CENTRAL BANK
OF THE REPUBLIC OF AZERBAIJAN

FINANCIAL STABILITY REPORT

2021

№1

The Central Bank of the

Republic of Azerbaijan

FINANCIAL STABILITY REPORT*

*** The Report is based on data as of December 2021.**

ACRONYMS

CBA – The Central Bank of the Republic of Azerbaijan

MCGF - The Mortgage and Credit Guarantee Fund of the Republic of Azerbaijan

SOFAZ – The State Oil Fund of the Republic of Azerbaijan

ADB – The Asian Development Bank

OFCP – Open Foreign Currency Position

DTI – Debt-to-Income ratio

NBCI– Non-Bank Credit Institution

IMF – The International Monetary Fund

WB – The World Bank

SCC – The State Customs Committee

SCS – The State Committee for Securities

SSC – The State Statistics Committee

HP – Hodrick-Preskott filter

ind – individual

p.p. – percentage point

DDCs – developed countries

DGCs – developing countries

NPLs – non-performing loans

NGS – non-government securites

LE – legal entity

CA – Capital Adequacy

CAR – Capital Adequacy Ratio

MSME – Micro, small and medium entrepreneurship

ROA – Return on Assets

ROE – Return on Equity

RWA – Risk-weighted assets

GDP – Gross Domestic Product

OVDL – Overdue loans

WEO – World Economic Outlook

FX – foreign exchange

w.r.t – with reference to

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Executive summary

The year of 2021 was marked by supply chain challenges, energy price volatility and rising inflationary pressures around the world amid a recovery in global economic growth and complex geostrategic processes.

To eliminate the negative impact of the pandemic on the country's economy, the government and the Central Bank implemented comprehensive fiscal, monetary and macroprudential measures to support businesses, population and financial market participants affected by the pandemic, resulting in macroeconomic and financial stability. Against the backdrop of mitigating the effects and risks of the pandemic, the Central Bank has developed and implemented an exit strategy from regulatory easing regime.

Over the year, the banking sector was resilient to external shocks, despite uncertainties caused by the effects of the global pandemic. This was due to the tightening of the macroprudential policy framework in recent years, enhancing banks' risk management and credit underwriting policies, improving the banking sector's resilience to external shocks and ability to absorb potential risks by strengthening its liquidity and capital positions.

Along with the positive dynamics in asset quality and better risk management of credit institutions, credit risks decreased. Specific provisions created over the years have increased the banks' capacity to absorb potential credit risks.

The liquidity of the banking sector is in the comfort zone and is resilient to possible shocks. The sector's quick liquidity ratio is up to 2 times higher than the minimum prudential requirement.

The currency position of the banking system allows reducing currency risks by complying with prudential requirements. At the same time, the impact of interest rate risks on the sector's capital position is minimal. The process of de-dollarization of the deposit and lending portfolio, which began in 2016, continues.

The banking system was able to maintain its profitability. The capital position of the sector exceeds the required prudential norms and has the ability to absorb potential risks.

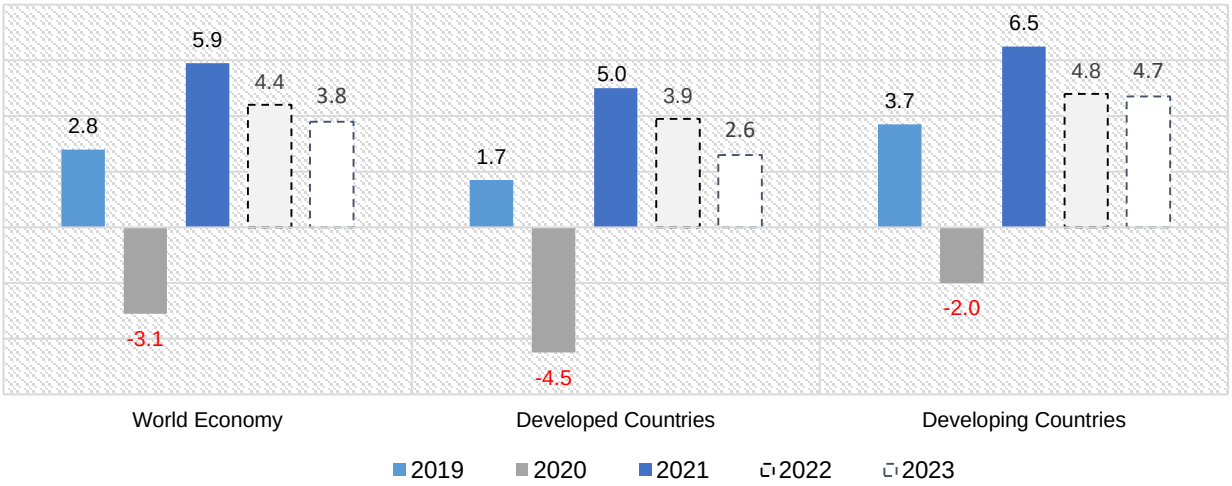
Despite the negative consequences of the pandemic, key financial indicators of the insurance sector continued the growth dynamics over the year. However, the level of penetration of the insurance sector is lower than in benchmark countries. The investment portfolio of the insurance sector consists mainly of government securities and bank deposits. Insurance companies are important institutional investors in the financial system, owning 1/3 of government securities. Over the year, the insurance sector has maintained its profitability. The sector's capital position exceeds the required prudential requirements.

The role of the capital market in the financial system intermediation is limited compared to other sectors. Government securities are the main drivers of the securities market. However, the corporate securities market and the REPO market demonstrated positive dynamics and trends.

The global macroeconomic environment

Despite the recovery of global economic growth amid mass pandemic vaccinations, uncertainty over new COVID-19 mutations, supply chain problems in the context of complex geostrategic realities, sharp fluctuations in energy and food prices and high inflation are major risks to global financial stability. According to IMF estimates, global economic growth in 2021 amounted to 5.9%. Economic growth in DGCs was higher (6.5%). However, spread of the new Omicron variant of COVID-19 triggered uncertainties. Thus, although the IMF predicted global economic growth at 4.9% in October 2021, expectations in January 2022 were lowered by 0.5% due to uncertainties, and global economic growth was projected at 4.4%.

Chart 1. Real GDP growth forecast, %



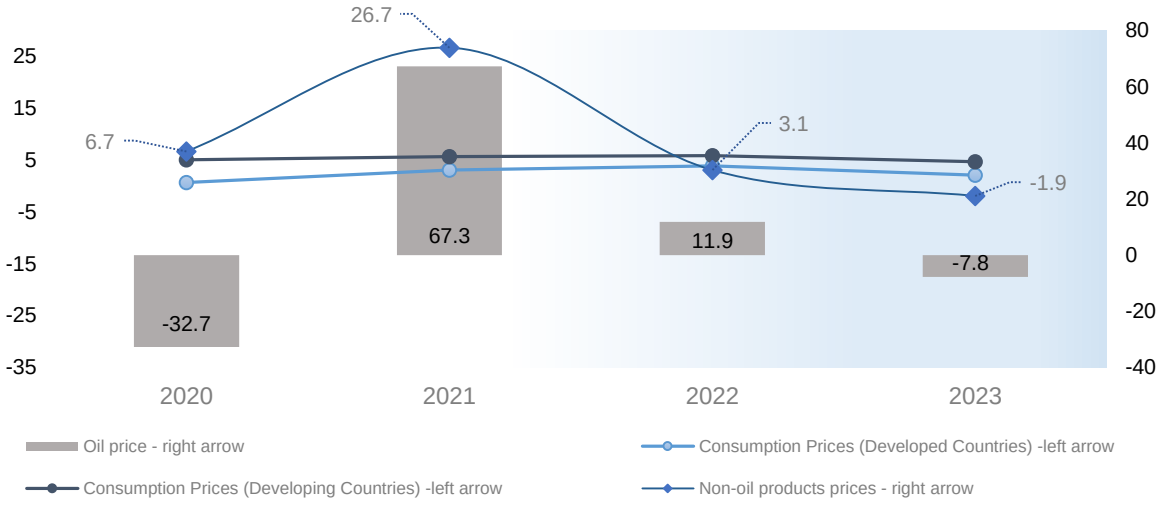
Source: IMF, World Economic Outlook (WEO) January 2022

Growing demand as a result of accelerating global economic growth and a weak recovery in the supply chain led to a significant increase in inflation in both DDCs and DGCs. Growing demand for consumer goods, especially in DDCs, has led to an overload of the global supply chain during the pandemic. As a result, delays in the logistics process and low inventory levels have led to shortages of consumer goods and rising prices. The IMF estimates that inflation is expected to stand high for some time, at 3.9% in advanced economies, at 5.9% in emerging markets in 2022, and will stabilize in 2023.

Rising inflationary pressures are tightening monetary policy of central banks. As a result, the risk of a significant increase in real interest rates in subsequent years could dampen the economic recovery in the short term. The exit of developed countries from the long-running expansionary monetary policy will lead to an increase in interest rates in advanced economies, which, in turn, may lead to capital inflows from DGCs and adversely affect their foreign exchange reserves and fiscal position.

Global commodity prices increased sharply amid rising economic activity. The increase in demand over the past year has affected the average price of crude oil. According to the Energy Information Administration (EIA), the average Brent oil price was $70.89 per barrel in 2021. According to the EIA's forecasts released in February 2022, the average oil price is expected to reach $83 in 2022 and $68 in 2023 per barrel.

Chart 2. Commodity price changes, %



Source: IMF, World Economy Outlook (WEO) January 2022

There is a decrease in fiscal deficits by country groups. In the post-pandemic period, the share of fiscal deficit in GDP in both DDCs and DGCs is declining due to the reduction in fiscal support in many countries. However, the tightening of monetary policy by central banks to prevent a sharp rise in inflation runs the risk of a faster-than-expected increase in the fiscal deficit in foreign-borrowed DGCs. Furthermore, with the improvement of the epidemiological situation, the direction of public spending has shifted from pandemic measures to support economic recovery and transformation into a post-pandemic period. Although the public debt-to-GDP ratio in the global economy decreased in 2021, following the sharp increase in 2020, pandemic uncertainties, high inflation and rising interest rates hinder the recovery of public debt to pre-pandemic level.

Table 1. The share of fiscal balance and public debt in GDP, %

	Fiscal balance				Government debt			
			Projection				Projection	
	2020	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
World economy	**-10.2**	**-7.9**	**-5.2**	**-4.2**	**98.6**	**97.8**	**96.9**	**97.0**
DDCs	***-10.8***	***-8.8***	***-4.8***	***-3.6***	***122.7***	***121.6***	***119.3***	***119.3***
USA	-14.9	-10.8	-6.9	-5.7	133.9	133.3	130.7	131.1
Eurozone	-7.2	-7.7	-3.4	-2.4	97.5	98.9	96.3	95.4
Japan	-10.3	-9.00	-3.9	-2.1	254.1	256.9	252.3	250.8
DGCs	***-9.6***	***-6.6***	***-5.8***	***-5.2***	***64.0***	***64.3***	***65.8***	***67.1***
Asia	-10.8	-7.9	-7.0	-6.2	67.3	70.1	72.4	74.2
Europe	-5.6	-3.2	-2.4	-2.1	38.0	36.6	36.7	36.8
Latin America	-8.8	-5.7	-4.9	-4.2	78.1	73.0	73.6	74.2
Oil producers	-7.5	-4.2	-2.2	-1.6	58.0	54.1	52.9	52.2

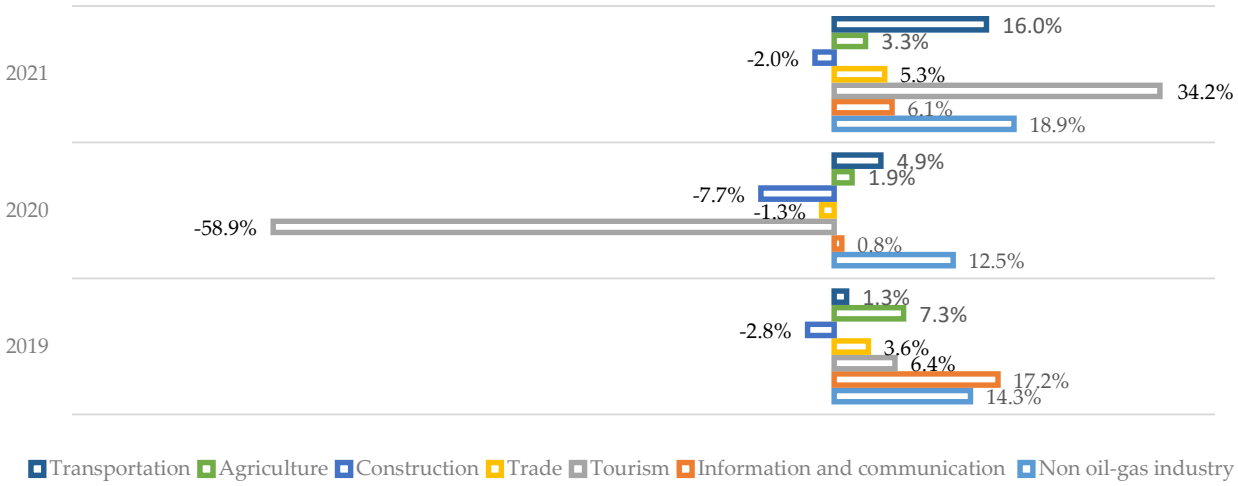
Source: IMF, Fiscal Monitor, 2021 October

The macroeconomic situation in Azerbaijan

In 2021, the macroeconomic stability was maintained despite uncertainties related to pandemic and rising inflationary pressures. Over the past year, the country's economy has grown amid the declining negative effects of the pandemic. GDP increased by 5.6% to AZN 92.9B in 2021. GDP growth was driven by both oil and non-oil sectors. Thus, the value added in the oil and gas sector increased by 1.8% during the year, and in the non-oil and gas sector by 7.2%. The non-oil sector was a major driver of economic growth. 62.2% of GDP was formed due to the non-oil sector.

In 2021 economic growth restored in most areas of the non-oil sector. The main drivers of non-oil GDP were: i) non-oil industry: 18.9%, ii) transport: 16% and iii) trade: 5.3%. As a result of the reduction of the negative effects of the pandemic, the decline observed in the tourism and trade sectors in 2020 was replaced by an upward trend.

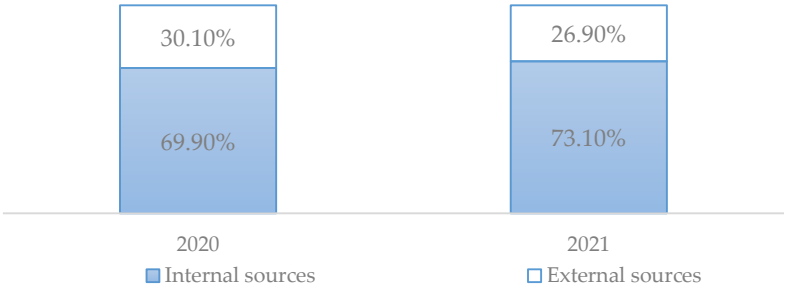
Chart 3. Non-oil economic growth rate



Source: SSC

According to the SSC, in 2021, AZN 16B worth of funds channeled to develop the country's economic and social spheres. In general, AZN 11.8B or 73.1% of investments during the year stemmed from internal sources.

Chart 4. Structure of investments in fixed assets

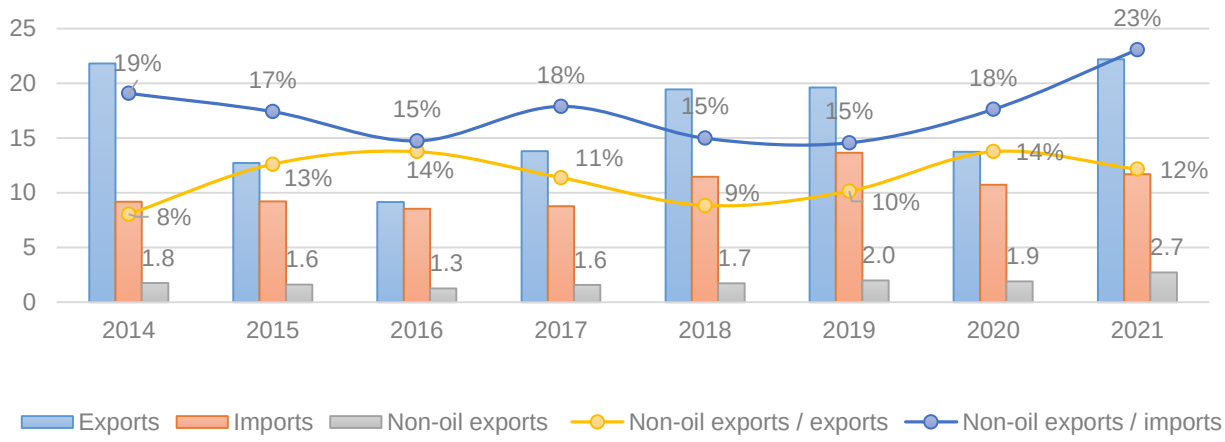


Source: SSC

Nominal income and wages of the population increased. As of the end of 2021, the number of economically active population was 5303.9 thousand persons, of which 4988.2 thousand persons were employed. The average monthly nominal wage of employees increased by 3.4% in 2021 and amounted to 732.1 AZN. Nominal income of the population yoy increased by 2.6% in 2021 up to AZN 57.2B. The dynamics of growth in nominal income and nominal wages of the population supported the recovery of aggregate domestic demand by affecting consumer behavior. The number of hired labor was 1705.1 thousand persons, of which 53% (904.7 thousand persons) involved in the public sector and 46.9% (800.4 thousand) in the private sector.

In 2021 accelerated inflation in the world, as well as the effect of cost factors weighed on inflation rate. According to the SSC, in 2021, 12-month inflation was 12% and average annual inflation was 6.7%. The increase in general inflation was mainly due to the increase in food prices. Thus, 12-month inflation in food products was 15.8%. Annual increase in the prices of non-food products and services were 7.7% and 10%, respectively. In general, inflation was driven by rising world food prices, rising inflation in trading partners and rising aggregate demand. The monetary policy pursued by the Central Bank is aimed at returning inflation to the target range. Thus, starting from the second half of the year, the Central Bank raised the refinancing rate three times in a row, from 6.25% to 7.25% (the floor 6%, the ceiling 8.25%). Moreover, to prevent high and permanent prices, on 21 February 2022, the decree ‘On urgent measures to strengthen antiinflationary measures in the Republic of Azerbaijan’ was signed. A working group was established under the Cabinet of Ministers to take appropriate measures to minimize the impact of inflation on business activity and social welfare of the population and to reduce the negative effects of inflation.

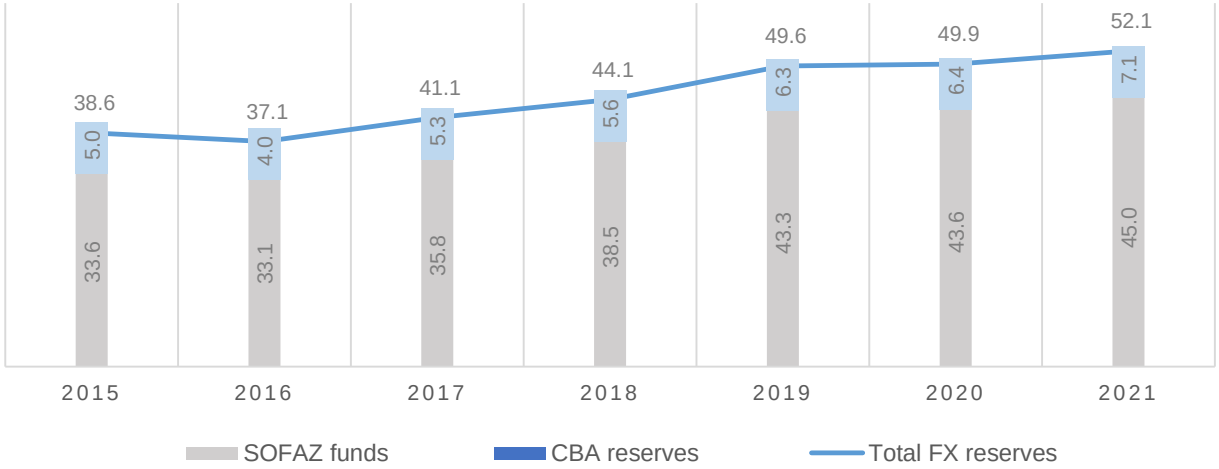
Chart 5. Dynamics of import and export, bln. AZN



Source: SCC

Over the year, the foreign trade position was formed in the context of the recovery of global economic growth due to declining impact of the pandemic and changes in the prices of major export products. According to the SCC, exports in 2021 increased by 62% (USD 8.5B) Yoy and amounted to USD 22.2B, while imports increased by 9% (USD 1.0B) to USD 11.7B. Non-oil and gas exports Yoy increased by 42.8% and amounted to USD 2.7B, which is higher than pre-pandemic level. The high growth in exports was due to both increased crude oil exports and non-oil exports amid growing demand in global energy markets.

Chart 6. FX reserves of the CBA and the SOFAZ, bln. USD

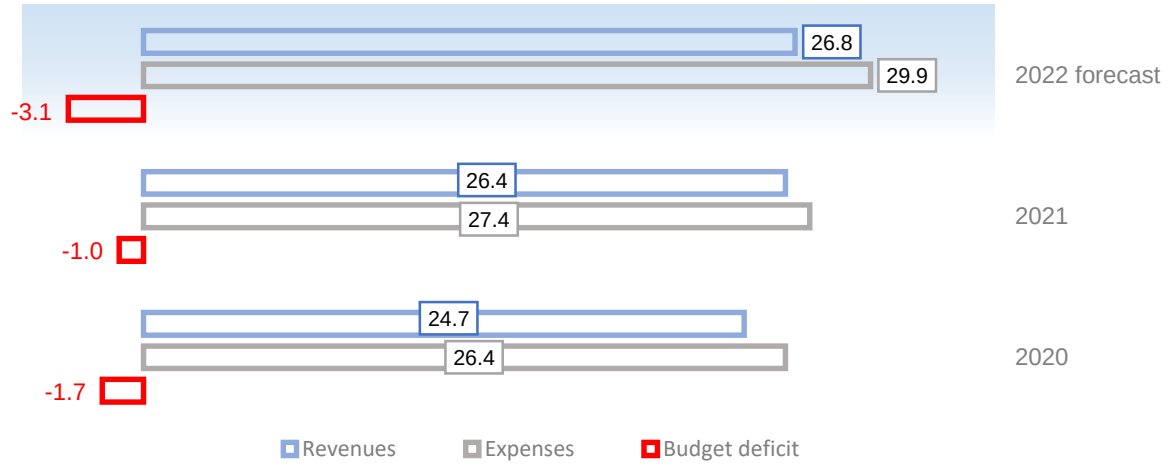


Source: CBA, SOFAZ

The long-term growth dynamics of strategic FX reserves continues. The growth observed in FX reserves since 2016 continued in 2021. The increase was due to both SOFAZ funds and the CBA's FX reserves. The Central Bank's FX reserves reached USD 7.1B in 2021 having increased since 2016. In general, the volume of FX reserves reached a five-year high during the year.

State fiscal support played a crucial role in mitigating the negative effects of the pandemic and reopening economic activity. Budget expenditures increased amid a decrease in the impact of the COVID-19 pandemic on economic growth, as well as the implementation of measures to support the welfare of the population and restore liberated lands. The state budget for 2021 concluded in AZN 1.0B worth deficit, which makes 1.1% of GDP. State budget revenues for the year amounted to AZN 26.4B, expenditures – AZN 27.4B. In 2022, state budget revenues are projected at AZN 26.8B and expenditures at AZN 29.9B. In addition, AZN 2.2B was allocated for the reconstruction and restoration of the liberated territories. Against the backdrop of an increase in budget expenditures for 2022, the upper limit of the budget deficit was set at AZN 3.1B.

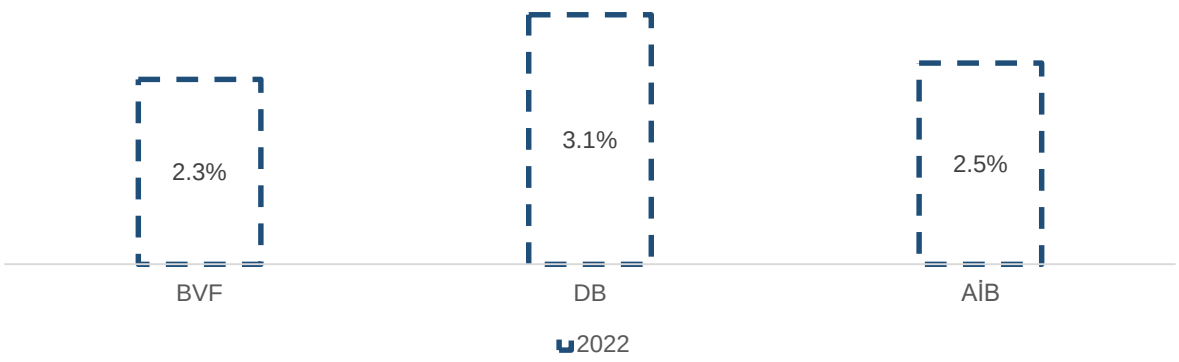
Chart 7. Revenues and expenses of the state budget, bln. AZN



Source: The Ministry of Finance

International organizations forecast economic growth in Azerbaijan in the coming years. From the first half of 2021, the easing of the quarantine regime and the rapid continuation of the vaccination process have laid the foundation for the restoration of economic activity. According to the forecasts of international organizations, GDP growth in 2022 is projected in the range of 2.3-3.1%.

Chart 8. GDP growth forecasts of international organizations on Azerbaijan



Source: Official data of international organizations

International rating agencies such as Fitch and S&P have rated the country's sovereign rating in 2022 as "stable" with a "BB +" rating. While uncertainties about new COVID-19 mutations and high global inflation remain a risk, a rapid recovery in economic growth, high-energy prices in global markets, growing positive trade balance and increasing strategic FX reserves allow maintaining the stability of the macroeconomic environment in which the financial system operates.

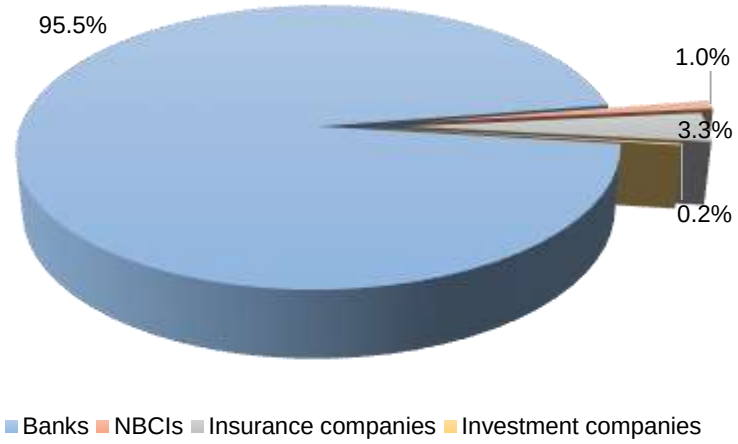
Overview of the banking system

Acceleration of the vaccination process in 2021, easing of epidemiological restrictions on the COVID-19 virus led to positive dynamics in the economy, including the banking sector. Over the year the dynamics of financial indicators on profitability, liquidity and capitalization in the banking sector was in the positive zone. The analysis shows that the financial system is highly resilient to external shocks[1].

- ***The role of the banking system in financial intermediation:***

The country has a bank-based financing model. Assets of the financial sector in 2021 constitute AZN 40.3B amounting to 43.4% of GDP (69.7% of non-oil GDP). The banking sector is the main intermediary in the financial system. Thus, the assets of the banking sector account for 95.5%, insurance companies for 3.3%, investment companies and non-bank credit institutions (NBCIs) for 1.2% of the assets of the financial sector. The assets to GDP ratio, one of the indicators characterizing banking sector's financial intermediation, was 41.4%. Note that this ratio is lower than that of benchmark countries (Georgia - 117%, Kazakhstan - 44%, Poland - 105%), indicating the future growth potential of the banking sector.

Chart 9.Financial system assets



Source: CBA

There are 26 banks in the country. Two of these banks are state-owned. The number of banks with foreign capital is 12, including 2 local branches of foreign banks. The service network of the sector consists of 479 branches, 97 departments, 2,907 ATMs, 20.3 thousand employees. It should be noted that the number of branches increased by 5.2% (24 branches), the number of ATMs by 7% (192 ATMs) and the number of employees by 8.6% (1621 employees) over the year.

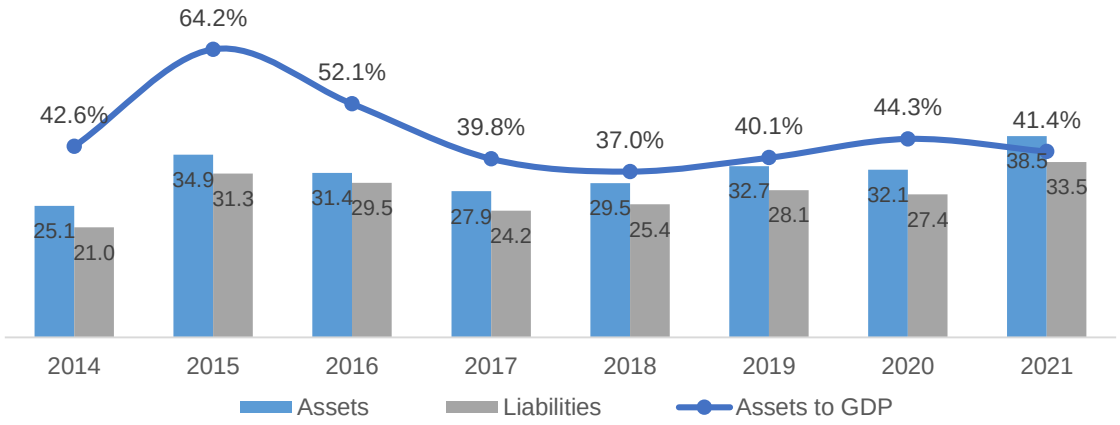
[1] The analysis of the banking sector was conducted based on prudential reporting of banks.

- The dynamics of banking sector assets and liabilities

Over the year amid the recovery in economic growth and an increase in domestic demand, the balance sheet capital of the banking sector increased significantly. During the year assets of the banking sector increased by 20% (AZN 6.4B) to AZN 38.5B. Liabilities increased by 22% (AZN 6.1B) to AZN 33.5B.

As of the end of 2021, 40.3% of the banking sector's assets are the net loan portfolio, 36.1% are liquid assets, 5.7% are deposits and loans in financial institutions, and 17.9% are other assets. Liabilities of the banking sector consist mainly of the deposits of legal entities. Thus, 53.5% of liabilities are deposits of legal entities, 27.0% - deposits of individuals, 12.2% - liabilities to financial institutions, 7.3% - other liabilities.

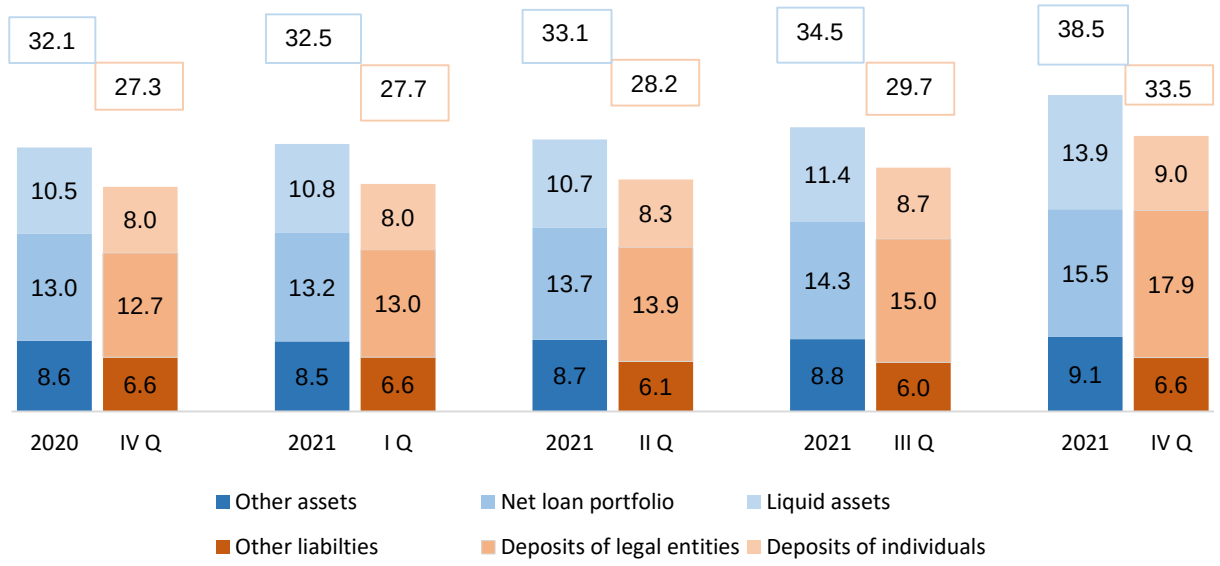
Chart 10. Dynamics of banking system assets and liabilities, bln. AZN



Source: CBA

The volume of assets exceeded the level observed before the financial crisis in 2015-2016. Over the year amid the gradual recovery of the economy, there was a steady increase in assets and liabilities. The process of economic transparency and growth of non-cash transactions, as well as the growth of deposits of individuals supported the growth of resources attracted by the banking sector, which is a key indicator of confidence in the banking system. It should be noted that deposits of legal entities increased by 41% over the year and deposits of individuals by 12%. At the same time, there is a transformation of funds attracted by the banking system into a loan portfolio. Thus, the loan portfolio increased by 17.7% over the year.

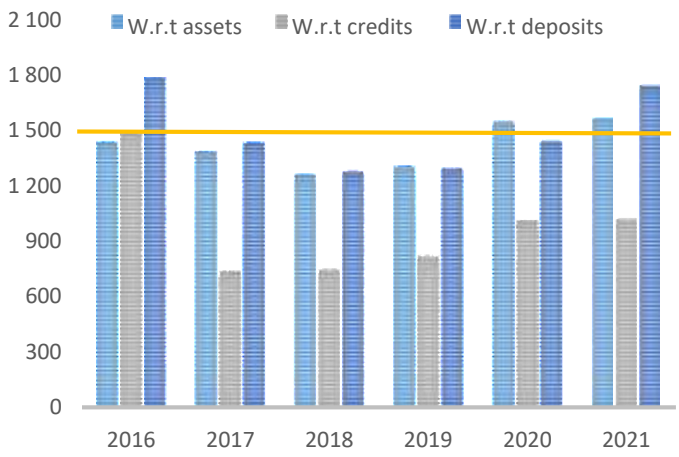
Chart 11.Dynamics of the structure of banking system assets and liabilities, bln.AZN



Source: CBA

- ***The concentration in the banking system***

Chart 12. HHI index



Source: CBA

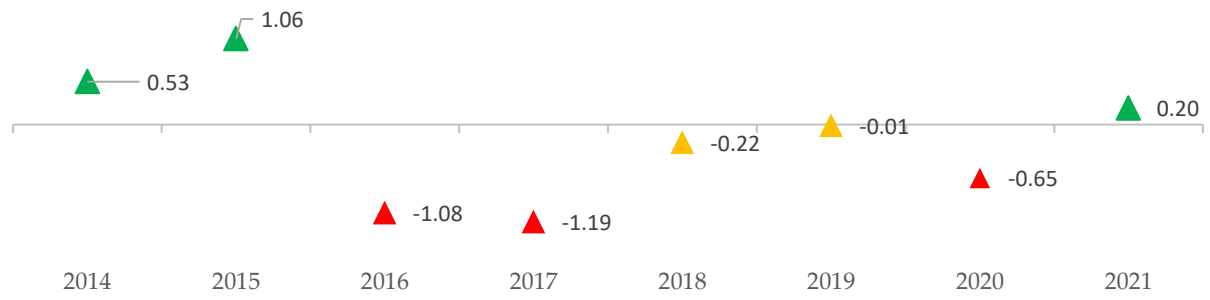
The level of concentration in the Azerbaijani banking system is on the border of low and medium concentration. The Herfindahl-Hirschman Index - HHI[2], which is widely used in international practice to assess concentration, displays low and medium levels of concentration in the banking system. This is due to the large number of small and medium-sized banks in the sector. Thus, the HHI was respectively 1017, 1741 and 1567 in terms of the share in assets, loans and deposits. This indicates that the sector displays low concentration in the loan portfolio, is at the border of the low and medium level of concentration in bank assets (1500>), and a medium level of

[2] The Herfindahl-Hirschman Index (HHI) is a common measure of market concentration and used to determine market competitiveness. According to the practice of the US Justice Department, three markets are distinguished under this index: competitive markets with an HHI less than 1500 (HHI<1500), moderately concentrated markets (1500<HHI<2500) and highly concentrated markets (HHİ>2500). It can range from zero to 10000.

concentration in the deposit portfolio. It should be noted that over the past three years, concentration levels in the sector have increased.

The banking sector fragility index (BSFI) improved. The BSFI index, which is widely used in international practice, assesses the resilience of the banking sector. The index is defined as the average value of the standard deviation of loans granted to the private sector, foreign debt obligations and deposits of the population. A sharp change in the index is assessed as an impact on the sustainability of the sector. As of the end of 2020, the sector's fragility index[3] Yoy decreased to '-0.65', which indicated an increased risk levels during pandemics and lockdowns. In 2021, the index improved to '0.20' driven by the economic growth recovery and banks' balance sheet expansion.

Chart 13. BSFI index



Source: CBA

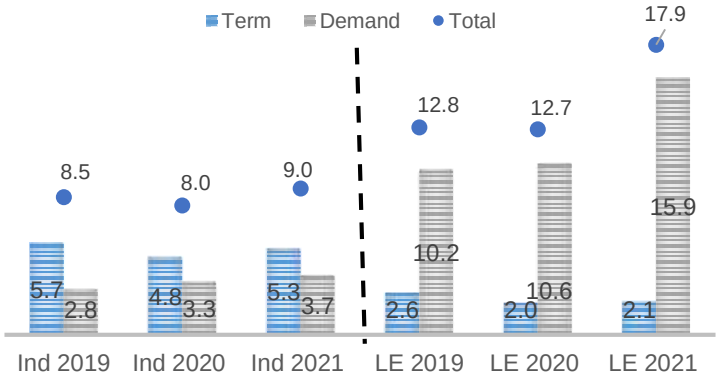
- ***Resources attracted by the banking sector***

80.4% of banks' liabilities is the deposit portfolio of individuals and legal entities. In 2021 the sector's deposit portfolio increased by 30.0% (AZN 6.2B) to AZN 26.9B. 27.4% of the deposit portfolio are term deposits and 72.6% are demand deposits. Deposit portfolio consisting of mainly demand deposits limits long-term financing opportunities and requires banks to maintain a large liquidity buffer.

[3] BSFI index between [-0.5; and lower) indicates higher fragility and probability of the realization of risks, BSFI index between (-0.5; 0) indicates moderate fragility, the value between (0; 0.5) - indicates high growth rate of the banking system and accumulation of potential risks, and the value of [0.5; and above) – indicates heating up and formation of a bubble.

Deposits of legal entities are the main source of financing for the sector. 66.5% of banks' deposit portfolio is deposits of legal entities. In general, the share of corporate deposits in liabilities is 53.5%. Over the year deposits of legal entities increased by 41.2% (AZN 5.22B) to AZN 17.9B. 99.7% of this increase is due to an increase in demand deposits (an increase of AZN 5.21B). 88.5% of legal entities' deposits (AZN 15.9B) are demand deposits.

Chart 14. Dynamics of the deposit portfolio of individuals and legal entities, bln.AZN

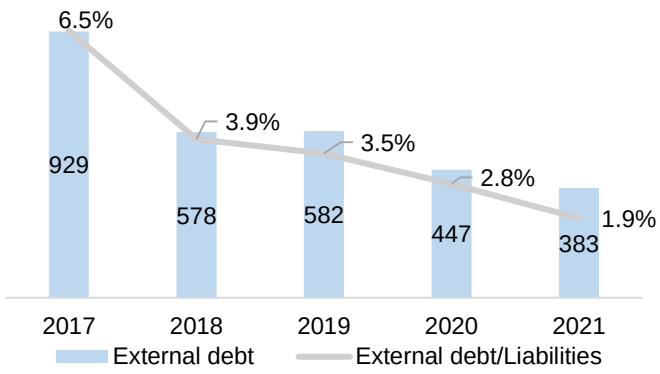


Source: CBA

The deposit portfolio of banks increased partially due to the updated framework of the deposit insurance mechanism. Since April 2021, the new framework of deposit insurance mechanism has been implemented. The amount of compensation for protected deposits of individuals was increased from AZN 30,000 to 100,000 (the equivalent of AZN 100,000 in foreign currency), deposits of individuals engaged in individual entrepreneurship were covered by the deposit insurance mechanism (compensation is set at AZN 20,000), as well as funds of individuals in deposit accounts of notaries were fully insured. The new architecture of the deposit insurance system allows fully protecting the deposits of the vast majority of depositors, improving risk management in banks, strengthening market discipline and the competitive environment, thereby ensuring the resilience of the banking system and reliable protection of depositors' interests. Driven by the strengthening of depositors' confidence in the banking system by the new deposit insurance framework, the deposit portfolio of banks demonstrated positive dynamics. Thus, the deposit portfolio of individuals in the sector increased over the year by AZN 988M (12%) and amounted to AZN 9,032M (33.5% of the total deposit portfolio). As of the end of 2021, deposits of individuals accounted for 27% of banks' liabilities. There are positive trends in the structure of deposits along with an increase in their volume. Over the year the dollarization of deposits decreased by 9.6 p.p. to 41.7%. The share of term deposits with long-term and sustainable financing resources in the total volume of deposits of individuals is 59% (AZN 5.3B).

The sector's external debt continues to decline. In 2017-2020, external debt of banks decreased more than twice, and over the year decreased by 14.3% (USD 63M) to USD 383M[4]. The share of the banks' foreign debt in the structure of liabilities amounted to only 1.9%. Only 27% of payments on foreign debt of the banks shall be paid next year.

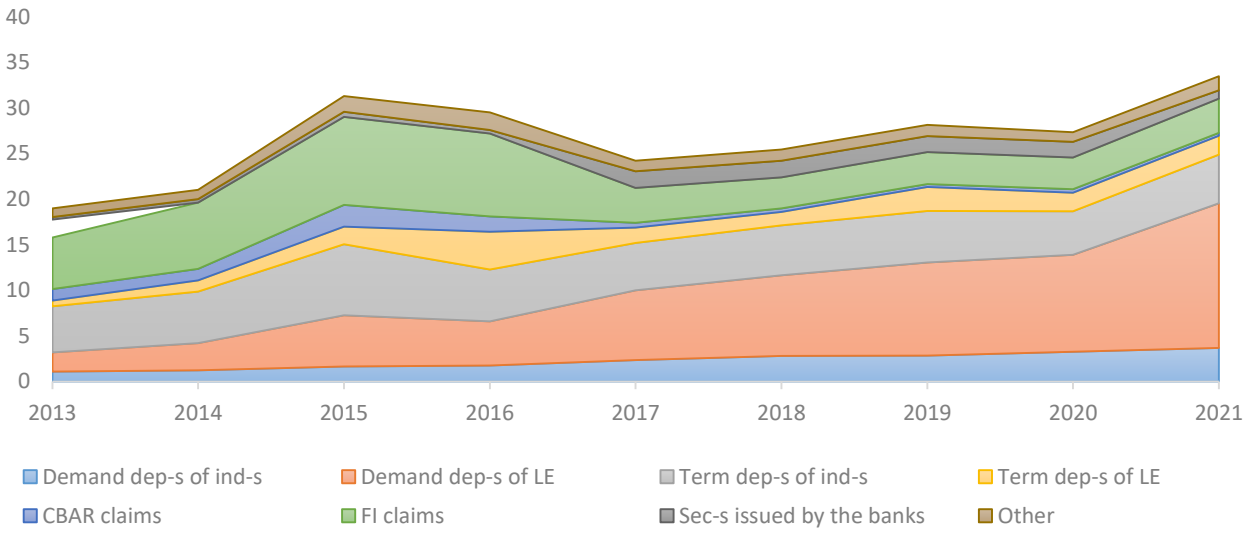
Chart 15. Foreign debt dynamics, mln. USD



Source: CBA

Demand deposits of legal entities are the main driver of banks' resource base.

Chart 16. Dynamics of the structure of funds attracted on the banking sector, bln. AZN



Source: CBA

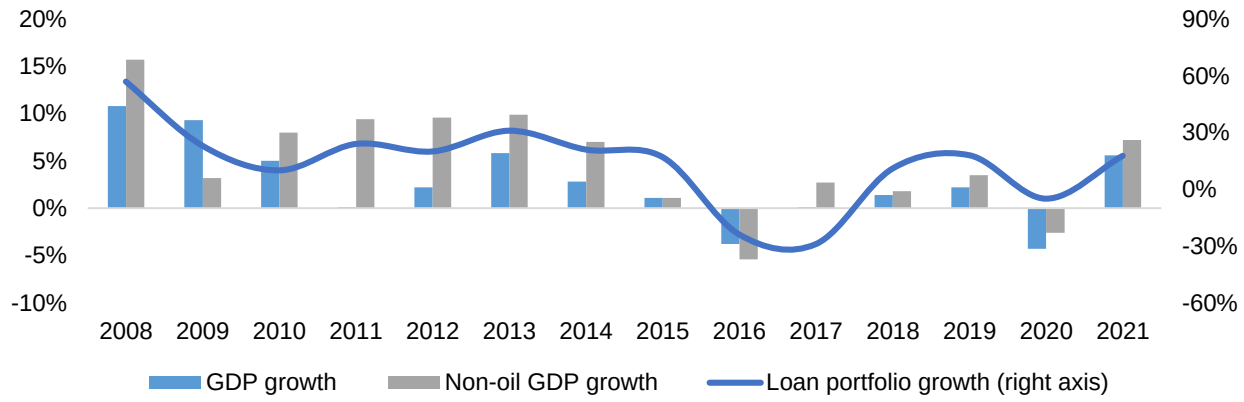
Although in 2013-2016, the resources were attracted mainly from the financial sector, after 2017 main part of resources consisted of demand deposits of legal entities. The implementation of the Law on non-cash settlements adopted in 2016, as well as the measures taken to increase the transparency of the economy, led to an increase in demand deposits of legal entities. 57% of demand deposits of legal entities are larger than AZN 1M. The level of concentration of demand deposits of legal entities is under supervisory surveillance. At the same time, since 2016, the share of bank securities in the financing has increased.

[4] Foreign debt refers to term liabilities attracted by banks from foreign financial institutions and legal entities on the basis of prudential reporting.

- ***The lending activity of the banking system***

There is a resumption of lending activities of banks in the post-pandemic era. Over the past year, the loan portfolio increased by 17.7% (AZN 2.5B) to AZN 16.7B. Amid the uncertainty surrounding the pandemic, simultaneous measures taken by the government and the Central Bank have accelerated the economic recovery this year.

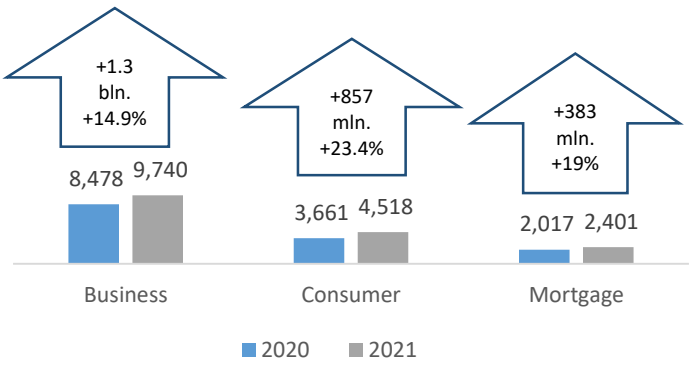
Chart 17. Comparison of the loan portfolio and GDP growth rate



Source: CBA

The analysis shows that there is a high correlation between the dynamics of the loan portfolio and the dynamics of economic activity (+0.79 correlation).In 2021 the volume of the business loan portfolio increased by 14.9% (AZN 1.3B) to AZN 9.7B. Over the year the mortgage portfolio rose by 19% (AZN 383M) and equaled to AZN 2.4B. Increase in the mortgage portfolio was mainly due to the state mortgage program. Over the period the consumer loan portfolio increased by 23.4% (AZN 857M) to AZN 4.5B. The realization of deferred demand during the pandemic, as well as an increase in the nominal income of the population, led to the growth of the consumer portfolio. The ongoing macroprudential policy aims at making consumer lending sustainable and healthy. As part of the new macroprudential policy of consumer lending, new prudential requirements for additional reserves and capitalization have been developed. To prevent over-indebtedness on consumer lending, the upper limit of the debt burden has been set, additional required reserves have been determined in case the

Chart 18. Annual dynamics of the lending portfolio, mln. AZN

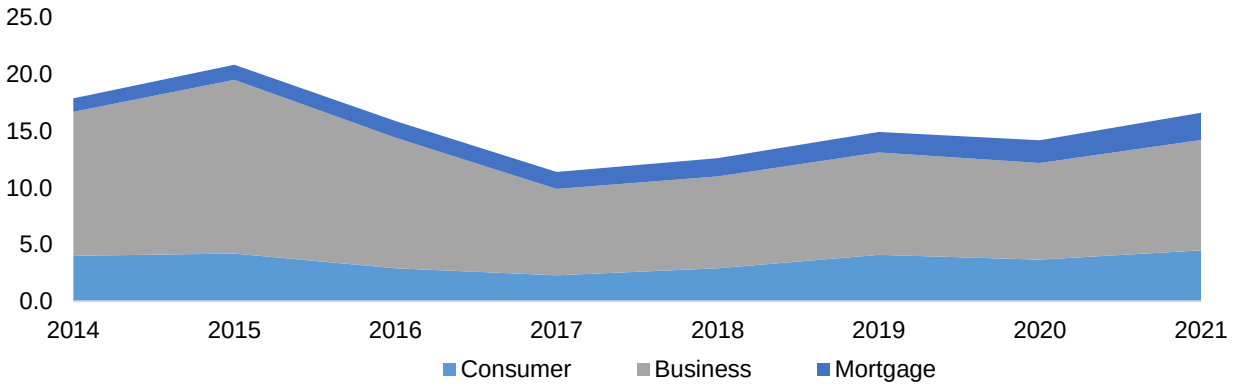


Source: CBA

DTI ratio being higher than 45%, consumer loans in foreign currency are limited to borrowers with income in foreign currency, the required reserves for such loans have been further increased, restrictions on the term of consumer loans have been introduced. As part of the new macroprudential capital requirements, an increase in risk-weighted assets applied depending on the DTI ratio, interest rate, term and currency.

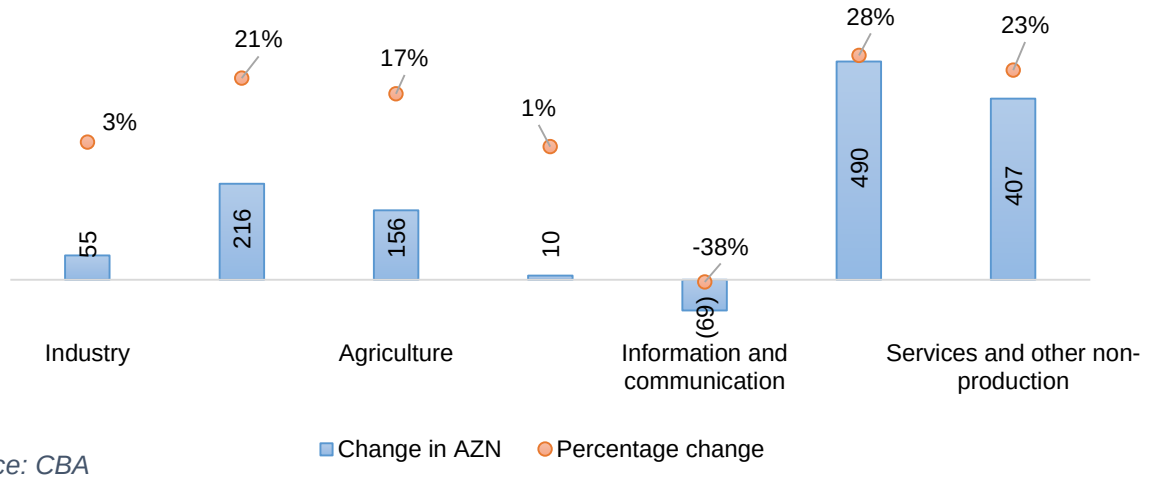
Economic recovery in the post-pandemic period was accompanied by increasing demand for business loans. The business portfolio in 2021 increased Yoy by 14.9% (AZN 1.3B) to AZN 9.7B. The growth of the business portfolio was mainly formed in trade, services and other non-manufacturing sectors. Business loans accounted for 58% of the total lending portfolio.

Chart 19. Dynamics of the lending portfolio structure, bln. AZN



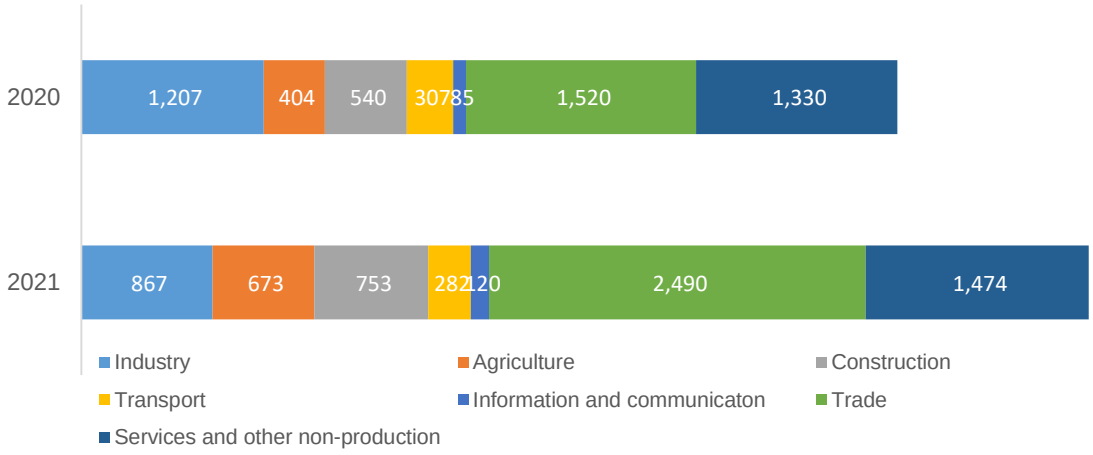
Source: CBA

Chart 20. Annual dynamics of the business portfolio, mln. AZN



Source: CBA

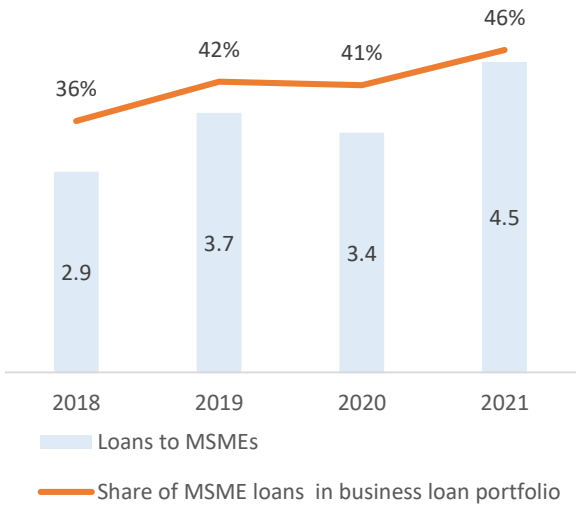
Chart 21. Dynamics of the structure of newly issued loans, mln. AZN



Source: CBA

In general, newly issued business loans Yoy rose by AZN 1.3B and equaled to AZN 6.7B. **One of the main goals of the banking system is to ensure the lending activity for the real sector.** During the pandemic, active anti-crisis measures and measures to support entrepreneurs minimized the negative impact on businesses and provided access to liquidity. Despite some progress in financing the real sector, there are still barriers to MSME's access to financial services. One of the limiting factors is that the financial statements of MSMEs do not meet the requirements for the underwriting process. According to a survey conducted by the ABA, the financial statements of 48% of MSMEs are not suitable for the underwriting process. Moreover, collateral restrictions and difficulties in securing collateral are among the factors that make it difficult for MSMEs to access finance.

Chart 22. Dynamics of loans issued to MSMEs, bln. AZN



Source: CBA

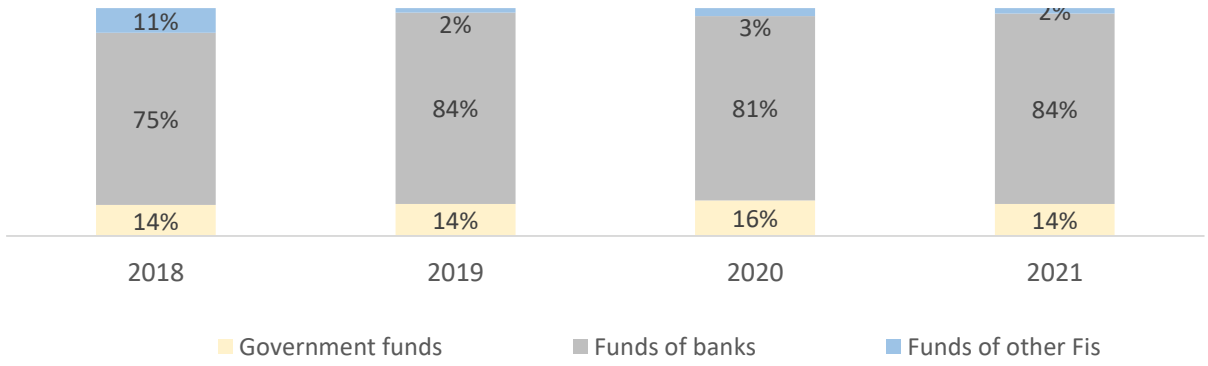
In recent years, there have been positive trends in lending to micro, small and medium enterprises. Thus, compared to 2018, the volume of loans to MSMEs increased by 55% to AZN 4.5B. Although the volume of MSME lending decreased as a result of the

COVID-19 pandemic in 2020, it was replaced by an upward trend in 2021. Thus, over the past year, loans to MSME entities increased by 29% (AZN 1B).

Along with state support mechanisms, the share of banks' own funds in lending to MSMEs is also growing. State support mechanisms are important in ensuring lending to MSMEs. Since 2018 the volume of loans issued to MSMEs at the expense of state funds has increased by 58% to AZN 0.6B. In recent years, banks have been actively involved in financing MSMEs from their own funds. Thus, the share of loans issued by banks at their own expense in the total portfolio rose by 9 p.p. in the last 3 years to 84%. There is also an increase in MSME loans guaranteed by the MCGF. Thus, compared to 2019, the volume of guaranteed MSME loans in 2021 increased by 4.8 times to AZN 128M.

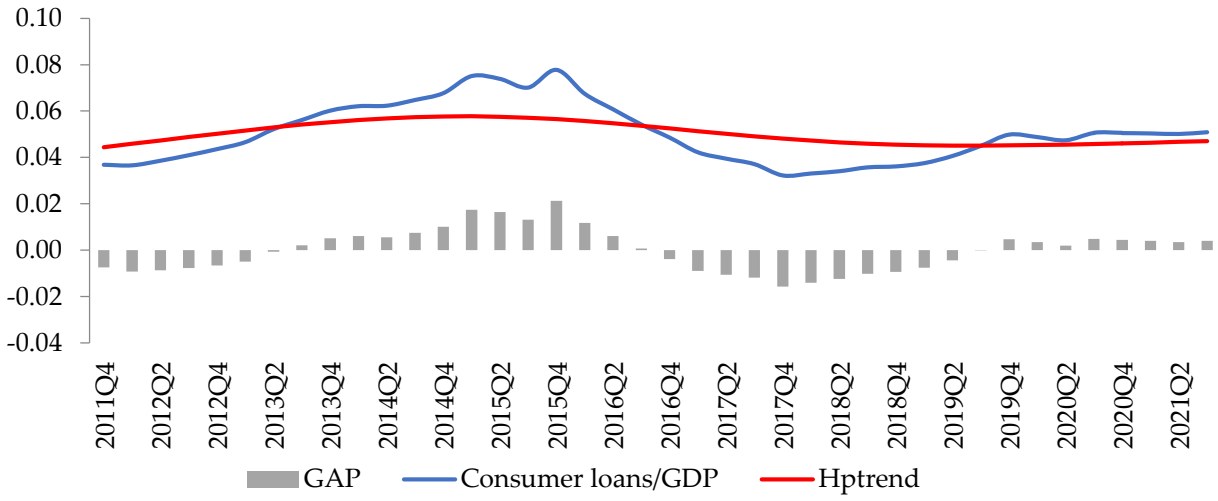
With the lifting of quarantine measures applied during the pandemic, consumer loans increased against the backdrop of the realization of the deferred demand.

Chart 23. Funding source structure of loans to businesses



Source: CBA

Chart 24. The consumer loan portfolio to GDP ratio, HP trend in %



Source: CBA

The realization of the demand deferred during the pandemic in 2021 has become the main driver of growth in the consumer portfolio over the past year.

The growth dynamics of the consumer portfolio is kept in focus. Because of the rapid growth dynamics of consumer loans from 2020, the consumption / GDP ratio has exceeded the long-term HP trend. In recent years, the regulating authority has been pursuing a macroprudential policy to limit consumer lending. The policy is aimed at preventing over-indebtedness by improving the risk analysis and underwriting process in banks, bringing consumer lending to a sustainable and healthy level and inculcating responsible borrowing habits. The share of the consumer portfolio in GDP in Azerbaijan is 5%, which is not high compared to international benchmarks.

Box 1. Central Bank measures to support the financial sector in the context of the COVID-19 pandemic

In accordance with the Action Plan approved by the Cabinet of Ministers with respect to the implementation of the relevant Decree of the President of the Republic of Azerbaijan on “A number of measures to mitigate the negative impact of the COVID-19 pandemic on the economy, macroeconomic stability, employment and businesses in the country’, the Management Board of the Central Bank of the Republic of Azerbaijan with its Resolution No.16 dated 24 April 2020 approved the Additional Support Actions Plan and the ‘Procedure for temporary regulation of acitivities of credit institutions on the backdrop of coronavirus (COVID-19) pandemic’.

This procedure envisages the application of the following key decisions and recommendations for the banking sector:

1. It has been recommended to banks and non-bank credit organizations to restructure the loans of individuals and individual entrepreneurs affected by the pandemic covered by state support mechanisms;

2. It has been recommended to banks and non-bank credit organizations to restructure the loans of individuals and individual entrepreneurs affected by the pandemic covered by state support mechanisms:

- the classification category of business loans issued to legal entities and individuals, whose credit interest rates are subsidized, is not deteriorated from the date of subsidy payment, irrespective financial standing of a borrower;

- the classification category of restructured business loans which are classified as satisfactory as of 1 March 2020, and of which interest rates of are subsidized, is not deteriorated;

- the classification category of restructured mortgage loans which are classified as satisfactory as of 1 March 2020 and issued out of funds of bodies established by the state funds, is not deteriorated.

3. Banks were recommended not to accrue additional penalty interest, delinquency charge, fines and other payments to borrowers in case of delay in loan obligations of legal entities and individuals in the conditions of pandemic, and not to deteriorate the credit history of borrowers;

4. The risk weight on mortgage loans issued by banks at their own expense has been reduced (from 100% to 50%);

5. The risk weight on microcredits provided by the Agrarian Credit and Development Agency has been reduced (from 100% to 20%);

6. The risk weight of national currency denominated business loans issued to producers of medical supplies and equipment, has been reduced (from 100% to 20%).

7. Payment of dividends on results of previous years of the banks and insurance institutions has been deferred.

To reduce the regulatory burden:

8. The total regulatory capital adequacy ratio of banks has been reduced by one percentage point (for systemically important banks up to 11% and for other banks up to 9%).

9. Countercyclic capital buffer is set 0 (zero) percent.

10. Considering market and operational risks when calculating Tier I and total regulatory capital adequacy ratios has been postponed.

11. The introduction of additional risk rates based on the ratio of debt to income on consumer loans (DTI ratio), maturity, interest and currency indicators has been suspended.

12. The due diligence audits have been suspended.

In addition, to stimulate cashless payment services during the pandemic and reduce the costs of economic entities for these services, the service fees deducted from banks in the Central Bank's interbank payment systems, as well as acquiring tariffs on entrepreneurs' payment cards have been reduced by about 50%.

Regulatory reliefs were provided to securities market participants (suspension of inspections, etc.), as well as tariffs on transactions concluded in the securities market, as well as tariffs for listing on the Baku Stock Exchange were suspended.

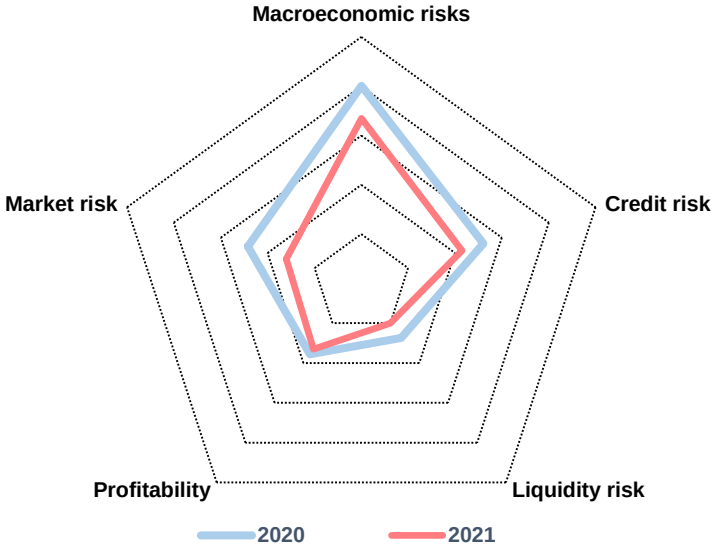
Following the adoption of the package of measures, the period of application of support measures and regulatory requirements was extended 5 times, taking into account the waves of the pandemic. Taking into account the current state and risks of the financial sector in 2020 and 2021, as well as the results of periodic assessments of the impact of regulatory reliefs and restrictions on the financial stability of the sector, as well as the recommendations of international financial institutions, the Central Bank constantly refined its regulatory support regime, including a phased exit strategy from the regulatory easing regime and made policy decisions. In 2021, the deferred regulatory requirements were restored, and the application of regulatory reliefs was completed.

At present, there are no special regulatory requirements or reliefs related to the pandemic in the financial sector.

At the same time, the regulatory framework for calculating capital adequacy for the application of reduced risk weights on mortgage loans issued by banks at their own funds, as well as microcredits provided by the Agrarian Credit and Development Agency was continued. According to the regulatory requirements for the calculation of the bank's capital and its adequacy, the countercyclic buffer calculated for the next period from 31.12.2021 was set 0%.

- ***The risk balance of the banking sector improved.***

Chart 25. Banking sector risk mapping



Source: CBA

Macroeconomic risks:
Although economic growth prospects have strengthened over the year along with the of mass vaccinations, uncertainty created by complex geostrategic processes and global inflation remain as major macroeconomic sensitivities. At the same time, the stability of the manat exchange rate is the main anchor of the macroeconomic stability.

Credit risks:
Positive dynamics in asset quality and write-offs on bad portfolios led to an improvement in the quality of the lending portfolio. However, the quality of the portfolio, the level of provisioning and the restructured portfolio is under the constant monitoring of the supervisory authority.

Profitability:
The banking sector operating in a complex macroeconomic environment, has maintained its profitability.

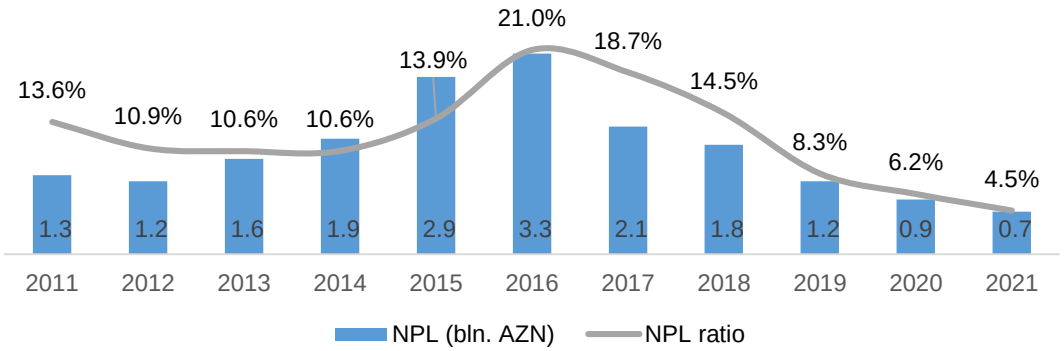
Market risks:
The decline in the open currency position in the banking sector and the de-dollarization process, which continues since 2016, have led to a reduction in market risks.

Liquidity risks:
The liquidity of the sector is in the comfort zone and fully meets prudential requirements. Efforts will be continued to distribute liquidity more homogeneously across the sector.

Credit risk of the banking system

With the resumption of economic growth in 2021, credit risks decreased significantly in quantitative terms. In 2021 the non-performing loan portfolio of the banking system decreased by 14.6% (AZN 128M) to AZN 0.7B. As a result, the non-performing loans (NPLs) ratio was 4.5%, decreasing by 1.7 p.p. since the beginning of the year. With the improvement of the epidemiological situation, the positive dynamics in the payment behavior of borrowers and the write-off of bad portfolios of banks have led to a decrease in the NPL ratio. Over the past year the non-performing loan portfolio ratio has remained at a record low.

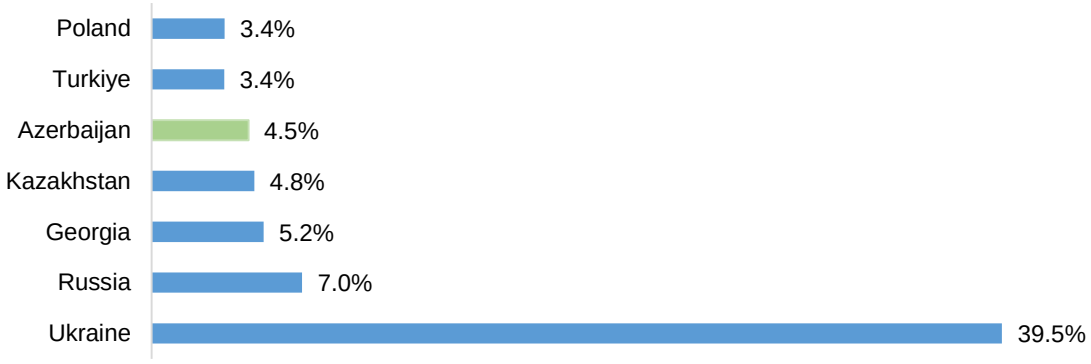
Chart 26. NPL portfolio of the banking sector



Source: CBA

The NPL ratio for loans in national currency is 4.4%, and for loans in foreign currency 4.6%. In general, compared to benchmark countries, Azerbaijan has a low level of non-performing loans as an indicator of credit risk.

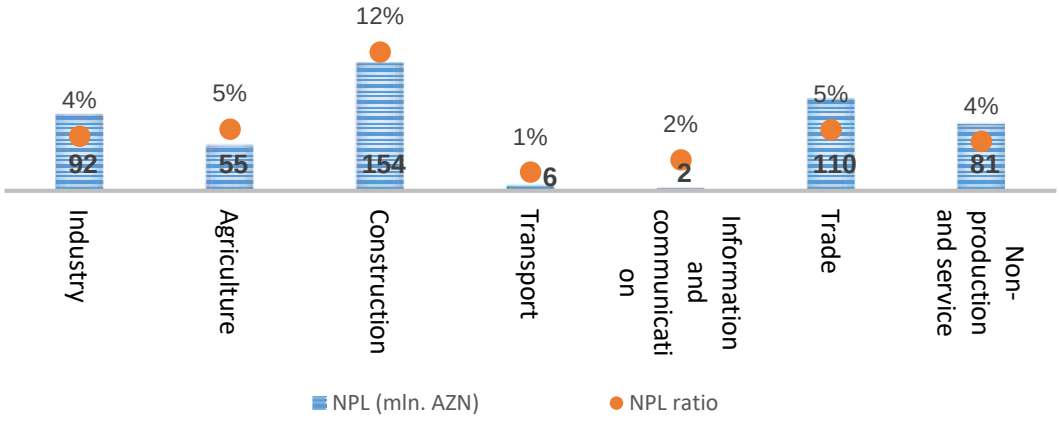
Chart 27. NPL ratio across the world



Source: IMF, relevant regulatory authorities

A decrease in credit risks was observed in the business portfolio. Over the year the volume of non-performing loans on business loans decreased by 15.4% (AZN 91M) to AZN 499M. As a result, as of the end of 2021, the NPL ratio on business loans decreased by 1.8 p.p. to 5.1%. Analysis of the non-performing loan portfolio by economic sectors shows that the non-performing portfolio in trade and construction accounts for 53% of the total NPL in the business portfolio.

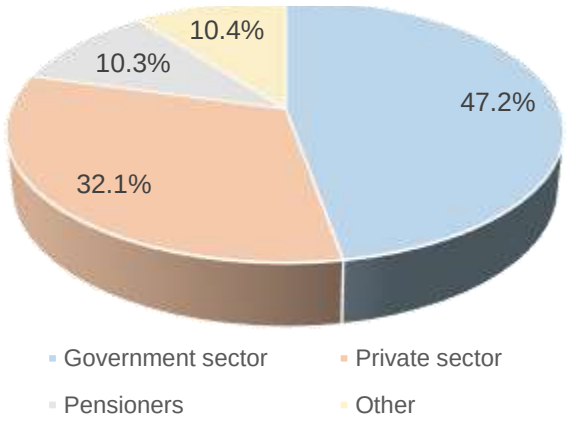
Chart 28. NPL portfolio structure across economic areas



Source: CBA

There was no change in the NPL portfolio on consumer loans. The portfolio of non-performing loans (NPLs) on consumer loans amounted to AZN 183M. Over the period the NPL on consumer loans decreased by 0.9 p.p. and equaled to 4.1%. An analysis of the borrowing structure of the consumer portfolio shows that 58% of the consumer portfolio was provided to public sector workers and retirees with stable incomes.

Chart 29. Lending structure on consumer portfolio, %



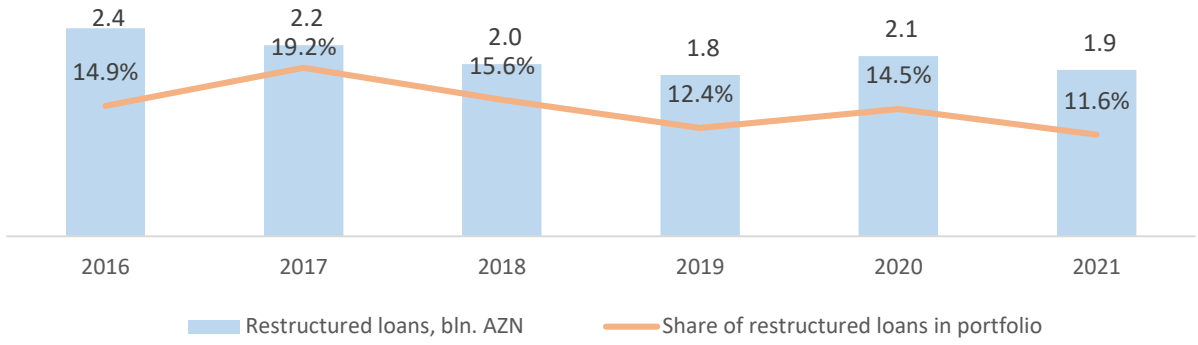
Source: CBA

There was a decrease in the volume of non-performing mortgage loans. Over the year the volume of NPL on the mortgage portfolio decreased by 36.4% (AZN 38M) to AZN 66M. As a result, as of the end of 2021, the NPL ratio was 2.8%, having declined by 2.4 p.p. The NPL ratio on loans issued at the expense of funds of MCGF, which accounts for 61% (AZN 1.5B) of mortgage lending, is only 0.7%. The underwriting conditions of mortgage loans issued through the MCGF have kept the risks on such loans to a minimum. The reason for the higher credit risks for loans issued through bank's internal resources is that borrowers on domestic mortgage programs are more sensitive to the economic cycle and higher monthly payments. However, with the

recovery of economic growth in the post-pandemic period, there is a positive trend in the quality of domestic mortgage lending.

The dynamics of the restructured portfolio decreased. In 2021 the restructured portfolio decreased by AZN 0.1B and equaled to AZN 1.9B. Restructured loans accounted for 11.6% of the total loan portfolio. The increase in the volume of the restructured portfolio in 2020 was against the backdrop of promoting the restructuring process to reduce the negative impact of the pandemic on the business environment. The share of restructured loans in the total portfolio is at its lowest level in five years. The share of more than once restructured loans in the total restructured portfolio is 36%. In general, the regulation of possible systemic risks in the restructured portfolio is one of the policy priorities of the Central Bank, and it is planned to improve the regulatory framework in this direction.

Chart 30. Dynamics of the restructured portfolio



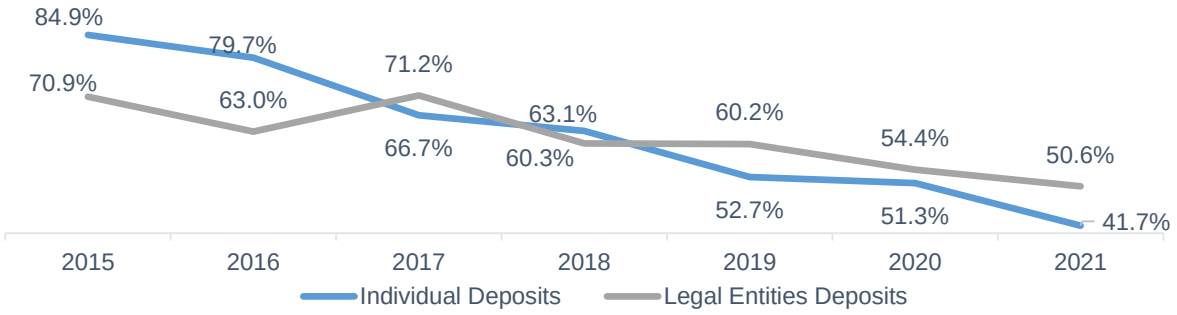
Source: CBA

The banking system has a high potential to absorb losses on overdue loans. The coverage ratio of overdue loans with specifc reserves is 119.4%. It should be noted that this figure was 97.9% at the end of 2020. Specific reserves created by banks for consumer loans are three times higher than overdue loans, due to the creation of a 25% specific reserve for loans with a DTI ratio above 45% under existing prudential regulations. Large specific reserves created by banks act as a buffer in case of deteriorating asset quality.

The market risk of the banking system

The currency position of the banking sector is within prudential requirements. The total currency position of the banking system is open short USD 290M. The ratio of open currency position to regulatory capital, which is a prudential norm on exchange rate risks, is negative 10.9%. The sector's currency position meets the prudential requirements and reduces the negative impact of the potential corrections on the manat exchange rate on the sector's capital position. It is important for financial stability that the OCP is in a safe zone within the normative requirements.

Chart 31. Deposit portfolio dollarization

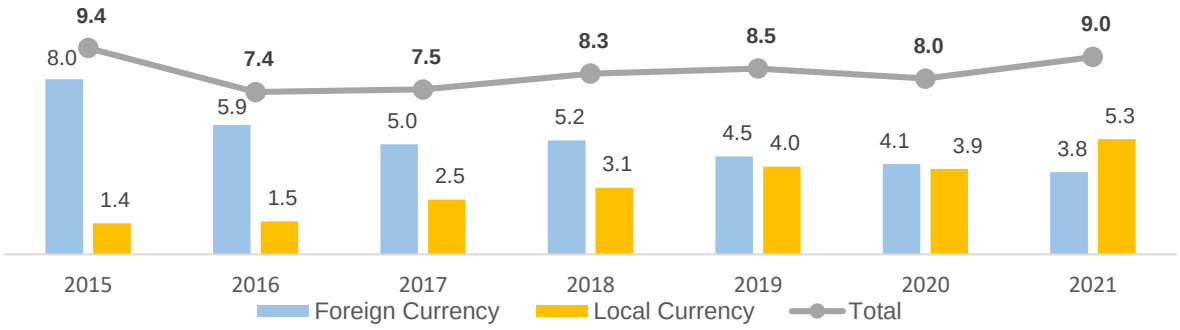


Source: CBA

The de-dollarization trend in the banking sector that began in 2015 continues. At present, 45% of the banking system's liabilities and 39% of its assets are in foreign currency. For comparison, in 2015 these figures were 73% and 58%, respectively. The macroprudential policy pursued in recent years, the preservation of the stability of the national currency has led to the process of de-dollarization.

The leading driver of the de-dollarization trend of liabilities was the deposits of individuals, which is a key indicator of confidence in the banking system. Since 2015 deposits in foreign currency have decreased by 53% (AZN 4.2B), while deposits in national currency increased by almost 3 times (AZN 3.8B). The main reason of this is the confidence in the manat and high interest rates on deposits in national currency. Thus, the Deposit Insurance Fund set the upper limit of the interest rate on insured deposits in national currency at 12%, and on foreign currency deposits at 2.5%. In general, 45% of term deposits of individuals and 37% of demand deposits are in foreign currency.

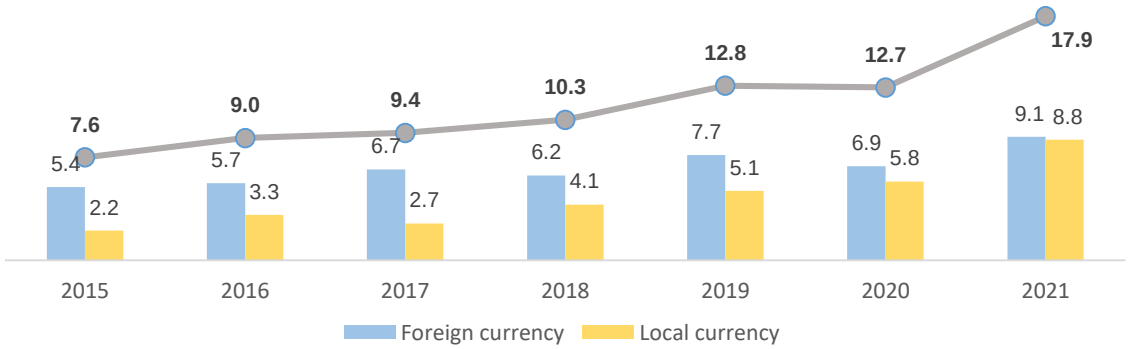
Chart 32.Currency breakdown of the deposit portfolio of individuals, bln. AZN



Source: CBA

The level of dollarization of deposits of legal entities is higher than that of deposits of individuals. In 2021 there was a significant increase in the deposit portfolio of legal entities (+AZN 5.2B or 41%). Since 2015, deposits of legal entities in national currency have increased by 4 times (AZN 6.6B), and deposits in foreign currency by 68% (AZN 3.7B). As a result, the dollarization of corporate deposits fell from 71% to 51%. Deposits of legal entities in foreign currency were mainly concentrated in demand deposits. The analysis shows that transactions with foreign partners, mainly with companies operating in the oil and gas sector, lead to large demand deposits in foreign currency. In recent years, one of the factors that caused the deposits of legal entities in the national currency was the implementation of the law "On cashless settlements."

Chart 33. Currency breakdown of the deposit portfolio of legal entities, bln. AZN

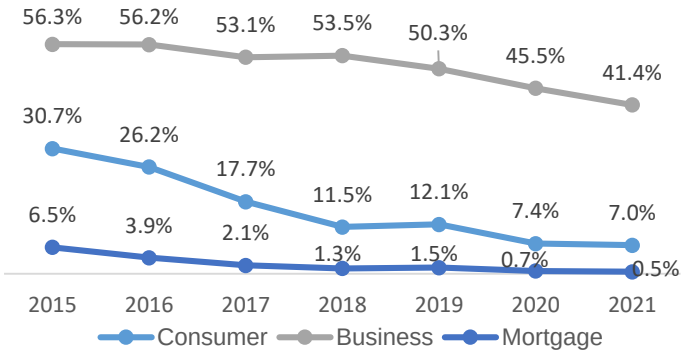


Source: CBA

To ensure the expansion of national currency lending, it is necessary to accelerate the process of de-dollarization of liabilities. The share of foreign currency deposits affects the currency structure of liquid assets and thus lending potential of banks. 51.1% of liquid assets are in foreign currency. The currency composition of liquid assets is related to the need to maintain the currency position within the norms.

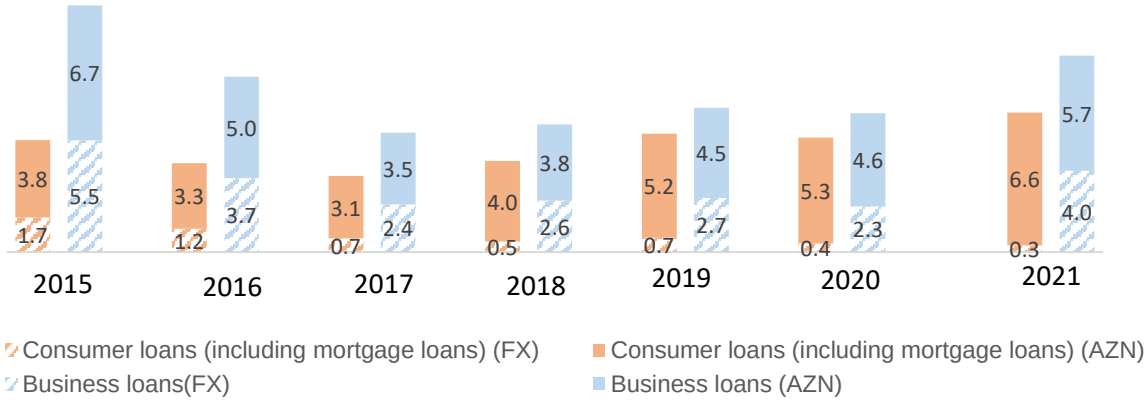
The de-dollarization process in the lending portfolio reduces real sector currency risks and strengthens financial stability. Over the period, as a result of the stability of the manat exchange rate and the expansion of lending in manat, the trend of increasing the share of loans in manat in the lending portfolio continued. The share of loans in foreign currency in the total lending portfolio decreased from 49.5% to 26.2% in 2015-2021. At present, 41.4% of business loans, 7.0% of consumer loans and 0.5% of mortgage loans are in foreign currency. Restrictions on the issuance of consumer loans in foreign currency to borrowers with no income in foreign currency have led to a historic reduction in the dollarization of the consumer portfolio. Also, according to the normative acts of the Central Bank, real estate loans (mortgage loans) can be issued only in national currency**.**

Chart 34. Currency structure and dynamics of the lending portfolio



Source: CBA

Chart 35. Foreign currency share of the lending portfolio,bln. AZN



Source: CBA

Banks' sensitivity to interest rates does not threaten their stability. Interest rate risk as part of the market risks was analyzed by the duration method[5]. Since most of the assets and liabilities in the sector are reflected in the book value, the calculations are based on the book value and discounted by the CBA interest rate. The main source of

[5] The duration analysis is used for measuring the weighted average term of assets and liabilities according to Macaulay duration concept. The duration gap analysis measures the sensitivity of banks to market interest rates through the following formula: $\partial(asset) - \frac{\partial(liability)\times liability}{asset}$. During the analysis, assets and liabilitis are discounted by the discount rate of the Central Bank.

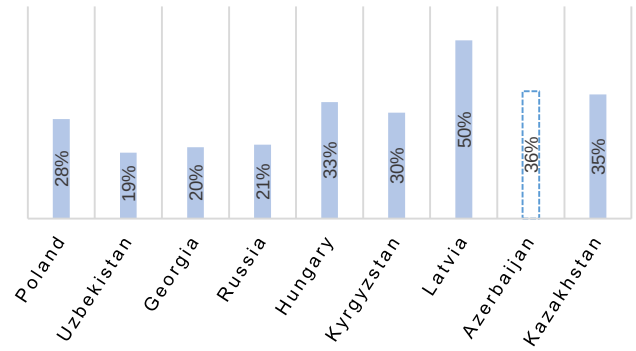
mismatch between assets and liabilities is that the difference between the average weighted duration of loans and attracted deposits is about 4 times.

An increase in interest rates as a result of a positive duration difference has a reducing effect on the capital adequacy ratio. According to simulations, a 1% rise in the interest rate decreases the capital adequacy ratio by only 1.1 p.p. This does not threaten the financial stability of the banking system.

Liquidity risk of the banking system

Liquidity of the sector is in the comfort zone and has large buffers against potential external shocks. The quick liquidity ratio of the banking system is 61.6%, which is twice the minimum requirement (30%). Liquid assets make up 36% of assets, which is a high indicator compared to benchmark countries.

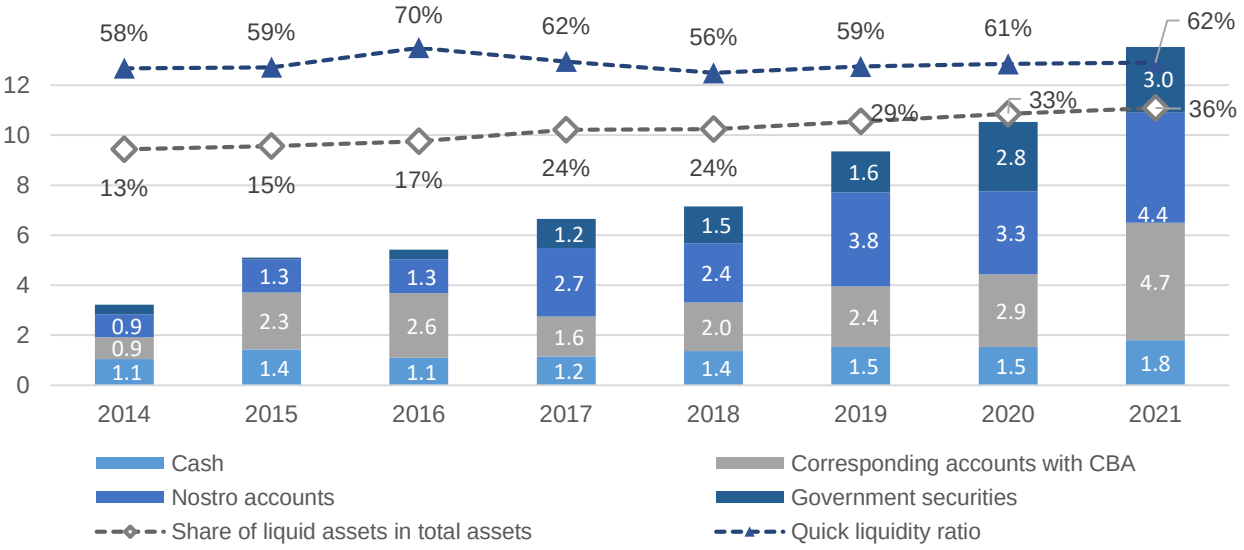
Chart 36. The share of liquid assets in total assets across countries



Source: CBA

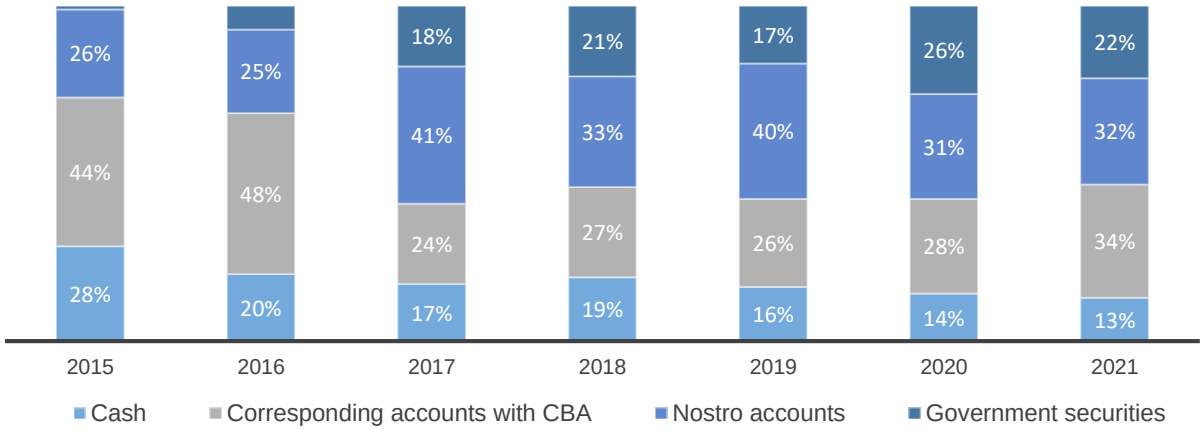
In 2021 liquid assets increased by 31.6% or AZN 3.3B and reached the historical maximum (AZN 13.9B). An increase in liquid assets mainly resulted from the dynamic growth of demand deposits of legal entities. 32% of liquid assets are concentrated in nostro accounts, 34% in correspondent accounts with the Central Bank, 22% in government securities, and 13% in cash. The increasing trend of the share of liquid assets in total assets continues. Compared to the pre-pandemic period, there was an increase in all components of liquid assets. Liquid assets of the banking system exceed demand deposits of individuals more than 3 times and constitute a significant part of term deposits of individuals.

Chart 37. Dynamics of the structure of liquid assets, bln. AZN



Source: CBA

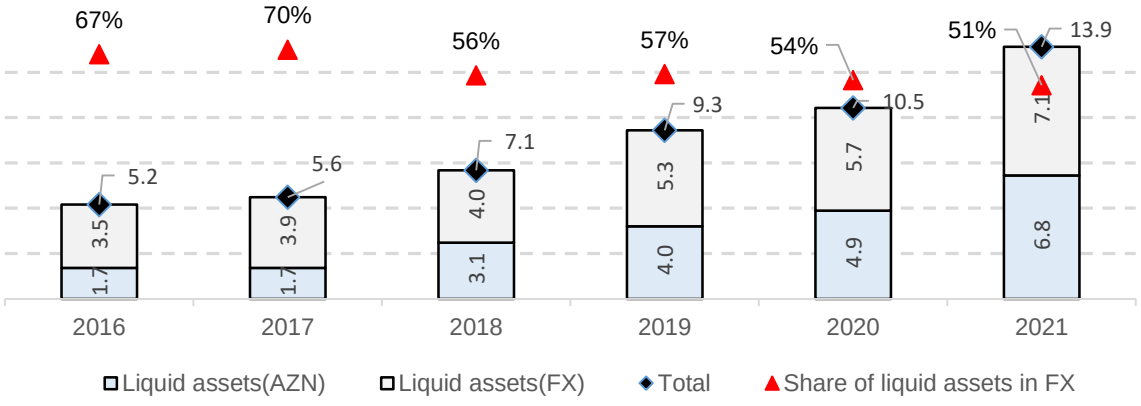
Chart 38. Dynamics of liquid asset components in total liquid assets



Source: CBA

The large share of the sector's liquid assets being foreign currency limits lending in national currency. Positive economic growth forecasts in the post-pandemic period facilitates increase in liquid assets, thus enhancing the role of lending as a channel to support economic growth. However, the high share of liquid assets in foreign currency limits lending in national currency. In 2021 the share of liquid assets in foreign currency was more than 50% (USD 4.2B), which was mainly due to the fact that large companies keep their funds in foreign currency in banks to conduct operations in foreign currency.

Chart 39. Dynamics of the currency structure of liquid assets, bln. AZN

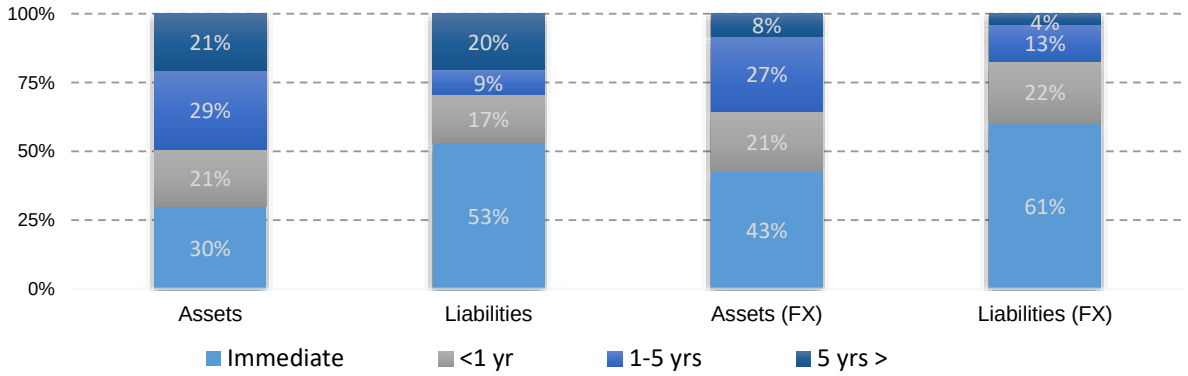


Source: CBA

The distribution of liquidity among banks is not homogeneous. The analysis of the distribution of liquid assets in the banking system shows that the concentration of demand accounts of large companies in large banks leads to the need for these banks to maintain a large volume of liquid assets.

The share of assets with a maturity of up to 1 year in total assets was 51%, and the share of similar liabilities was 70%. The fact of 58% of liabilities being less than 1 year of maturity obstructs long-term financing. However, the steadily rising share of demand deposits increases balance sheet maturity mismatch, sufficient level of bank liquidity and deposit insurance mechanism make this mismatch not having a major impact on liquidity risk.

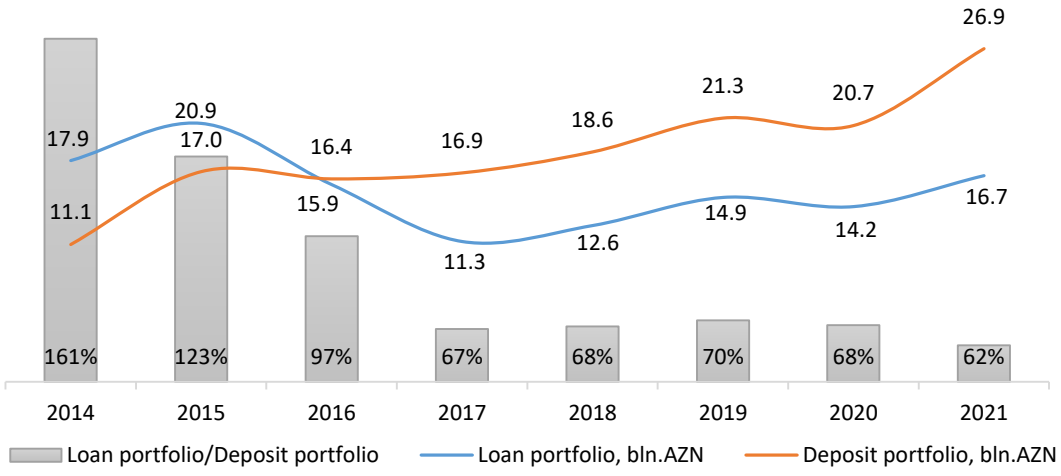
Chart 40. Maturity breakdown of assets and liabilities



Source: CBA

The dynamics of the lending portfolio to the deposit portfolio ratio shows that banks have a resource base for providing lending activities. As of December 2021, the ratio of the lending portfolio to the deposit portfolio was 62%, which is the lowest indicator in recent years.

Chart 41. Dynamics of the lending portfolio to the deposit portfolio ratio

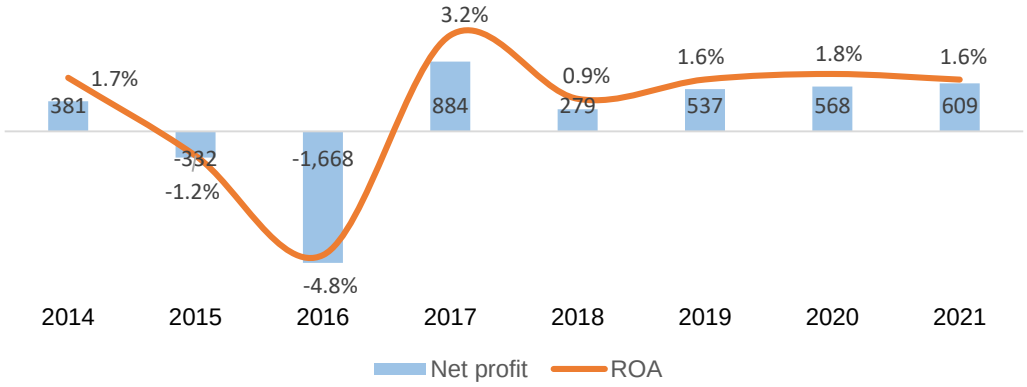


Source: CBA

The profitability of the banking system

Despite the complex external environment and conditions, the sector maintained its profitability. In 2021 the net profit of the banking system amounted to AZN 609M, which was 7.3% or AZN 41M more than in comparison with the last year. The positive dynamics was achieved as a result of the reduction in the total loss of banks operating at a loss. In 2021 23 banks worked with profit, 3 banks ended the year with a loss. The total loss of loss-making banks decreased by AZN 46M to total AZN 3M, and the share of these banks in the sector in terms of assets equaled to 1.3%. The net profit of 23 profitable banks decreased by 0.7% or AZN 5M and amounted to AZN 612M.

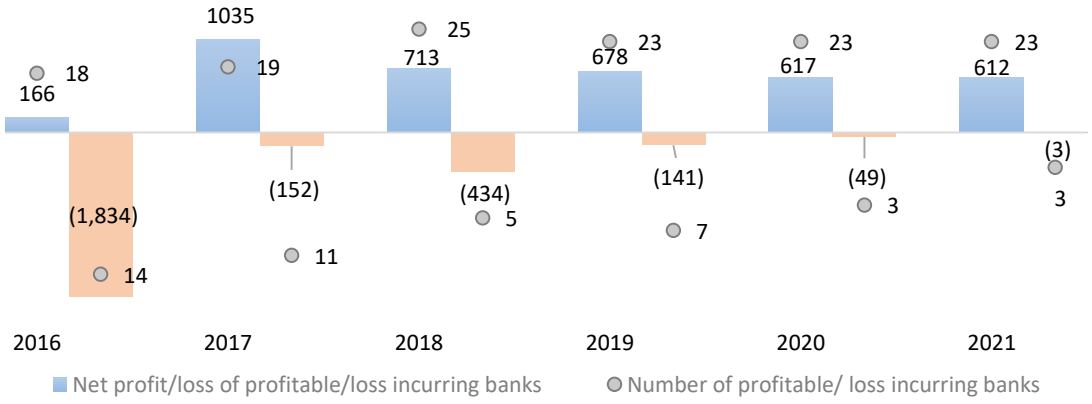
Chart 42. Banking system profitability, mln. AZN



Source: CBA

There is positive dynamics in the profitability indicators of individual banks, too. In the last 5 years, the number of banks operating at a loss has been steadily decreasing.

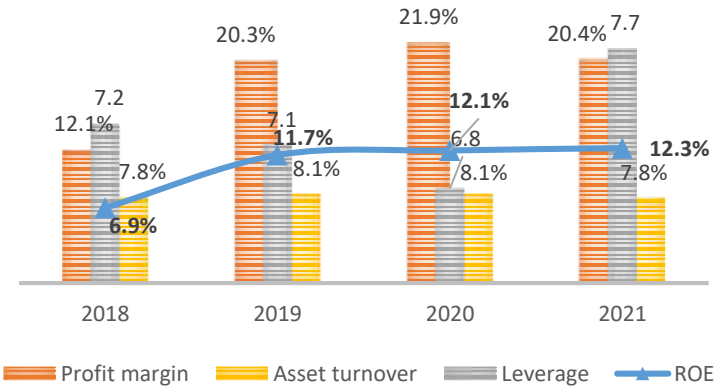
Chart 43. Dynamics of the number of banks with profit and loss, mln. AZN



Source: CBA

Net profit margin and high leverage played a key role in formation of profitability in banks. Over the year the ROE of the banking sector rose by 0.2 p.p. and amounted to 12.3%. DuPont[6] analysis, a technique widely used in the international practice to decompose profitability components, highlights the high leverage of banks as the main factor determining the growth in ROE over the past year**.** The rapid growth of assets over the year increased the leverage ratio. Asset growth also reduced asset turnover. At the same time, there is a slight decrease in the profit margin of banks, which is the main factor shaping the profitability of banks.

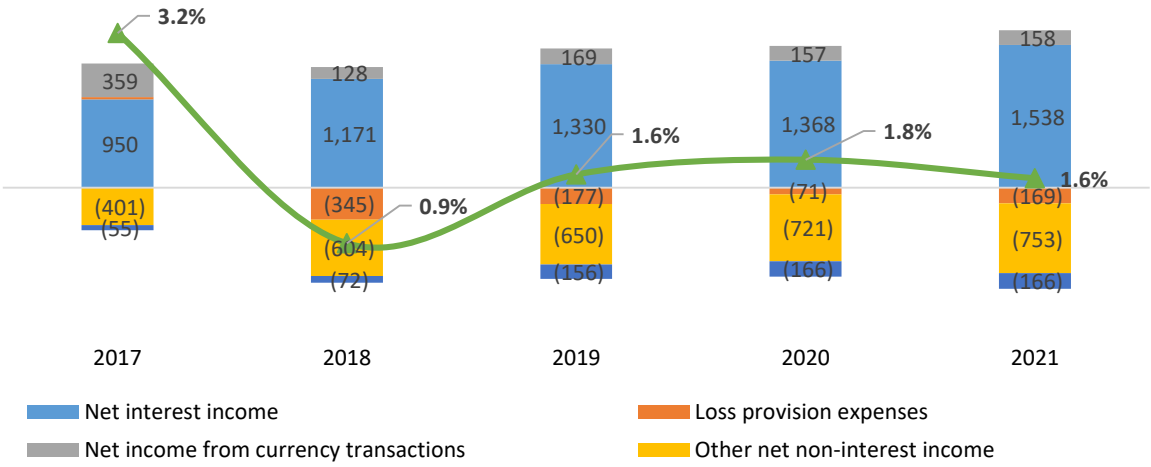
Chart 44. DuPont – ROE decomposition analysis



Source: CBA

The positive dynamics of net profit is due to a significant increase in net interest income. Thus, the net interest income over the year increased by AZN 169M or 12%. Despite this increase, increase in specific provisions expenses by AZN 98M or 138%, at the same time an increase worth AZN 31M (4.4%) in non-interest net loss excluding net income from currency transactions led to a decrease in profit margin by 1.5 p.p.

Chart 45. Decomposition and dynamics of profit on the sector, mln. AZN



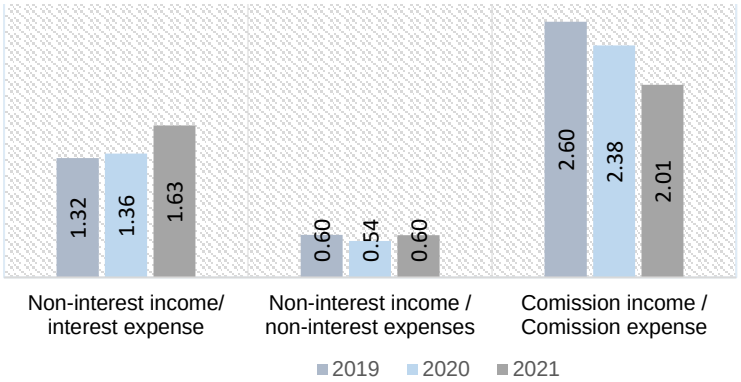
Source: CBA

[6] DuPont Analysis is a method used to decompose the different drivers of return on equity (ROE). In widespread international practice, ROE is equal to the product of profit margin (net profit / gross revenues), asset turnover (total revenues / assets) and leverage ratio (assets / balance sheet capital).

The increase in specific provisions occurred mainly in consumer loans. Thus, according to the existing macroprudential framework, if the DTI ratio of consumer loans is higher than 45%, these loans should be classified as non-standard loans and a 25% specific reserves should be created for them.

The bankng sector efficiency indicators increased compared to the last year. Albeit negative dynamics in the sector's efficiency indicators during the pandemic, there was a positive trend in 2021. Thus, non-interest income increased in proportion to both interest and non-interest expenses. This was driven by a 32% increase in commission income, which accounts for 73% of non-interest income. At the same time, due to a 56% increase in commission expenses, the ratio of commission income to commission expenses decreased by 16% to 2.01. As commission expenses account for only 22% of the non-interest expenses, there was no sharp increase in non-interest expenses.

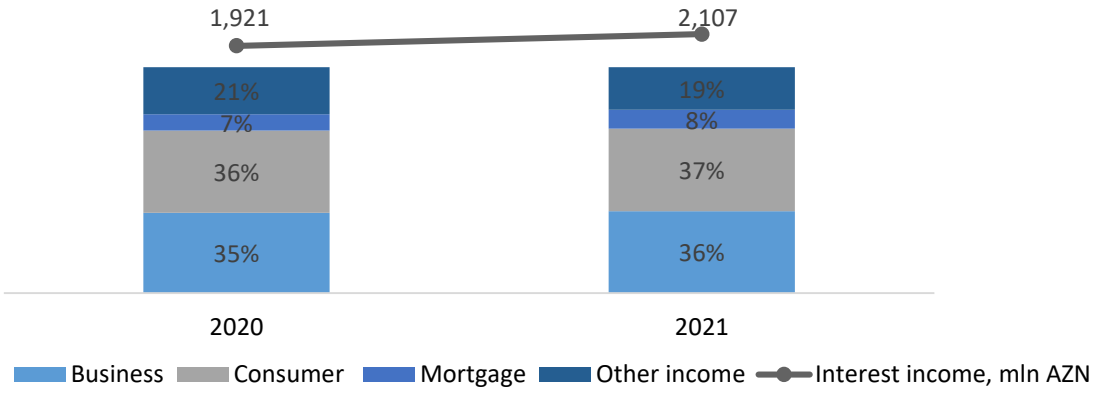
Chart 46. Banking sector efficiency indicators



Source: CBA

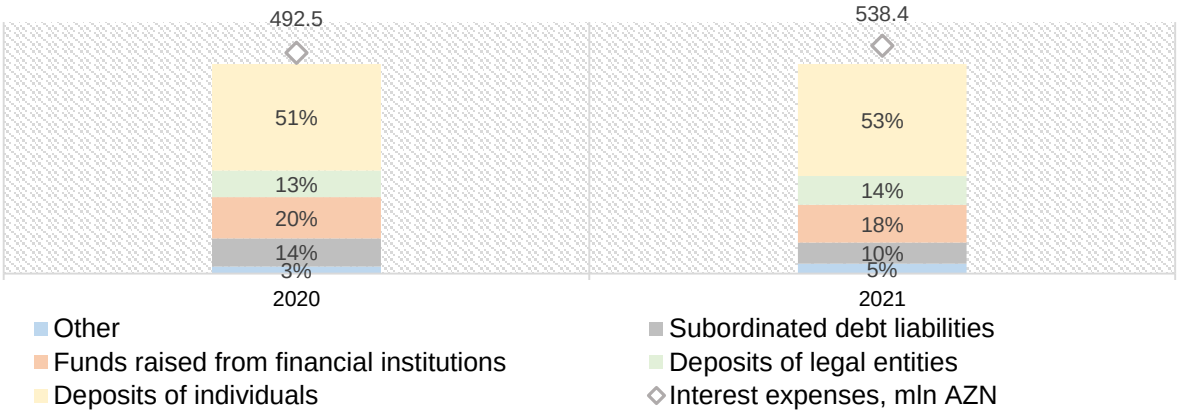
Banks' interest income was formed mainly due to consumer and business loans. Over the year the sector's interest income increased by 10% (AZN 187M), and interest expenses increased by 9.3% (AZN 46M) to AZN 2.1B and AZN 0.5B respectively. Interest on consumer loans (AZN 771M) and business portfolio (AZN 763M) form the main part of interest income. In 2021 consumer loans accounted for 27% of the total lending portfolio, but formed 37% of interest income. While the business portfolio of the banking system makes up 58% of total loans, it forms 36% of interest income.

Chart 47. Interest income structure



Source: CBA

Chart 48. Interest expense structure



Source: CBA

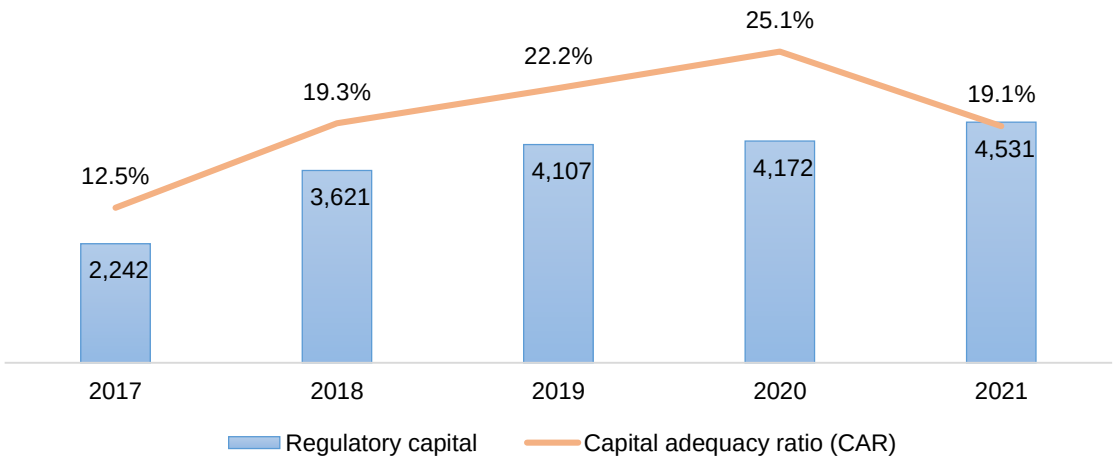
The main part of banks' interest expenses is the expenses on deposits of individuals. Deposits of individuals, which play the main role in the source of stable funding of banks, form a significant part of interest expenses (53% or AZN 288M). Other main directions of interest expenses are deposits of legal entities and loans of financial institutions.

Capital position of the banking system

The sector's capital position is able to absorb potential losses by exceeding prudential requirements. As of the end of 2021, the Tier I capital of the sector amounts to AZN 3.8B, and the total regulatory capital is AZN 4.5B. The capital adequacy ratio (CAR) for the sector was 19.1%, which exceeds the required minimum prudential requirements by almost 2 times. Compared to 2020, the aggregate capital of the sector increased by 8.6% or AZN 360M. The main driver of growth is undistributed profits of banks (AZN 207M). At the same time, a new capital injection worth AZN 23M was carried out.

Despite the increase in the volume of aggregate capital Yoy, the capital adequacy ratio decreased by 6 p.p. to 19.1%. The main reason for this is related to the increase of risk weights of assets on consumer loans based on the new regulatory framework, as well as the requirement to maintain additional capital buffer to cover market and operational risks. In general, since 2017, there has been a steady increase in the capitalization of the banking system. The source of capital growth is both internal profit generation and capital

Chart 49. Dynamics of capital adequacy, mln. AZN



Source: CBA

injection. AZN 1.8B worth capital injection has been carried out since 2017 as part of the restructuring and recovery of the banking system. As a result, the volume of aggregate capital has increased more than 2 times in the last 5 years. A significant increase in regulatory capital made the banking system more resilient to external shocks.

The monitoring results of individual banks in terms of capital adequacy level also show that there has been a positive dynamics since 2017 because of the restructuring of the banking system and the restoration of the banks' ability to generate profits.

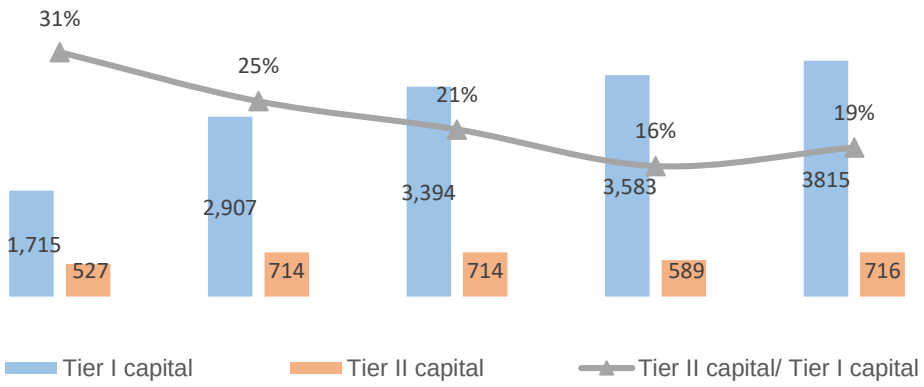
Table 2. Grouping of banks in terms of CAR

Capital adequacy ratio[7]	2017	2018	2019	2020	2021
<12%	5	4	1	0	1
12-16%	5	7	8	3	6
16-20%	4	2	2	5	4
>20%	16	17	19	18	15
Total	**30**	**30**	**30**	**26**	**26**

Source: CBA

The share of Tier I capital in the capital structure of the banking system is high. As a result of the capital injections carried out within the framework of the banking system recovery, as well as the undistributed profits obtained by banks over the past years, the volume of Tier I capital, which is considered to be of high quality, increased stably. Currently, 84% of aggregate capital is Tier I capital.

Chart 50. Dynamics of capital structure, mln. AZN

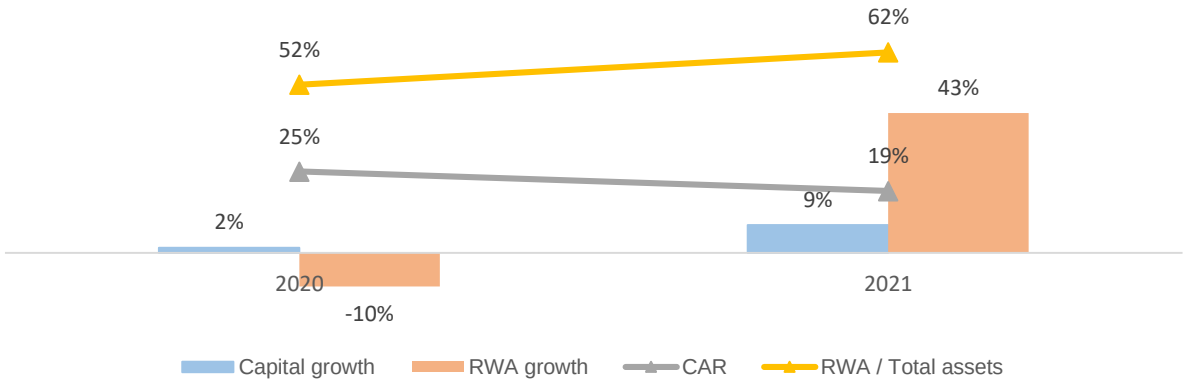


Source: CBA

[7] According to articles 13.1 and 13.2 of the 'Regulations on calculation of bank capital and its adequacy', the minimum normative limit of the capital adequacy ratio is 12% for systemically important banks, and 10% for other banks.

In 2021 the RWA increased. Against the backdrop of an 8.6% (AZN 360M) increase in total capital, the amount of risk-weighted assets increased by 43% (AZN 7.2B). As a result, the ratio of risk-weighted assets to total assets rose by 10 p.p. and reached to 62%. According to the information up to the end of the year, RWA was AZN 23.8B, AZN 21.9B of which falls to the share of risk-weighted assets, AZN 0.6B to market risks, and AZN 1.2B to the share of operational risks. The main driver of the increase in risk-weighted assets is the introduction of the new regulatory framework.

Chart 51. Dynamics of capital and risk-weighted assets

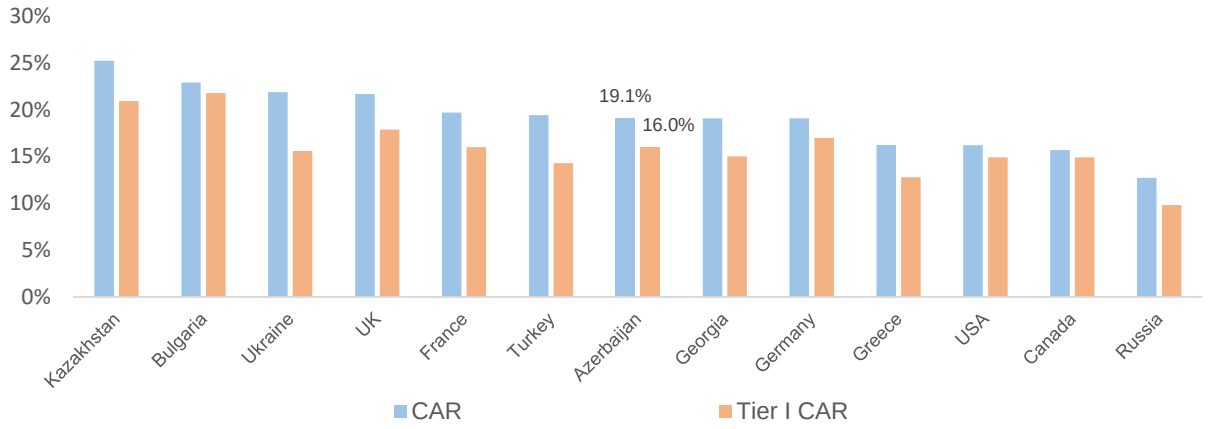


Source: CBA

In accordance with Basel II standards, CAR began to be calculated on the basis of the regulatory framework requiring additional capital buffer to cover market and operational risks. The amendments to the 'Regulations on calculation of bank capital and its adequacy' that entered into force on 30 November 2019 for the purpose of increasing the stability of the banking system, strengthening the risk management potential of banks, and harmonizing the regulatory framework with advanced regulatory standards envisaged to consider market and operational risks along with credit risks while calculating the capital adequacy ratio according to Basel II standards from 1 September 2020. However, this request was postponed until 1 July 2021 as part of the regulatory holiday granted to banks due to the COVID-19 pandemic. As of the end of 2021, CAR was calculated based on the newly formulated prudential framework, which was one of the factors that caused it to decrease by six p.p to 19.1%.

Consideration of countercyclical capital buffer in line with Basel III standards. The amendments made to the 'Regulations on calculation of bank capital and its adequacy' provide for taking into account the countercyclical capital buffer when calculating capital adequacy ratios in connection with bringing the prudential framework in line with Basel III requirements. As a macroprudential tool, the countercyclical capital buffer prevents

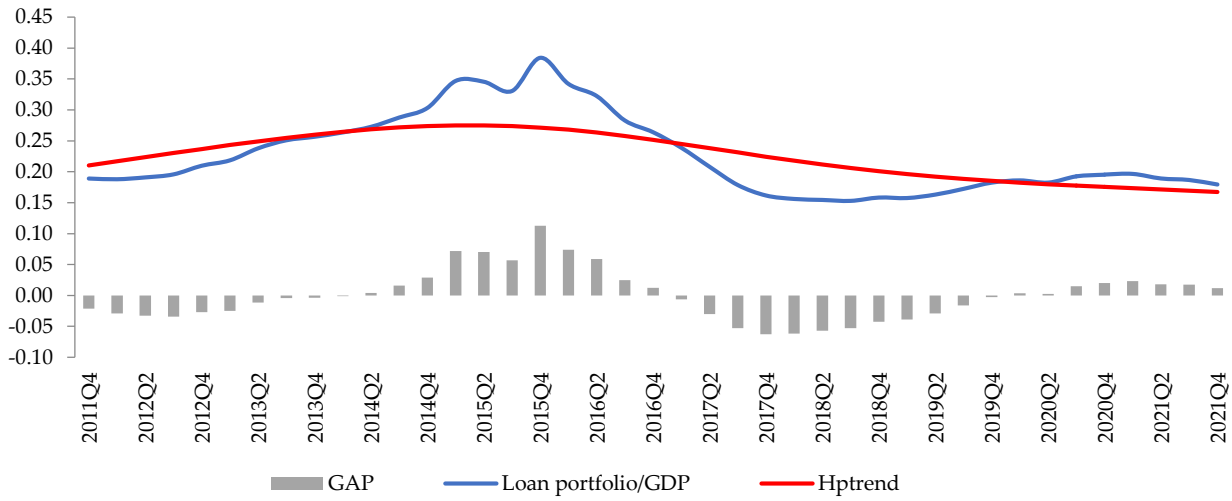
Chart 52. International comparison of capital adequacy



Source: IMF

systemic risks arising from over-lending in the banking sector and reduces sensitivity to cyclical processes. The credit gap is taken as the main indicator for calculating the counter-cyclical capital buffer. When the credit gap changes in the range of 2-10%, the countercyclical capital buffer is set in the range of 0-2.5%, respectively. Given the gradual lifting of restrictions currently applied to sectors of the economy, it is considered appropriate to set the countercyclical buffer requirement for banks at 0%.

Chart 53. The lending portfolio to GDP ratio, in HP Trend



Source: CBA

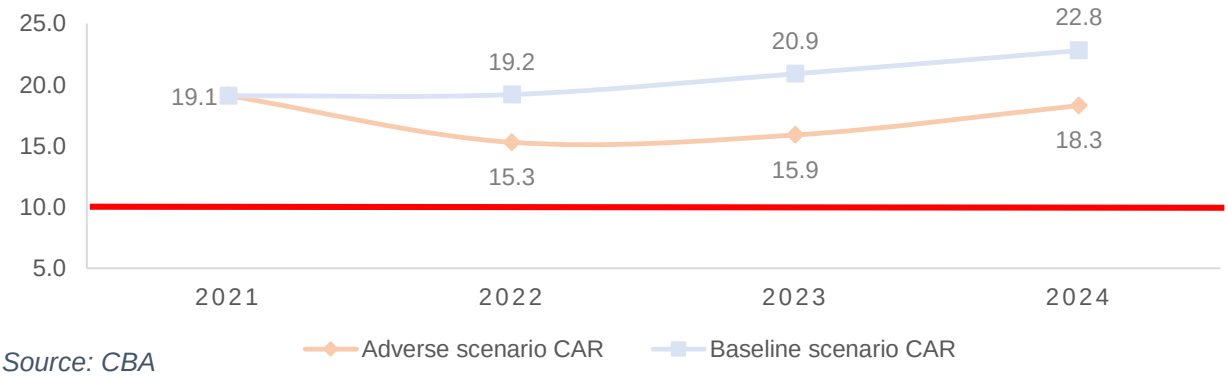
Assessment of the banking system resilience

The ability of the banking sector to withstand external shocks was assessed through a stress test. Bank stress tests act as an important analysis tool in developing an analytical diagnostic framework for assessing the resilience of the banking system, identifying and measuring system risks. This tool is used to assess the strength of banks' capital in various adverse macrofinancial scenarios and determine appropriate mitigation and policy measures.

The IMF technical support program was involved in the development of the Central Bank's internal stress testing model. As part of the technical assistance program, econometric satellite models for credit risk analysis were improved, foreign exchange risk was integrated to the model, and econometric satellite models were built to predict various components of the profit and loss statement. Thus, indicators of credit risk indicators on consumer, mortgage and business loans in national and foreign currencies (non-performing loans), interest rates on loans, funding costs, commission income/expense, risk-weighted assets were projected in various macrofinancial scenarios. As a result, the financial resilience of banks was assessed according to different scenarios.

To determine the impact of macroeconomic factors on the resilience of banks under stress test conditions, an adverse scenario was formed taking into account the base scenario and the most severe scenarios ("extreme but plausible") approach. The baseline macroeconomic scenario is based on IMF forecasts included in the World Economic Outlook (WEO) October 2021. A pessimistic scenario is based on the calibration of the 2015-2016 crisis.

Chart 54. Stress-test resulting capital adequacy of the banking system



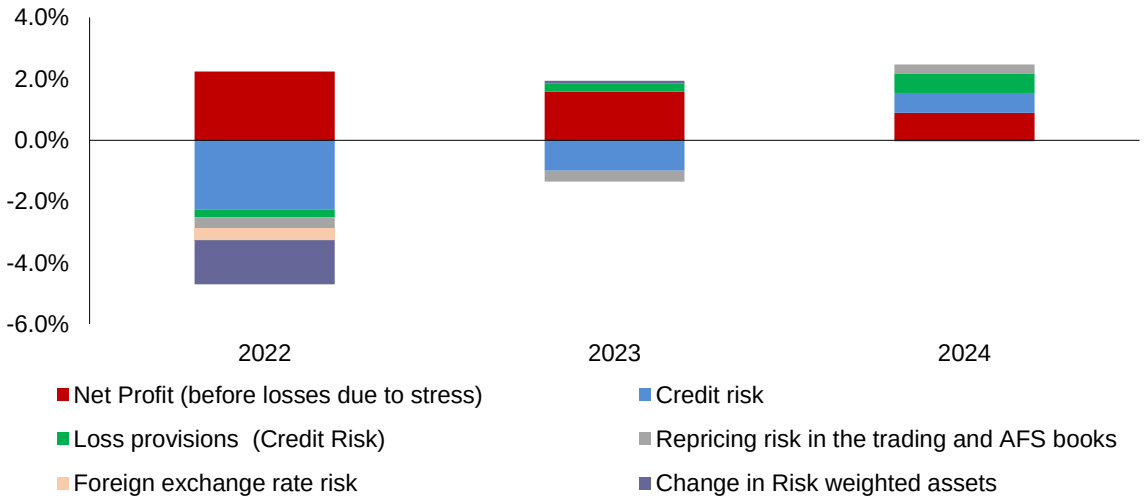
Source: CBA

Although the banking sector suffered capital erosion because of the stress test, the capital adequacy of the sector as a whole exceeds the minimum norms. Thus, according to the baseline scenario, the capital adequacy ratio of the banking sector is 19.2% in 2022, and stable growth in the following years means that the capital adequacy ratio will reach 22.8% in 2024. In the pessimistic scenario, the capital adequacy ratio of

the banking sector will decreace by 3.8 p.p in 2022 to 15.3%. However, along with the recovery in profitability in subsequent years, the adequacy ratio will reach 18.3% in 2024. The results of stress test show that the existing capital buffer of the banking sector has the capacity to absorb potential losses.

Whereas the credit risk and foreign exchange risk are the main risk factors according to the stress test results, exposure to interest rate risk was relatively low.

Chart 55. Exposure channels to capital adequacy indicators under a pessimistic scenario



Source: CBA

Box 2. Interbank exposure and vulnerability risks are assessed with the network model (Espinosa-Vega and Sole, 2010)*

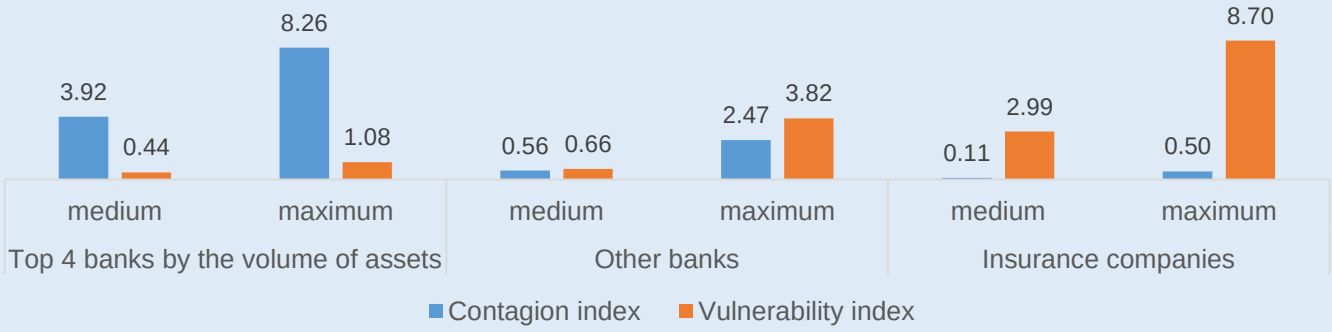
In the event of any financial institution's hypothetic default the Network model assesses its impact on the financial system as a whole and other individual institutions. The analysis generates contagion and vulnerability indexes. The contagion index indicates the share of capital that the sector will lose in percentage in the event of a default of one financial institution in the sector. The vulnerability index shows average share of capital one financial institution will lose in the event of hypothetic default of each financial institution on the system.

The analysis covered banks and insurance companies based on the indicators of 2021. ***Scenario: Credit shock –100 % loss in the event of financial institution's bankruptcy; Liquidity and funding shock – in the event of 100% withdrawal of claims, sale of assets at 35% haircut.***

The analysis suggests that, the overall standing of the interbank market reduces banks' exposure and vulnerability risks. The contagion risk mainly emerged in large banks in terms of the size of their assets, due to deposits of the insurance sector and use of mutual hedging instruments.

In general, as investment in bank funds is the main investment tool of the insurance sector, it elevates the insurance sector vulnerability to the banks' risk profile. 31% of assets of insurance sector comprised of deposits in banks. Another risk is the funds of insurance companies with a high vulnerability index in related banks. However, funds in related banks were prone to falling over the year.

Exposure of banks and insurance companies based on the network model



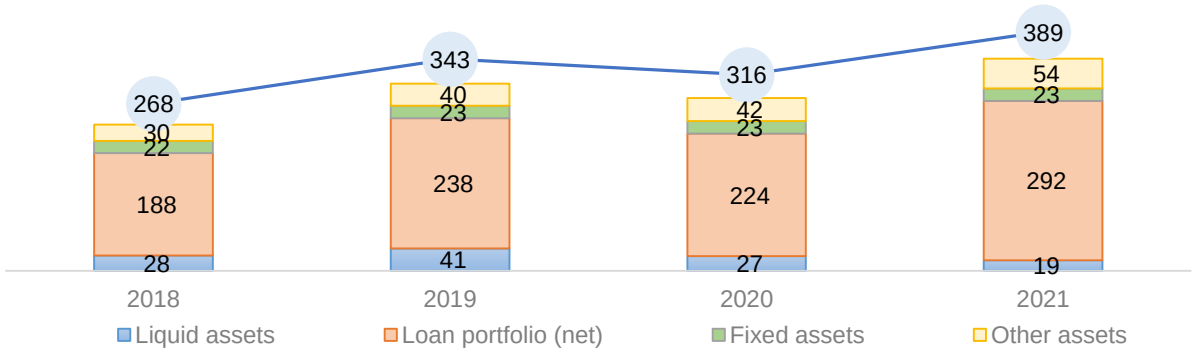
** Juan Sole & Marco A Espinosa-Vega, 2010. "Cross-Border Financial Surveillance; A Network Perspective," IMF Working Papers 2010/105, International Monetary Fund.*

Non-bank credit institutions

The role of non-bank credit institutions (NBCI) in financial intermediation is still negligible. In general, the market share of NBCIs in the financial system is less than 1.0% in terms of assets[8]. 14 out of 99 operational NBCIs have foreign capital, the share of foreign capital in 11 of them ranges between 50% and 100%. As of Deember 2021, the number of NBCIs was 56, while the number of credit institutions (CI) was 43. Over the year, the number of staff of NBCIs increased by 327 persons to 2 563 persons, while the number of branches increased by 19 to 266. Over the reporting period 9 new NBCIs were licensed, while the license of one NBCs was revoked.

Pandemic-triggered economic contraction in the NBCI sector was replaced with growth. Total assets of NBCIs increased by 23.1% (AZN 73M) to AZN 389M over the year, driven by the net lending portfolio. The net lending portfolio increased by 30.3% (AZN 68M), driven by consumer loans (AZN 59M).

Chart 56. Dynamics of assets of NBCIs, mln. AZN

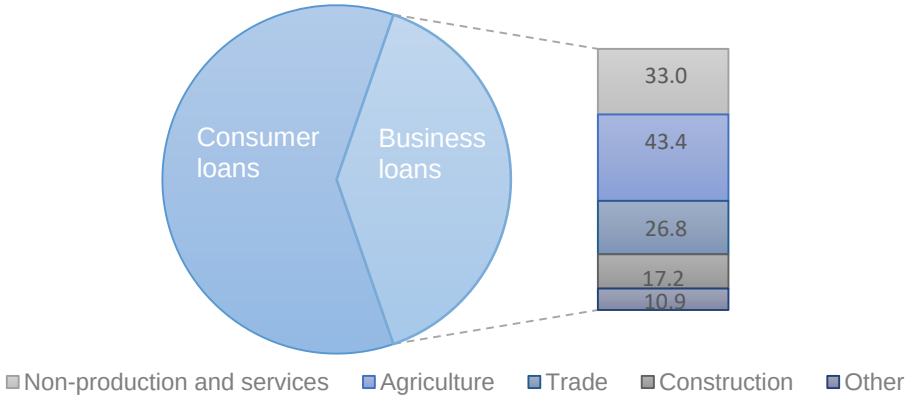


Source: CBA

In 2021 consumer loans accounted for the main part of the NBCI's portfolio. As of the end of 2021 consumer loans accounted for 61% (AZN 201.8M) and business loans accounted for 39% (AZN 131.3M) of the NBCIs' lending portfolio. 33.1% (AZN 43.4M) of business loans were issued to agriculture, 25.1% (AZN 33.0M) to non-production and services and 20.4% (AZN 26.8M) to trade sector.

[8] The Agrarcredit CJSC was not considered in the analysis of NBCIs.

Chart 57. NBCI lending portfolio structure, mln. AZN

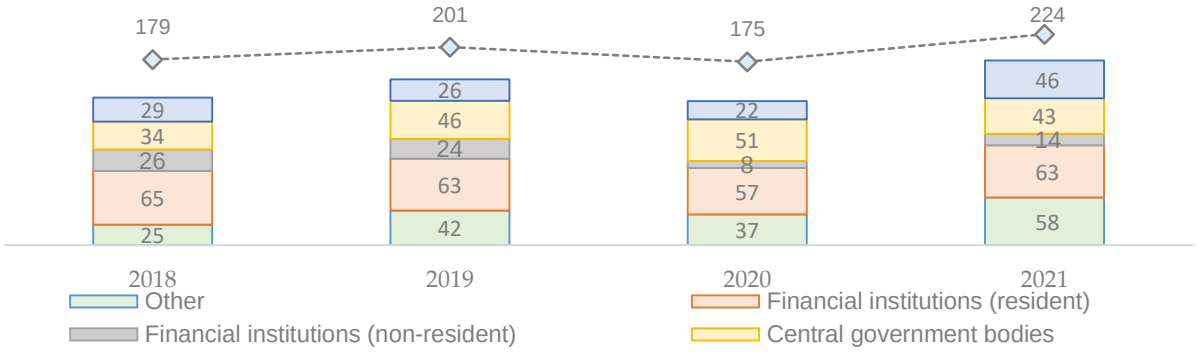


Source: CBA

The concentration level of NBCs in terms of their assets is high. There are 12 credit institutions out of operating NBCIs whose assets amounts to above AZN 10M (71.4% (AZN 277.6M) of NBCIs' total assets). There are 26 NBCIs whose assets fall below AZN 2M (6.6% of NBCIs' total assets). The main reason for concentration is that NBCIs with a small share of the sector's assets have slowed the issuance of new loans.

Liabilities of the sector have increased by 28% (AZN 49M) to AZN 224M, driven by the increase in securities. The share of securities in liabilities yoy increased by 8 pp to 20.5%. The rise in issued securities is concentrated in a limited number of NBCIs. Foreign debt of the sector increased by 70% (AZN 6M) to AZN 14 M.

Chart 58. Dynamics of NBCI liabilities, mln. AZN



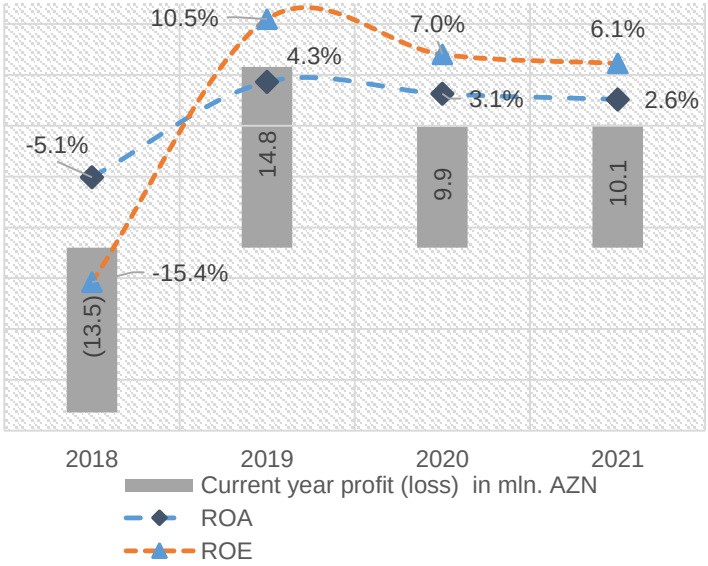
Source: CBA

Funds attracted from banks and other financial institutions account for 34.4% of total liabilities of NBCIs. One of the main components of liabilities is funds of central government bodies. With the implementation of the Presidential Decree on the resolution of problem loans of individuals, those restructured loans increased the liabilities of the NBCIs to the central bank.

The quality of the lending portfolio in the post-pandemic period improved. In 2021 non-performing loans of the sector decreased by 15.0% to AZN 70.3M. NPLs are mainly concentrated in the business sector. The volume of non-performing consumer loans is AZN 28.5M, and non-performing business loans is AZN 41.8.

The sector keeps generating profit. In 2021, the sector generated AZN 10.1M profit (Yoy AZN 9.9M). At the end of the year ROA and ROE were 2.6% and 6.1% respectively.

Chart 59. NBCI profit indicators



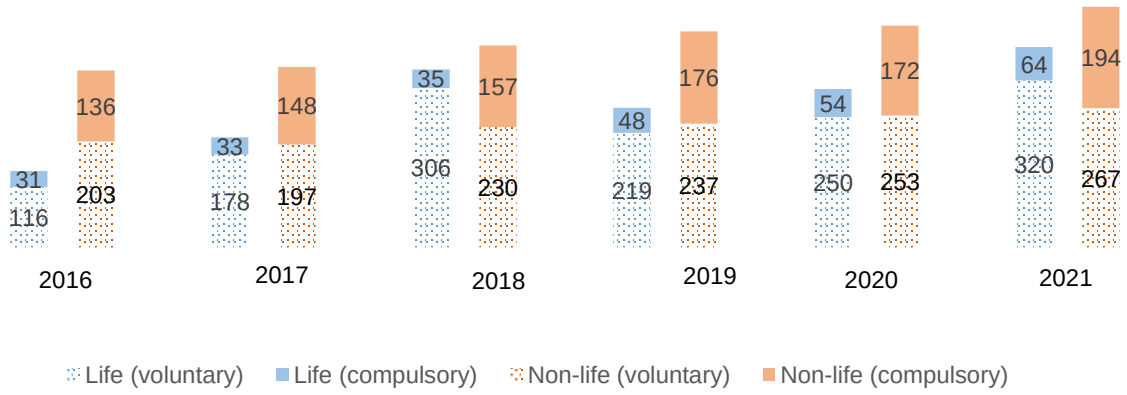
Source: CBA

Insurance sector

As of the end of 2021 there were 20 insurance and 1 reinsurance companies in the Azerbaijani insurance sector. Out of insurance companies 5 are life and 15 are non-life insurance companies. 28 insurance brokers and 730 insurance agents operated in the insurance sector.

Insurance premiums increased. In 2021 insurance premiums yoy increased by 16% (AZN 115M) to AZN 844M, driven by voluntary insurance. Over the period there was a 17% (AZN 84M) increase in voluntary insurance , and 14% (AZN 31M) increase in compulsory insurance. The main driver of the growth in voluntary insurance was life insurance. The endowment life insurance accounts for the AZN 68M of the total AZN 84M worth of the voluntary insurance growth. In total, in the last five years insurance premiums have increased by 74% (AZN 358M). Insurance premiums collected across the life insurance classes have increased by 161% (AZN 236M) and by 36% (AZN 22M) on non-life insurance classes over the last five years.

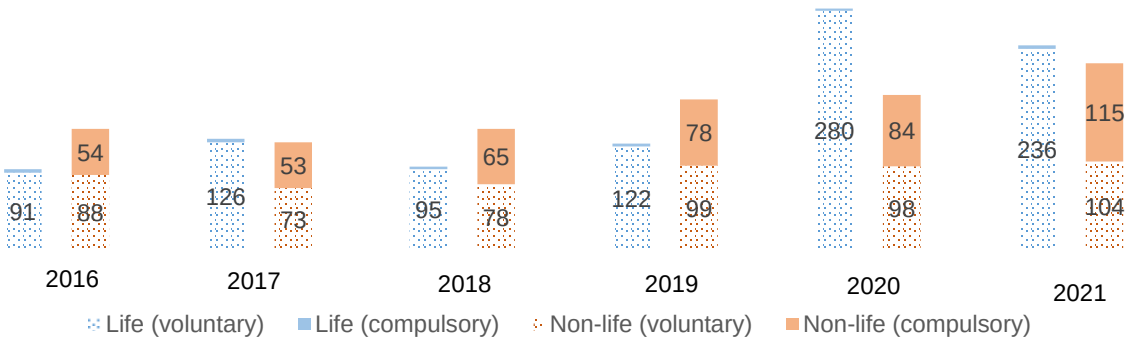
Chart 60. Dynamics of insurance premiums, mln. AZN



Source: CBA

Insurance claim expenses decreased over the year. Claim expenses Yoy decreased by 1.4% (AZN 6M) to AZN 459M, driven by the decrease in claim expenses of the life insurance classes. Over the year claim expenses in life insurance classes decreased by 15% (AZN 43M) to AZN 240M, while claim expenses in non-life insurance classes increased by 20% (AZN 37M) to AZN 219M.

Chart 61. Dynamics of insurance payments, mln. AZN

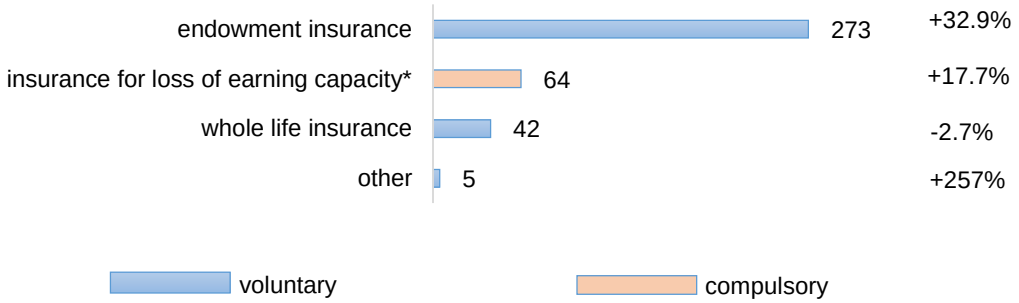


Source: CBA

- ***The structure of premiums collected by insurance classes:***

The endowment insurance class prevails in the structure of life insurance classes (AZN 273M, 71% of total life insurance premiums). During the year growth in premiums was observed primarily within this insurance class (up by 33% or AZN 68M).

Chart 62. Structure of life insurance premiums across classes, mln. AZN

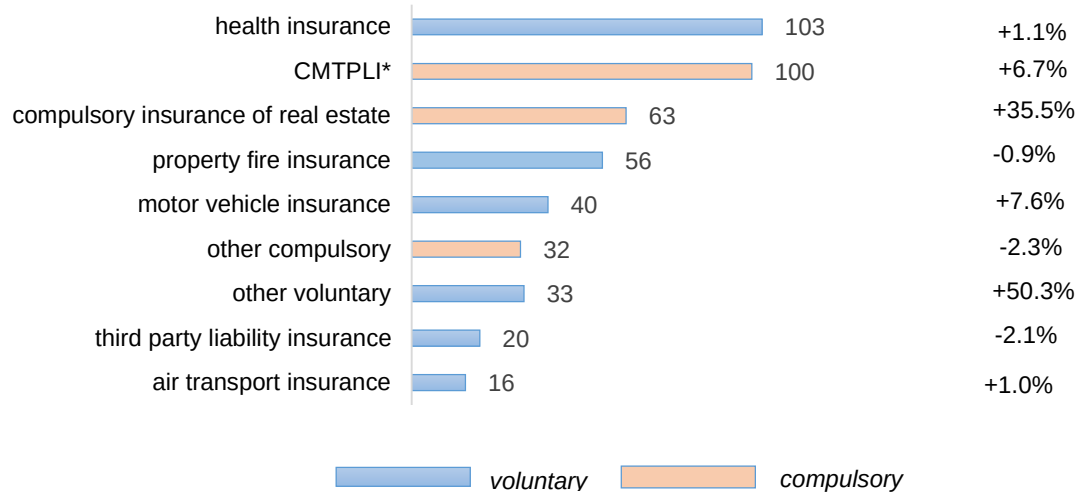


Source: CBA

Voluntary health insurance (AZN 103M, 22% of total non-life premiums), compulsory motor third party liability insurance (AZN 100M, 22% of total non-life premiums) and compulsory property insurance (AZN 63M, 14% of total non-life premiums) prevail in the structure of non-life insurance classes. The main drivers of growth within the non-life insurance class were compulsory insurance of real estate (+35.5%, AZN +16.4M), compulsory motor third party liability insurance (+6.7%, AZN +6.3M), crop insurance (AZN +6.2M) and livestock insurance (+126%, AZN +3.6M).

* *Compulsory insurance against industrial accidents and occupational diseases*

Chart 63. Structure of non-life insurance premiums across classes, mln. AZN

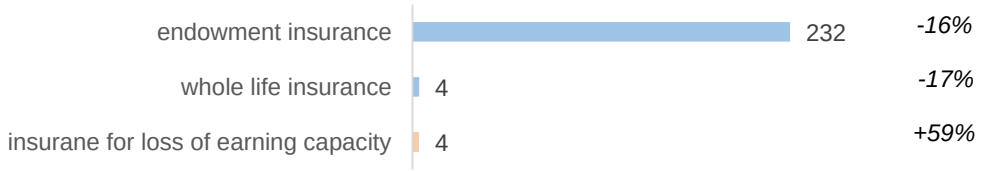


Source: CBA

- ***The structure of claim expenses across insurance classes***

The endowment insurance is the main class in the structure of claim expenses within the life insurance too. Although claim expenses on endowment insurance Yoy decreased by 17%, they accounted for 98% (AZN 232M) of total insurance claim expenses (AZN 236M).

Chart 64. Structure of life insurance claim expenses across classes, mln. AZN

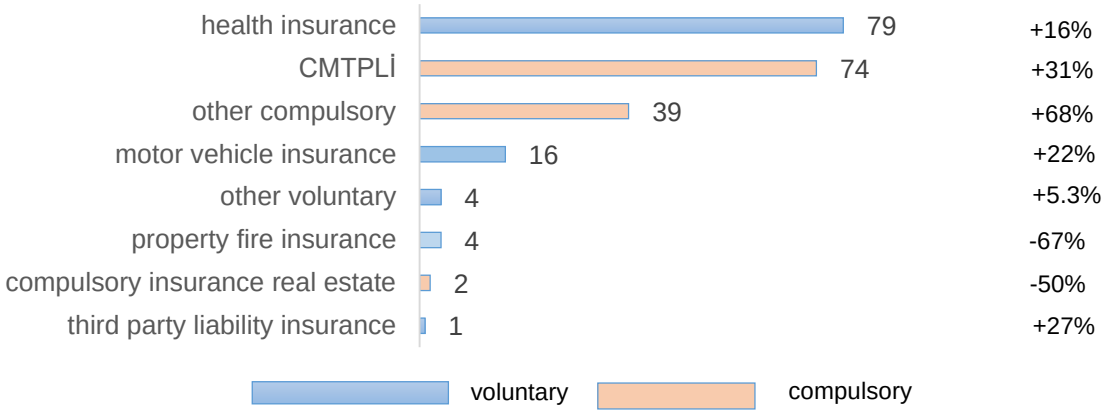


Source: CBA

The main drivers of claim expenses within the non-life insurance sector are health insurance (AZN 79M, 36% of total non-life claim expenses), compulsory motor third party liability insurance (AZN 74M, 34% of total non-life claim expenses) and other compulsory insurance claim expenses (AZN 41M, 19% of total non-life claim expenses). Claim expenses on compulsory motor third party liability insurance posted 31%, and total claim expenses on all other insurance classes less compulsory real estate insurance posted 68% growth. Growth in voluntary insurance is attributable to health insurance (16%) and vehicle insurance (22%).

** CMTPLI – compulsory motor third party liability insurance*

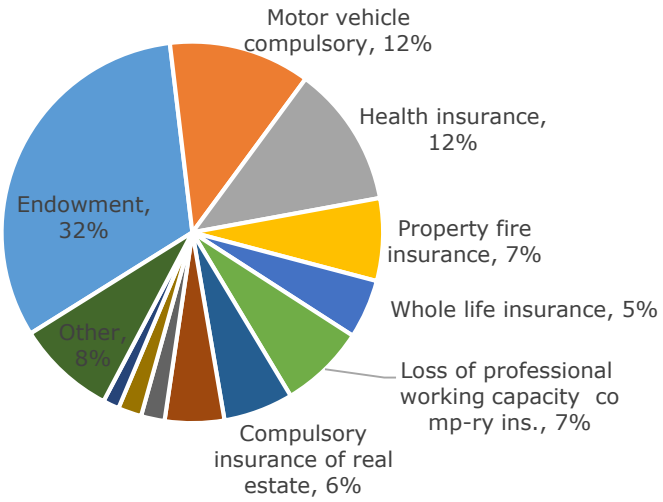
Chart 65. Structure of non-life insurance payments across classes, mln. AZN



Source: CBA

Concentration exists within the insurance sector among classes. Over half of insurance premiums is concentrated on 3 insurance classes. In 2021 the share of main insurance classes was 56% of total premiums.

Chart 66. Structure of premiums by insurance classes

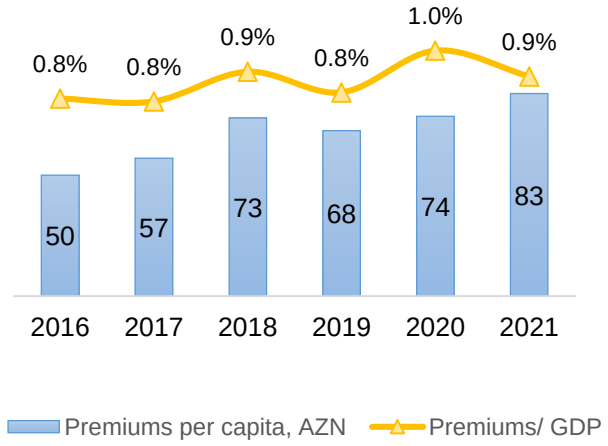


Source: CBA

Whereas the share of insurance premiums in GDP decreased, per capita insurance premium increased. The share of insurance premiums in GDP Yoy decreased by 0.1 pp to 0.9%, attributable to the fact that GDP growth was faster than the growth in insurance premiums in the post-pandemic period. In general, the penetration indicator lags behind the one in benchmark countires. Increasing penetration levels in the insurance sector is one of the main directions of the strategic activity of the Central Bank. According to the insurance sector development strategy, more digital services and introduction of digital solutions will both increase the digitalization of the sector and support higher penetration.

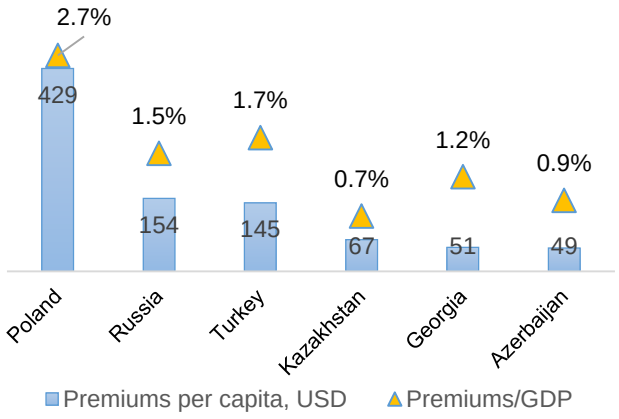
At the same time, large-scale insurance awareness events, development of an effective market infrastructure to boost confidence in the insurance sector and application of modern corporate management will stipulate higher penetration in the years to come.

Chart 67. Insurance sector penetration level



Source: CBA

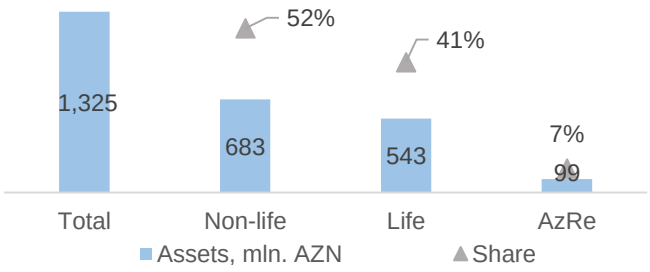
Chart 68. Comparison of insurance sector penetration with other countries



Source: OECD and relevant regulatory authorities

Assets of the sector Yoy decreased by 1.2% (AZN 16.0M) to AZN 1 325M[9]. Over the year assets of the non-life insurance sector decreased by -1.1% (AZN 7M) to AZN 683M, and assets of the life insurance sector increased by 3.9% (AZN 20M) to AZN 543M.

Chart 69. Insurance sector assets, mln. AZN

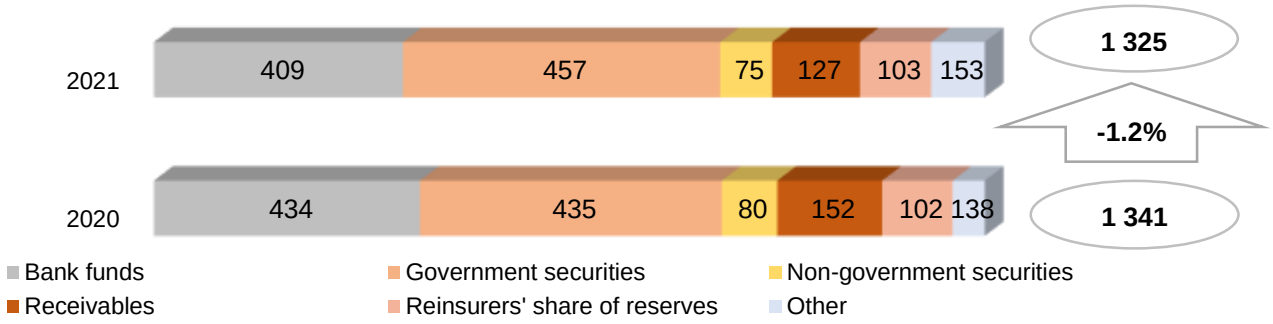


Source: CBAR

Insurance sector assets are mainly invested in government securities and bank funds. In general, insurance sector assets are invested in government securities (35% or AZN 457M), bank funds (31%, AZN 409M), and non-government securities (6%, AZN 75M). Riskier bank funds and non-government securities decreased (stricter liquidity and diversification ratios are applied on calculation of aggregate capital and reserves on these assets), and government securities increased year over year.

[9] The analysis covers 20 operating insurers and one exceptional reinsurer excluding insurance companies whose licenses have been revoked.

Chart 70. Dynamics of asset components, mln. AZN

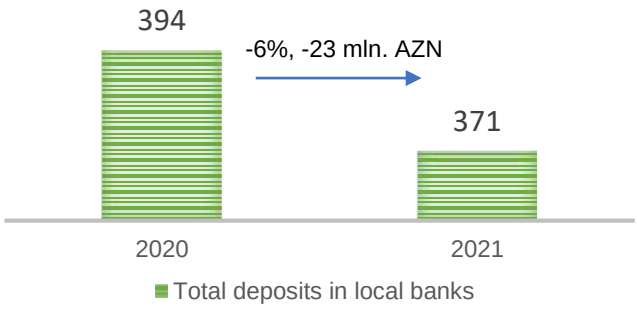


Source: CBA

While deposits of insurers with domestic banks decreased, they act as the main investment tool. Compared with the end of the previous year deposits of insurance companies with domestic banks decreased by 7% (AZN 28M) to AZN 371M.

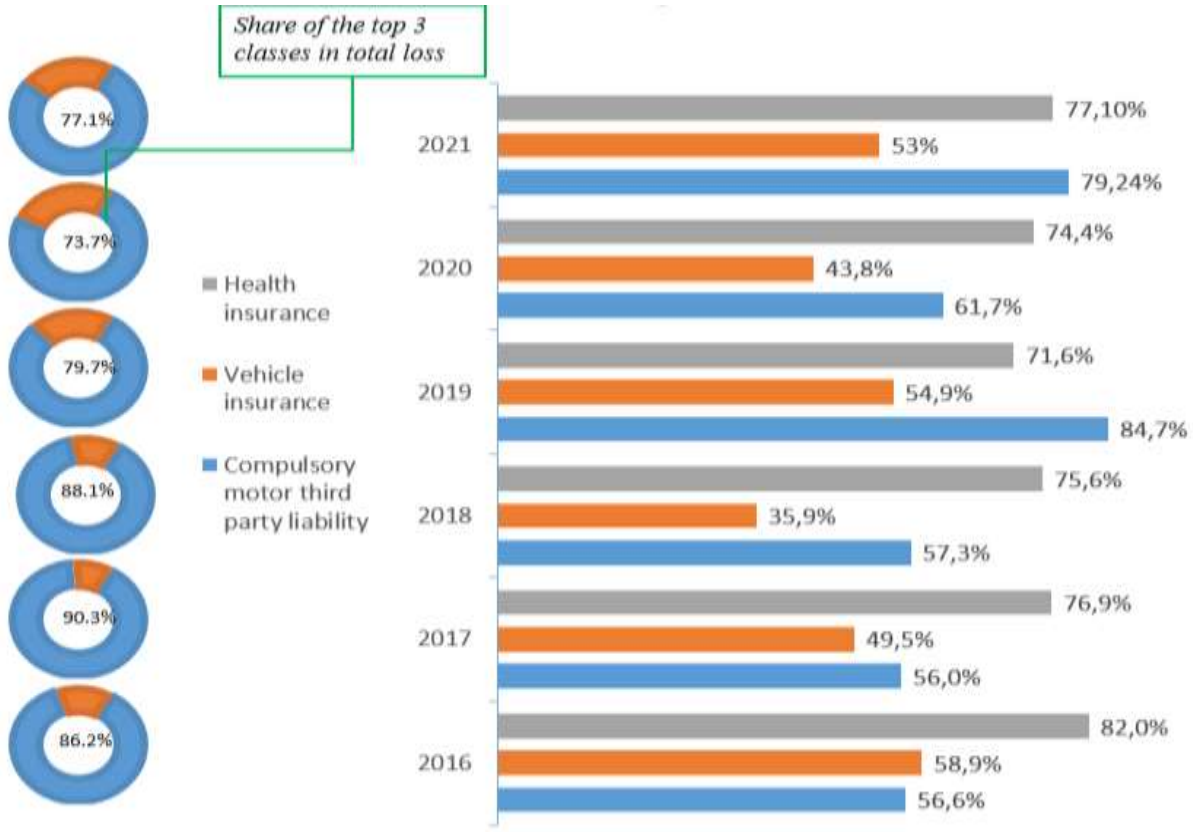
Insurance premiums on three classes that incurred the highest losses increased with respect to the last year due to the easing of pandemic and quarantine rules. Note that, since two of these insurance classes are voluntary, the tariff policy is implemented freely by the insurers. In addition, loss increased to 79% on the background of government regulation of compulsory motor third party liability insurance tariffs (recent change was made in 2011) and expansion of the vehicle base.

Chart 71. Funds of insurance companies with domestic banks, mln. AZN



Source: CBAR

Chart 72. Three insurance classes of the insurance sector with the highest loss

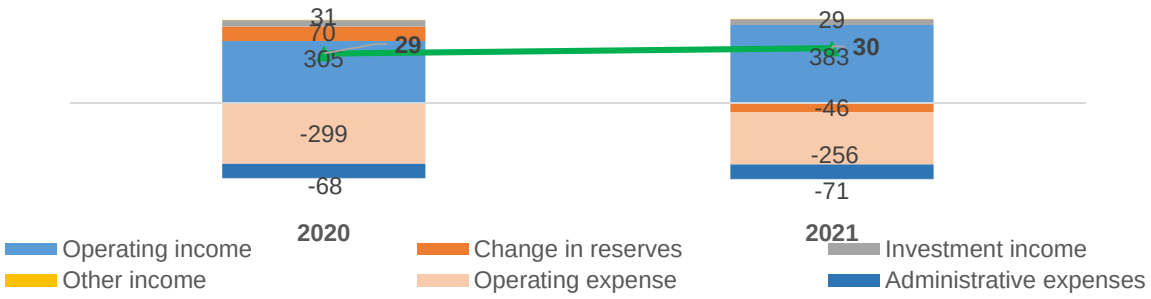


Source: CBA

Profitability of the sector is mainly driven by life insurance companies. The life insurance sector sustained its profitability. Net profit of the sector increased slightly (4% or AZN 1.3M) to AZN 30M. Profitability was mainly maintained due to the AZN 78M increase in operating income and AZN 43M drop in operating expenses. AZN 46M worth changes in reserves had a negative impact on profitability. Profitability of the non-life sector decreased by 42% (AZN 21.7M) to AZN 30M, mainly driven by Yoy 9.8 times or AZN 39.8M rise in changes in net insurance reserves. At the same time, AZN 32.0M worth increase in main operating profit, AZN 4.0M increase in other income and AZN 1.4M worth decrease in other expenses slowed down the rate of decline in net profit.

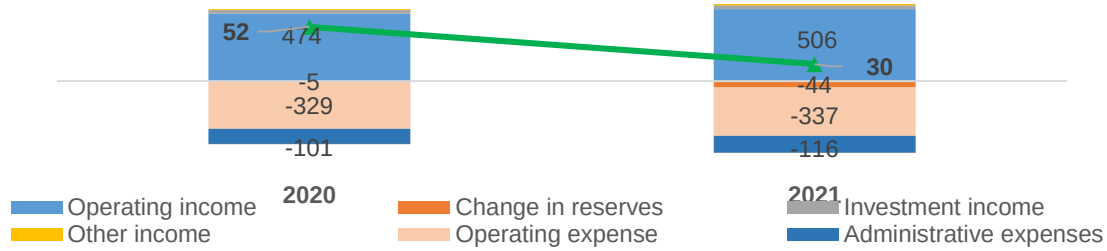
ROE of the insurance sector Yoy decreased by 3.0 pp to 12.8% and ROA decreased by 1.2 pp to 4.7%.

Chart 73. Profitability indicators of life insurance companies, mln. AZN



Source: CBA

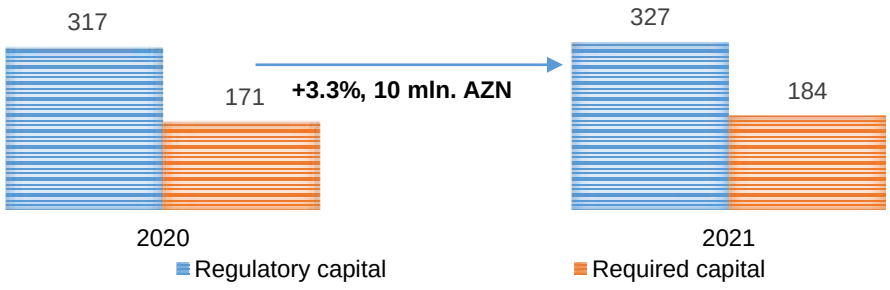
Chart 74. Profitability indicators of non-life insurance companies, mln. AZN



Source: CBA

Insurance sector capital exceeds aggregate capital requirements. In general, as of the end-2021 balance capital of the insurance sector (together with the exceptional reinsurer) amounted to AZN 491M, while regulatory capital was AZN 327M. Regulatory capital of the life insurance exceeds the required capital by 1.7 times (AZN 42M) and amounts to AZN 99M. Similar indicator was 1.7 times (AZN 77M) higher for the non-life sector and amounted to AZN 184M. To boost financial sustainability of the sector and ensure risk-based calculation of capital, one of the main priorities for the insurance sector development program is the elaboration of a methodological framework on Solvency II standards.

Chart 75. Dynamics of aggregate and required capital, mln. AZN

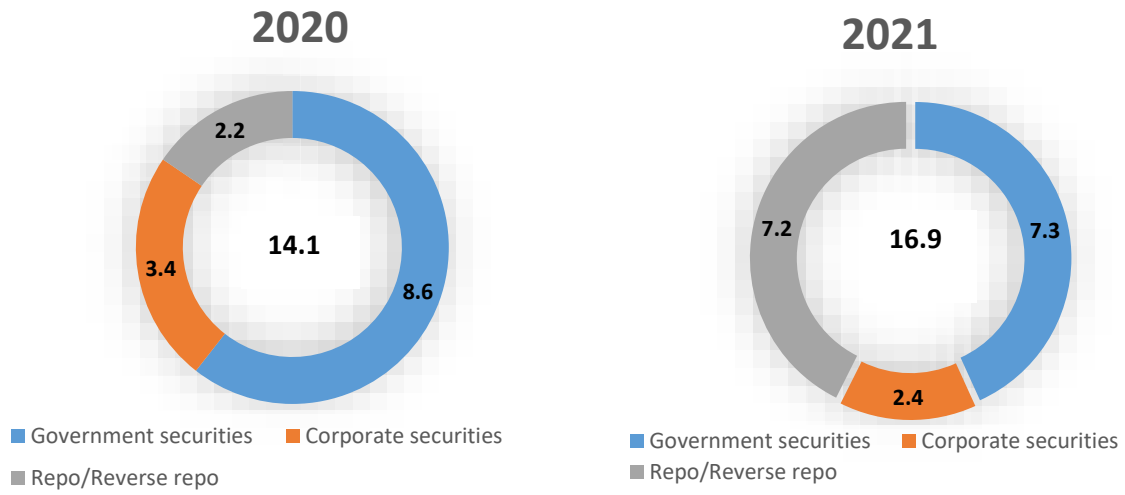


Source: CBA

Capital market

The capital market expanded in parallel with the recovery of the economic growth and domestic demand. In 2021 total trade turnover of the securities market increased by 19% Yoy to AZN 16.9B. The primary market of corporate securities grew by 51%, the government bonds market grew by 46% and the repo market grew by 3.3 times.

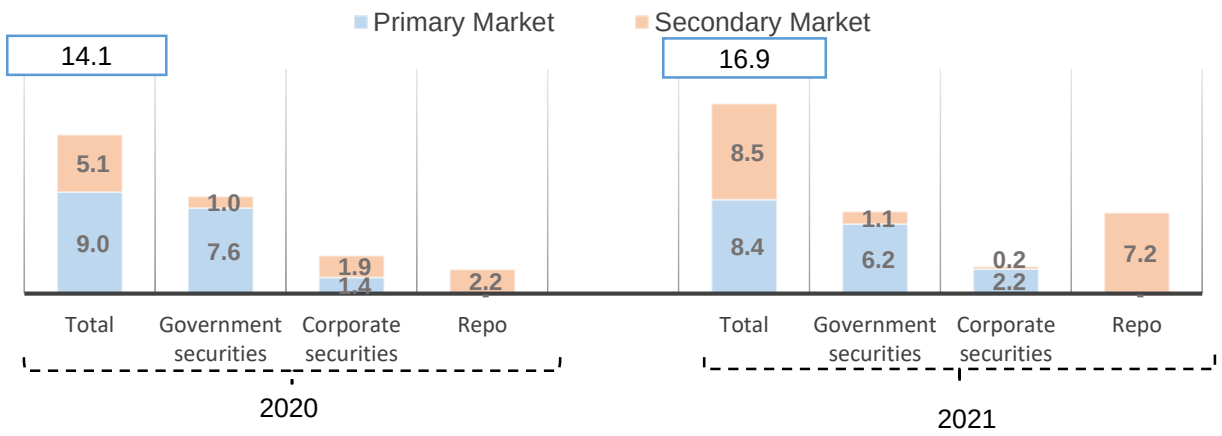
Chart 76. Capital market turnover, bln. AZN



Source: CBA

Stimulus measures contributed to higher access of issuers and investors to the capital market. Listing requirements were simplified and stimulus tariff regime began to be applied for issuers and investors in order to increase funding initiatives of the private sector through the capital market.

Chart 77. Volume of primary and secondary market operations, bln. AZN

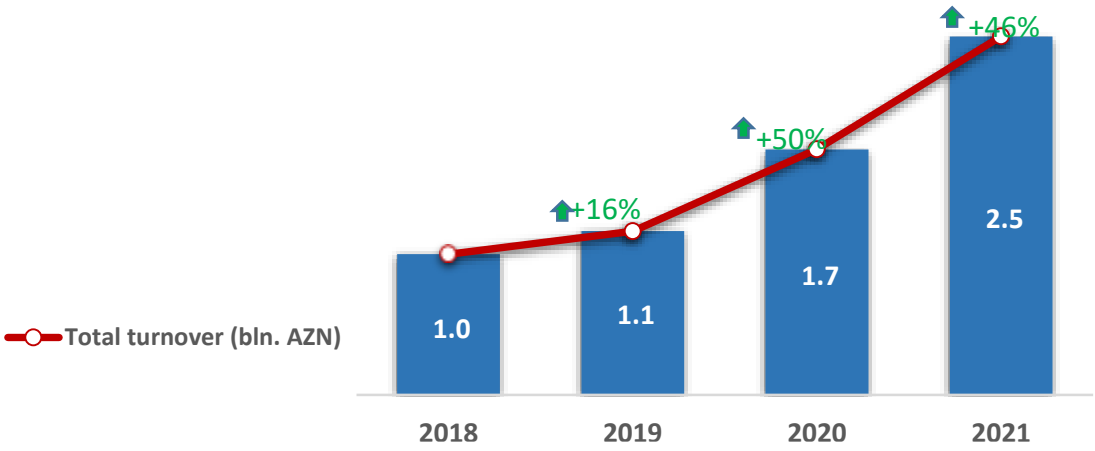


Source: CBA

At the same time, to stimulate public offering of corporate securities the Baku Stock Exchange launched a reward scheme for investment companies providing underwriting service. The above stimuli resulted in dynamic growth in public offering of securities.

The market for government securities issued by the Ministry of Finance grew. According to the 'Medium to long term debt management strategy for the Republic of Azerbaijan's public debt' government securities in circulation Yoy increased by 46% to AZN 2.5B as of end 2021. The volume of primary market transactions on the placement of government bonds increased by 29% to AZN 1.5B, and secondary market operations increased by 83% to AZN 955M. New government bonds with seven year maturity were issued over the reporting year. This issue is very important in terms of adjustment of the government securities market to international practice, formation of a yield curve and expansion of the collateral market.

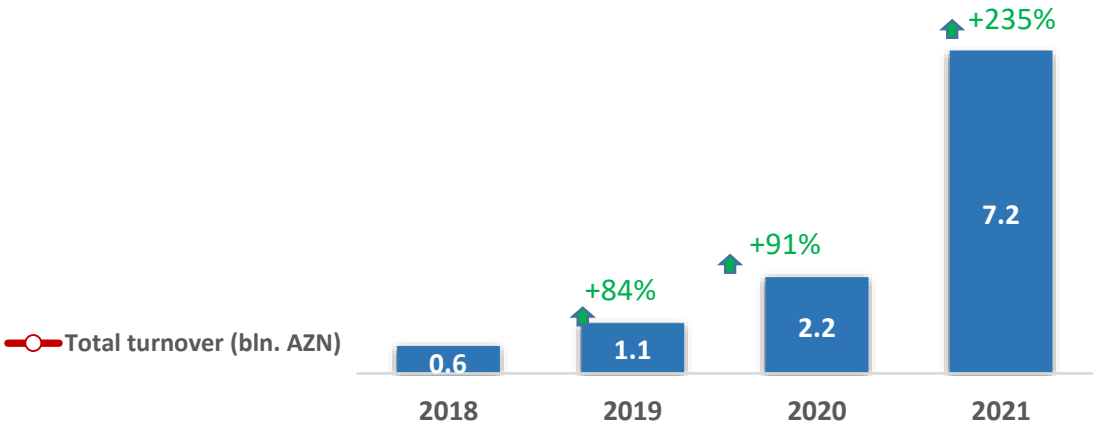
Chart 78. Volume of government securities in circulation, bln. AZN



Source: CBA

The volume of operations in the repo market increased to AZN 7.2B on the backdrop of expansion of the government bonds market. In the environment of the rise in the volume of government bonds in circulation financial institutions actively used repo operations, and it became a favorable lending and investment tool. 95% of repo operations was conducted with government bonds over the reporting period. The volume of interbank repo market amounted to AZN 1.4B, while the size of other repo operations amounted to AZN 5.8B.

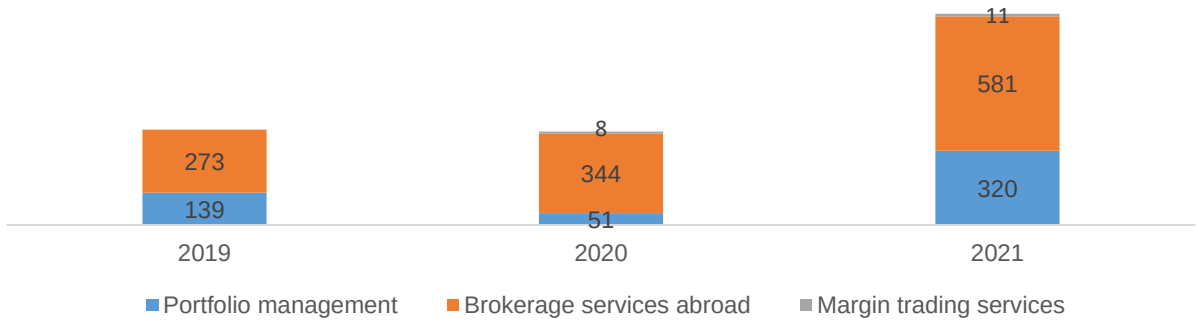
Chart 79. Dynamics of the repo market, bln. AZN



Source: CBA

Assets and profitability of investment companies increased due to the rise in trade turnover in the securities market. As of end-2021 assets of investment companies increased to AZN 84.2B. Over the period two investment companies received licenses for investment activities and the number of investment companies reached 12. In addition, a customer base of investment companies expanded as well. In 2021 customer assets increased by 127% to AZN 912M. Profit of investment companies increased by AZN 2.7M to AZN 8.7M.

Chart 80. Dynamics of customer assets of investment companies, mln. AZN

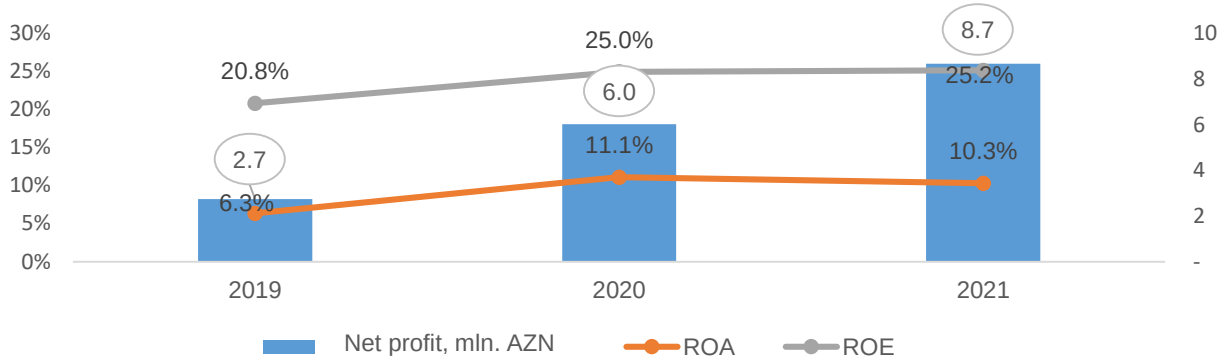


Source: CBA

One of the main targets for the capital market is to boost the activity on real sector funding through the securities market. Albeit certain progress in real sector funding with corporate bonds, impediments are still on air in increasing activity of the stock market. The factors, like weak development of corporate governance in the private sector, low awareness of the population and businesses on the capital market and its tools contain attraction of capital through the securities market. In order to develop the capital market, efforts are underway by the Central Bank to adjust a legal framework to international

standards, improve the market infrastructure and support supply and demand in the market.

Chart 81. Profitability of investment companies



Source: CBA

Challenges related to the institutional development of the capital market necessitate modernization of the market infrastructure. The Central Bank is planning to launch a centralized transactions system covering trade and post-trade operations in the capital market, adjust operations on the issue and trading of securities up to the most recent technological standards and formulate remote trading opportunities for investors at the stock exchange. In addition, to make funding of issuers from the capital market more flexible, the Central Bank, the National Depository Center and the Baku Stock Exchange started efforts to create a single portal. The system will allow electronic registration of securities through a single window system.

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The Central Bank of the Republic of Azerbaijan

Phone: (+99412) 493 11 22

http://www.cbar.az

Address: R.Behbudov Str, 90, AZ1014, Baku