutions. In 2021, credit activity in the sector of non-financial companies remained subdued. The annual credit growth rate of the sector of private non-financial companies was only 2.1%, while the total value of newly approved loans to this sector decreased by 5.1% compared to the previous year.

Graph 5.3: Banking Sector Assets



Source: the FBA and the BARS, calculation by the CBBH

The modest growth of the lending activity can be partially attributed to lending conditions that were tightened in the first three quarters of the current year, as a reflection of continued increased risk perception and continued high uncertainty. In accordance with the results of the survey on the lending activity of banks for the end of 2021, the tightening of credit standards for long-term and short-term loans to companies was not recorded only in the fourth quarter of 2021, with slight changes of terms for approving loans compared to previous quarters. At the same time, in the third and fourth quarters, an increase in the demand of companies for long-term loans was recorded, thanks to the recovery of economic activity and increased optimism regarding borrowing. The prolonged perception of increased risk also influenced the tightening of credit standards in approving loans to households during the first two quarters of 2021, after which the terms for approving loans were eased in the third and fourth quarters. As a result of the recovery of personal consumption, increase in demand for household loans for general consumption has been recorded since the middle of the second quarter of 2021. In addition to the growth of loans for general consumption (4.3%), the dynamic growth of loans for housing construction continued (10.4%). During the corona crisis, loans for housing construction had the highest growth, since the loans for general consumption recorded no growth due to households' reduced propensity to spend. The annual credit growth rate of the household sector was 5.6%, with the total value of newly approved loans to this sector being even higher by 33.4% compared to the previous year. Despite this, the intensity of lending activity in the household sector is still weaker compared to the pre-crisis period, given that the total value of newly approved household loans in 2021 was lower than in the pre-pandemic 2019.

Continued growth of the balance sheet was not followed by the same dynamics of credit growth, resulting in a continued decrease in the share of loans in total assets. At the end of 2021, loans placed to non-financial companies in total assets amounted to 24.2%, and their share is lower by 1.34 percentage points compared to the previous year, while the share of loans to households in total assets was 29.4%.

Text Box 4 describes the methodology and indicators on the basis of which the assessment of the financial cycle for BH was done. The indicators used in the assessment (the credit-to-GDP gap and the composite indicator) point to below-average credit activity in BH since the end of 2015 (Graph TB 5.1). The benchmark indicator, the credit-to-GDP gap, has further deepened in the last year, showing that the financial cycle in BH is still in the negative stage, while the composite indicator points to a slight recovery of the credit cycle in the recent period, primarily due to the recovery of non-credit variables. While the gradual weakening of the pandemic and the lifting of restrictions improved the macroeconomic indicators in 2021 and increased the optimism regarding the future recovery of credit activity, due to the emerging crisis caused by the war conflicts in Ukraine, the negative risks to the prospects for recovery of economic and credit activity in BH prevailed. A prolonged period of inflation could once again reduce the propensity to spend and the demand for credit, which is the reason why the financial cycle could remain in the recessionary stage for the next two years.

Text Box 4: Assessment of the financial cycle for BH

Introduction

The current state of the financial cycle is one of the most important pieces of information for successfully managing the financial stability of a country. To be more specific, in phases of excessive credit growth, there is an increase in systemic risks, which can lead to significant disruptions in the financial system and, consequently, in the entire economy. Therefore, it is crucially important to timely identify the current phase of the financial cycle, in order to take the available regulatory measures to mitigate the risk.

The financial cycle can be defined as the cyclical movement of credit activity and financial markets in general through phases of expansion and recession, which goes through the top and bottom of the cycle. It is clear that any assessment of the financial/credit cycle will depend on a large number of assumptions, the variables used, the filtering technique, i.e. the method of extracting the cycle from the variable used, the characteristics of the analysed economy, the length of the series of available variables, from which it follows that the assessment of the financial cycle will never be completely objective and that there is no unified assessment method applicable to all countries. Basel regulations and series of related BIS publications[13] provides recommendations for financial cycle assessments, on the basis of which the estimated cycles should be comparable between countries to the greatest extent possible, and adequately serve to calibrate the countercyclical capital buffer. Some countries have largely succeeded in applying the above recommendations (with their own data), while others have proposed alternative assessment methods[14]. . In a similar way, the methodology for assessing the financial cycle for BH is presented in this Text box, which is to a certain extent adapted to the domestic economy and available data series, and partially follows the recommendations of the Basel Committee. The method of monitoring the financial cycle developed for BH is therefore based on two fundamental indicators: the composite indicator of the financial cycle and credit-to-GDP gap.

Benchmark indicator: Credit- to-GDP gap

The basic benchmark indicator for estimate the credit cycle is represented by the credit-to-GDP gap. The assessment consists of three steps. The first is the construction of a suitable series of loans to the private sector, the second step includes the calculation of such a credit indicator to GDP ratio, while the third step assesses the cycle/gap, i.e. the percentage deviation of such a series from the trend.

In the assessment, one should use the widest possible coverage of private sector indebtedness as a relevant indicator of credit. In addition to bank credits, we can include other domestic sources of funding the private sector (microcredit organizations, leasing companies, etc.) and external funding sources of non-financial companies and households. It is also important to emphasize that stock of all banking credit is used, not newly approved loans, so that the assessment of the cycle includes the previous accumulation of debt, and therefore the typically longer duration and strong amplitude that is present in credit cycles. In our case, in accordance with the availability of data and the length of the time series, the total claims of banks on private sector were selected as the relevant credit indicator for the calculation of the benchmark indicator[15].Claims on private sector include claims on domestic non-financial corporations (loans, securities and other financial derivatives), and claims on other resident sectors (households and non-profit organizations that serving households). In a second step, we divided such series of private sector debt with the adjusted nominal GDP series. The mentioned series is seasonally adjusted and additionally smoothed with a one-sided moving average of 4 quarters in order to reduce the influence of short-term outliers in the denominator of the fraction of such created variable. The third step involves applying a filter to so constructed ratio. In this case, we used the Hodrick-Prescott (HP) filter, and before that we

[13] See, for example, Drehman, Borio and Tsatsaronis (2012): Characterizing the financial cycle: don't lose sight of the medium term! BIS working Papers No 380 or Drehman et al (2010): Countercyclical capital buffers: exploring options. BIS Working Papers No 317 and Basel Committee on Banking Supervision (2010): Guidance for national authorities operating the countercyclical capital buffer.

[14] For example, the Czech Republic proposes a composite indicator: Holub et al (2020): The CNB's approach to setting the countercyclical capital buffer. CNB thematic articles on financial stability.

[15] Source: Monetary and financial statistics of the CBBH

had extended mechanically the series with the available CBBH projections (for the next 12 quarters) and an autoregressive model in order to reduce the so-called end-point problem that is present with two-sided filters. The cycle represents the percent Credit-to-GDP deviation from such filtered trend. The Basel regulation recommendations are to use an HP filter with a lambda smoothing parameter of 400,000 on quarterly data. The parameter of 400,000 implies the length of the financial cycle (the duration of the cycle from one to the next peak) which is 4 times longer than the Real Business Cycle, i.e. the GDP cycle with a lambda parameter of 1600. The above is based on empirical literature which shows that for a large number of countries, the financial cycle is indeed much longer than the real one, and that as a rule it has larger amplitudes. However, such an estimate also requires a long enough data series for the estimate to be meaningful. Given the relatively short time series of available data on the history of the financial system, and after a sensitivity analysis, we concluded that a lambda parameter of 125,000 should be applied for BH. Such a parameter represents financial cycles that are on average approximately 3 times longer than the real cycle.

Composite indicator of the financial cycle

In addition to the previously described benchmark indicator of the financial cycle, we have created an additional indicator based on a larger number of series and factor analysis, which we believe better describes the trends' dynamics of the credit cycle in BH. The mentioned indicator consists of 16 individual financial and economic indicators, for which we determined, through detailed analysis, that reflect the financial cycle of BH to a significant extent. The analysis first included a wider set of indicators, which was then reduced considering their contribution to the indicator and the economic interpretation. In addition to the previously described private sector credit-to-GDP gap, the composite indicator includes the following indicators: total assets to GDP, households credit to GDP, NFC credit to GDP, net interest income to GDP, non-performing loans to GDP, non-performing loans to total loans, deflated real estate price index, stock market indices (SASX and BIRS) to GDP, interest rates spread for households, unemployment rate, private sector debt to other financial institutions to GDP, the external indebtedness of the private sector to GDP, the foreign liabilities of commercial banks to GDP, and the deflated money supply. Ultimately, the indicator, in addition to the previously described private sector credit-to-GDP gap, includes additional detailed data on the state of loans to the private sector, data on NPLs, external borrowing, newly approved loans, stock prices, real estate prices, interest spreads, and various indicators of credit institutions' performance. The specified set of 16 indicators is not final and may change over time depending on index performance and data availability. Combining a larger number of indicators enables a broader interpretation of the financial cycle that does not exclusively reflect credit activity. An additional advantage of such a composite indicator is that it minimizes the risk of so-called false signals, which is present when basing conclusions about the stage of the financial cycle on an indicator derived from a single credit variable.

Each of the mentioned variables included in the composite indicator are, as in the case of the private sector credit-to-GDP gap, seasonally adjusted and expressed in deviation from the HP trend in order to have an interpretation of the cycle. In order for the analysis to be consistent and comparable with the described benchmark indicator, an HP filter with a lambda of 125,000 was applied here, as well.

Factor analysis was applied to the group of such de-trended data in order to extract common dynamics from the set of indicators. For this purpose, Principal Component Analysis (PCA) and the software package EViews were applied. The first principal component represents an unobserved variable/factor that, to the greatest extent possible, describes the dynamics of the described set of 16 indicators. We will therefore interpret it as a composite indicator of the financial cycle. For the current set of data, the specified component explains more than 60% of the variation of the specified set, which confirms that the selection of indicators has been done adequately. Through standardization, we arrive at the principal component, which we can interpret in standard deviations of the financial cycle from the trend. For example, an indicator value of -1 means that the financial cycle is one standard deviation below the trend. In addition to the principal component itself, it is also possible to calculate the contributions of variables or set of variables to the estimated component, and at a given moment we can say whether certain indicators contribute positively or negatively to the indicator, which for the recent period is commented later on in this Text Box.

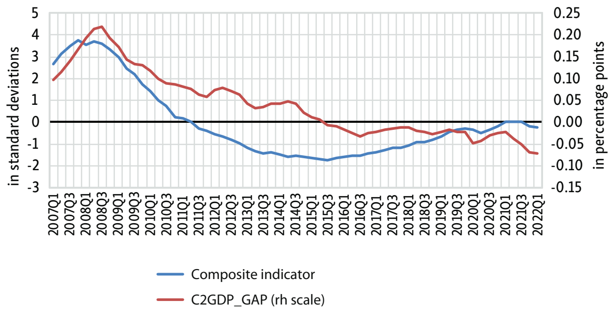
Results and conclusion

The graph TB 4.1 shows the assessments of credit cycle based on the two earlier described indictors. The left-hand axis shows credit-to-GDP gap in percentage points (the blue line), whereas the right-hand axis shows the composite financial cycle indicator (the red line) expressed in standard deviations. Dynamics of both indicators is similar, showing a very high positive gap in the initial period shown in the graph, while suggesting that the cycle values are negative in the recent period.

Credit-to-GDP gap shows a positive cycle of 20% during 2008, followed by a sharp slowdown in lending, reaching the negative area in 2015. From that period until 2021, the cycle remains negative. In the most recent period, the negative gap deepens amounting to -7%, indicating below-average lending activity without tangible risks of overheating.

Composite indicator in recent period points to a slightly smaller negative cycle of around -0.25 standard deviations. The mentioned difference at the very end of the sample is conditioned with other non-credit variables included in the assessment of indicators showing a certain recovery of financial cycle. The pre-crisis period also indicates significant overheating with the gap of more than 3 standard deviations. However, the passing over to negative area takes place much earlier compared to benchmark indicator – as early as at the end of 2011, which is again the consequence of a faster reaction of non-credit indicators.

Graph TB 4.1: Assessment of Financial Cycle for BH

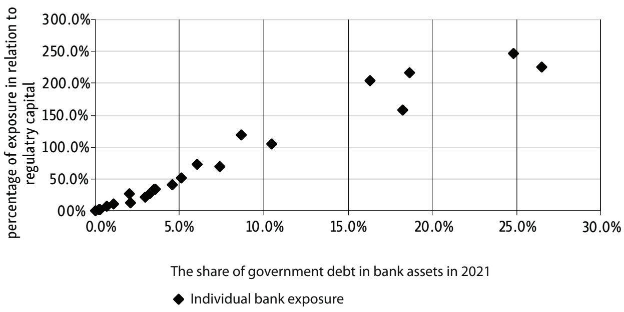


Source: the CBBH
Note: The estimate is made with the last observation of 2022Q1.

On the basis of the estimated contributions of each used variable in composite indicator, three conclusions can be derived regarding the effect on the 2021 financial cycle. Firstly, according to credit-to-GDP gap results, most of the included credit indicators, together with indicators of bank performance, interest rate spread and stock exchange indices, have a negative contribution to the composite financial cycle indicator. On the other hand, non-performing loans, money supply, labour market indicators and foreign debt reduce the indicator decline, i.e. point to a gradual recovery of the cycle. Real estate market indicators are roughly on their trend, thus having a neutral effect on the cycle.

In 2021, banking sector exposure to government sector was still at the moderate level, but slightly higher compared to the previous year. According to the CBBH monetary and financial statistics data, the total banking sector exposure to government sector at the end of 2021 amounted to KM 2.97 billion, being higher by KM 85.4 million or by 3% compared to the previous year. In 2021, banks increased their exposure to government sector based on purchases of Entity securities, while a slight decrease of loans to government institutions was recorded at the same time. The share of government debt in the total banking sector assets decreased to the level of 7.8% due to greater increase in total assets. At the entire banking system level, exposure to government sector at the end of 2021 was at the level of 77% of banking system regulatory capital[16]. Yet, some banks recorded high exposure to government sector, even close to the maximum regulatory limit (see Graph 5.4.). Graph 5.4 shows individual exposures of banks to all the levels of BH authorities, including extra-budgetary funds and social security funds[17].

Graph 5.4: Exposure to Government Sector, by Banks, in 2021



Source: the CBBH, calculation by the CBBH

In 2021, a strong growth of liquid assets continued, taking into account that a major part of funds based on residents' deposits was kept in liquid forms of assets. Liquid assets at the end of the year amounted to KM 10.73 billion and ware higher by KM 1.4 billion or 15% compared to previous year, whereas the share of liquid assets in the total assets increased to 30.3%. Within liquid assets, the highest increase was recorded in reserve accounts [18] with the CBBH by KM 1.37 billion or 23.6%, followed by cash in banks' vaults in the amount of KM 312.9 million or 20.4%. Funds in deposit accounts with foreign banks decreased by KM 264.9 million or 13.6% compared to the end of the previous year.

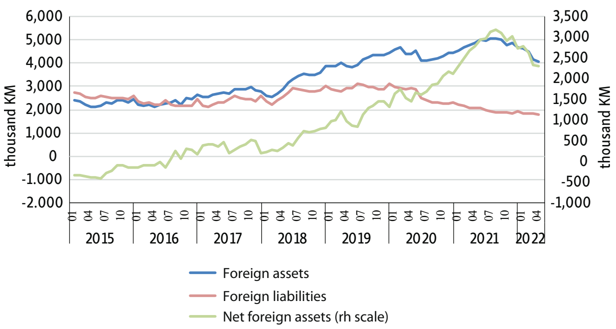
In the structure of funding sources, the deleveraging trend continued throughout 2021. According to the CBBH data, foreign liabilities of banking sector at the end of 2021 amounted to KM 1.86 billion, recording a decrease in the amount of KM 377.9 million or 16.3% compared to the end of the previous year (Graph 5.5). Banking sector foreign liabilities decreased under the impact of a decrease of deposits and credit liabilities towards foreign direct investors, fellow enterprises and other non-residents. On the other hand, foreign assets of commercial banks had been increasing strongly until mid-2021, reaching its maximum value at the end of August, when the value of foreign assets exceeded KM 5 billion. Banks recorded an increase of foreign assets as a result of increased investment in foreign sovereign and corporate bonds and increase of short-term investments with the foreign banks. From the fourth quarter, the upward trend of foreign assets was reversed and foreign assets started to decline gradually, followed by the same trend in net foreign assets of commercial banks. The financial cycle in BH is still not in the upward stage, and, due to increased uncertainties in macroeconomic environment, a significant growth of lending which could put pressure on sources of financing is not expected. Foreign liabilities are not likely to grow significantly in the period ahead, having in mind that the growth of foreign liabilities is mainly generated from deposits and loans from parent foreign banks.

[16] According to local regulations, maximum allowed exposure to government sector amounts up to 300% of regulatory capital.

[17] Data on individual bank exposures were taken over from the CBBH monetary and financial statistics. According to the IMF methodology, the data on Entity securities include also securities of public companies.

[18] Razvojna banka Federacije BiH is excluded from the data.

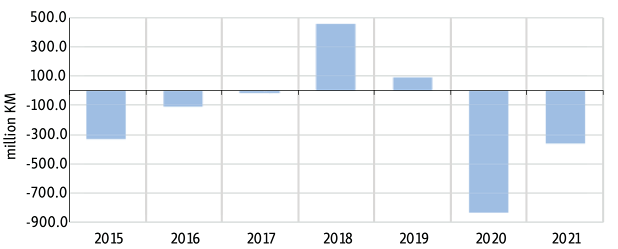
Graph 5.5: Foreign Assets and Liabilities of Commercial Banks



Source: the CBBH

BH banking sector in 2021 saw net outflow of foreign liabilities in the amount of KM 362 million (Graph 5.6). Decline of foreign liabilities was a result of the outflows in all categories of foreign liabilities, mainly the decrease of liabilities towards direct foreign investors. In 2021, liabilities to direct foreign investors decreased by KM 193.4 million, liabilities to fellow enterprises by KM 134.1 million, while the liabilities to other non-residents decreased by KM 34 million. Due to the growth of deposits of resident sectors, as well as prolonged market uncertainties causing the tighter lending conditions, the decrease of foreign sources of financing continued. During 2021, lending was mostly financed from the domestic sources. However, it is important to point out that maturity structure of domestic sources of financing additionally deteriorated over the observed period due to the increase of short-term deposits share in the total deposits.

Graph 5.6: Flows of Foreign Liabilities in the Banking Sector



Source: the CBBH

Text box 5: Network analysis of system risk spillover

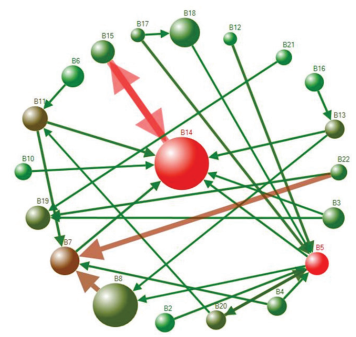
The purpose of the analysis of network structure in BH banking sector is assessment of intensity of potential shocks due to mutual connection, and cross-border exposure of domestic commercial banks. The analysis was conducted on the basis of the data on 31 December 2021 in two directions, as: the analysis of mutual balance sheet exposures of 22 commercial banks, with simulation of failure of each of them, and the analysis of cross-border exposure to domestic commercial banks towards banking and public sectors of 36 countries[19].

In the network structure analysis, focus is on credit risk, while the main assumption in respect of credit shock is maximum loss on the basis of unsettled liabilities, i.e. the loss of the total amount of claims. The condition of existence of interbank contagion is the situation when losses exceed the part of regulatory capital above the amount meeting the regulatory minimum of capital adequacy ratio, which would lead to a decline of individual bank's capital adequacy ratio below the prescribed level of 12%. The main finding of the analysis is a number of undercapitalised banks, arising from unsettled liabilities of some banks or a certain foreign banking system. Banks is considered to be undercapitalised in case the capital adequacy ratio falls below the minimum regulatory requirement.

Findings of the analysis of interbank exposure do not point out the existence of large exposures at the system level, and risks of financial contagion in the domestic interbank market. According to the data of the Banking Agencies, the total interbank exposures of commercial banks in BH on 31 December 2021 amounted to KM 73.8 million and were lower by 21.9% compared to the end of 2020. The amount of the total interbank exposures of commercial banks accounted for 1.9% of the total regulatory capital of banking sector, i.e. only 0.2% of the total assets.

The network of interbank exposures in BH banking sector, shown in Graph TB 5.1 is not very dense, as only interbank liabilities and claims of banks on one particular day are presented, while the average volume of overnight transactions among individual domestic banks could not be included in the analysis.

Graph TB 5.1: Interbank Exposure Network, as of 31 December 2021



Source: the FBA and the BARS, calculation by the CBBH

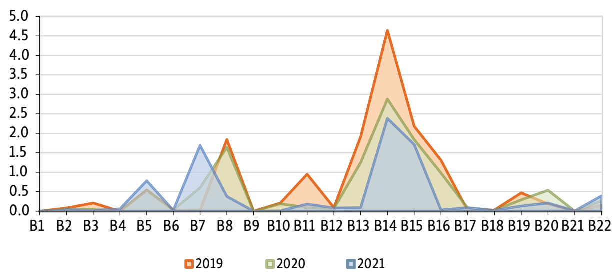
The size of the circles in Graph TB 5.1., representing banks in BH banking sector, is determined by the total asset amount. The amount of interbank exposures is shown through the width of connections and their colour, shown in the range from green to red. The wider the connections and the stronger the red colour, the bilateral claims and liabilities among banks are higher. The colour of circles indicates the number of connections of the bank with other banks. It is also shown in the range from green to red. Banks marked with a stronger red colour are connected with a higher number of banks in the domestic banking sector.

[19] The analysis does not include the amounts of claims and liabilities of a commercial bank towards some of the countries if they account for less than 1% of the total regulatory capital of that bank.

As in the case of the network analysis which was carried out a year before, the results of the network analysis conducted on the basis of the data from the end of 2021 do not indicate large threats for bank capitalisation arising from interbank exposure. In a credit shock, assuming that, due to the bank's failure to settle its liabilities, the other bank would face a loss in the amount of 100% of its claims towards the insolvent bank, capital adequacy would not be jeopardised for any bank. The analysis results are not significantly different even if the financing shock is included in the analysis besides the credit shock. If the loss of 50% of the exposure amount due to the end of the financing which could not be substituted, is a basic assumption for this shock, the findings of the analysis do not show that any bank would face serious problems or that capitalisation would be endangered. In addition to lower interbank exposure, such favourable results of the analysis are mainly influenced by a good bank capitalisation, which, compared to the end of 2020, was improved in most banks in the sector.

Contagion index [20] and vulnerability index also indicate lower risks compared to the previous year (Graphs TB 5.2 and TB 5.3). Unlike the previous three or four years, no bank has extremely high values of contagion index and vulnerability index, which leads to the conclusion that risks of interbank contagion in case of credit shock and financing shock are low. Contagion index was lower with most banks compared to the end of 2020, including banks with the highest contagion indices in the sector. It shows a lower significance of individual banks for other banks in the sector, which decreases the average percentage of bank losses due to a possible failure of one bank.

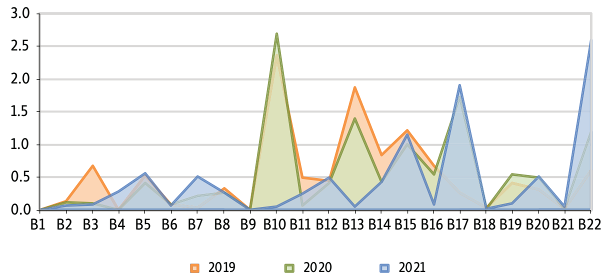
Graph TB 5.2: Contagion Index by Individual Banks



Source: the FBA and the BARS, calculation by the CBBH

The vulnerability index [21] also shows lower vulnerability of most banks in the sector in case of insolvency of other banks compared to the end of 2020. Out of ten banks with higher vulnerability indices compared to the end of the previous year, only one small bank, having at the same time the highest vulnerability index, faced a stronger increase of the average percentage of loss due to possible failure of all other banks in the sector (Graph TB 5.3).

Graph TB 5.3: Vulnerability Index by Individual Banks



Source: the FBA and the BARS, calculation by the CBBH

In order to identify foreign banking systems which are systemically important for banks in BH, network analysis of cross-border relations was carried out. The analysis included two shocks: credit shock and financing shock, with the assumptions identical to those used in the analysis of interbank relations. The analysis of cross-border relations pointed out that the contagion risk from cross-border exposure is higher than from exposure in domestic interbank market. The results of the analysis show that large shocks in several countries which banks from BH have significant exposures to could have direct contagion effects for some banks in BH, however, the analysis did not show the existence of indirect contagion effects. The results of the analysis at the end of 2021 showed a much lower vulnerability of banks to cross-border shocks compared to the previous year. The number of countries which contagion could be spread to banks in BH from, and the number of banks showing vulnerability to cross-border shocks decreased compared to the analysis conducted on the basis of data from the end of 2020. Possible large shocks in three countries could spill over to one or more banks in BH, and the total of five banks in case of large shocks in three countries and with the set assumptions would have considerable losses, which would lead to the decline of capital adequacy ratio below the regulatory minimum. Cross-border exposures to Austria and Turkey represent the highest risk as in case of possible large shocks in one of the two countries, with the assumptions described in the network analysis, two banks would have considerable losses which would lead to a decline of capital adequacy ratio below the prescribed minimum, while one bank showed vulnerability towards cross-border shocks from Germany. None of banks showed vulnerability to shocks in two or more countries. Compared to the previous year, vulnerability index caused by interbank exposure and spillover of cross-border systemic risks for almost all the banks in the sector was much lower.

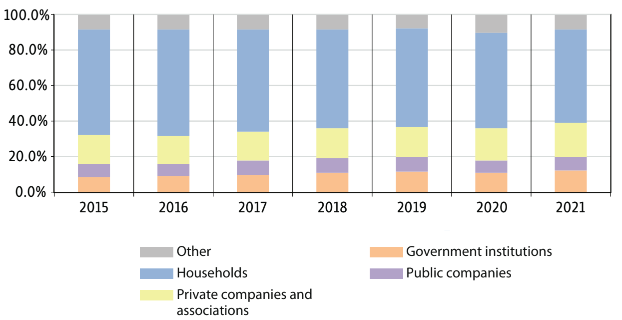
Lower bank vulnerability arising from interbank exposure, and lower vulnerability to cross-border shocks, and non-existence of indirect contagion effects results from lower exposure and better capitalisation of banks in 2021. Although the network analysis did not identify the risk of spreading contagion through the system, but only risks for individual banks, which would not spill over to other banks in the sector, the fact should not be neglected that banks vulnerable to shocks from some countries, due to strong relations firstly with mother bank and sister companies, include several large banks in the sector. In the

[20] The contagion index shows a significance of one bank for other banks in the sector, i.e. it shows the average percentage of other banks' losses in case of a possible failure of one bank.
[21] Vulnerability index shows how much a bank is vulnerable in case of insolvency of other banks, i.e. it represents an average percentage of loss due to the failure of all other banks in the sector.

final assessment of the risks arising from inter-bank and cross-border exposures, it should be stressed that the analysis, due to limited data, did not include average overnight transactions among banks, and mutual connections of bank sector and other financial sectors in the country. Also, when assessing risks arising from inter-bank and cross-border exposures, the existing risks in the country and abroad arising from the war in Ukraine and the coronavirus pandemic should not be neglected either, so, depending on the intensity of spillover of risks from real to financial sector, stronger pressures on capitalisation can be expected, particularly in case of smaller and less resilient banks.

In 2021, a dynamic growth of deposits of resident sectors was seen again. Slightly stronger growth compared to the previous year was generated due to considerable increase of deposits of public companies and government institutions. The total residents' deposits at the end of the year amounted to KM 27.74 billion, and increased by KM 2.8 billion or 11.2% compared to the end of 2020. In 2021, growth was seen in all categories of deposits, with household deposits providing the largest contribution to growth, participating with 52.8% in the total deposits. At the end of 2021, these deposits amounted to KM 14.66 billion and increased by KM 922.9 million or 6.7% compared to the previous year. Deposits of private companies, participating with 19.8% in the total deposits, continued their upward trend, and increased by 17.8% compared to the previous year. Government institutions' deposits also increased considerably by 25%, while deposits of public companies increased by 16.7% compared to the previous year (Graph 5.7).

Graph 5.7: Sector Structure of Deposits



Source: the FBA and the BARS, calculation by the CBBH

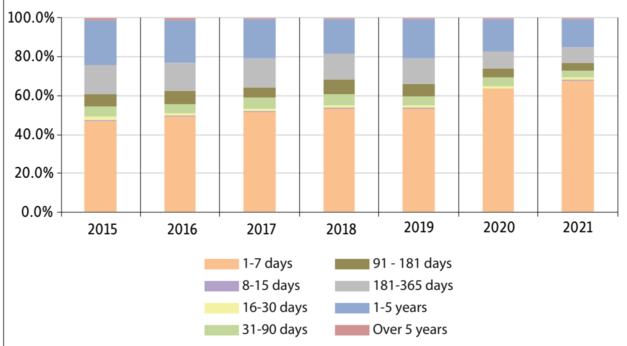
According to the CBBH data, at the end of 2021, deposits in transaction accounts and sight deposits made up 37.1% and 26.3% of the total household deposits. The downward trend of the share of long-term deposits in the total household deposits continued from the previous years. The share of long-term deposits in the total household deposits at the end of 2021 decreased by 3 percentage points compared to the previous year, to the level of 34.5%.

The several-year long upward trend of household deposits continued due to the growth of deposits in transaction accounts (KM 886.9 million or 19.4%) and sight deposits (KM 192 million or 5.2%). On the other hand, in 2021, there was a decline of short-term deposits and long-term deposits. Long-term deposits of households amounted to KM 5.07 billion at the end of the year, having decreased by KM 87 million or 1.7% compared to 2020, while short-term deposits were lower by KM 57.1 million or by 15.5% amounting to KM 310.6 million. In the first quarter of 2022, due to the shock caused by the beginning of the war in Ukraine, a strong withdrawal of deposits took place, reducing the total household (residents and non-residents) deposits by KM 947.9 million or 6.3%. However, as early as in April, the level of household deposits stabilised at the level from the end of the first quarter of 2022.

Shortening of maturities of funding sources continued in 2021, since only deposits in transaction accounts and sight deposits recorded an increase, due to low interest rates and non-existence of alternative forms of safer investments. Deposits with maturities from 1 to 7 days in 2021 recorded a dynamic growth of 17.3% and increased their share in the total deposits reaching 67.9% at the end of the observed period. The share of deposits with maturities from 1 to 5 years decreased by 2.1 percentage points from 16.7% in 2020 to 14.5% in 2021, which also contributed to the deterioration of deposit maturity structure. On the basis of the data from the end of 2021, deposits with remaining maturities shorter than one year accounted for 85% of the total deposits, so the share of these liabilities in the total liabilities was higher by 2.4 percentage points compared to the previous year. On the other hand, deposits with remaining maturities longer than one year decreased their share over the observed period in the total deposits to 15%, while long-term deposits with maturities over five years participated with only 0.5% in the total deposits (Graph 6.8).

The rather adverse structure of the funding sources, which deteriorated further in 2021, can represent a limiting factor for future credit growth, particularly considering the expected decreased contribution of private consumption to economic growth due to stronger inflationary pressures. Recovery of economic activity should be driven by the new investment cycle by providing long-term lending to the economy.

Graph 5.8: The Total Deposit Structure by the Remaining Maturity

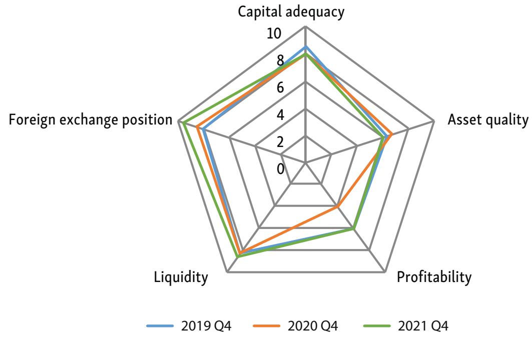


Source: the FBA and the BARS, calculation by the CBBH

The assessment of the banking sector stability is summarized in the chart of financial soundness indicators, showing the changes of the main indicators for assessment of the capital adequacy, asset quality, profitability, liquidity and foreign exchange risk in the banking sector. Financial soundness indicators have been harmonised with the Financial Soundness Indicators Compilation Guide of the International Monetary Fund from 2019 (hereinafter: The Guide)[22] in the fourth quarter of 2021..

In 2021, BH banking sector remained stable, adequately capitalised, highly liquid and profitable, and, compared to the previous year, the sector's resilience to risks was increased. The overall assessment of banking sector stability indicators for 2021 is at satisfactory level, while only asset quality indicators deteriorated slightly. The indicators in segments of profitability, liquidity and foreign exchange risk improved, while the capitalisation indicator remained at the level from the previous year (Graph 5.9). In 2021, banks retained their sound capital positions and increased Tier 1 and regulatory capital, however, due to the decrease of leverage ratio, assessment in the capitalisation segment remained at the same level from the previous year. Indicators in the segment of asset quality deteriorated slightly compared to the end of the previous year as the several-year long downward trend of the share of non-performing in the total assets ended in the last quarter of 2021, resulting from deterioration of portfolio quality in the segment of legal entities. Nevertheless, the values of asset quality indicator improved with most banks compared to the end of the previous year, indicating that credit risk in the system was limited. Due to improved macroeconomic circumstances and regulator's measures for recovery from negative economic consequences of the pandemic, which were in effect throughout 2021, profitability of banking sector recovered completely. Banks recorded profitability in the same manner as before the outbreak of the pandemic. A considerable growth of operating income was recorded, with simultaneous decline of business and direct expenses, due to decreased costs of impairments of assets at risk. The values of return on average assets and return on average equity indicators improved significantly, so the grade in profitability segment reached again the level from the period before the outbreak of the crisis. High grade in the segment of liquidity indicators, particularly in the segment of foreign exchange position show that banking sector stayed very liquid, the foreign exchange risk being minimal due to the currency board arrangement. Due to continuous decrease of shares of indexed and foreign currency loans in the total loans, the grade in the foreign exchange position segment improved.

Graph 5.9: Chart of the Banking Sector Financial Soundness Indicators



Source: the CBBH, calculation by the CBBH

Assessment of stability for each variable is based on simplified standardisation of several indicators representing the basis for quantification of synthetic assessment of degree of stability of various segments of banking sector operations. To make indicators comparable, they need to be transformed first, i.e. standardised, after that, depending on the obtained value of z-score, each indicator is assessed according to relative position in relation to its empiric distribution. Increase of distance from the centre of the chart for each variable, i.e. higher grade indicates the increase of stability in the system, while grades closer to the centre warn of the increase of risk or decrease of resilience of banking sector and accordingly, a higher threat to stability.

At the end of 2021, BH banking sector was adequately capitalised. All the banks in the system fulfilled the prescribed regulatory requirements with respect to capital adequacy and financial leverage ratio. The ratios of Tier 1 and CET1 at the end of 2021 amounted to 18.7% regulatory capital ratio was 19.6%, while the financial leverage ratio at the banking sector level was 10%. Tier 1 and regulatory capital increased by 5.5% and 3.8% compared to the end of the previous year. The major positive impact on the values of Tier 1 and regulatory capital came from including the recorded current year profit into Tier 1 capital, and recapitalisation conducted by 5 banks in the system during 2021[23]. After the regulator's provisions related to restriction on dividend payments during the pandemic expired, several banks in the fourth quarter of 2021 paid out dividends from retained profits from earlier years.

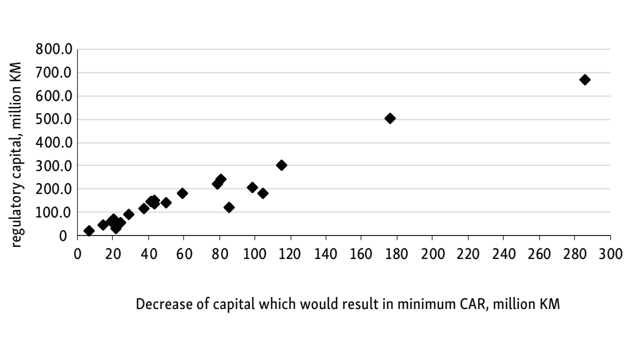
The total risk exposure amount was KM 19.7 billion. Out of the total risk exposure, the risk-weighted exposures for credit risk accounted for 90.8% of the total risk exposure, exposures for market risk accounted for 1.1% of the total risk exposure, while risk exposures for operative risk accounted for 8.1% of the total risk exposure. In the structure of the total risk exposure, shares of particular risk types have changed. The shares of exposures for operative and market risks decreased,

[22] The Methodology for FSI compilation, based on the Guide from 2019 is available on the CBBH web site on the link https://www.cbbh.ba/content/read/1120?lang=hr. As for analytic purposes, it is important to mention that methodological adjustment of the existing indicators was carried out for all the previous periods, which is why the values of some indicators, and the results of the analyses themselves, more or less deviate from the previous Reports.

[23] After a longer delay in the work of Commission for Securities of FBH, recapitalization was carried out by banks from this Entity in 2021. Described in details in Chapter 6.

resulting from the changes of regulatory provisions related to the calculation of weighted risk for operative and market risk[24]. For the purpose of calculating weighted risk, capital requirements for market and operative risks are multiplied with reciprocal value of regulatory capital ratio amounting to 8.33, while such requirements were multiplied with 12.5 according to previously applicable regulations. Lower capital requirements for market and operative risks decreased the total risk exposure and increased capitalisation indicators' values. Provisions related to the change of calculation of capital requirements for market and operative risks were applied by banks from FBH from the end of the last year, and banks from RS from the end of the second quarter of 2021. All banks in the system were adequately capitalised at the end of 2021, while capital adequacy of the banks which operated close to or below the regulatory minimum was significantly improved after the implemented recapitalisation in 2021 (Graph 5.10)[25]. Yet, in case of some smaller banks, a rather small decrease of regulatory capital could jeopardise the fulfilment of the required level of capital adequacy. On the other hand, the graph shows that most banks, at the unchanged level of risky assets, could sustain a considerable decrease of regulatory capital before their CAR falls to the regulatory minimum.

Graph 5.10: The Effect of Regulatory Capital Decrease on CAR, Q4 2021

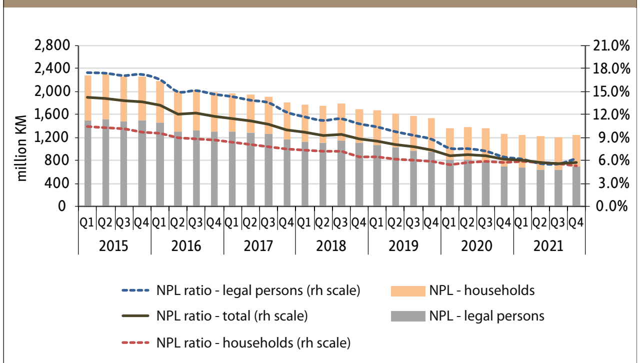


Source: the FBA and the BARS, calculation by the CBBH

Asset quality indicators at the end of 2021 improved compared to the end of the previous year, but in the fourth quarter, the growth of NPLs in total loans at the system level was recorded as a result of deterioration of credit portfolio quality in the segment of legal entities. While the provisional measures of regulators for the recovery from negative economic consequences of the pandemic were revoked in the first half of 2022 due to the weakening of coronavirus, the crisis brought about by the war in Ukraine caused the renewed increase in risks. The identified corporate and household credit risks could spill over to the banking sector in the period ahead and bring about a deterioration of credit portfolio quality.

The share of non-performing in the total assets at the end of 2021 amounted to 3.17%, representing a decrease of 28 bp compared to the end of the previous year. The largest part of non-performing assets consisted of non-performing loans which at the end of 2021 amounted to KM 1.25 billion and were lower by KM 18 million or 1.8% compared to the previous year. Decrease of non-performing loans with simultaneous growth of the total loans resulted in decreased share of non-performing in the total loans. At the end of 2021, NPL ratio decreased to 5.78%. During 2021, banks recorded a decrease of non-performing loans mainly due to accounting and permanent write –off of assets estimated as loss and conducted activities to collect non-performing claims. Regulators' measures which were in effect throughout 2021 protected banks from the increase of credit risk, so the downward trend of non-performing loans in the total loans was preserved during the first three quarters of the current year. For most companies which were covered by provisional measures, moratoriums expired, so at the end of 2021, only KM 382.1 million or 1.8% of loans of the total credit portfolio was under some of regulators' provisional measures. In the last quarter, the share of non-performing in the total loans increased, as a consequence of deterioration of the credit portfolio in the segment of legal entities, while non-performing loans in the household sector continued to decrease (Graph G3). At the end of 2021, the share of non-performing in the total loans in the sector of companies was 6.24%, while this indicator in the household sector amounted to 5.28%.

Graph 5.11: Credit Portfolio Quality



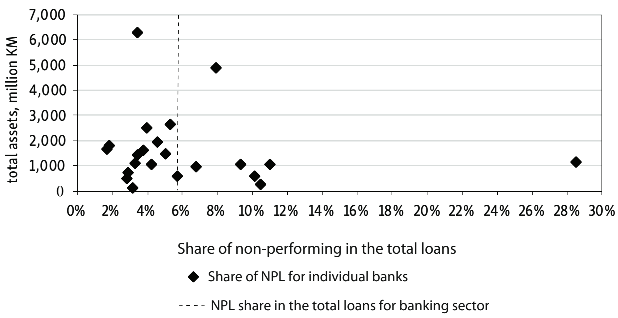
Source: the FBA and the BARS, calculation by the CBBH

Increase of non-performing loans in the fourth quarter of 2022, mainly seen with companies from manufacturing industry was not unexpected, having in mind that operations in a number of industries remained burdened with problems in supply chains of finished products and production materials, and increased inflation pressures on supplier prices and transportation costs. Despite undertaken measures of regulators to mitigate negative consequences of the pandemic and recovery of economic activities in 2021, there were difficulties in debt servicing of the companies which were not able to transfer the increase of costs to consumers. In circumstances of the new crisis, due to structural disturbances in energy markets and strong inflation, it is realistic to expect that credit risk

[24] Decision on amendments and supplements of the Decision on calculating bank capital ("Official Gazette of FBH", 37/20) and Decision on amendments and supplements of the Decision on calculating bank capital („Official Gazette of RS, 114/20").
[24] The graph shows how much regulatory capital needs to be decreased for each individual bank, with the total weighted risk from the end of 2021, for capital adequacy ratio to go down to regulatory minimum of 12%.

growth would be continued in the sector of companies, the operations of which are already under pressure of the interrupted supply chains. Weak recovery of credit activity and decreased projections of economic growth indicate that peak levels of non-performing loans in the non-financial companies' sector lie ahead in the following period. Continuing inflationary pressures could bring about the growth of credit risk in the households' sector of the most vulnerable debtors with low disposable income. The credit risk growth could be also affected by the expected growth of interest rates, and deterioration of financing conditions which will have unfavourable impact on the operations of companies. The banks with slightly higher shares of non-performing loans in their portfolios and weaker capital positions will be particularly affected (Graph 5.12).

Graph 5.12: The Share of Non-performing in the Total Loans by Banks at 2021 End



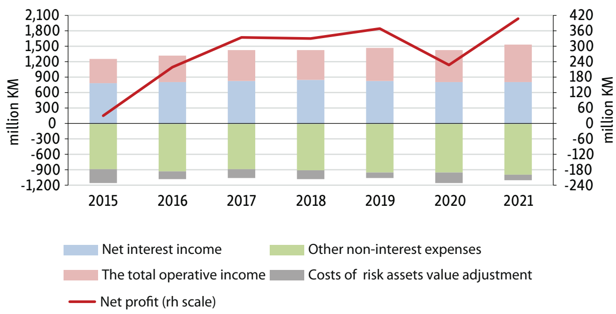
Source: the FBA and theBARS, calculation by the CBBH

U In 2021, large changes were not recorded in exposure to interest rate risk, however, due to the expected growth of interest rates, the increase in interest rate-induced credit risk in the period ahead is possible. In the household sector, the share of loans with variable rates and interest rate fixation periods up to one year in the total newly approved loans to households was lower by 3,5 percentage points compared to the previous year, amounting to 50.2%. On the other hand, in the sector of companies, the share of loans with variable rates and interest rate fixation up to one year increased by 1.7 percentage points amounting to 68%. The share of these loans in both sectors in the total newly approved loans during 2021 decreased from 61.7% at the end of 2020 to 57.7% at the end of 2021. Due to the expected growth of interest rates in the period ahead, interest rates for loans with contracted variable rates would be adjusted upwards. Yet, it is realistic to expect that the interest rate growth would be gradual, having in mind that credit potential from the existing sources is assessed to be sufficient in the period ahead. Increase of monthly loan repayment amount could bring about the growth of interest rate-induced credit risk, given that the inflation growth significantly exceeds the growth of nominal wages in BH, resulting in a continuing downward trend of disposable income of households.

At the end of 2021, BH banking sector achieved a much higher net profit and recorded higher returns on average assets and on average equity compared to the same period of the previous year. Following a considerable decline of net profit in 2020, profitability of banking sector completely recovered and the profit recorded at the end of the year exceeded the pre-pandemic level. Net profit of BH banking sector amounted to KM 409 million at the end of 2021, higher by KM 181.9 million or 80.1% compared to the same period of the previous year. Banks recorded a growth of profitability in the same manner as in the period before the outbreak of the pandemic. A considerable increase of operating income was recorded, and at the same time, a decline of business and direct expenses, due to decreased costs of impairments of assets at risk, provisions for potential liabilities and other value adjustments (Graph 5.13). In addition to such trends recorded during the year, in the third and fourth quarter, a slow increase of interest income and decline of interest expenses was recorded.

The largest part of the banking sector profit remained concentrated in several large banks. The two largest banks achieved 38.6% of the profit of entire sector, while the four most profitable banks generated 55.3% of the total net profit of the banking sector. One bank ended the year with a negative financial result.

Graph 5.13: Banking Sector Profit



Source: the FBA and theBARS, calculation by the CBBH

The main source of banking sector income, interest income, started to increase from the third quarter of 2021 mainly as a result of recovery of credit activity. The total interest income at 2021 end amounted to KM 996.6 million and was higher by KM 3.1 million or 0.3% compared to the same period of the previous year. At the same time, a decrease in interest expenses was recorded at the banking sector level, given that short-term and a vista deposits are predominant in the term structure of deposits, bearing almost no interest income or even negative fees in some segments.

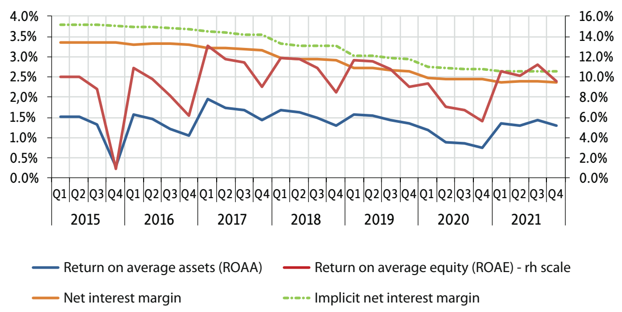
The total interest expenses and other similar expenses in 2021 amounted to KM 178.1 million and were lower by KM 10.9 million or 5.8% compared to the same period of the previous year. Decrease of interest expenses coupled with the growth of interest income resulted in the increase of net interest income which was higher in the observed period by

KM 14 million compared to the same period of the previous year.

In 2021, a dynamic growth of the total operating income was recorded after the decline in the previous year, due to the sharp fall of economic activity. The total operating income amounted to KM 720.4 million at the end of the year. Compared to the same period of the previous year operating income increased by KM 89 million or 14.1% as a result of increased fees for services and income from foreign exchange operations, contributing strongly to the maintenance of high level of profitability in the system. The share of operating income in the total banking sector income amounted to 42%.

Profitability indicators ROAA and ROAE amounted to 1.31% and 9.61% respectively at the end of 2021 and their values increased by 0.6 and 4.0 percentage points compared to the same period of the previous year. A significantly stronger growth of net profit compared to the growth of average assets and equity resulted in an increase in profitability indicators (Graph 5.14)[26].

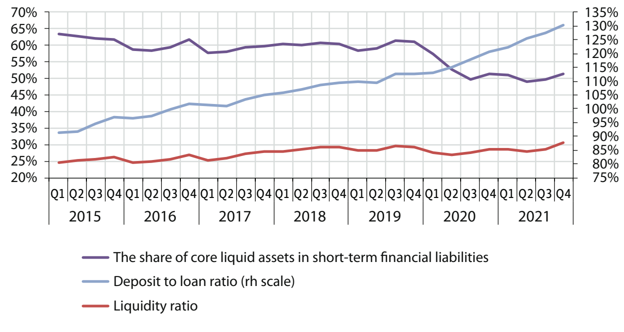
Graph 5.14: Profitability Indicators



Source:the FBA and the BARS, calculation by the CBBH

During 2021, banks recorded a strong growth of liquid assets, continuing the upward trend of banking sector liquidity indicators. However, the maturity structure of the funds has become increasingly unfavourable for long-term financing. Liquidity maintenance is one of the main tasks of a bank and the precondition for its sustainability in the financial market and for the strengthening of confidence in the stability and safety of the banking sector. High levels of BH banking sector liquidity indicators were recorded during 2021, mainly due to the continuing trend of growth of deposits in transaction accounts and sight deposits (Graph 5.15).

Graph 5.15: Liquidity Indicators



Source: the FBA and the BARS, calculation by the CBBH

At the end of 2021, liquid assets accounted for 30.7% of banking sector assets, while 51.3% of short-term liabilities was covered by liquid assets. Liquidity Coverage Ratio (LCR) at the banking sector level amounted to 216.9%. At the end of 2021, all banks met regulatory requirements related to LCR, most of them significantly above the defined regulatory minimum[27]. Net stable funding ratio (NSFR) amounted to 168.8% at the end of 2021 with all the banks in the system recording much higher values of the indicator than the defined minimum of 100%. Short-term liquidity shock in the first quarter of 2022, related to the war in Ukraine (see Text box 3) resulted in a decline of LCR by 18 percentage points to the level of 198.8%. Despite high liquidity of banking sector, the events from the first quarter of 2022 showed vulnerability of the liquidity position of BH banks, particularly taking into account that the CBBH within the currency board arrangement has no lender of last resort capacities.

[26] Implicit net interest margin is a ratio of net interest income and average interest-bearing assets. Average interest-bearing assets at the end of the fourth quarter were calculated as the average balance of interest-bearing assets at the end of the fourth quarter of the previous year and the fourth quarter of the current year.

[27] According to the Decision on managing bank liquidity risk („Official Gazette of FBH", 39/21) and the Decision on liquidity risk management („Official Gazette of RS", 62/21) the minimum liquidity coverage ratio is 100%.

Text box 6: Stress tests

The results of top-down stress tests conducted in BH banking sector on the basis of the data from the end of 2021 indicate the resilience of banking sector even to assumed strong shocks in stronger adverse scenario, including significant deteriorations in macroeconomic environment in the country and abroad. Banking sector resilience to assumed strong shocks is based on a good foundation in respect of indicators of capitalisation, profitability and asset quality which at the end of 2021 recorded improvement compared to previous years, so in the three- year time horizon of stress test, capitalisation at the sector level stayed above the regulatory minimum of 12%.

On quarterly basis, the CBBH conducts top-down stress tests for the country's banking sector solvency, which is one of the main tools for the assessment of its resilience to potential shocks from macroeconomic environment and banking sector. Stress tests are used to assess the capacity of the entire banking sector and also individual banks to stand potential losses which would occur in case assumed shocks materialise. Stress tests are based on credit risk, as a prevailing risk in BH banking sector.

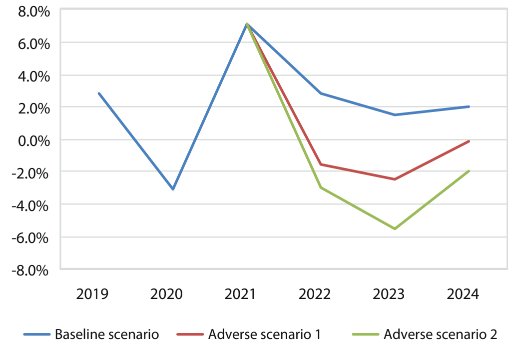
With purpose of assessing the banking sector solvency, in stress tests conducted on the basis of the data from the end of 2021, three macroeconomic scenarios have been considered – one baseline and two adverse scenarios. Each scenario includes projections of a high number of macroeconomic and financial variables for the period 2022 - 2024. Scenarios and assumptions for stress tests conducted on the basis of data from the end of 2021 are set in the light of the most recent geopolitical events in the world, and also their implications for global economy and BH economy, and also expected implications for BH banking sector.

The baseline scenario of solvency stress tests is based on the official projections of the main macroeconomic variables produced by the CBBH within the spring round of medium-term projections for the period from 2022 to 2024. The assumptions for adverse scenarios are an output of macroeconomic model for adverse scenarios in stress tests, based on a hypothetical narrative regarding the most significant local and global risks and shock intensity. The two adverse scenarios differ by the intensity of shocks and the time period needed to recover economic activity, with a stronger adverse scenario including also the shock brought about by the new wave of the coronavirus pandemic.

The quantification of scenario includes the projections of macroeconomic and financial variables – such as real GDP, inflation, credit growth, interest rates on loans to households and companies, and real estate prices. The framework for stress tests includes the effect of risk of interbank contagion, based on the network analysis of spillover of systemic risks in BH banking sector. The effects of this risk are estimated at the end of the third year of stress test, and, as interbank exposures are not significant, these effects are quite weak and have almost no impact on capital adequacy ratio at the banking sector level.

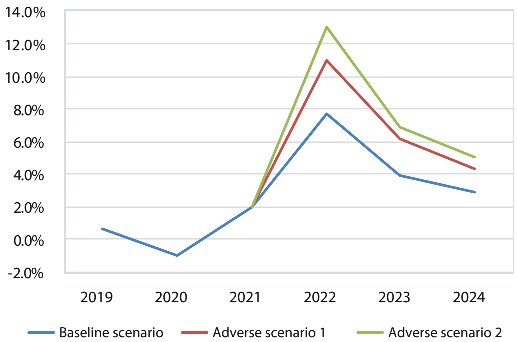
Graphs from TB 6.1 to TB 6.7 show the basic projections and assumptions used in the stress tests scenarios.

Graph TB 6.1: Real Growth of GDP



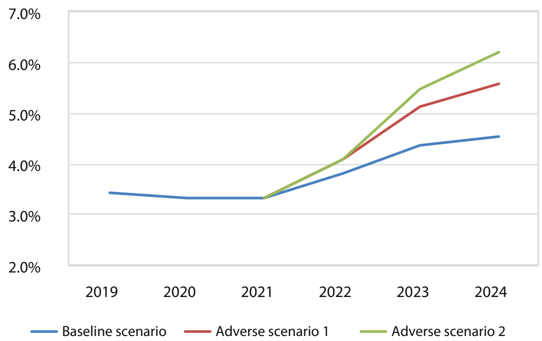
Source: the CBBH

Graph TB 6.2: Inflation Rate



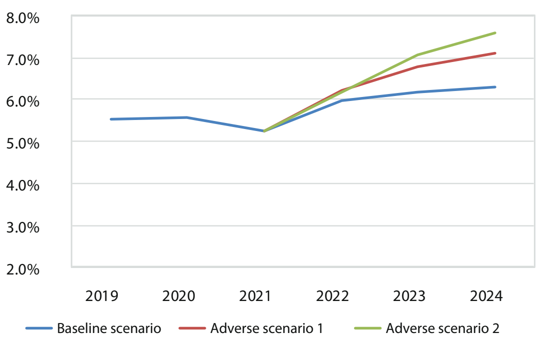
Source: the CBBH

Graph TO 6.3: Interest Rates on Loans



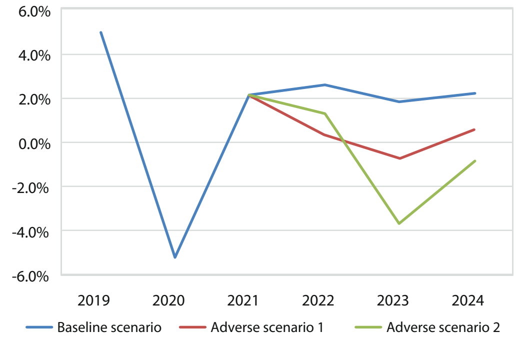
Source: the CBBH

Graph TB 6.4: Interest Rates on Loans



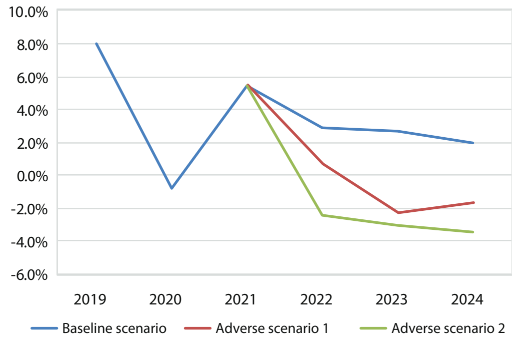
Source: the CBBH

Graph TB 6.5: Credit Growth, Companies



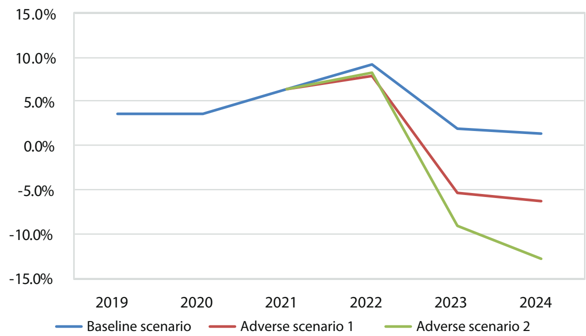
Source: the CBBH

Graph TB 6.6: Credit Growth, Households



Source: the CBBH

Graph TB 6.7: Growth of Real Estate Prices



Source: CBBH

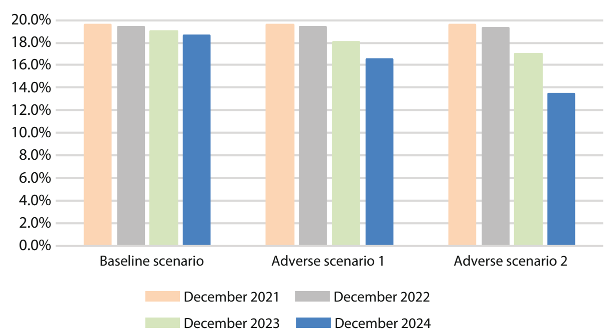
According to macroeconomic variables projections for the period from 2022 to 2024, slower economic activity and continuing inflationary pressures are expected, as a consequence of the war in Ukraine, which brought about negative trends in the global markets of energy, food and production materials, and additionally deepened problems in global supply chains. Leading central banks of the world are already implementing or announcing much more restrictive monetary policy, including the increase of benchmark interest rates. Therefore, a gradual increase of lending interest rates in BH banking sector is expected in the period ahead. Credit growth forecasts both in the sector of companies and in the sector of households, still do not indicate any considerable credit activity in the time horizon of the next three years. Despite the slower economic activity in the country, a decline of demand for residential real estate and *decline of real estate prices are not expected; on the contrary, a continuing trend of price growth is expected, especially in 2022. Although the assumed shock in adverse scenario l is much milder than the shock in adverse scenario 2, this scenario also assumes a significant contraction of economic activity, while the reversal of the negative trends from the first two years of stress tests is assumed to take place in the third year. Hypothetical shock in adverse scenario 2 which is modelled in the form of strong recession developments throughout the stress test period, is set with an aim to test the resilience of the banking sector and individual banks in case the negative assumptions materialise, the probability being only negligible.*

In both adverse scenarios, it is assumed that the crisis brought about by the war in Ukraine will last during the entire stress test period, but in adverse scenario 2, the shock will not be mitigated until the end of 2024. Additionally, in adverse scenario 2, another deterioration of the situation related to COVID-19 is assumed. Disturbances in global supply chains due to the war in Ukraine will bring additional pressure on the growth of prices compared to the baseline scenario. It is assumed that inflationary pressures will last throughout the stress test period, with the inflation rate at its highest level in the first period of stress test (2022). The assumed increase of the country's risk premium in macroeconomic model of 150 basis points in adverse scenario 1 and 250 basis points in Adverse scenario 2, together with the increase of the ECB benchmark interest rate, would lead to gradual increase of domestic interest rates on loans to households and companies compared to the baseline scenario. The increase in interest rates would be the highest in the second year of stress testing. Credit activity in the first year of stress testing is stagnating, and decreasing in the following period. As a result of domestic economic activity decline, a decline of demand for real estate is assumed and consequently, the decline of real estate prices in the three- year time horizon, however, this effect is postponed and real estate prices record a decline as early as from the second year of stress test. On the one hand, the increase of construction material prices affects the growth of real estate prices, while on the other hand, demand for real estate is assumed to remain significant in the first stress test period due to the concerns raised by the growing inflation and low deposit interest rates.

The impact of stress tests on capital adequacy ratio was quantified on the basis of the initial balance as of 31 December 2021. According to the assumptions set in the baseline scenario, all the banks in banking sector would keep the satisfactory capital level despite the assumed mild deterioration of credit portfolio quality and lower profitability in the three-year time horizon. Capital adequacy ratio at the banking sector level, according to the set assumptions, would decrease by only 95 basis points in the three- year period.

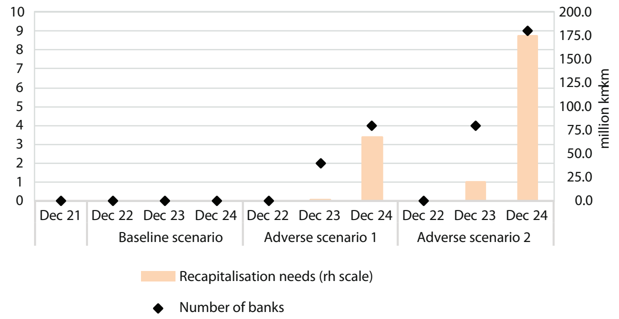
In case shocks assumed in adverse scenarios materialise, banking sector would, mainly due to the existing sound capital base, be capable of absorbing the assumed shocks, and no bank would present recapitalisation needs after the first year of stress testing. In adverse scenario 1, after the second year of stress test, two small banks would not keep capital adequacy ratios within regulatory framework, while in the third year, additional two small banks would have capital adequacy ratios below regulatory minimum of 12%. The share of assets of these four banks in the total banking sector assets at the end of 2021 amounted to 6.8%. The total recapitalisation needs at the sector level after the third year of stress test in Adverse scenario 1, assuming that banks would not have a possibility of recapitalisation in this time period, would amount to KM 68 million, and capital adequacy ratio at aggregate level within this time horizon would decrease from the initial 19.6% to 16.5%. Assuming materialisation of exceptionally strong shocks from Adverse scenario 2, the banking sector capital adequacy ratio during the first year of stress testing would decrease by only 31 basis points. However, due to the accumulation of losses within time horizon of three years, at the end of the third year of stress test, CAR would additionally decrease to 13.4% (Graph TB 6.8). Only after the second year of extremely strong shocks, some banks would not have sufficient capital, and those are four banks which in the three-year time period in Adverse scenario 1 show vulnerability to the set shocks. Until the end of 2024, five more banks would have needs for additional capital, while the total recapitalisation needs at the banking sector level after the third year of stress test would amount to KM 175.2 million, representing 0.5% of GDP from 2021 (Graph TB 6.9). Even with such strong shocks assumed in stress test, we can conclude that the banking system would keep its stability.

Graph TB 6.8: Banking Sector Capital Adequacy Ratio



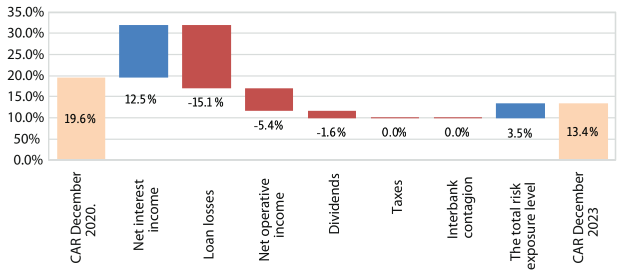
Source: the CBBH

Graph TB 6.9: The Number of Banks with Insufficient Capital and Recapitalisation Needs



Source: the CBBH

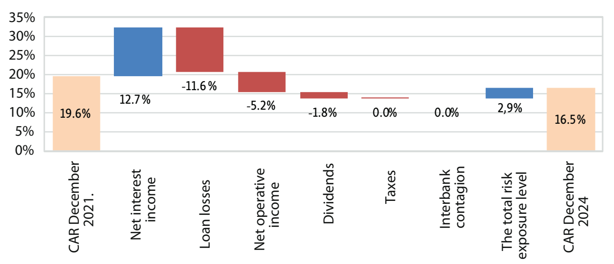
Graph TB 6.11: Impact of Individual Items on Capital Adequacy Ratio, Adverse Scenario 2



Source: the CBBH

Graphs TB 6.10 and TB 6.11 show the contributions of the particular items of balance sheet and profit and loss statement to the change of capital adequacy ratio at the system level, cumulative, in adverse scenarios, in the period from the end of 2021 to the end of 2024. Credit risk in stress tests is distinguished as the most important risk in BH banking sector. Losses associated with credit risk arise from provisions for financial items of assets, primarily credit portfolio of sectors of companies and households, which gives the largest negative contribution to capital adequacy ratio in stress conditions. In Adverse scenario 1, provisions for loan losses impact the decrease of capital ratio at the end of 2024 by 11.6 percentage points, whereas in Adverse scenario 2, they have an impact on decrease of CAR by 15.1 percentage points. Capital adequacy ratio is also under a strong impact of cumulative changes of net interest income and net operating income in adverse scenarios compared to the end of 2021. The effect of interbank contagion in the system on bank capitalisation is negligible currently. As stress test also included an assumption of dividend payments in all the three periods of stress testing and all the three scenarios, credit institutions which make profits and meets regulatory requirements pay dividends, which also influences the capital adequacy ratio decrease in the system. Changes of the level of the total risk exposure, due to the assumptions on dynamic balance sheet in the three-year period of all the three scenarios, have a low positive effect on capital adequacy ratio.

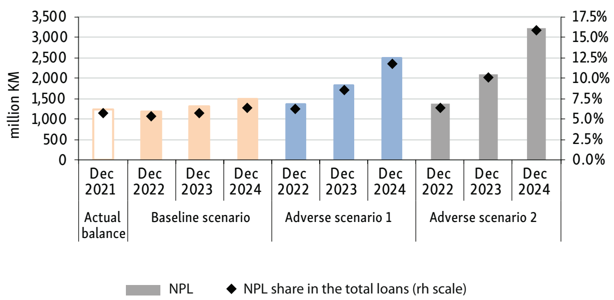
Graph TB 6.10: Impact of Individual Items on Capital Adequacy Ratio, Adverse Scenario 1



Source: the CBBH

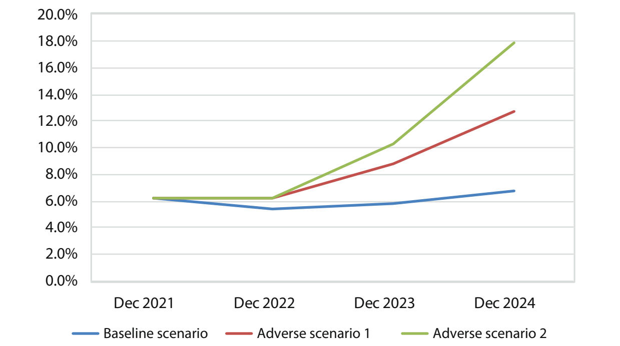
Given the assumptions from the baseline scenario, the credit portfolio quality would start deteriorating from the second year of stress test, with the possibility of the share of non-performing in the total loans increasing to the level of 6.5% until the end of stress test time horizon. In both stress scenarios, a considerable increase of non-performing loans is assumed, lasting throughout the period of stress test. The growth of non-performing loans in both adverse scenarios is impacted by a strong growth of inflation, contraction of economic activity and growth of interest rates. Projected growth of non-performing loans is evident both in the sector of companies and the sector of households, however, the sector of companies is more vulnerable to the effect of the assumed shocks. As the coronavirus pandemic has a stronger impact on companies operating in the activities which were the most affected by the restrictive measures, it is assumed that the inflow of new non-performing loans could be the strongest in the sector of companies whose profitability indicators are already undermined. Graphs from TB 6.12 to TB 6.14 show the credit portfolio quality by years and scenarios.

Graph TB 6.12: Non-performing Loans and Share of Non-Performing in the Total Loans



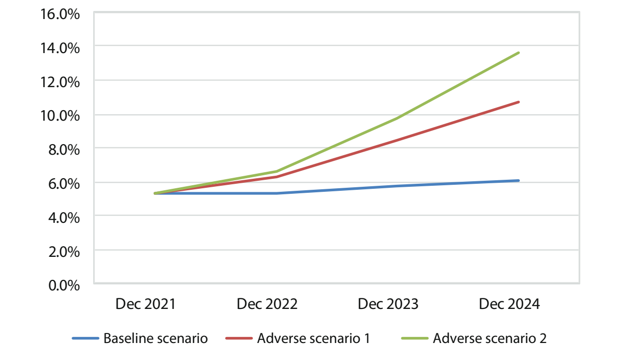
Source: the CBBH

Graph TB 6.13: The Share of Non-performing in the Total Loans to Companies



Source: the CBBH

Graph TB 6.14: The Share of Non-performing in the Total Loans to Households



Source: the CBBH

5.2. Non-banking financial sector

The sector of non-banking financial institutions is still an underdeveloped segment of financial market, with a very modest share in the total assets of financial intermediaries (Table 5.1). The recovery from the corona crisis had weak positive effects on all financial intermediaries' operations. A slow growth of balance sheet amount and profitability indicators was seen in microcredit and leasing sectors, while a satisfactory quality of credit portfolio in both sectors was preserved due to regulators' measures for the recovery from negative consequences of the pandemic, which were in effect during 2021. The largest and the most significant segment of non-banking financial sector, insurance and reinsurance companies saw a recovery of their operations reflected in the growth of charged premiums in both categories of insurance, life and non-life insurance.

The operations of microcredit sector in 2021 were marked by: asset growth, growth of gross loans, capital increase, accompanied by the decreased value of delayed loans, and profitability growth. At the end of 2021, 26 microcredit organisations (MCO) operated in BH, out of it, 14 microcredit companies (MCC) and 12 microcredit foundations (MCF). At the end of 2021, the total assets of microcredit sector were higher by 7.8% compared to 2020, while loans increased by 8.2% (Table 5.2). Out of the total microcredit amount, 97.4% was extended to natural persons, the agriculture sector financing remaining primary (27.6%), followed by the financing of housing needs (17.4%) and the service sector (11.1%).

Table 5.2: Simplified Balance Sheet of Microcredit Organisations million KM

Assets			Liabilities		
	2020	2021		2020	2021
Monetary funds and placements to other banks	86.4	92.8			
Loans	889.6	962.6	Liabilities based on loans	571.77	605.3
Loan loss provisions	-15.7	-13.9	Other liabilities	55.03	69.7
Other assets	117.8	-120.7	Capital	451.21	487.2
TOTAL	**1,078.0**	**1,162.3**	**TOTAL**	**1,078.0**	**1,162.3**

Source: FBA and BARS, CBBH calculation

Improved macroeconomic circumstances had a positive effect on the credit portfolio quality in microcredit sector, and, in addition, the satisfactory quality of credit portfolio in microcredit sector was preserved due to the measures of regulators to mitigate negative economic consequences of the pandemic, which were in effect throughout 2021. At the end of 2021, loans delayed in repayment for more than one day accounted for 3.1% of the total credit portfolio, their share being lower compared to the previous year. The share of loans delayed in repayment for more than 30 days also decreased, amounting to 1.42% at the sector level. Provisions for loan losses at the sector level amounted to KM 13.9 million. At the end of 2021, active number of exposures covered by some of special measures regulated by decisions on provisional measures implemented by leasing companies and microcredit organisations for recovery from negative economic consequences caused by “COVID-19” was 7,617 items, i.e. KM 51.3 million, representing 4% of the total credit portfolio[28].

In the structure of liabilities, the loan liabilities represent the main source of MCO funds and recorded a growth of 5.9% compared to the previous year. Within the total liabilities based on loans, 94% were liabilities based on long-term loans. Following a significant improvement of maturity structure of sources of funds in 2020, when most short-term loan liabilities were replaced with long-term loans, the growth of long-term liabilities continued in 2021. The total capital of the sector at the end of 2021 was KM 487.2 million, and increased by 8% compared to the previous year. In the structure of MCO sector capital, capital of microcredit foundations accounted for 58.1%, while capital of microcredit companies accounted for 41.9% of the total sector capital. In 2021, capital of microcredit foundations and companies increased at the rates of 7.9% and 8%, respectively. The main source of MCF capital is excess income over expenses, amounting to KM 229.2 million at the end of the year, i.e. 80.9% of the total capital of foundations. Similarly, as in the case of MCF, prevailing impact on the growth of capital of microcredit companies was the growth of profit during the year. At the end of 2021, unallocated profit accounted for 49% of the total capital of MCC, followed by the Tier1 accounting for 43.7% in the structure of capital of microcredit companies.

At the end of 2021, microcredit sector achieved a positive financial result in the amount of KM 32.7 million and recorded a growth of profitability of 38.2% compared to 2020. The recovery of profitability of MCO sector was mainly the result of the growth of the total recorded income with lower costs of regulatory provisions for loan losses, which had a positive impact on profitability growth. The total income amounted to KM 193.7 million, and compared to the previous year, it was higher by 9.3%. Interest income remained a dominant source of the sector income. Due to the recovery of economic activity, and growth of interest rates which continued in 2021, the growth of income based on interest and fees was 8.9% in 2021. The average weighted effective interest rate on the total microcredit in FBH in 2021 amounted to 24%, and in RS 34.4%. Effective interest rates on short-term microcredits were quite high, with a strong increase in 2021 recorded in RS under the impact of a significant increase of effective interest rate on the lowest microcredit amount (up to KM 400) with one microcredit company. The total expenses of microcredit sector amounted to KM 158.5 million and recorded an increase of 4.5% compared to the previous year. The growth of the total expenses was influenced by the growth of all the items of expenses, except loan loss provisions, with the strongest impact of the increase of operating expenses in the amount of KM 7.7 million.

[28] The total number of items and amount of exposure covered by provisional measures of regulators applies to exposures related to MCO and leasing companies.

Leasing sector operations recorded a slow recovery in 2021, reflected in the growth of balance sheet amount and recorded profit. However, the volume of operations and share of this sector in the assets of financial intermediaries remains modest. At the end of 2021, four leasing companies had operating licences. The total assets of leasing sector amounted to KM 373.7 million, having recorded a growth of 8.7% compared to the previous year. Financial leasing accounted for 84.5% of the value of contracts on leasing, while operative leasing accounted for the remaining 15.5%. The value of new contracts of financial and operative leasing in 2021 amounted to KM 214.4 million, which was higher by 30% compared to the previous year. At the end of 2021, the leasing sector recorded a positive financial result in the amount of KM 4.8 million. The growth of profitability in 2021 was achieved as a result of a mild increase of the total income with a slightly lower increase of the total expenses. The growth of profitability was mainly impacted by the growth of interest income (12.5%), and lower costs of loss provisions (8.7%) compared to the previous year. The sector of leasing is generally underdeveloped, with main activities of the sector representing a kind of substitution for standard bank loans, mainly extended to legal entities, as financing in the form of leasing is less favourable for households compared to bank loans due to the obligation of paying VAT on interest.

In the insurance market, there was an increase of activities compared to the previous year. NAt the end of 2021, 25 insurance companies and one reinsurance company operated in BH, the same as in 2020. The upward trend of the insurance premium from previous years was continued (with an exception of 2020), while the total calculated premium amounted to KM 818.4 million and it increased by 8.3% compared to the same period of the previous year. Although a growth of the premium was recorded, due to the growth of the country' economic activity and the increase in GDP, the share of the premium in the total GDP remained at approximately the same level as in the previous year (2% of GDP). Out of the total calculated premium, non-life insurance accounted for 78.6%, i.e. KM 643.6 million.

Low share of voluntary types of insurance remained a key weakness and the limiting factor of the development of BH insurance market. The most significant share in the total insurance premium is still the car liability insurance (60.6%). A growth was seen in almost all categories of non-life insurance, except for several categories. The calculated premium for life insurance amounted to KM 174.8 million and recorded an increase of 11.8% compared to the previous year. The total gross paid damages amounted to KM 346.9 million and accounted for 42.4% of the total calculated premium.

According to the CBBH data, insurance companies held a considerable part of assets in highly liquid and low risk forms of assets. Insurance companies held 31.2% of the total assets in different forms of deposits in accounts with commercial banks. Investments in securities amounted to 23.7% of the total assets, with 73.4% of investments in securities related to government securities.

In 2021, 32 investment funds, out of them 16 in FBH and 19 in RS, had operating licences. Out of the total of 32 investment funds, 19 were open investment funds, while 11 funds were closed investment funds. The total value of net assets of investment funds at the end of 2021 amounted to KM 974.1 million, which was higher by KM 135.3 million or 16.7% compared to the end of the previous year.

The total turnover on BH stock exchanges in 2021 decreased significantly, since governments that are the main drivers of activities in the primary market of debt instruments issued debt on BH stock exchanges to a much lower extent. The total trading amounted to KM 698.9 million and it was lower by KM 576.2 million or 45.2%, compared to the same period of the previous year. Decline of trading was seen on both local stock exchanges, with stronger decline on BLSE than on SASE. Out of the total trading, KM 321 million, i.e. 45.9% was recorded in Sarajevo Stock Exchange (SASE), while KM 377.8 million or 54.1% was recorded in Banja Luka Stock Exchange (BLSE). The total market capitalisation in BH at the end of 2021 amounted to KM 9,682.8 million and was slightly higher compared to the previous year (4%). The increase of market capitalisation on SASE amounted to KM 235.5 million (4.4%), while the increase of market capitalisation on BLSE amounted to KM 135.5 million (3.4%) compared to the end of 2020.

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FINANCIAL INFRASTRUCTURE

6. FINANCIAL INFRASTRUCTURE

6.1. Payment systems

In 2021, the Central Bank of BH successfully fulfilled its legal obligation to maintain adequate payment systems. Payment operations were carried out smoothly through the systems of giro clearing and real time gross settlement (RTGS). The Central Registry of Credits (CRC) and Single Registry of Business Entities' Accounts (SRBEA) were maintained, while transactions through the international clearing of payments with foreign countries were carried out smoothly. During the years, payment systems have been continually upgraded with purpose of fulfilling all the necessary technological and safety standards, the biggest step having been made in 2019 when giro clearing system was adjusted with the operating procedure in the European Union (EU), thus creating the assumption for a faster integration of the CBBH payment systems into the EU developments.

During 2021, there was an increase in the number of transactions, and the total value of all transactions through the giro clearing and RTGS payment systems. Following the last year's decrease of the total value of interbank payment transactions, the increase by 16.4% was registered in 2021 resulting from increased economic activities in the country. The total number of transactions went up by 9.6% compared to the year before. The first ten banks in BH by volume of transactions in 2021 participated in the total number of RTGS and giro clearing interbank transactions with 73.50%, which is a slight increase compared to 2020. On the other hand, the share of the first ten banks in the total transaction value declined from 76.24% in 2020 to 75.20% in 2021.

Table 6.1: Interbank Payment Transactions

Year	The total number of transaction. in million	The total turnover. million KM	Average daily turnover. million KM	GDP/ average daily turnover
2005	22.9	36,195	140.3	122
2006	24.9	47,728	185.0	104
2007	28.4	60,193	234.2	93
2008	29.6	70,345	272.7	91
2009	29.0	64,458	251.8	95
2010	31.8	67,779	263.7	94
2011	32.5	76,653	298.3	87
2012	33.8	81,533	318.5	81
2013	35.8	76,605	298.1	88
2014	37.9	87,859	341.9	79
2015	39.1	85,106	326.1	87
2016	40.0	88,380	338.6	86
2017	41.1	96,243	370.2	85
2018	42.3	102,670	393.4	83
2019	43.6	123,046	471.4	74
2020	43.8	105,132	398.2	85
2021	48.0	122,403	470.8	79

Source: CBBH, BHAS, calculation by CBBH

The increase in the value of the total payment transactions in 2021 and faster circulation of money resulted in a decrease of the number of days needed to carry out transactions in the value of the annual nominal GDP (Table 6.1). The number of intra-bank transactions increased by 4.5%. and the number of interbank ones rose by 9.8% compared to the same period of the last year.

Intra-bank transactions remained predominant in the total number of transactions. their share being 54% (56.3 million transactions). The value of intra-bank transactions in 2021 was KM 100.4 billion or 47% of the total payment transaction value.

Table 6.2 Concentration of the Transactions in Interbank Payment System (HHI)

Period	10 banks with the largest shares	
	Number of transactions	Value of transactions
December 2008	1,271	1,381
December 2009	1,233	1,413
December 2010	1,256	1,346
December 2011	1,230	1,287
December 2012	1,278	1,295
December 2013	1,337	1,378
December 2014	1,350	1,310
December 2015	1,314	1,305
December 2016	1,307	1,322
December 2017	1,320	1,349
December 2018	1,344	1,335
December 2019	1,397	1,471
December 2020	1,352	1,249
Decembar 2021	1,373	1,264

Source: CBBH, calculation by CBBH

Table 6.2 shows the values of the Herfindahl-Hirschman index (HHI) [29]. which illustrates the concentration of the total number and value of interbank payment transactions for 10 banks with the largest shares in both payment systems (giro clearing and RTGS). Although most interbank payment transactions take place between small number of large banks. the HHI index value indicates a moderate concentration of interbank payment transactions and the absence of systemic risks in payment systems. In 2021. there was an increase of the HHI index value measuring the concentration of the number and the value of transactions for the ten largest participating banks. indicating a slight increase of concentration of transactions with large banks.

In 2021. the CBBH continued maintaining the CRC. which was updated during the year by 77 institutions (banks. MCO and leasing companies) in real time. The CRC provides the financial institutions that are users of this database with the data on credit history and current debt levels of their existing or potential customers. thus enabling them to carry out better quality risk assessments when making decisions on extending funds.

The CBBH continued to maintain the Single Registry of Business Entities Accounts of BH. which. at the end of 2021. included 238.183 active and 100.271 blocked accounts. After the system upgrade in late 2018. SRBEA now includes all accounts of business entities performing their payment

[29] HHI is a measure of concentration and is calculated as a sum of squares of individual shares in the observed segment. The index below 1.000 points shows lack of concentration. from 1.000 to 1.800 moderate concentration. from 1.800 to 2.600 points high concentration. over 2.600 points is considered high concentration up to the maximum 10.000 when it is a monopoly concentration.

transactions in BH via accounts opened with banks and the CBBH. SRBEA is primarily useful for commercial banks. tax authorities. administration. law enforcement authorities and other government levels in detecting financial structures and transactions that companies and individuals may possibly use in an illegal manner. e.g. for tax evasion. money laundering. etc. Also. this registry provides information to all legal entities and natural persons pursuing collection of their claims through enforcement via authorised institutions.

International clearing of payments between banks from BH and the Republic of Serbia continued in 2021. so the total of 12.236 payment orders in the total value of EUR 352.7 million were performed in the system. which shows an active use of this platform for the settlement of payment transactions.

6.2. Regulatory framework

The several-year long process of harmonisation of bank regulations and bank supervision in BH with the EU regulatory framework resulted in the adoption of the decision of the European Commission in October 2021. which confirmed the equivalence of supervisory and regulatory framework in BH with the EU provisions. Institutional and regulatory framework for banking system in BH have been assessed as progressive. harmonised and organised according to the rules applied in the EU. The equivalence in segments of supervision and regulatory framework for banking system is among other important for risk weights in calculating capital requirements. levels of interest rates. safety of investment etc.

In 2021. new regulation which apply to bank operations have taken effect: banking agencies' decisions on liquidity risk management regulating minimum qualitative requirements for liquidity risk management in the bank and quantitative requirements in respect of liquidity coverage ratios and net stable funding ratio. as well as use of additional mechanisms to monitor and assess liquidity risks.

In mid-2021. the banking agencies adopted new regulation in the area of internal governance system and risk management. in order to remove weaknesses related to the work of the bank's bodies. assessments of key functions. performance of control functions and reporting on risks. This decision defines the minimum requirements for setting up and implementing efficient system of internal governance which the bank is obliged to provide. continually implement and maintain. as well as the rules of conscientious proceeding of bank's body members and rules on assessment on the fulfilment of conditions for members of bank bodies. The banking agencies have adopted new decisions on the procedure of supervisory examination and assessment of banks and decisions on amendments and supplements of decisions on the resolution plans of bank and bank groups.

In the beginning of July 2021. the House of Representatives of FBH Parliament appointed the members of Commission for Securities of FBH. ending the delay in the work of Commission that had affected the FBH banking sector.

The decision on provisional measures for banks for mitigating negative economic consequences caused by the coronavirus pandemic is no longer in effect in Republika Srpska since the end of March 2022. while the decision is no longer in effect in Federation of BH from the end of May 2022. The provisional measures. which were in effect from April 2020 until April 2022 (Republika Srpska) i.e. June 2022 (the Federation of BH) enabled banks to provide exemptions to customers directly or indirectly affected by negative effects of the pandemic in the form of moratorium. i.e. postponing the servicing of loan obligations.

In the fourth quarter of 2021. merger of Vakufska banka d.d. Sarajevo with ASA banka d.d. Sarajevo was completed through the purchase of majority block of Vakufska banka shares by ASA Finance. The operating licence of Vakufska banka d.d. Sarajevo was revoked on December 1st 2021. At the end of February 2022. immediately after the exclusion of Russian banks from SWIFT. the banking agencies took full control over Sberbank BH dd Sarajevo and Sberbank a.d. Banja Luka and started the restructuring processes. In the process of restructuring. upon receiving the consent of the Banking Agency. „ASA FINANCE" d.d. Sarajevo obtained 100% of qualified shares in equity and took over the ownership of Sberbank BH d.d. Sarajevo. From mid May 2022. the bank has operated as ASA Banka Naša i snažna d.d. Sarajevo. After the restructuring process was completed in May 2022. Sberbank a.d. Banja Luka is under ownership of Nova Banka a.d. Banja Luka. operating as Atos Bank a.d. Banja Luka.

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STATISTICAL APPENDIX

Table A1: Sovereign Rating Changes

Country	Date of change	Standard & Poor's rating		
		Long-term	Outlook	Short-term
Greece	until 2009	A	Stable	A-1
	1/9/2009	A	Negative, watch	A-1
	1/14/2009	A	Stable	A-2
	12/7/2009	A	Negative, watch	A-2
	12/16/2009	BBB+	Negative, watch	A-2
	3/16/2010	BBB+	Negative	A-2
	4/27/2010	BB+	Negative	B
	12/2/2010	BB+	Negative, watch	BB+
	3/29/2011	BB-	Negative, watch	B
	5/9/2011	B	Negative, watch	C
	6/13/2011	CCC	Negative	C
	7/27/2011	CC	Negative	C
	2/5/2012	CCC	Stable	C
	2/27/2012	SD	NM	SD
	5/2/2012	CCC	Stable	C
	8/7/2012	CCC	Negative	C
	12/5/2012	SD	-	SD
	12/18/2012	B-	Stable	B
	1/28/2015	B-	Negative, watch	B
	4/15/2015	CCC+	Negative	C
	1/22/2016	B-	Stable	B
	1/19/2018	B	Positive	B
	6/25/2018	B+	Positive	B
	11/25/2019	BB-	Positive	B
	4/24/2020	BB-	Stable	B
	4/23/2021	BB	Positive	B
	4/22/2022	BB+	Stable	B
Ireland	until 2009	AAA	Stable	A-1+
	1/9/2009	AAA	Negative	A-1+
	3/30/2009	AA+	Negative	A-1+
	6/8/2009	AA	Negative	A-1+
	8/24/2010	AA-	Negative	A-1+
	11/23/2010	A	Negative, watch	A-1
	2/2/2011	A-	Negative, watch	A-2
	4/1/2011	BBB+	Stable	A-2
	12/5/2011	BBB+	Negative, watch	A-2
	1/13/2012	BBB+	Negative	A-2
	2/11/2013	BBB+	Stable	A-2
	12/7/2013	BBB+	Positive	A-2
	6/6/2014	A-	Positive	A-2
	12/5/2014	A	Stable	A-1
	6/5/2015	A+	Stable	A-1
	11/29/2019	AA-	Stable	A-1+

Portugal	until 2009	AA-	Stable	A-1+
	1/13/2009	AA-	Negative, watch	A-1+
	1/21/2009	A+	Stable	A-1
	10/7/2009	A+	Negative	A-1
	4/27/2010	A-	Negative	A-2
	11/30/2010	A-	Negative, watch	A-2
	3/24/2011	BBB	Negative, watch	A-2
	3/29/2011	BBB-	Negative	A-3
	12/5/2011	BBB-	Negative, watch	A-3
	1/13/2012	BB	Negative	B
	3/6/2013	BB	Stable	B
	7/5/2013	BB	Negative	B
	5/9/2014	BB	Stable	B
	3/20/2015	BB	Positive	B
	9/18/2015	BB+	Stable	B
	9/15/2017	BBB-	Stable	A-3
	3/15/2019	BBB	Stable	A-2
	13.09.2019.	BBB	Positive	A-2
	24.04.2020.	BBB	Stable	A-2
Spain	until 2009	AAA	Stable	A-1+
	1/12/2009	AAA	Negative, watch	A-1+
	1/19/2009	AA+	Stable	A-1+
	12/9/2009	AA+	Negative	A-1+
	4/28/2010	AA	Negative	A-1+
	12/5/2011	AA-	Negative, watch	A-1+
	1/13/2012	A	Negative	A-1
	4/26/2012	BBB+	Negative	A-2
	10/10/2012	BBB-	Negative	A-3
	5/23/2014	BBB	Stable	A-2
	10/2/2015	BBB+	Stable	A-2
	4/1/2017	BBB+	Positive	A-2
	3/23/2018	A-	Positive	A-2
	9/20/2019	A	Stable	A-1
	9/18/2020	A	Negative	A-1
	3/18/2022	A	Stable	A-1
Italy	until 2009	A+	Stable	A-1+
	5/20/2011	A+	Negative	A-1+
	9/20/2011	A	Negative	A-1
	12/5/2011	A	Negative, watch	A-1
	1/13/2012	BBB+	Negative	A-2
	7/9/2013	BBB	Negative	A-2
	12/5/2014	BBB-	Stable	A-3
	10/27/2017	BBB	Stable	A-2
	10/26/2018	BBB	Negative	A-2
	10/23/2020	BBB	Stable	A-2
	10/22/2021	BBB	Positive	A-2

Cyprus	until 2009	A+	Stable	A-1
	7/21/2010	A+	Negative, watch	A-1
	11/16/2010	A	Negative	A-1
	3/30/2011	A-	Negative	A-2
	7/29/2011	BBB	Negative, watch	A-2
	8/12/2011	BBB+	Negative, watch	A-2
	10/27/2011	BBB	Negative, watch	A-3
	1/13/2012	BB+	Negative	B
	8/1/2012	BB	Negative, watch	B
	10/17/2012	B	Negative, watch	B
	12/20/2012	CCC+	Negative	C
	3/21/2013	CCC	Negative	C
	4/10/2013	CCC	Stable	C
	6/28/2013	SD	-	SD
	7/3/2013	CCC+	Stable	C
	11/29/2013	CCC+	Stable	B
	4/25/2014	B	Positive	B
	10/24/2014	B+	Stable	B
	3/27/2015	B+	Positive	B
	9/25/2015	BB-	Positive	B
	3/18/2017	BB+	Stable	B
	9/15/2017	BB+	Positive	B
	9/14/2018	BBB-	Stable	A-3
	9/3/2021	BBB-	Positive	A-3

Source: Standard & Poor's

Table A2: Real Estate Price Index (2015=100)

		Sarajevo	Mostar	Zenica	Tuzla	Banja Luka	Bijeljinja	Trebinje	TOTAL
2004	Q1	58	71	47					60
	Q2	58	70	46					59
	Q3	58	70	47					59
	Q4	59	68	46					60
2005	Q1	61	66	48					61
	Q2	61	70	47					61
	Q3	63	67	47					62
	Q4	66	70	50					65
2006	Q1	69	72	53					68
	Q2	74	71	49					71
	Q3	73	70	52					70
	Q4	80	60	55					74
2007	Q1	87	73	56					83
	Q2	98	76	67					93
	Q3	108	73	72					98
	Q4	117	77	74					105
2008	Q1	125	85	78	95				112
	Q2	133	82	84	98				119
	Q3	132	83	88	106				120
	Q4	138	87	99	107				126
2009	Q1	129	104	101	97				120
	Q2	120	101	100	100				114
	Q3	115	105	100	107				112
	Q4	111	104	93	115				109
2010	Q1	111	100	99	112				108
	Q2	111	110	101	110				110
	Q3	107	104	99	105				106
	Q4	106	106	107	104				106
2011	Q1	105	107	105	97				105
	Q2	105	103	107	89				103
	Q3	104	98	102	91				102
	Q4	105	104	102	89				103
2012	Q1	105	112	101	102				106
	Q2	104	101	109	96				103
	Q3	101	104	95	94				100
	Q4	100	101	103	96				100

		Sarajevo	Mostar	Zenica	Tuzla	Banja Luka	Bijeljinja	Trebinje	TOTAL
2013	Q1	101	108	105	93				102
	Q2	99	109	104	90				100
	Q3	98	105	97	94				99
	Q4	97	109	106	90				99
2014	Q1	98	104	98	95				99
	Q2	96	102	97	93				97
	Q3	98	94	99	99				98
	Q4	98	96	101	92				98
2015	Q1	98	101	100	98	93	102	103	98
	Q2	101	99	99	101	109	82	97	101
	Q3	99	103	102	100	101	92	99	100
	Q4	102	97	99	100	101	118	101	101
2016	Q1	99	94	97	96	96	68	106	98
	Q2	100	97	104	99	102	93	100	100
	Q3	102	114	101	96	106	89	106	104
	Q4	103	113	104	98	106	94	105	104
2017	Q1	104	110	104	97	100	93	98	103
	Q2	104	96	105	97	98	94	89	101
	Q3	104	104	104	103	98	102	102	102
	Q4	107	93	105	100	96	100	97	102
2018	Q1	108	103	103	100	100	96	103	104
	Q2	109	110	102	100	98	100	101	105
	Q3	109	104	102	102	98	99	108	105
	Q4	109	106	102	104	100	98	108	106
2019	Q1	111	105	106	103	104	97	111	108
	Q2	113	110	109	109	97	99	106	109
	Q3	112	109	113	109	97	102	108	109
	Q4	115	108	107	108	100	104	110	110
2020	Q1	117	109	112	110	95	103	107	111
	Q2	117	122	125	103	101	109	94	114
	Q3	117	113	123	118	100	104	114	114
	Q4	118	106	121	117	96	102	103	113
2021	Q1	120	112	123	121	103	99	124	116
	Q2	122	117	127	120	109	105	122	119
	Q3	125	113	126	126	112	111	133	121
	Q4	128	107	131	130	113	117	132	125

Source: CBBH

Note: Compared to the real property prices index presented in the FS Report 2019

Table A3: Financial Soundness Indicators

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Capital adequacy									
Tier 1 ratio	15.2	14.3	13.8	15.0	14.8	16.5	17.5	18.1	18.7
Regulatory capital ratio	17.8	16.3	14.9	15.8	15.7	17.5	18.0	19.2	19.6
CET 1 ratio	n/a	n/a	n/a	n/a	n/a	16.5	17.5	18.1	18.7
Financial leverage ratio	n/a	n/a	n/a	n/a	n/a	n/a	10.5	10.2	10.0
Non-performing loans reduced by the provisions to regulatory capital	26.4	24.6	24.9	17.6	13.5	11.4	9.6	7.4	7.0
High exposure against the capital	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	81.4
Assets quality									
Non-performing assets to the total assets	11.3	10.5	10.0	8.3	7.1	6.2	5.2	3.4	3.2
Non-performing loans to the total loans	15.1	14.2	13.7	11.8	10.0	8.8	7.4	6.1	5.8
Non-performing loans provisions to NPLs	66.7	69.7	71.2	74.4	76.7	77.4	77.0	78.4	78.4
Loans concentration by economic activity	n/a	n/a	n/a	n/a	n/a	n/a	73.1	72.0	67.6
Profitability									
Return on average assets	-0.1	0.8	0.3	1.1	1.4	1.3	1.4	0.7	1.3
Return on average equity	-1.2	4.5	0.9	6.2	9.0	8.5	9.1	5.6	9.6
Net interest income to the total income	62.3	61.6	62.0	60.4	58.3	58.8	56.8	56.0	59.2
Income from financial instruments trading to total income	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Non-interest expenses to the total income	101.2	85.7	94.5	80.7	73.3	74.0	71.0	83.0	60.1
Costs of wages and contributions to non-interest expenses	28.1	32.9	29.2	31.5	32.9	33.2	34.1	29.8	43.8
Liquidity									
Liquid assets to total assets	26.2	26.6	26.2	26.9	28.1	29.3	29.2	28.6	30.7
Liquid assets to short-term financial liabilities	65.9	65.6	61.9	61.6	59.9	60.4	61.0	51.3	51.3
Liquidity coverage ratio (LCR)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	216.9
Net stable funding ratio (NSFR)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	168.8
Deposits to loans	87.2	92.4	96.9	101.7	105.1	109.6	112.7	120.7	130.3
Short-term financial liabilities to the total financial liabilities	47.2	48.1	50.3	52.1	55.7	57.2	56.2	65.4	68.8
Foreign exchange risk									
Indexed and foreign currency loans to the total loans	68.8	68.0	67.1	62.6	60.1	56.7	53.9	53.9	50.2
Liabilities in foreign currencies to the total financial liabilities	63.8	62.7	60.3	57.4	55.1	53.3	50.7	48.1	44.4
Net open position	5.7	9.0	8.3	1.6	-0.2	2.1	3.4	4.2	4.0
Number of banks	23	23	23	23	23	23	23	23	22

Source: CBBH

Note: Compilation of FSI for the banking sector of BH from the fourth quarter 2021 is based on the IMF 2019 Financial Soundness Indicators Compilation Guide (FSI 2019 Guide).

Table A4: Status Changes in Banks in the Period 2001-Q2/2022

Num	Bank	Type of change	Date of change
1	Sparkasse Bank d.d. Bosna i Hercegovina Sarajevo	Sparkasse Bank d.d. Sarajevo changed its name into Sparkasse Bank d.d. BiH Sarajevo	Q3 2014
	Sparkasse Bank d.d. Sarajevo	ABS banka d.d. Sarajevo changed its name into Sparkasse Bank d.d. Sarajevo	Q3 2009
	ABS banka d.d. Sarajevo	Became a member of Steiermaerkische Bank und Sparkassen AG, Erste Group	Q4 2006
	Šeh-in banka d.d. Zenica	Merged to ABS banka d.d. Sarajevo	Q2 2002
2	Bosna Bank International (BBI) d.d. Sarajevo		
3	Privredna banka Sarajevo d.d. Sarajevo	BOR banka d.d. Sarajevo changed its name into Privredna banka Sarajevo d.d. Sarajevo	Q1 2017
	BOR banka d.d. Sarajevo	Merged to BOR banka d.d. Privredna banka Sarajevo d.d. Sarajevo	Q4 2016
	Prviredna banka Sarajevo d.d. Sarajevo	Privredna banka Sarajevo d.d. Sarajevo merged with BOR banka d.d. Sarajevo	Q4 2016
4	UniCredit Bank d.d. Mostar		
	UniCredit Zagrebačka banka BiH d.d. Mostar	UniCredit Zagrebačka banka BiH changed its name into UniCredit Bank d.d. Mostar	Q1 2008
	Zagrebačka banka BH d.d. Mostar	Merging with Univerzal banka d.d. Sarajevo into UniCredit Zagrebačka banka BiH	Q3 2004
	Univerzal banka d.d. Sarajevo	Merger with Zagrebačka banka BH d.d. Mostar into UniCredit Zagrebačka banka BiH	Q3 2004
	HVB Central Profit banka d.d. Sarajevo	HVB Central profit banka Sarajevo merged to UniCredit Zagrebačka banka BiH	Q1 2008
	HVB banka d.d. Sarajevo	Merger with Central Profit banka into HVB Central Profit banka d.d. Sarajevo	Q4 2004
	Central Profit banka d.d. Sarajevo	Merger with HVB banka d.d. Sarajevo into HVB Central Profit banka d.d. Sarajevo	Q4 2004
	Travnička banka d.d. Travnik	Merged to Central Profit banka d.d. Sarajevo	Q4 2002
5	UniCredit Bank a.d. Banja Luka	Nova Banjalučka banka a.d. Banja Luka changed its name	Q2 2008
	Nova Banjalučka banka a.d. Banja Luka	Merged to HVB group, continued its operations as a separate legal person	Q4 2005
	Banjalučka banka a.d. Banja Luka	Privatised and changed its name into Nova Banjalučka banka a.d. Banja Luka	Q1 2002
6	Addiko Bank d.d. Sarajevo		
	Hypo Alpe Adria Bank d.d. Mostar	Hypo Alpe Adria Bank d.d. Mostar changed its name and seat	Q4 2016
7	Addiko Bank a.d. Banja Luka		
	Hypo Alpe Adria Bank a.d. Banja Luka	Hypo Alpe Adria Bank a.d. Banja Luka changed its name	Q4 2016
	Kristal banka a.d. Banja Luka	Kristal banka a.d. Banja Luka changed its name	Q3 2003
8	ASA banka d.d.Sarajevo		
	Vakufska banka d.d. Sarajevo	Merged to ASA bank d.d. Sarajevo	Q4 2021
	Investiciono komercijalna banka (IKB) d.d. Zenica	IKB d.d. Zenica changed its name and seat into ASA banka d.d. Sarajevo	Q4 2016
	MOJA banka d.d. Sarajevo	MOJA banka d.d. Sarajevo merged with Investiciono komercijalna banka d.d. Zenica	Q3 2016
	FIMA banka d.d. Sarajevo	Changed its name into MOJA banka d.d. Sarajevo	Q4 2010
	VABA banka d.d. Sarajevo	Changed its name into FIMA banka d.d. Sarajevo	Q3 2007
	Validus banka d.d. Sarajevo	Changed its name into VABA banka d.d. Sarajevo	Q1 2007
	Ljubljanska banka d.d. Sarajevo	Established Validus banka took over a part of assets and liabilities of Ljubljanska banka d.d. Sarajevo	Q3 2006
9	Komercionalno investiciona banka (KIB) d.d. Velika Kladuša		
10	NLB Banka d.d. Sarajevo		
	NLB Tuzlanska banka d.d. Tuzla	NLB Tuzlanska banka d.d. Tuzla changed its seat and name into NLB Banka d.d. Sarajevo	Q1 2012
	Tuzlanska banka d.d. Tuzla	Tuzlanska banka d.d. Tuzla changed its name into NLB Tuzlanska banka d.d.	Q3 2006
	Comercebank bančna skupina NLB d.d. Sarajevo	Merged to Tuzlanska banka d.d. Tuzla	Q3 2006
11	NLB Banka a.d. Banja Luka		
	NLB Razvojna banka a.d. Banja Luka	NLB Razvojna banka a.d. Banja Luka changed its name into NLB a.d. Banja Luka	Q4 2015
	LHB banka a.d. Banja Luka	Merger with Razvojna banka jugoistočne Evrope into NLB Razvojna banka a.d. BL	Q2 2006
	Razvojna banka jugoistočne Evrope a.d. Banja Luka	Merger with LHB banka a.d. Banja Luka into NLB Razvojna banka a.d. Banja Luka	Q2 2006
12	Raiffeisen Bank d.d. BiH, Sarajevo		
	Raiffeisen Bank HPB d.d. Mostar	Merged to Raiffeisen banka d.d. Sarajevo	Q1 2003
13	ProCredit Bank d.d. Sarajevo	Microenterprise bank d.d. Sarajevo changed its name into ProCredit Bank	Q4 2003

Num	Bank	Type of change	Date of change
14	ZiraatBank BH d.d. Sarajevo	Turkish Ziraat Bank Bosnia d.d. Sarajevo changed its name into Ziraat Bank BH	Q1 2013
15	Union banka d.d. Sarajevo		
16	ASA banka Naša i snažna d.d.Sarajevo	Sberbank d.d. Sarajevo changed it name into ASA banka Naša i snažna d.d.Sarajevo	Q2 2022
	Sberbank d.d. Sarajevo	ASA Finance d.d. Sarajevo became owner of Sberbank d.d. Sarajevo	Q1 2022
	Sberbank d.d. Sarajevo	Volksbank d.d. Sarajevo changed its name into Sberbank d.d. Sarajevo	Q1 2013
	Volksbank d.d. Sarajevo	Sberbank group acquired Volksbank d.d Sarajevo	Q1 2012
17	Atos bank a.d. Banja Luka	Sberbank a.d. Banja Luka changed its name into Atos bank a.d. Banja Luka	Q2 2022
	Sberbank a.d. Banja Luka	Nova banka a.d. Banja Luka became owner of Sberbank a.d. Banja Luka	Q2 2022
	Sberbank a.d. Banja Luka	Volksbank a.d. Banja Luka changed its name	Q1 2013
	Volksbank a.d. Banja Luka	Sberbank group acquired Volksbank a.d. Banja Luka	Q1 2012
	Zepter Komerc banka a.d. Banja Luka	Became a member of Volksbank International AG, changed its name into Volksbank a.d. BL	Q3 2007
18	Intesa Sanpaolo banka d.d. BiH		
	UPI banka d.d. Sarajevo	Changed its name into Intesa Sanpaolo banka d.d. BiH	Q3 2008
	LT Gospodarska banka d.d. Sarajevo	Merged to UPI banka d.d. Sarajevo	Q3 2007
	Gospodarska banka d.d. Sarajevo	Merger with LT Komercijalna banka Livno into LT Gospodarska banka d.d. Sarajevo	Q1 2003
	LT Komercijalna banka d.d. Livno	Merger with Gospodarska banka Sarajevo into LT Gospodarska banka d.d. Sarajevo	Q1 2003
19	Nova banka a.d. Banja Luka	Nova banka a.d. Bijeljina changed its seat	Q3 2007
	Agroprom banka a.d. Banja Luka	Merged to Nova banka a.d. Bijeljina	Q1 2003
20	Naša banka a.d. Bijeljina		
	Pavlović International Banka a.d. Slobomir Bijeljina	Changed its name into Naša banka a.d. Bijeljina	Q4 2019
	Privredna banka a.d. Doboj	Merged to Pavlović International banka	Q2 2003
	Privredna banka a.d. Brčko	Merged to Pavlović International banka	Q4 2002
	Semberska banka a.d. Bijeljina	Merged to Pavlović International banka	Q4 2001
21	Banka Poštanska štedionoca a.d. Banja Luka		
	Komercijalna banka a.d. Banja Luka	Komercijalna banka changed the name to Banka Poštanska štedionoca a.d. Banja Luka	Q1 2022
	Komercijalna banka a.d. Banja Luka	Banka Poštanska štedionica a.d. Beograd bought Komercijalnu banku a.d. Banja Luka	Q1 2022
22	MF banka a.d. Banja Luka		
	IEFK banka a.d. Banja Luka	Changed its name into MF banka a.d. Banja Luka	Q3 2010

	Banks with revoked operating licence since 2002:	Datum promjene
1	Camelia banka d.d. Bihać	Q1 2002
2	Privredna banka a.d. Gradiška	Q1 2002
3	Ekvator banka a.d. Banja Luka	Q1 2002
4	International Commercial Bank Bosnia d.d. Sarajevo	Q3 2002
5	Banka za jugoistočnu Evropu Banja Luka	Q4 2002
6	Privredna banka a.d. Srpsko Sarajevo	Q4 2004
7	Gospodarska banka d.d. Mostar	Q4 2004
8	Ljubljanska banka d.d. Sarajevo	Q3 2006
9	Hercegovačka banka d.d. Mostar	Q3 2012
10	Postbank BH Poštanska banka BiH d.d. Sarajevo	Q2 2013
11	Bobar banka a.d. Bijeljina	Q4 2014
12	Banka Srpske a.d. Banja Luka	Q2 2016
13	Vakufska banka d.d. Sarajevo	Q4 2021

Source: CBBH

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