National Bank of the Republic of North Macedonia
Financial Stability and Macroprudential Policy Department

REPORT ON RISKS IN THE BANKING SYSTEM OF THE REPUBLIC OF NORTH MACEDONIA IN THE THIRD QUARTER OF 2022

December 2022

Contents

I. Summary

In the third quarter of 2022, the banking system is still operating under heightened risks due to the prolonged military conflict in Ukraine and inflationary pressures and challenges related to the energy crisis. In such an environment, banks are resillience to external shocks and without noticable negative effects on their balance sheets. The sources of funds of the banking system contributed to a faster quarterly growth that mostly resulted from the increase in deposits from non-financial entities, the recapitalization carried out at several banks and the higher profit from operations. After the decline in the first quarter and the stagnation in the second quarter of the year, deposits from non-financial entities registered a solid three-month growth of 3.1%, for which the contribution of enterprises was greater, although household deposits also recorded an increase. The greater contribution of denar deposits to the total deposit growth, already for the second quarter in a row and the quarterly increase in long-term savings, for the first time since the beginning of the pandemic, are another confirmation of the gradual recovery of the banks' deposit activity. In conditions of tightening credit conditions by banks, placements in loans to non-financial entities continue to grow solidly, although slightly slower (1.8%), with a greater contribution of household loans, compared to the increase in corporate loans. From the aspect of currency, foreign currency credits have the biggest contribution to credit growth, which on the one hand results from the borrowing of the Government based on a short-term foreign currency credit in this quarter, and on the other hand it results from the stronger growth of corporate foreign currency loans, in conditions of higher prices of energy sources and imported goods in general. In addition to loan placements, the banks' liquid assets also recorded a significant growth (primarily, placements in the National Bank instruments), after their decrease in the past two quarters of the year.

During the third quarter, the National Bank continued with the gradual normalization of monetary policy to maintain medium-term price stability, with a macro prudential policy measure being introduced to strengthen the resilience of the banking system and maintain financial stability. Thus, during the third quarter of 2022, the policy rate of the National Bank increased in two occasions by 0.5 pp each, reaching a level of 3% in September. In September, it was decided to increase the interest rates on deposit facilities and seven-day deposits, by 0.5 pp each, to the levels of 0.90% and 0.95%, respectively. In the same month, the National Bank adopted a Decision amending the Decision on reserve requirement, which encourages lending to projects related to domestic production of electricity from renewable sources. In this way, in conditions of energy crisis and strong growth of the global electricity prices, the National Bank contributes to mitigating the pressures and the structural problems in the economy, while the measure also supports "green finance" and sustainable financing, which is being determined also as a strategic goal in the latest strategic plan of the National Bank. On the basis of the regular quarterly assessment of systemic risks, as well as the latest indicators, in August 2022, it was assessed that there is a need for introducing a rate of the countercyclical capital buffer of banks for exposures in the Republic of North Macedonia, in the amount of 0.5%. This macro prudential measure, the implementation of which is planned for 1 August 2023 further strengthens the banking protection mechanisms, in order to preserve its resilience and further strengthen financial stability in conditions of a gradual increase in systemic risks. Monetary policy normalized in October and November 2022, as well when the policy rate increased by a total of 1.25 pp, to the level of 4.25%, together with interest rates on deposit facilities and seven-day deposits, which rose to the level of 2.15% and 2.20%, respectively. In addition, in November 2022, the National Bank Council adopted a decision on changing the banks' reserve requirement rates, in order to further encourage savings in domestic currency by increasing the banks' reserve requirement rate for foreign currency liabilities from 18% to 19%, and the part of the reserve requirement in foreign currency that banks meet in euros has also increased, from 75% to 77%.

The solvency of the banking system improved. The capital adequacy ratio increased by 0.4 quarterly, to the record high of 17.7% in the last decade. The better solvency is the result of new issues of capital instruments by several banks with a slow quarterly growth of risk-weighted assets. Over 90% of the own funds account for the common equity Tier 1 capital, which represents the highest-quality segment of the banks' regulatory capital. Analyzing the use, more than half of own funds account for capital supplements determined according to the supervisory assessment, the capital buffers or are "free", above the necessary minimum, which banks may use in dealing with various challenges in the downward phases of the economic cycle and in crisis conditions. The conducted stress testing of the banking system resilience to the simulated shocks shows satisfactory resilience.

Indicators of liquidity of the banking system improved. After two consecutive quarters of decrease in banks' liquid assets, in the third quarter of 2022, these assets recorded a growth of 2.4%. In this way, the share of liquid assets in total assets remained at a satisfactory level of 28.8%, while the coverage of short-term liabilities and household deposits with liquid assets increased, so as of 30.9.2022 equaled to 46% and 58.1 %, respectively. The liquidity coverage ratio of the banking system equals 258.9%, which is by 2.5 times more compared to the regulatory minimum (100%), thus confirming the sufficient amount of liquidity available to the Macedonian banking system. The results of the stress tests indicate satisfactory resilience of the banking system to the assumed extreme, individual and combined liquidity outflows.

In the third quarter of 2022, the quarterly growth of the non-performing loans decelerated, however their share in the total loans increased by minimal 0.1 pp., to the level of 3.3%. From a sectoral point of view, the quarterly growth of non-performing loans was slightly more evident in corporate loans, which increased by 3.9%, while non-performing household loans went up by 3.5%. The ratio between non-performing and total loans increased by 0.1 percentage points, to the level of 4.5% in the corporate loan portfolio, while in the credit portfolio comprised of households it remained at the same level of the previous 2.2%.

In the first nine months of 2022, the profit of the domestic banking system keep up growing, but almost twice as slow as compared to the same period of the previous year. The increased profit mostly results from the growth of net interest income and net commission income, as well as lower impairment costs. The ratios of return on average assets and average equity and reserves improved compared to the first nine months of 2021 and reached levels of 1.7% and 13.7%, respectively. The operational efficiency indicators registered various movements, given increase in the operating costs of 8.7% compared to the same period last year.

The exposures of the banking system to currency risk and to the interest rate risk increased and amount to 11.0% and 10.8% of own funds, respectively, which is within the prescribed limits. Such movements result from the stronger growth of banks' placements in loans with a currency component and variable interest rates and investments in time deposits in foreign banks and with the National Bank with fixed interest rates, while at the same time a slower growth of foreign exchange liabilities, primarily due to reduced liabilities based on loans with fixed interest rates.

The risks to the overall macroeconomic context are still pronounced and are predominantly associated with the external environment, and the main risk still includes the uncertainty related to the course and duration of the military conflict between Russia and Ukraine and its impact on prices and economic activity globally, which adequately affect the activity and the risk profile of the banking system in the future period. The National Bank, as it was until now, closely monitors all events and is ready to take all necessary measures within its competence, when needed.

II. Structure of the banking system

1. Number of banks and ownership structure of the banking system

As of 30.9.2022, the number of banks in the Republic of North Macedonia remained unchanged compared to the previous quarter and equaled thirteen banks. Nine banks are in predominant foreign ownership, five of which are subsidiaries of foreign banks.

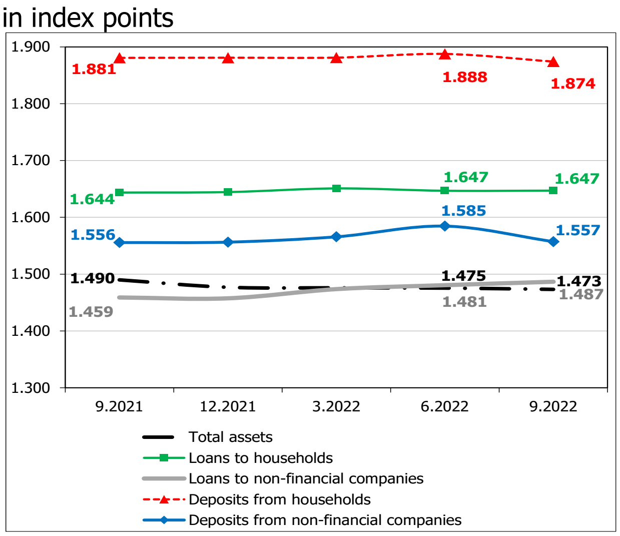
Table 1
Structure of major balance sheet positions by banks' majority ownership (as of 30.9.2022)
in millions of denars and in per cent

Type of ownership	Number of banks	Capital and reserves		Assets		Loans to non-financial sector		Deposits from non-financial sector		Total revenues*		Financial result*	
		Amount	In %	Amount	In %	Amount	In %	Amount	In %	Amount	In %	Amount	In %
Banks in dominant ownership of foreign shareholders	**9**	**63.566**	**76,8%**	**469.668**	**71,5%**	**335.734**	**81,5%**	**323.597**	**68,9%**	**20.665**	**74,8%**	**7.145**	**71,6%**
- subsidiaries of foreign banks	*5*	*56.318*	*68,1%*	*394.189*	*60,0%*	*281.200*	*68,3%*	*274.386*	*58,4%*	*17.519*	*63,4%*	*6.533*	*65,5%*
- Austria	1	9.611	11,6%	80.606	12,3%	60.315	14,7%	47.241	10,1%	2.916	10,6%	722	7,2%
- Bulgaria	1	1.269	1,5%	11.165	1,7%	7.544	1,8%	8.081	1,7%	409	1,5%	47	0,5%
- Greece	1	19.827	24,0%	117.132	17,8%	85.555	20,8%	86.993	18,5%	6.200	22,4%	2.741	27,5%
- Slovenia	1	12.998	15,7%	107.343	16,3%	72.474	17,6%	84.456	18,0%	5.044	18,3%	2.614	26,2%
- Turkey	1	12.612	15,2%	77.944	11,9%	55.312	13,4%	47.615	10,1%	2.950	10,7%	409	4,1%
- other banks in dominant foreign ownership	*4*	*7.248*	*8,8%*	*75.479*	*11,5%*	*54.535*	*13,2%*	*49.212*	*10,5%*	*3.146*	*11,4%*	*612*	*6,1%*
- Bulgaria	2	3.630	4,4%	28.274	4,3%	19.695	4,8%	19.124	4,1%	1.569	5,7%	230	2,3%
- Germany	1	2.977	3,6%	38.999	5,9%	29.335	7,1%	23.977	5,1%	1.178	4,3%	270	2,7%
- Switzerland	1	641	0,8%	8.206	1,2%	5.504	1,3%	6.110	1,3%	399	1,4%	112	1,1%
Banks in dominant ownership of domestic shareholders	**4**	**19.165**	**23,2%**	**187.589**	**28,5%**	**75.961**	**18,5%**	**146.006**	**31,1%**	**6.960**	**25,2%**	**2.834**	**28,4%**
- private ownership	*3*	*16.289*	*19,7%*	*171.614*	*26,1%*	*75.890*	*18,4%*	*146.006*	*31,1%*	*6.792*	*24,6%*	*2.795*	*28,0%*
- state ownership	*1*	*2.876*	*3,5%*	*15.974*	*2,4%*	*72*	*0,0%*	*0*	*0,0%*	*168*	*0,6%*	*39*	*0,4%*
Total:	**13**	**82.731**	**100,0%**	**657.256**	**100,0%**	**411.696**	**100,0%**	**469.603**	**100,0%**	**27.625**	**100,0%**	**9.978**	**100,0%**

Source: National Bank based on data submitted by banks.
* Total income and financial result are calculated for the last twelve months (30.9.2021-30.9.2022).

The share of banks with dominant foreign ownership in the structure of banking system's major on-balance sheet items prevailed also in the third quarter of 2022. The most significant change was registered in the financial result, where the share of these banks decreased by 2.5 percentage points. The change in capital and reserves is also noticeable, where the share of foreign-owned banks increased by 0.9 pp. Foreign-owned banks remain dominant in the share of total loans of the non-financial sector, which amounts to 81.5% and recorded a decrease by 0.2 percentage points.

Chart 1
Herfindahl index



Source: National Bank based on data submitted by banks.

The value of the Herfindahl index[1] indicates a reduced concentration with regards to deposits, while insignificant changes were observed in the other categories of bank activities. The concentration of deposits of non-financial corporations decreased by 28 index points, and the deposits of households decreased by 14 index points. However, the value of the Herfindahl index of household deposits is still above the acceptable level of 1,800 index points (which it exceeded in the third quarter of 2020). In all other categories of activities, the index is **within the acceptable values[2]**.

Table 2
Indicators of concentration of major balance sheet positions in the three and five banks with the largest share in these positions

in per cent

Position	30.09.2022		30.06.2022	
	CR3	CR5	CR3	CR5
Total assets	57,2	81,3	57,6	81,3
Loans to households	61,1	83,5	61,3	83,4
Loans to non-financial companies	51,6	79,9	51,5	79,9
Deposits from households	70,5	86,1	70,9	86,0
Deposits from non-financial companies	54,7	83,0	56,7	83,6
Financial result*	81,7	93,1	79,4	94,3
Total revenues*	61,6	82,8	62,0	83,1

Source: National Bank based on data submitted by banks.
* Total income and financial result are calculated for the last twelve months (30.9.2021-30.9.2022).

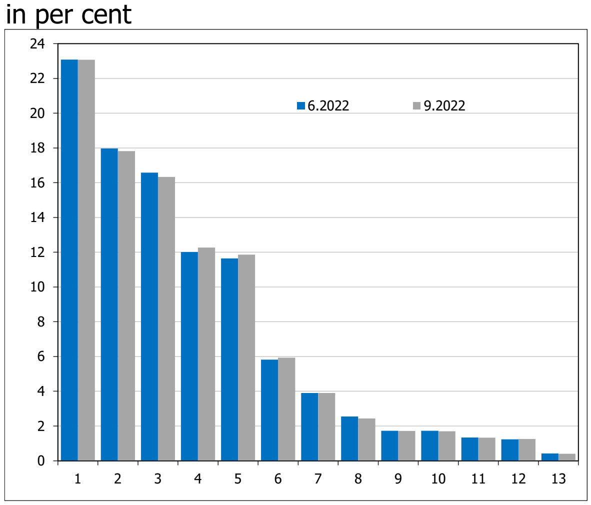
[1] The Herfindahl index is calculated according to the formula $HI = \sum_{j=1}^{n} (S_j)^2$, where S is the share of each bank in the total amount of the analyzed category (e.g. total assets, total deposits, etc.), and n denotes the total number of banks in the system.

[2] The level of concentration is considered acceptable when the index ranges from 1,000 to 1,800 points.

The concentration indicators of the three and five banks with largest share in individual banks' balance sheets positions registered slight changes on a quarterly basis. There is a more pronounced change in the bank presentation of the financial result, so the three banks with the largest participation recorded an increase of 2.3 percentage points, but if the fourth and fifth largest banks are added, there is a decrease of 1.3 percentage points. From the other categories of activities, decrease in the non-financial corporations' deposits is noticeable in the five, and especially in the three banks with the largest share in this position.

Chart 2
Share of individual banks in the total assets of the banking system

in per cent



Source: National Bank, based on the data submitted by banks.

The difference in the size of banks according to the amount of their assets is maintained at a high level, while the spread between the bank with highest market share (23.1%) and the bank with the lowest market share (0.4%) remained almost the same for a fourth consecutive quarter. The five big banks are still the only ones having a double-digit market share, which collectively amounts to 81.3% and is unchanged compared to the previous quarter.

III. Bank risks

1. Credit risk

Although the environment in which the banks operate is full of numerous uncertainties and challenges due to the military conflict between Russia and Ukraine, the deepening of the energy crisis and the present inflationary pressures, for now there are no visible negative effects on the balance sheets of the banks, which maintain the good quality of the credit portfolio. In the third quarter, the rate of non-performing loans (non-peforming loans / total loans) increased minimally by 0.1 pp to the level of 3.3%, which is significantly lower compared to the pre-pandemic period. The minimal deterioration of the rate of non-performing loans mostly comes from the corporate sector (primarily from construction and activities related to real estate), where the rate of non-performing loans is 4.5% and on a quarterly basis has increased by 0.1 p.p. The non-performing loan rate of households remained at the level of the previous quarter and it equaled 2.2%

Coverage of non-performing loans with impairment for them is maintained at a relatively high level (67.7%), which together with the satisfactory volume and quality of the own funds, limits the negative effects on the banks' solvency in the case of a hypothetical fully provisioning of these loans. The results of stress testing confirm the resilience of the banking sector to the simulated credit risk shocks.

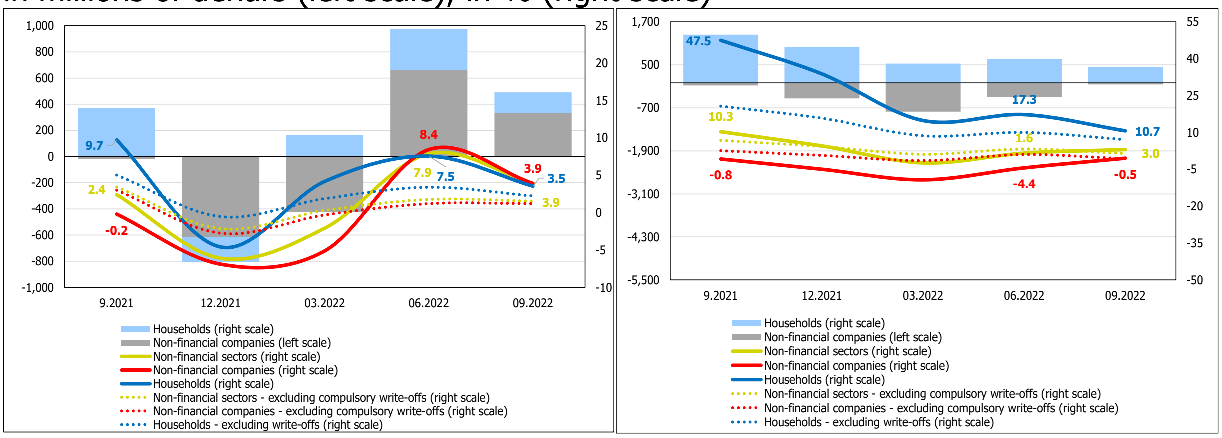
Although a part of the growth of non-performing loans results from the default on part of the regular restructured loans, after last year's more significant growth, the movements of the restructured loans from the beginning of 2022 point towards stagnation and reduction, so they are currently not a significant risk factor for more pronounced deterioration of the quality of the credit portfolio. However, in the conditions of several shocks the environment imposed and that may affect the creditworthiness of households and the corporate sector, the risks of possible growth of non-performing loans has increased as well as the risk of growth of restructurings for appropriate adjustment of the terms of the loans to the possibly worsened financial standing of the customers.

1.1 Materialization of credit risk in banks' balance sheets

In the third quarter of 2022, the increase in the total non-performing loans of the non-financial sector (3.9% or by Denar 509 million) halved compared to the second quarter (7.9%, or Denar 959 million)[3].

[3] By isolating the effect of net writte-offs, the non-perdorming loans of the non-financial sector registered an increase of 1.5% (Denar 622 million).

Chart 3
Quarterly (left) and annual (right) change in the non-performing loans by sector
in millions of denars (left scale), in % (right scale)

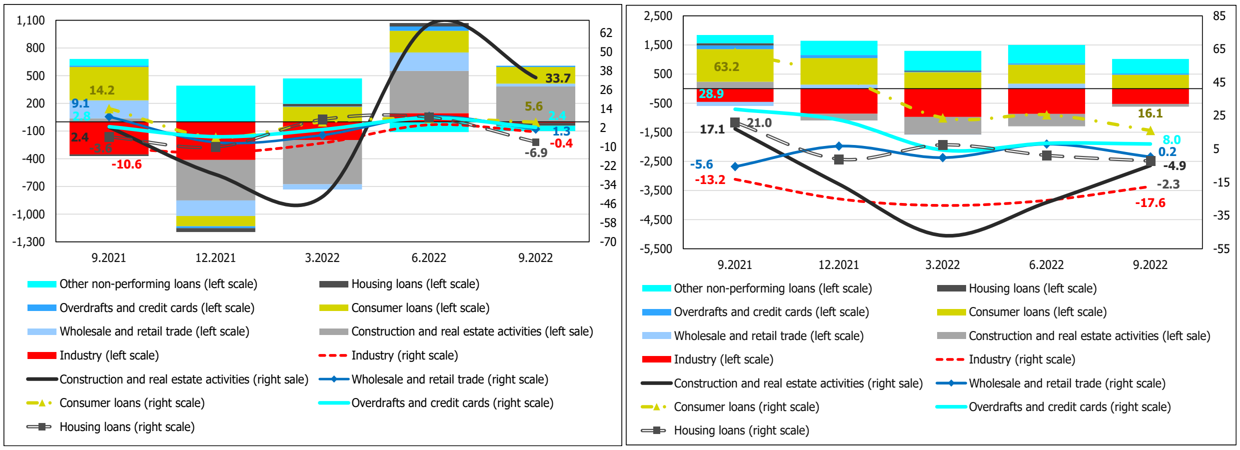


Source: National Bank, based on the data submitted by banks.
Note: The lines with dots show the growth of non-performing loans by excluding the effect of all mandatory write-offs made in the period 1.1.2016 - 30.9.2022. From December 2019, the data also contain collected compulsory written-off loans.

The quarterly growth of non-performing loans mainly stems from non-financial corporations[4], the non-performing loans of which registered a quarterly growth (of 3.9%, or Denar 333 million[5]), although decelerated compared to the preceding quarter (8.4% or Denar 663 million). The increase in the non-performing loans mostly arise from "construction and activities related to real estate". During this quarter, the increase in the non-performing loans, although more moderate, was registered also in the activities "mining and quarrying", "wholesale trade and retail trade", "agriculture", "technical and professional activities" and "water supply". On the other hand, there are activities that record a decline in non-performing loans, and this decline is most pronounced in the activities "accommodation facilities and food service activities" and "transport and storage". Similarly, as before, within the total non-performing loans of enterprises, the share of non-performing loans from the activities of construction, wholesale and retail trade, transport, the food sector, catering is the highest, despite the fact that in some of these activities, the rate of non-performing loans improved on a quarterly basis.

[4]Non-performing corporate loans prevail in the total non-performing portfolio with a share of 65.1%.
[5] By isolating the effect of compulsory write-oofsнthe non-performingcorporate loans increase by1.2%.

Chart 4
Quarterly (left) and annual (right) change in the non-performing loans by activity (non-financial corporations) and credit products (households)
in millions of denars in % in millions of denars in %

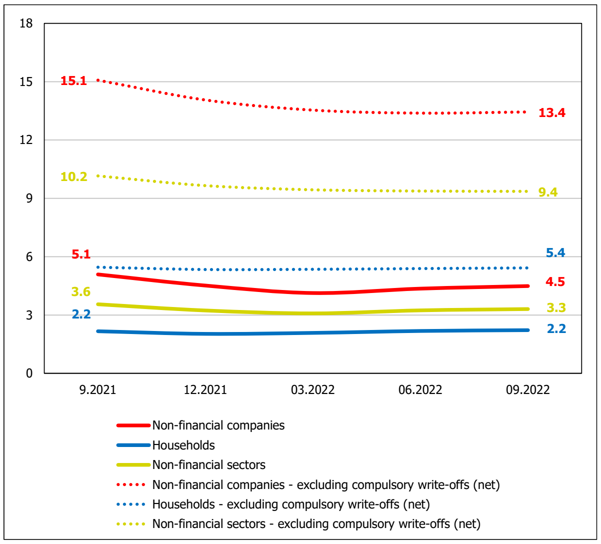


Source: National Bank's Credit Registry, based on data submitted by banks

The household non-performing loans increased by 3.5% or by Denar 158 million[6], but this increase is halved compared to the second quarter when these loans incremented by Denar 313 million, or by 7.5%. The growth slowdown of the household non-performing loans is mainly due to consumer non-performing loans, which increased by 5.6% or by Denar 180 million against the growth of 8.0% (or by Denar 236 million) in the previous quarter. Non-performing housing loans decreased in this quarter (by 6.9%, or by Denar 31 million) compared to the growth registered in the previous quarter (by 8.8%, or by Denar 36 million). From the rest of the credit categories, non-performing claims based on other loans to natural persons and non-performing loans for the purchase and renovation of business premises also recorded a decrease in the third quarter. Moderate growth of non-performing loans was registered in loans based on issued credit cards and overdrafts.

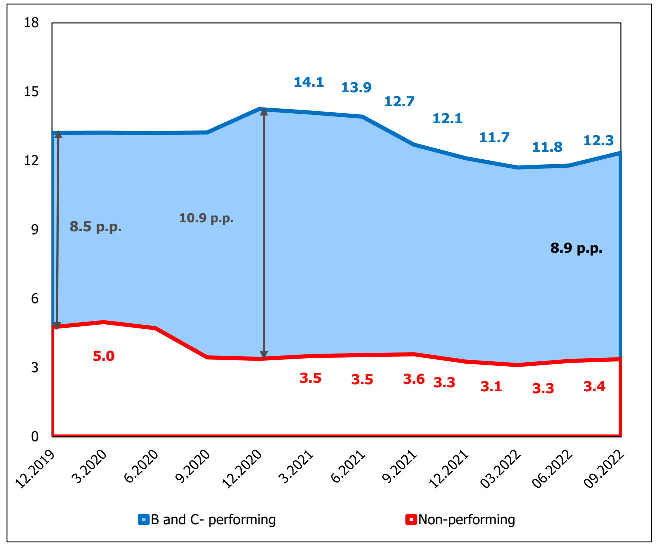
[6] If exclude the effect of the compulsory write-offs, then the increase in the household non-performing loans is smaller and equals 2.2%.

Chart 5
Non-performing loans/total loans to non-financial sectors, by sector
in %



Source: National Bank, based on data submitted by banks.

Chart 6
Gap between regular loans in the risk categories B and C and the non-performing loans *
in % of the total loans



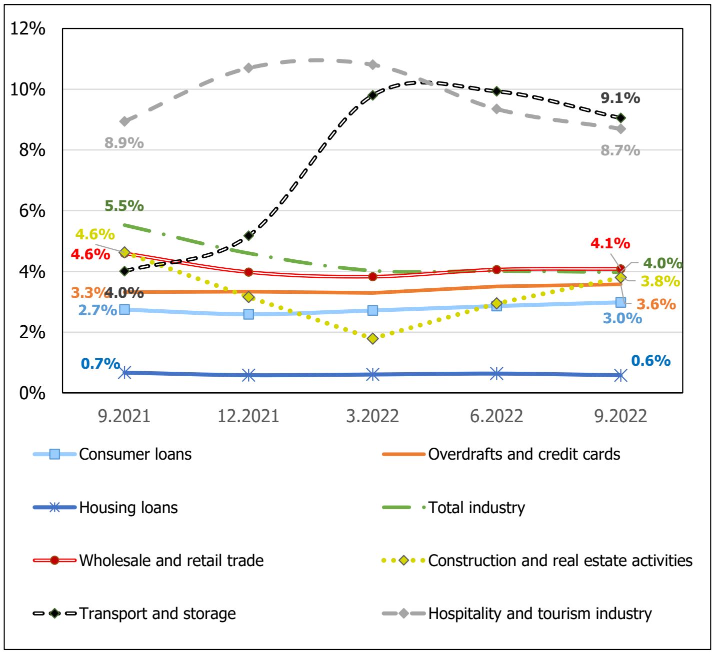
Source: National Bank's Credit Registry, based on data submitted by banks National Bank's Credit Registry, based on data submitted by banks.
* Regular loans classified in the risk categories B and C and non-performing loans, are approximation of the so-called Stage 2 and Stage 3 loans according to IFRS 9, respectively. Small differences are possible in the share of non-performing loans in the total loans of the non-financial sector shown in the two charts due to differences in the methodology and definition of the data collected from different sources.

The transition of loans from Stage 1 to Stage 2 (according to IFRS 9) in the third quarter of 2022 indicates a certain deterioration in the quality of the banks' regular (functional) loan portfolio, but for now there is no significant migration of loans to Stage 3 (non-performing credits), so the participation of these loans in the total loans is still at a stable level. Thus, with a slowdown in credit support by banks (quarterly credit growth is 1.8%) and a moderate increase in non-performing loans (3.9%), the rate of non-performing loans increased by a minimal 0.1 pp and reached the level of 3.3%[7]. In contrast, a deterioration of half a percentage point, to the level of 12.3%, was recorded by the share of loans classified in risk categories "B" and "C-regular" (as an approximation for loans from Stage 1 and Stage 2 according to IFRS 9) in the total credits of the non-financial sector (mostly due to the

[7] Without the effect of compulsory net write-offs, the share of non-performing loans in total loans has remained unchanged at the level of 9.4% for the third quarter in a row.

growth of credits classified in category B by 8.3%). This led to a slight widening of the gap between Stage 1 and Stage 2 loans (by 0.4 p.p.) compared to the previous quarter. It is important to emphasize that this growth in loans classified in the B risk category is entirely due to two clients and does not represent a movement characteristic of the banks' total loan portfolio. This is confirmed also by the almost unchanged level of loans in risk category B in the coming month (in October 2022).

Chart 7
Non-performing loans / total loans, by activity and credit products
in %



Source: National Bank's Credit Registry, based on data submitted by banks.

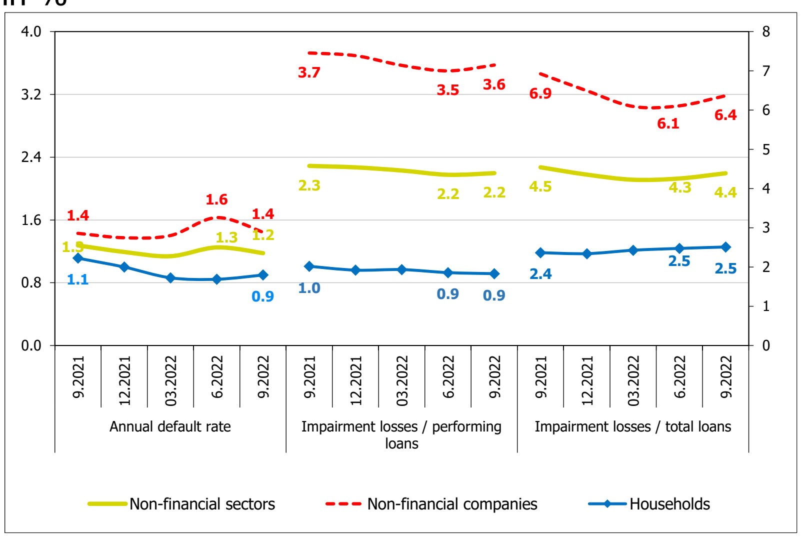
Non-performing **loans to total loans ratio increased by 0.1 percentage points, and reached 4.5%**[8]**. Analyzed by economic activity, the rate of non-performing loans recorded heterogeneous movements.** A more pronounced deterioration of this indicator is observed in the water supply sector and in the mining and quarrying sector, where the rate of non-performing loans increased by 1.8 and 1.4 pp, respectively, amid growth of non-performing loans in these activities. There was also an increase of 1.3 pp in the rate of non-performing loans in the administrative and service activities, and similar to the last quarter, a growth of 1 p.p. in this rate was also registered in the "construction" sector. There is a certain increase in this rate in the rest of the

[8] Without the effect of the compulsory non-write-offs, the share of the non-performing in the total corporate loans remained unchanged at the level of 13.4%.

manufacturing industry[9] (by 0.8 p.p.) and in the "professional, scientific and technical activities" sector (by 0.5 p.p.). In contrast, the rate of non-performing loans improved in several activities, such as service activities in the field of art, entertainment, recreation, transport and storage, catering, information and communications services, industrial branches in the domain of the food industry, electricity and gas supply activities and textile industry.

At the end of the third quarter of 2022, the rate of non-performing loans in the household's credit portfolio is unchanged and amounts to 2.2%.[10] Analyzed according to individual purposes, no significant changes were registered during this quarter. The rates of non-performing loans in the two largest categories of household loans, i.e. consumer and housing loans, remained stable during the quarter and equaled 3.0% and 0.6%, respectively. Furthermore, the rate of non-performing loans is the highest among credit cards and overdrafts, but is stable during the quarter (3.6% and 3.5%, respectively), and the lowest among housing loans (0.6%).

Chart 8
Annual rates of default and average risk level of performing and total loans, by sector
in %



Source: National Bank's Credit Registry, based on data submitted by banks.

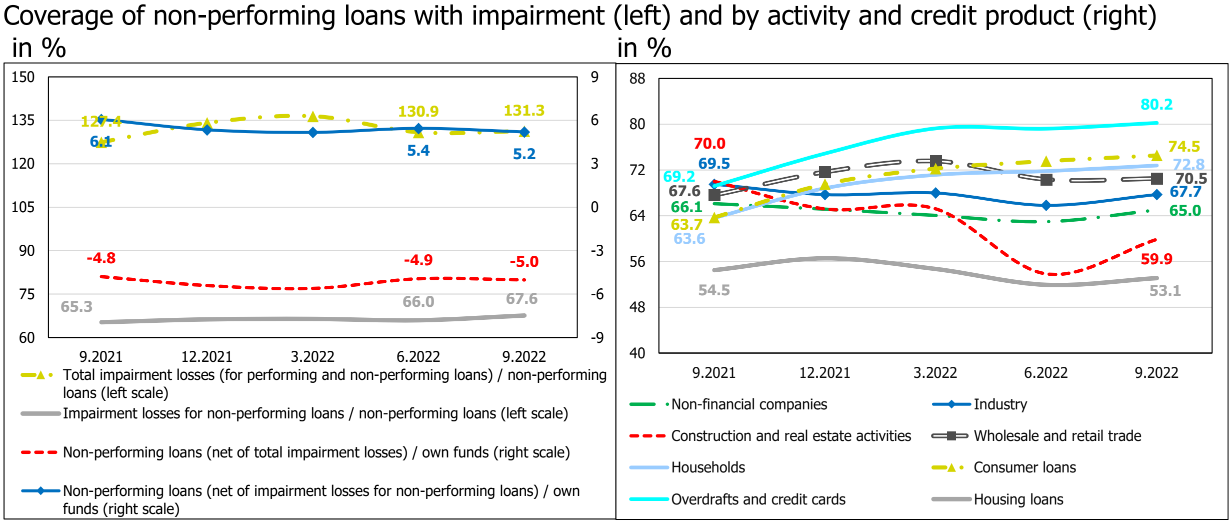
The non-collectability of regular loans of the entire non-financial sector registered a minimal decrease, which can be seen through the decrease of the annual default rate by 0.1 p.p..This is due to the improved collectability of the credit portfolio in the corporate sector, in contrast to the minimal deterioration

[9] The rest of the manufacturing industry includes all branches of the manufacturing industry, except the food industry, the textile industry and the production of clothing and footwear, the chemical industry, the production of building materials, the production and processing of fuels, the production of pharmaceutical products, the production of metals, machines, tools and equipment.
[10] If we exclude the effect of mandatory write-offs, the rate of the non-performing household loans equals 5.4%.

in households. In contrast, banks kept the average provisioning (average level of risk, calculated as impairment losses / loans) of regular loans to households at the same level as on 30.6.2022, while in the case of regular loans to enterprises, this level recorded a slight increase. Typically, banks set aside a higher amount of impairment in relation to realized default rates for legal entities, which is indicative of their perception of higher risks from placements to enterprises than to households. Taking into account the uncertainties worldwide and domestic economy, it is necessary for the banks to carefully monitor the credit portfolio quality and set aside provisions to cover expected credit losses.

The possible complete default on non-performing loans (fully provisioning of these loans), i.e. the volume of unexpected losses on this basis would have a limited impact on the solvency of the banking system. This is a result of the solid coverage of non-performing loans with impairment for non-performing loans, which registered an increase of 1.6 p.p. in the third quarter of 2022 compared to the previous quarter, and reached 67.6%. At the same time, the share of the provisioned amount of non-performing loans in the banking system's own funds is relatively low and amounts to 5.2%. Thus, even amid assumption of fuly provisioning of non-performing loans, the banking system solvency will not be jeopardized.

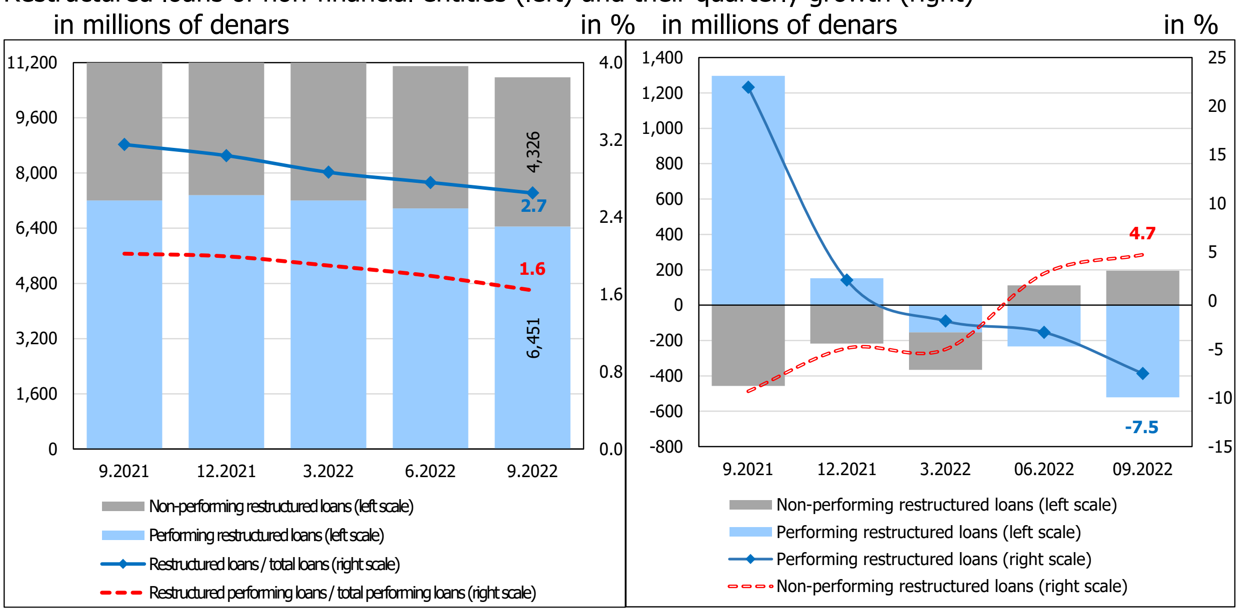
Chart 9
Coverage of non-performing loans with impairment (left) and by activity and credit product (right)



Source: National Bank's Credit Registry, based on data submitted by banks.

Restructured loans by their nature, are loans that need to be followed more closely, because the restructuring is performed on customer claims who have deteriorated financial condition. Restructured loans are a possible source of new non-performing loans, if the restructuring does not achieve the expected goals of adjusting the credit burden to the financial condition of the client. After the increase in regular restructured loans during 2021, these loans have been declining since the beginning of 2022. Decrease in the regular restructured loans was also present in the third quarter (by 7.5%, or by Denar 521 million), but it intensified compared to the previous quarter (when regular restructured loans decreased by 3.2%, or by Denar 234 million). At the same time, non-performing restructured loans increased by 4.7%, or by Denar 195 million, contributing about 38% to the quarterly growth of the banks' total non-performing loans. The share of regular restructured loans kept falling (a decrease of 0.2 pp on a quarterly basis) and represents a small part of the total regular loans of banks, which as of on 30.9.2022 equals 1.6% (3.1% and 0, 3%, for enterprises and households, respectively), meaning that these loans do not represent a serious source of new non-performing loans.

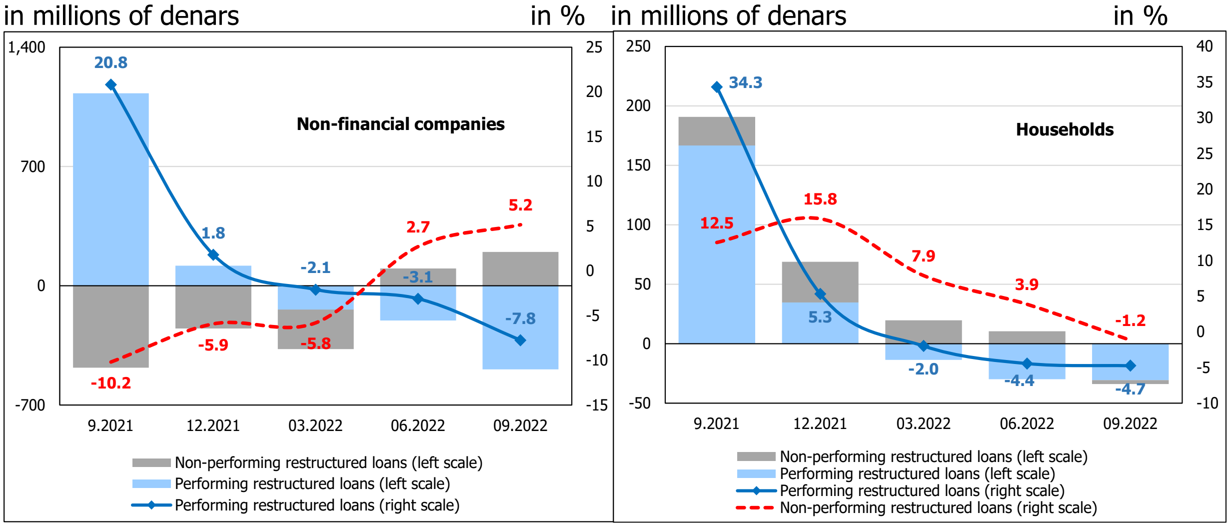
Chart 10
Restructured loans of non-financial entities (left) and their quarterly growth (right)



Source: National Bank's Credit Registry, based on data submitted by banks.

The higher inherent risk from the restructured loans is also perceived through the higher provisioning levels of the regular restructured loans which is 19.0%, as opposed to 2.2% for the total regular loans. The coverage of non-performing restructured loans with provisions is similar to the coverage of total non-performing loans.

Chart 11
Annual change of restructured loans, by sector



Source: National Bank's Credit Registry, based on data submitted by banks.

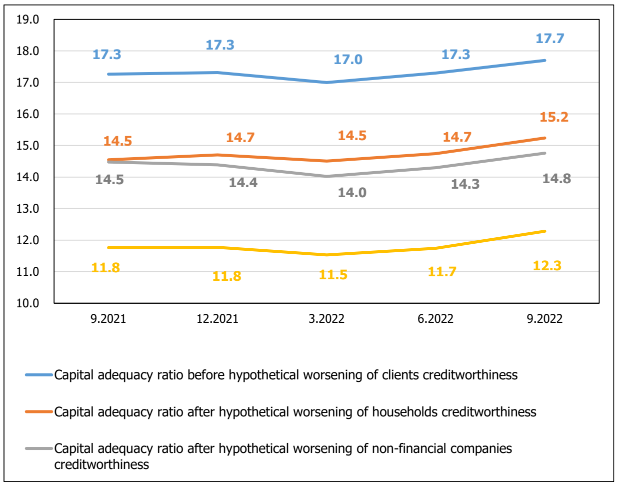
The trend of restructured loans by individual non-financial sectors is similar, and they as well registered a quarterly decrease. Regular restructured loans of non-financial corporations are decreasing in all economic activities. At the same time, construction and real estate activities, together with retail and wholesale trade, contributed the most to the quarterly reduction in the volume of regular restructured loans. Among households, restructured consumer loans, with a decrease of 5.4%, are the main driver for the quarterly fall in restructured household loans, as opposed to restructured housing loans, which grew by a moderate 3.9%. Restructuring is mainly present in non-financial corporations, which account for about 90% of the entire restructured loan portfolio.

1.2 Stress-testing of the resilience of the banking system to increased credit risk

The results of stress testing confirm the resilience of the banking system to the simulated credit risk shocks. The capital adequacy ratio of the banking system does not go below 8% in individual hypothetical simulations. In case of extreme simulation for a migration of 30% of the credit exposure to non-financial corporations, from the existing to the next two higher risk categories, the capital adequacy ratio of the banking system is reduced by 5.4 percentage points compared to the initial level, i.e. from 17.7% to 12.3%, which is slightly better result compared to the previous quarter.

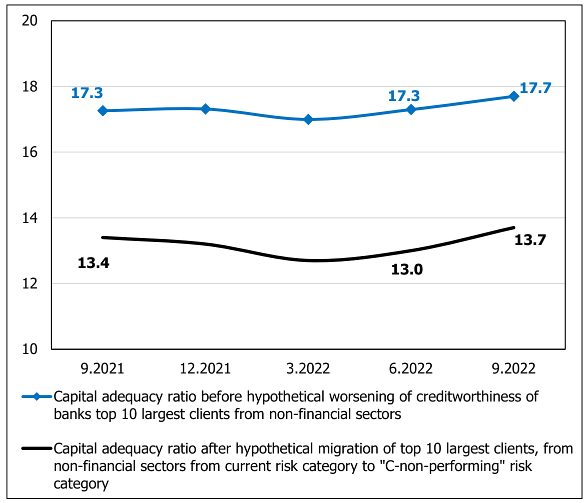
By activity, in such a scenario, the most pronounced impact on the decline of the capital adequacy of the banking system would be the deterioration of the creditworthiness of clients from the activities and loan type by the purpose to which banks have the greatest exposure (such as "industry", "wholesale trade and small" and consumer loans).

Chart 12
Capital adequacy ratio at the transition of 30% of the credit exposure from the existing categories to the next two with higher risk
in %



Source: National Bank's Credit Registry, based on data submitted by banks.

Chart 13
Effects on the capital adequacy ratio of the transfer of the ten largest exposures to non-financial entities in risk category "C" non-performing
in %



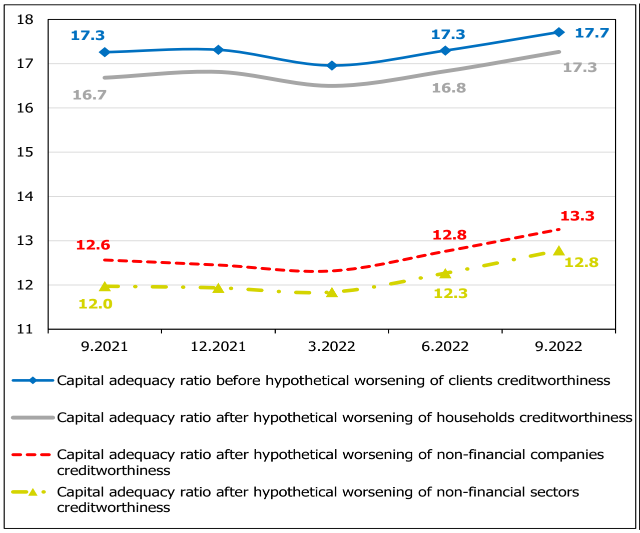
Source: National Bank's Credit Registry, based on data submitted by banks.

Simulated materialization of concentration risk in the credit portfolio, amid assumed migration of the ten largest clients from non-financial sector of each bank, from the risk category (mostly A), to risk category C- non-performing, reduces the capital adequacy ratio of the banking system by 4 p.p. (from the initial 17.7% to 13.7%). In case of this simulation, the results improved, which stems from the higher capital adequacy before the simulations, while slight contribution was also made by the decrease in the level of the concentration level in the non-financial sector's loan portfolio[11]. As of 30.9.2022, the reduced capital adequacy ratio amid such scenario would range from 1.4 percentage points to 6.9 percentage points, whereby it would not fall below 8% in any of the banks.

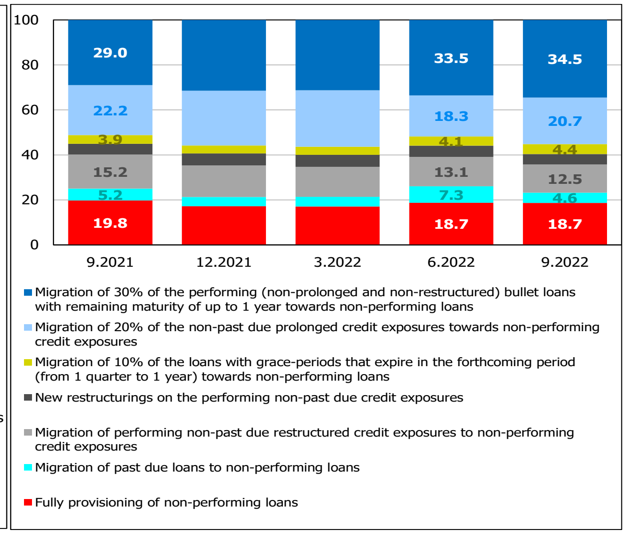
[11] On quarterly basis, the five ten largest exposures to the non-financial sector decreased by 0.3%, respectively, while own funds increased significantly by 3.6%. This contributed to reducing the share of the five and ten largest exposures to the non-financial sector in own funds to 71.2% on 30.9.2022 (73.9% on 30.6.2022).

Chart 14
Capital adequacy ratio before and after hypothetically combined shocks of various credit exposure segment (up) and contribution of individual shocks to the reduction of the capital adequacy ratio (down)

in %



in %



Source: National Bank's Credit Registry, based on data submitted by banks.

The banking system resilience is also examined by conducting an extreme simulation based on a combination of seven hypothetical shocks of worsening of the quality of the credit portfolio to the non-financial sector[12]. Even in case of this extreme simulation, the capital adequacy of the banking system does not come below the prescribed minimum. Upon this simulation, the capital adequacy ratio reduces by 4.9 percentage points to 12.8%, which is a better result compared to the end of the second quarter (5.0 p.p. and 12.3%, respectively). The highest effect on the capital adequacy ratio is that of the assumed deterioration in the quality of bullet loans, which contributes to 34.5% of the total reduction of capital adequacy amid combined shock. In addition, the effect of the hypothetical worsening of the quality of prolonged loans (accounting for 20.7% of the total reduction of the capital adequacy ratio of the banking system) is also significant, as well as the assumed complete default on non-performing loans of the non-financial sector (18.7% of the total decline in capital adequacy in the combined shock). The assumed acquisition of non-performing status of regular restructured loans contributes with 12.5% in the total reduction of capital adequacy as of 30.9.2022.

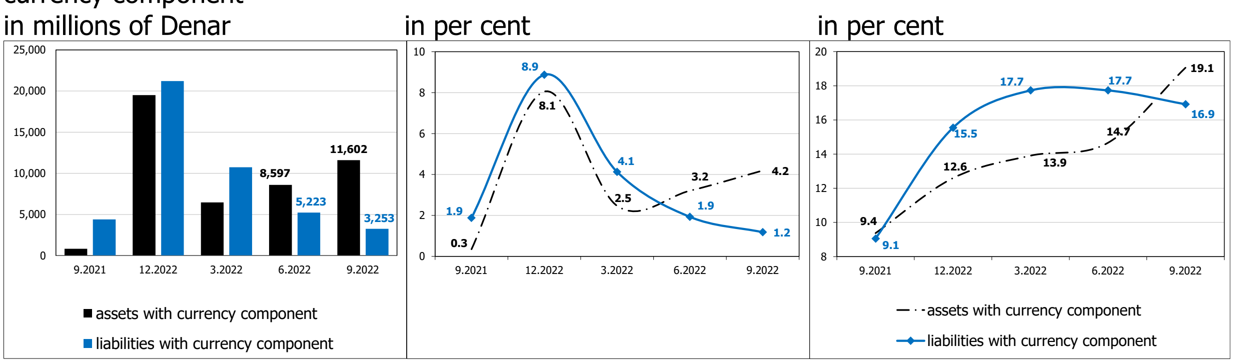
[12] The seven hypothetical shocks are the following: 1. complete default on the existing non-performing loans; 2. the total past due loans receive non-performing status; 3. the total regular undue restructured exposure receives non-performing status; 4. banks carry out new restructuring of the regular undue part of the credit exposure which according to the volume correspond with the amount of restructured exposures which received a non-performing status, from the previous item; 5. 10% of loans with granted grace period which expires after a period of one quarter to one year receive a non-performing status; 6. 20% of the undue prolonged exposure receives a non-performing status; 7. 30% of regular bullet loans with residual maturity up to one year (which are not prolonged, nor restructured) receive a non-performing status.

2. Currency risk

The banking system significantly increased its direct exposure to currency risk in the third quarter of 2022, reflected by the double-digit rates of participation of the gap between the assets and liabilities with a currency component in own funds, as well as in the open foreign currency position in own funds. Such movements result from the relatively high growth of banks' placements in loans and term deposits in euros, while at the same time reduced loan-based liabilities in this currency. All banks in the banking system have a long foreign currency position, which mostly results from the positive gap between assets and liabilities in euros and denars with a euro clause.

The significant increase in the representation of loans with a currency component in the credit portfolios of banks due to the high growth of foreign currency loans increases the indirect exposure of the banking system to currency risk. However, the unfavorable impact of the this risk is mitigated by the dominant participation of loans in euros and in denars with a euro clause in the total loans with a currency component in conditions of application of the strategy for maintaining a stable exchange rate of the denar against the euro.

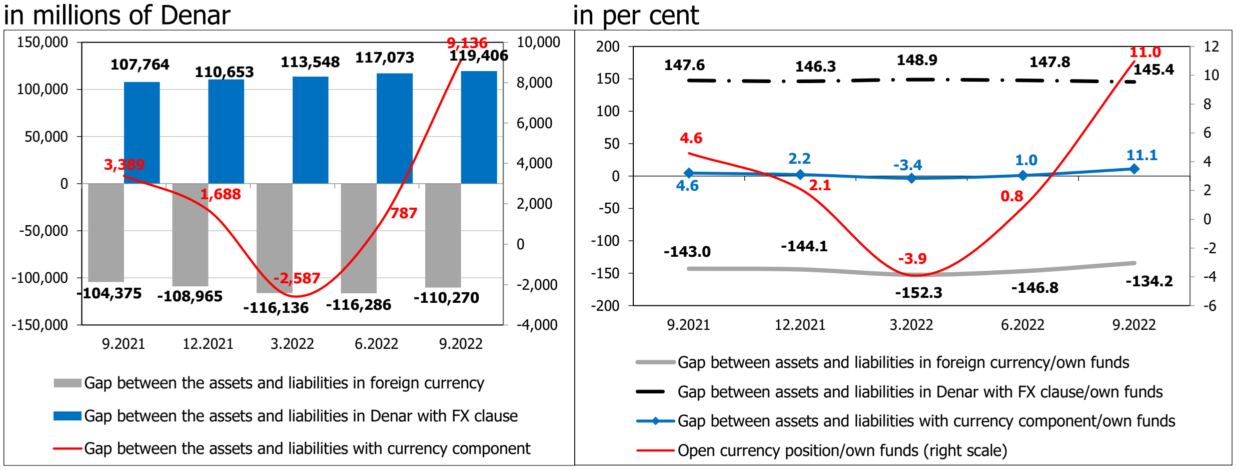
Chart 35
Quarterly (left and middle) and annual (right) growth of total assets and of assets and liabilities with currency component *



Source: National Bank, i.e. the report on open currency position based on data submitted by banks.
* The assets are on a net basis, reduced by the impairment of claims that are classified in risk categories "C", "D" and "E", in accordance with the regulations on currency risk management. DBNM is not included in the analysis, because pursuant to the legislation, the regulations for the open foreign exchange position do not apply to the DBNM.

In the third quarter of 2022, the gap between assets and liabilities with a currency component has significantly widened and amounted to Denar 9,136 million, which historically represents the largest gap in the last 10 years. The gap shows a multiple increase compared to the previous quarter and occurs as a result of the accelerated growth of assets with a currency component (which increased by Denar 11,602 million, or by 4.2%)[13], but also to the slow growth of liabilities with a currency component (which increased by Denar 3,253 million, or by 1.2%)[14]. The ratio of the positive gap in own funds is 11.1%, which represents a significant increase of 10.1 percentage points compared to the previous quarter and points to an increase in the banks' direct exposure to currency risk. The open currency position[15] increased significantly, as well and amounts to 11.0% of own funds, and although it is three times lower than the regulatory minimum of 30%, it still exceeded the ten-year average, for the first time since the fourth quarter of 2020.

Chart 16
Structure of the gap between assets and liabilities with currency component (left) and share of the assets and liabilities with currency component in own funds (right)
in millions of Denar / in per cent



Source: National Bank, based on the data submitted by banks.

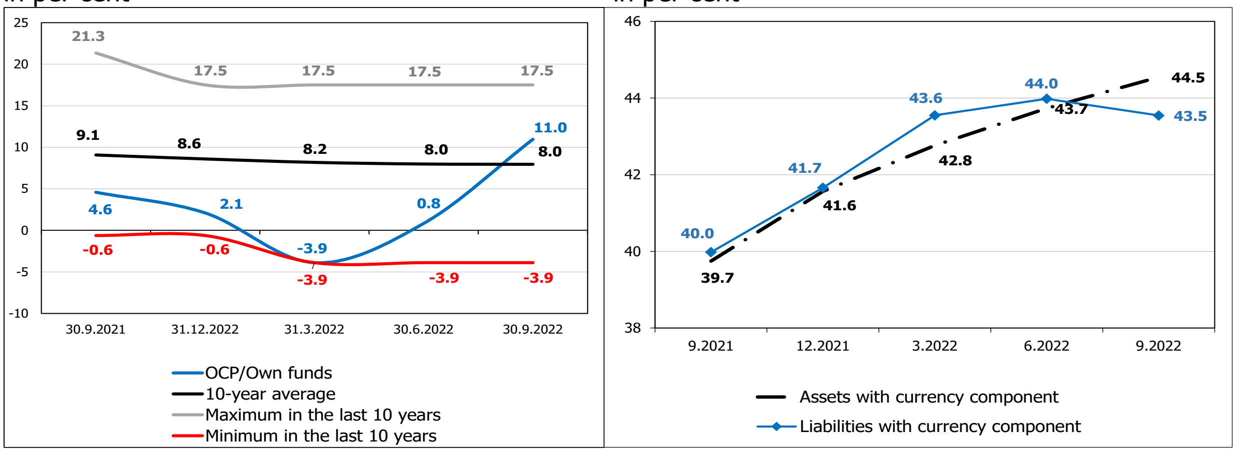
Assets with a currency component recorded a higher growth than total assets (which grew by 2.2% or Denar 13,778 million), so its share in total assets increased by 0.8 percentage points. Liabilities with a currency component, on the other hand, grew at a lower growth rate than total liabilities, so its share in total liabilities decreased by 0.5 percentage points.

[13] The growth of assets with a currency component on a three-month basis mainly results from increased loans by Denar 8,060 million (of which Denar 6,184 million are loans in foreign currency, and Denar 1,876 million are in denars with a FX clause), as well as term foreign currency deposits by Denar 3,409 millions. The increase in mandatory deposits in foreign currency with the NBRNM by Denar 3,011 million also had an impact. On the other hand, the foreign currency current accounts in foreign banks registered a more significant decrease by Denar 4,035 million.

[14] The growth of liabilities with a currency component on a three-month basis is mainly a result of the increase in the natural persons' current accounts in foreign currency of Denar 2,867 million, while a more noticeable decrease was registered in liabilities based on foreign currency loans by Denar 1,664 million.

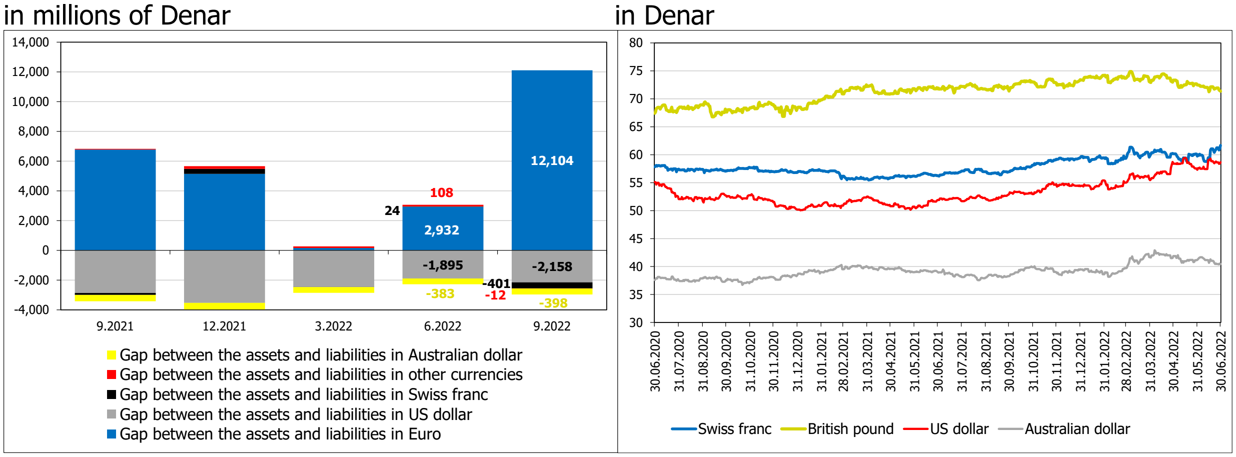
[15] The calculation of the open currency position, in addition to the gap between the on-balance sheet assets and liabilities with currency component, also includes the gap between the off-balance sheet assets and liabilities with currency component.

Chart 17
Ten-year average, minimum and maximum of the OCP/own funds ratio (left) and share of the assets and liabilities with currency component* in the total banks' assets (right)
in per cent | in per cent



Source: National Bank, based on the data submitted by banks.
* Within the assets, claims are shown on a net basis i.e. adjusted for the impairment. The analysis does not include DBNM.

Chart 18
Structure of the gap between assets and liabilities with currency component by currency (left) and movement of the denar against the US dollar, Swiss franc, British pound and Australian dollar (right)
in millions of Denar | in Denar



Source: National Bank, based on the data submitted by banks.

Analyzed by currency, the long foreign currency position is exclusively due to the positive gap in euros and in denars with a euro clause, which amounts to Denar 12,104 million and increased by Denar 9,172 million or more than four times compared to the previous quarter. The large gap between assets and liabilities in euros and euro clause occurs as a result of the higher asset growth in relation to liabilities in this currency[16]. In relation to the foreign currency position with a

[16] Assets with Eurocomponent increased by Denar 11,280 million, or by 4.5% due to the growth of loans by Denar 8,027 million (of which Denar 6,152 million are in euros, Denar 1,876 million are in denars with a euro clause), and a significant growth was also

dollar component, the negative gap between assets and liabilities has widened (by Denar 263 million, or 13.9%), which is due to the higher liabilities growth compared to assets in US dollars and in denars with a dollar clause[17]. The extended negative gap in this currency exposes the banking system to the risk of an increase in the value of the US dollar against the euro and subsequently against the Macedonian denar, which could be observed during the third quarter of 2022, when the value of the dollar for the first time in 20 years exceeded the value of the euro and at the end of the quarter it reached Denar 64.3 for one dollar. However, the effect of such a change is small due to the relatively low representation of dollar positions in banks' balance sheets. The foreign currency position with the other more prevalent currencies is short, but the contribution of the changes in the gap with these currencies is minor[18].

Table 3
Currency structure of assets and liabilities with currency component
in per cent

Currency	30.6.2022		30.9.2022	
	Assets	**Liabilities**	**Assets**	**Liabilities**
Euro	90.2	89.4	90.5	89.1
US dollar	6.5	7.2	6.5	7.5
Swiss franc	1.3	1.3	1.2	1.3
Australian dollar	0.5	0.7	0.5	0.7
British pound	0.6	0.6	0.5	0.6
Other	0.9	0.8	0.8	0.8
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: National Bank, based on the data submitted by banks.

Loans with a currency component in the third quarter of 2022 have a higher representation in the credit portfolios of banks, which indicates a higher indirect exposure of banks to currency risk. On 30 September 2022, the share of loans with a currency component in the total loans of the non-financial sector reached 43.0% and grew by 1.2 percentage points compared to the previous quarter, which is historically the highest quarterly increase in the past ten-year period. This increase is mainly due to the high quarterly growth of foreign currency loans of 9.8%, mainly to enterprises (in conditions of increased liquidity needs due to ever higher energy prices). Within loans with a currency component, both loans to non-financial corporations and loans to households recorded growth, with the increase being more pronounced in

registered in the foreign currency deposits by Denar 2,719 million. Liabilities with a euro component increased by Denar 2,109 million or by 0.9%, which is mainly due to the growth of current accounts by Denar 3,890 million, but a more significant decrease was recorded by credit liabilities in euros by Denar 1,664 million.

[17] Assets with a dollar component grew by Denar 705 million, or by 3.9%, and the growth occurs as a result of increased time deposits in dollars by Denar 402 million, as well as cash, cash equivalents, gold and precious metals by Denar 239 million. Liabilities with a dollar component increased by US dollar 968 million, or by 4.9%, with the increase resulting from increased current accounts by Denar 458 million, as well as by term US dollar deposits of natural persons by Denar 155 million.

[18] The negative gap between assets and liabilities in Australian dollars and in denars with a clause in this currency has slightly widened compared to the previous quarter and amounts to Denar 398 million. A change in the foreign currency position from long to short was registered with the Swiss franc, where the gap in the third quarter was negative and amounted to Denar 401 million, as well as with other currencies, where there was a negative gap in the amount of Denar 12 million.

loans to companies. In addition, there is a noticeable growth in the foreign currency loans of other clients due to the borrowing of the Government in foreign currency with a bank. However, it should be taken into account that as much as 99.5% of loans with a currency component are in euros or in denars with a euro clause, so the further maintenance of a stable nominal exchange rate of the denar in relation to the euro is the main factor for mitigating the indirect currency risk of the banks.

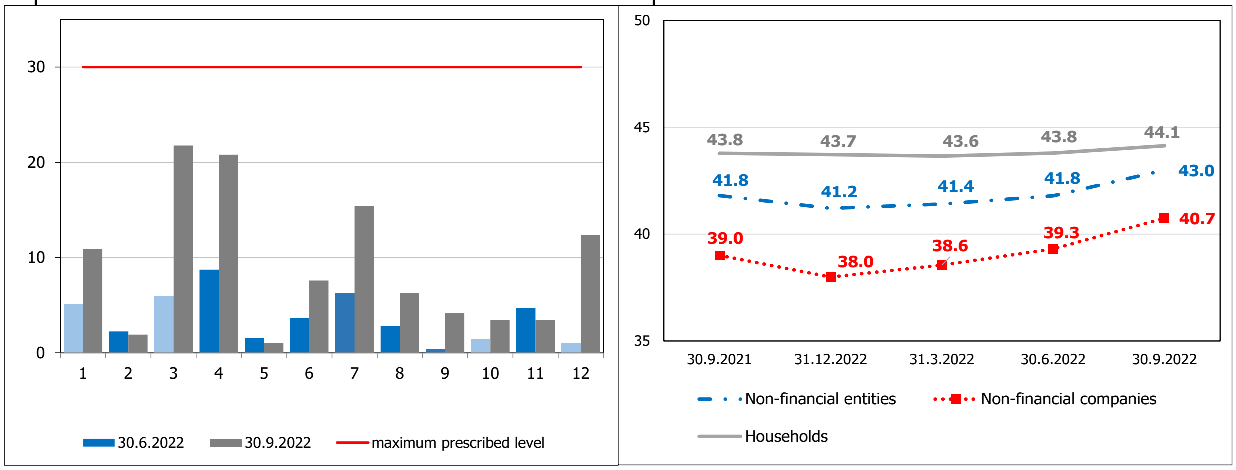
Table 4
Distribution of banks by share of open currency position, by currency and the aggregate currency position in own funds

Items	Number of banks										
	Open currency position by currency/own funds										Aggregate currency position/own funds
	Euro		US dollar		Swiss franc		Australian dollar		Other		
	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	
under 5%	5	0	9	3	6	5	7	1	10	2	5
from 5% to 10%	2	0									2
from 10% to 20%	3	0									3
from 20% to 30%	2	0									2
over 30%											

Source: National Bank, based on the data submitted by banks.

Most of the banks recorded an increase in the ratio of the aggregate foreign currency position to own funds, which ranges from 1.1% to 21.8%, but these values are still below the prescribed limit of 30%. On 30 September 2022, all banks had a long aggregate foreign currency position, which results from the high positive gap between assets and liabilities in euros and denars with a euro clause.

Chart 19
Aggregate currency position to own funds ratio, by bank* (left) and loans with FX component to total loans ratio (right)
in per cent in per cent



Source: National Bank, based on the data submitted by banks.
* Columns with lighter shades refer to the banks that have a short foreign currency position, but are shown in absolute value. The analysis does not include DBNM.

3. Liquidity risk

In the third quarter of 2022, the liquidity position of the banking system remained stable and further strengthened, ensuring the banks' capacity for continuous credit support to companies and households. In contrast to the first two quarters of this year, when the liquid assets of the banking system recorded a decrease in the conditions of decelerated deposit growth, while simultaneously strengthening the credit support of the economy, in the third quarter of 2022, the liquid assets began to grow again, achieving a quarterly growth of 2.4%. Thus, the liquidity indicators of the banking system remained at a stable and satisfactory level, and the liquidity coverage ratio of the banking system (higher by 2.5 times compared to the regulatory minimum (100%), which confirms the sufficient amount of liquidity available to the Macedonian banking system. The cumulative gaps between the agreed cash inflows and outflows of up to 1 year are negative, but banks expect a relatively high level of deposit stability, as the main source of financing of their activities. The results of the stress tests indicate satisfactory resilience of the banking system to the assumed extreme, individual and combined liquidity outflows.

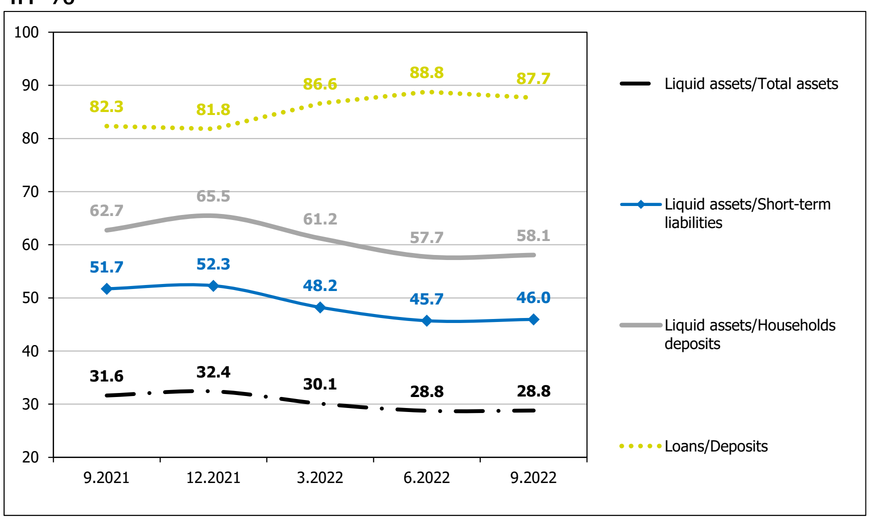
Taking into account the inflationary movements, the National Bank in the third quarter of 2022 pursued with the tightening of the monetary policy using a wider set of monetary instruments, in order to maintain medium-term price stability. During the third quarter of 2022, the policy rate was increased to the level of 4.25% (as of November 2022), which was complemented by an increase in interest rates on overnight and seven-day deposits. Changes were also made to the reserve requirement instrument[19] to encourage crediting projects for renewable energy sources, but also changes aimed at reducing euroization. It is expected that with this measure the initiated changes in the banks' interest policy will be strengthened and that the banks will offer more favorable interest rates for all categories of denar deposits, contributing to a stronger growth of savings in domestic currency. At the same time, this change would achieve optimum liquidity management.

[19] Since March 2022, given the increased propensity to save in foreign currency, as well as the unfounded speculations about the stability of the denar, the National Bank took targeted measures, i.e. made changes to the reserve requirement, in response to such tendencie and reduced the reserve requirement rate on denar liabilities (from 8% to 6.5%), simultaneously increasing the reserve requirement rate on foreign currency liabilities (from 15% to 16,5%). The changes started to apply since June this year. Link Decision on reserve requirement (Official Gazette of the Republic of Macedonia No. 83/22), and in June, the reserve requirement rate on denar liabilities decreased from 6.5% to 5%, while the reserve requirement rate on foreign currency liabilities increased from 16.5% to 18%. Link: Decision amending the Decision on reserve requirement (Official Gazette of the Republic of North Macedonia No.153/22). With the change in the reserve requirement in September 2022, the basis for allocating reserve requirement in denars of banks, by the amount of new loans for financing projects for domestic production of electricity from renewable sources. Link Decision on reserve requirement (Official Gazette of the Republic of North Macedonia No. 201/22). The amendment of this instrument from November 2022, which is the fourth in a row this year, includes an increase in the reserve requirement ratio of banks for liabilities in foreign currency from 18% to 19%, and the part of the reserve requirement in foreign currency which banks fulfill meet in euros, from 75% to 77%. Link Decision on reserve requirement (Official Gazette of the Republic of Macedonia No. 251/22).

3.1. Liquidity indicators

In the third quarter of 2022, the increase in liquid assets of the banking system also contributed to better liquidity indicators, as well. Although the indicators are below their ten-year average, they still indicate adequate management of the banks' liquidity risk, without the emergence of liquidity pressures, which is being proved by the solid participation of liquid assets in the banks' total assets (28.8%) and by the satisfactory coverage of short-term liabilities and household deposits with liquid assets (from 46% and 58.1%, respectively[20]).

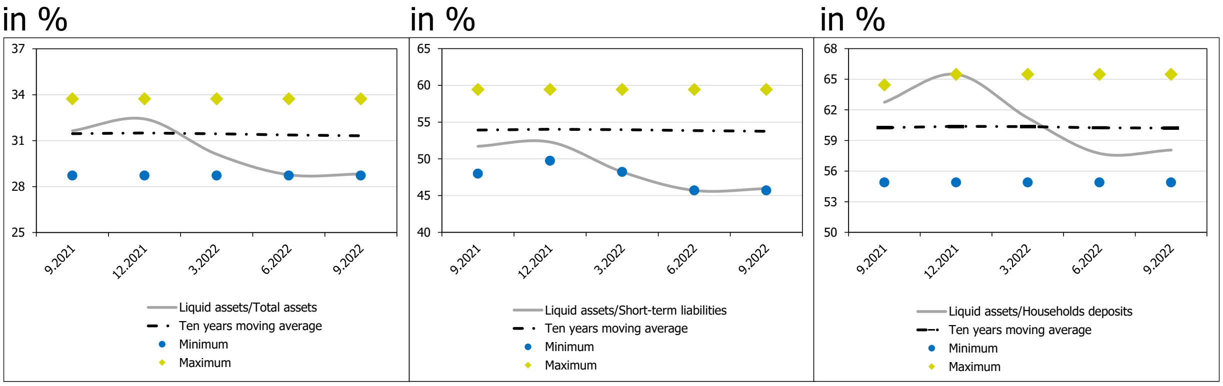
Chart 20
Indicators of solvency of the banking system
in %



Source: National Bank, based on the data submitted by banks.
Note: The calculation of liquidity ratios of the banking system does not include resident interbank assets and liabilities.

[20] Analyzed by bank, as of 30.9.2022, the share of liquid in total assets ranges between 19.7% and 49.1%, with a median of 22.2% (September 2021: between 18.8% and 53.3%). The coverage of short-term liabilities with liquid assets ranges between 32.9% and 64.1%, with a median of 40.7% (September 2021: between 36.5% and 70%), and the coverage of household deposits with liquid assets ranges between 35.3% and 79.1%, with a median of 59.8% (September 2021: between 38% and 86.3%). The Development Bank of North Macedonia AD Skopje is excluded from this analysis.

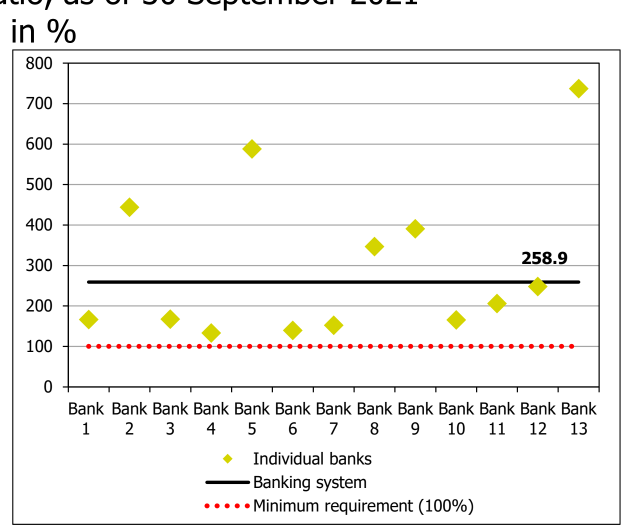
Chart 41
Liquid assets/total assets (left), liquid assets/short-term liabilities (middle) and liquid assets/household deposits (right)



Source: National Bank, based on the data submitted by banks.

The liquidity coverage ratio of the banking system equals 258.9%, which is more by 2.5 times compared to the regulatory minimum (100%[21]) and confirms the sufficient volume of the liquidity available to the Macedonian banking system. Analyzed by bank, liquidity coverage rates range from 133.2% to 737.1% (with a median of 206.1%), which also points to acceptable limits of liquidity risk to which banks are exposed and stable liquidity management on their part.

Chart 22
Liquidity coverage ratio, as of 30 September 2021

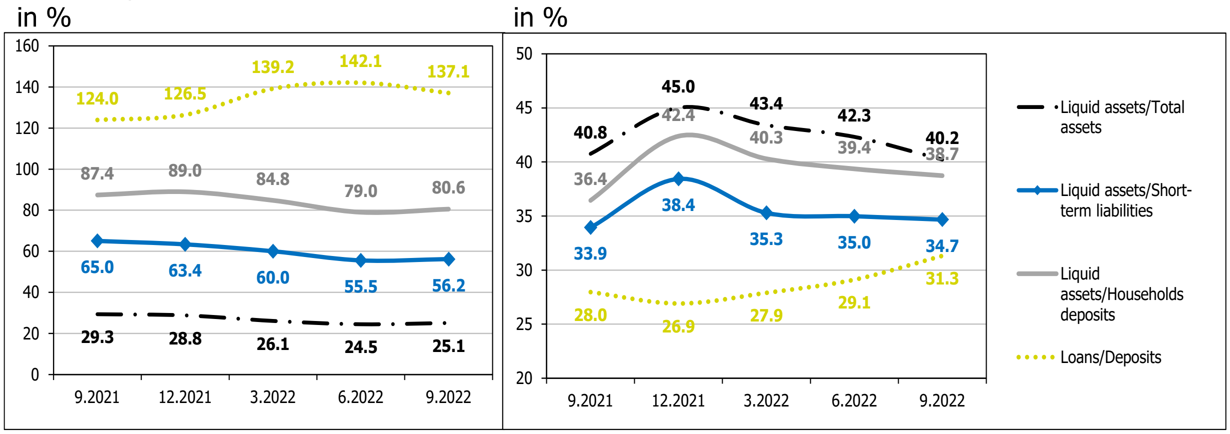


Source: National Bank, based on the data submitted by banks.

[21] In addition to on a cumulative basis, banks are required to determine and monitor a liquidity coverage ratio for each currency that is significant to the bank (each currency whose share of the bank's total balance sheet liabilities is at least 5%). Thereby, the prescribed minimum of 100% refers only to the total liquidity coverage ratio and not to the liquidity coverage ratios by each significant currency. As of 30 Septemberr 2022, the liquidity coverage ratios for the two significant currencies, euros and denars, were 95.5% and 265.6%, respectively.

According to the currency characteristics of liquid assets and liabilities, in the third quarter of 2022, the denar liquidity indicators improved, as opposed to the foreign currency liquidity indicators[22], which have been decreasing for the third consecutive quarter. Such movements of the liquidity indicators correspond to the more significant quarterly increase of the denar (by 3.6%), against the minimal growth of foreign currency liquid assets (by 0.4%). On the other hand, analyzed on an annual basis, the liquidity indicators show the opposite behavior, that is, the denar liquidity indicators decrease, while the foreign currency liquidity indicators show growth. However, denar liquidity indicators remain at a higher level compared to the foreign currency liquidity indicators, due to the higher structural share of liquid assets in denars in total liquid assets of banks. The risks arising from the lower foreign currency liquidity indicators are mitigated by high denar liquidity and the possibility to provide smoothly foreign currency liquid assets[23], if necessary.

Chart 23
Banking system liquidity indicators by currency - denar (left) and FX (right)



Source: National Bank, based on the data submitted by banks.

3.2. Dynamics and composition of liquid assets

At the end of the third quarter of 2022, liquid assets[24] of the banking system amounted to Denar 184,399 million. In contrast to the first two

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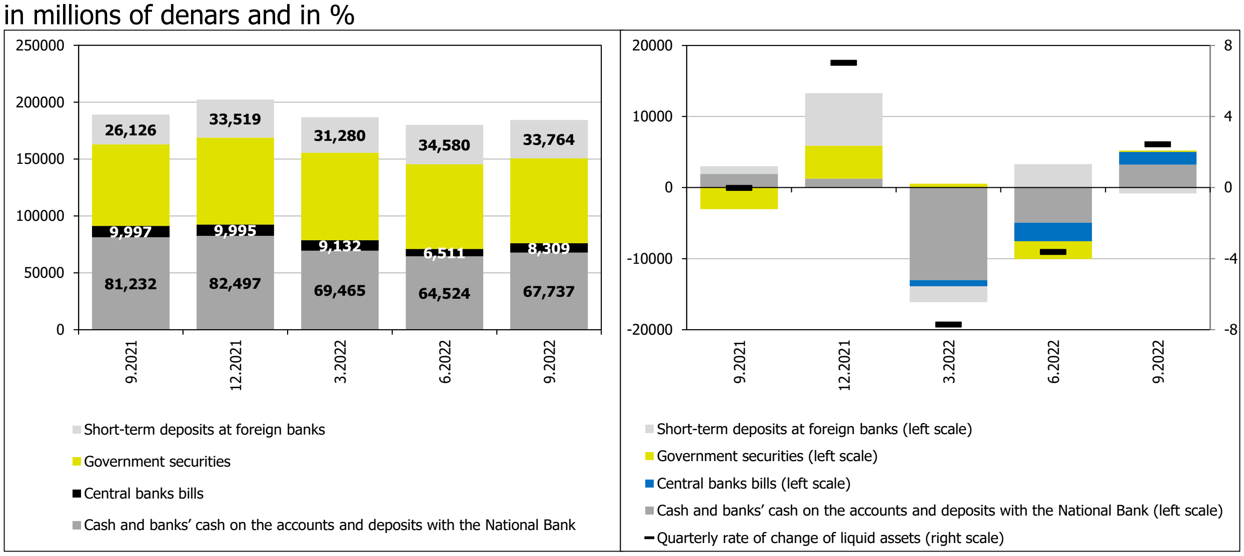
[22] Claims and liabilities with FX clause are considered as denar claims and liabilities, since their cash flow is in denars.

[23] Bank can provide the necessary foreign currency liquid assets at any time, through the National Bank interventions on the foreign exchange market. In addition, the European Central Bank (ECB) decided to extend the validity of repo line granting the National Bank access to euro liquidity for the first time in August 2020, with adequate collateral. The deadline for application of the repo line, worth up to Euro 400 million, has been extended to January 2023. Thus far, the National Bank has not used funds from the approved repo line, given the constant maintenance of both the denar and the foreign currency liquidity of the banking system at an appropriate level, with a evident tendency for further increase in the banks' liquid assets in the last several months.

[24] The liquid assets encompass: 1) assets and claims on the National Bank, which include cash, assets on the accounts of banks with the National Bank, deposit facility with the National Bank and CB bills; 2) short-term deposits with foreign banks, including the assets of the banks on their correspondent accounts abroad and 3) the carrying amount of the investments in securities issued by central

quarters of this year, when with a smaller deposit growth and a fall in the first quarter (as a temporary reaction of households to the shock of the war in Ukraine), while simultaneously strengthening the credit support of the economy, the liquid assets of the banking system recorded decrease, in the third quarter of 2022 deposits are growing again, which was also reflected in the movement of liquid assets (growth by Denar 4,397 million or by 2.4%). The quarterly increase in the banks' liquidity, analyzed according to the individual financial instruments that make up the liquid assets, was most pronounced in the banks' placements in deposit facilities with the National Bank (which increased by Denar 9,325 million, or by 46%), as well as in available seven-day deposits at the National Bank (which increased by almost four times, i.e. by Denar 1,571 million). A significant contribution to the growth of liquid assets was also made by the increase in the bank placements in CB bills (by Denar 1,797 million, or by 27.6%)[25]. At the same time, the funds in the denar account at the National Bank decreased by Denar 8,713 million (or by 31.4%). The banks' funds on correspondent accounts and short-term deposits placed in foreign banks also decreased (by Denar 816 milllion, or by 2.4%), while there were no significant quarterly changes in the banks' investments in government securities (investments in government bonds grew by 0.5%, while placements in treasury bills decreased by 0.2%).

Chart 24
Liquid assets, structure (left) and growth (right)
in millions of denars and in %



Source: National Bank, based on the data submitted by banks.

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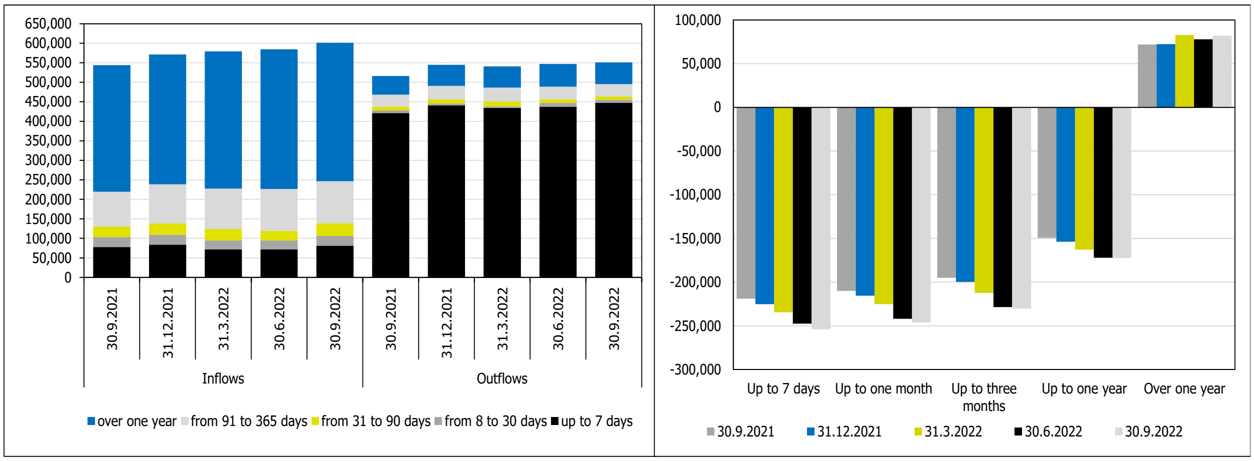
governments, i.e. government securities issued by the Republic of North Macedonia and issued by foreign countries. For the purposes of analyzing the liquidity, assets and liabilities in denars with foreign exchange clause are considered denar assets and liabilities.

[25] During the third quarter of 2022, as well as in October and November 2022, the National Bank continued to increase the interest rates, whereby the interest rate on CB bills increased by 2.25 percentage points to the level of 4.25%. The offered amount of CB bills remained the same, i.e. Denar 10,000 million, and the demand increased to the level of Denar 7,105 million in September 2022, i.e. Denar 8,958 million in November 2022.The changes in the policy rate were also supplemented with the growth of interest rates on overnight and seven-day deposit facilities, by totally 1.75 pp, respectively, to a level of 2.15% and 2.2%, respectively, as of November 2022.

3.3. Maturity structure of the contracted inflows and outflows of bank's assets and liabilities

Chart 25
Maturity structure of inflows and outflows based on on-balance sheet assets and liabilities (left) and cumulative gap between the agreed inflows and outflows, by including the cumulative amount of unencumbered assets (right)

in millions of denars in millions of denars

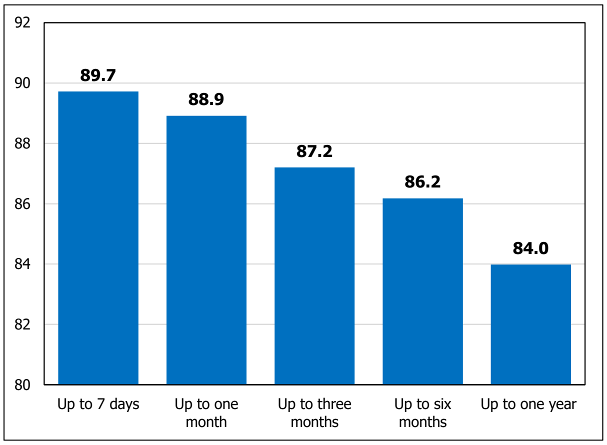


Source: National Bank, based on the data submitted by banks.

As of 30 September 2022, the agreed inflows of banks distributed in the period over one year and the agreed outflows of banks distributed in the period up to seven days prevail in the maturity structure of banks' inflows and outflows. The largest difference (gap) between the banks' inflows and outflows is registered in the time periods up to seven days (negative gap) and over one year (positive gap), which results from the inclusion of the bank liabilities and without a maturity in the maturity segment up to seven days, i.e. due to claims based on loans and advances included in maturity segments over one year (long-term loans at the level of the banking system cover about 80% of total loans to non-financial entities). These gaps in relation to the assets of the banking system are 38.7% (the cumulative gap up to 7 days) and 26.3% (the cumulative gap up to 1 year).

Chart 26
Expected deposit stability, according to the remaining period to maturity, as of 30 September 2022

in %



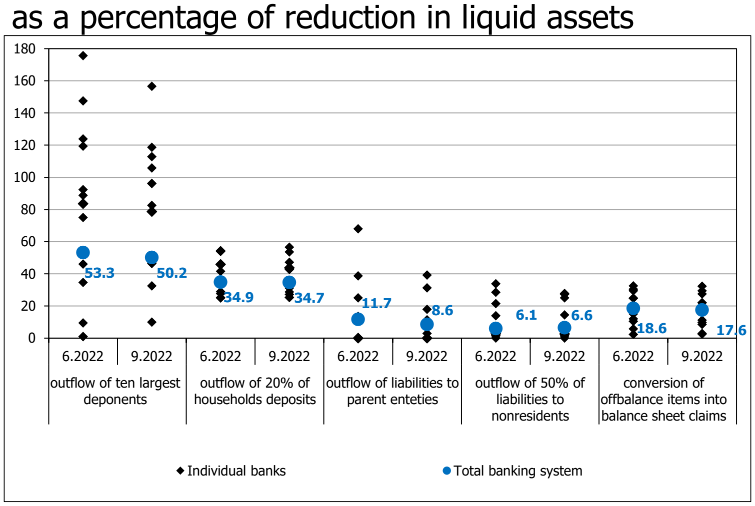
Source: National Bank, based on the data submitted by banks.

In the third quarter of 2022, the banks expect maintenance of the deposit stability as the main source of funding for their activities. Namely, at the end of the third quarter of 2022, in line with the depositors' behavior, the banks further expect that in the next 12 months a substantial part (or 84%) of the contractual outflows-based liabilities will not be realized by the depositors.

3.4. Stress-simulations for liquidity shocks

Chart 27
Contribution of individual shocks to the decline in the liquid assets in the simulation of a combined liquidity shock

as a percentage of reduction in liquid assets

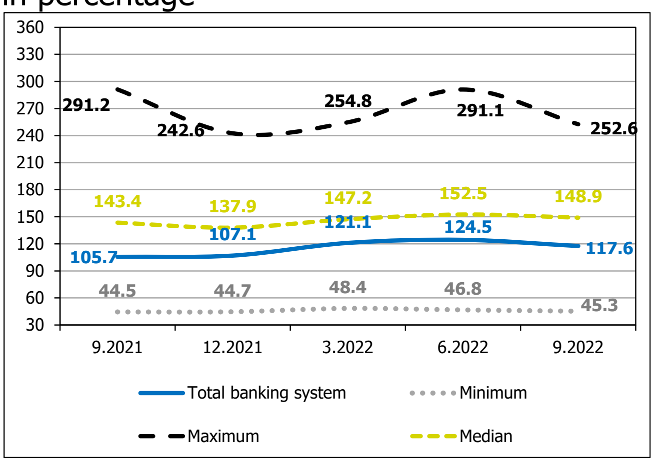


Source: National Bank, based on the data submitted by banks.

On 30.9.2022, the results of the conducted stress simulations for liquidity shocks show solid capacity of the banking system, which has sufficient liquid assets to respond appropriately to the individual simulated cash outflows. The resilience of the Macedonian banking system to liquidity shocks is confirmed by the results of all individual simulations of liquidity shocks, with the liquid assets being fully used (117.6% on 30.9.2022) only in case of significantly extreme simulation of liquidity shock, which covers combined outflows[26] of funds from banks on several bases. Considering the extremity of assumption, for the purpose of this simulation, the usual coverage of liquid assets is extended with other financial instruments[27] owned by banks, for which it is estimated that banks will quickly and easily collect or turn into cash. In such a case, amid combination of the assumed shocks, the liquidity shocks coverage would require less, i.e. 102.3% of the available liquid assets, according to the expanded definition.

Chart 28
Reduction in liquid assets after the simulation for combined liquidity shocks (after all shocks)

in percentage



Source: National Bank, based on the data submitted by banks.

At individual simulations of liquidity shocks, the high level of liquidity which Macedonian banks have at their disposal provides settlement also of all

[26] The simulation assumes outflow of: deposits of the ten largest depositors, 20% of household deposits, liabilities to parent entities (liabilities on subordinated instruments and hybrid capital instruments are excluded from the simulation as, according to the regulations for calculating capital adequacy, their repayment is regulated), 50% of the liabilities to non-residents (excluding liabilities to non-resident parent entities of banks which are already covered by one of the previous simulations) and conversion of certain off-balance sheet liabilities of the banks (uncovered letters of credit, irrevocable credit lines and unused limits based on credit cards and approved overdrafts on transaction accounts) into balance sheet claims. The simulations of liquidity shocks exclude the Development Bank of North Macedonia AD Skopje.

[27] Financial instruments that comprise liquid assets, also include the following financial instruments: assets in the guarantee fund in KIBS, long-term deposits in foreign banks, money market instruments issued by foreign non-government issuers, loans with contractual residual maturity of up to 30 days and the effect of reducing the reserve requirement for foreign currency liabilities of banks, which is allocated in foreign currency due to the simulated outflow of households' foreign currency deposits.

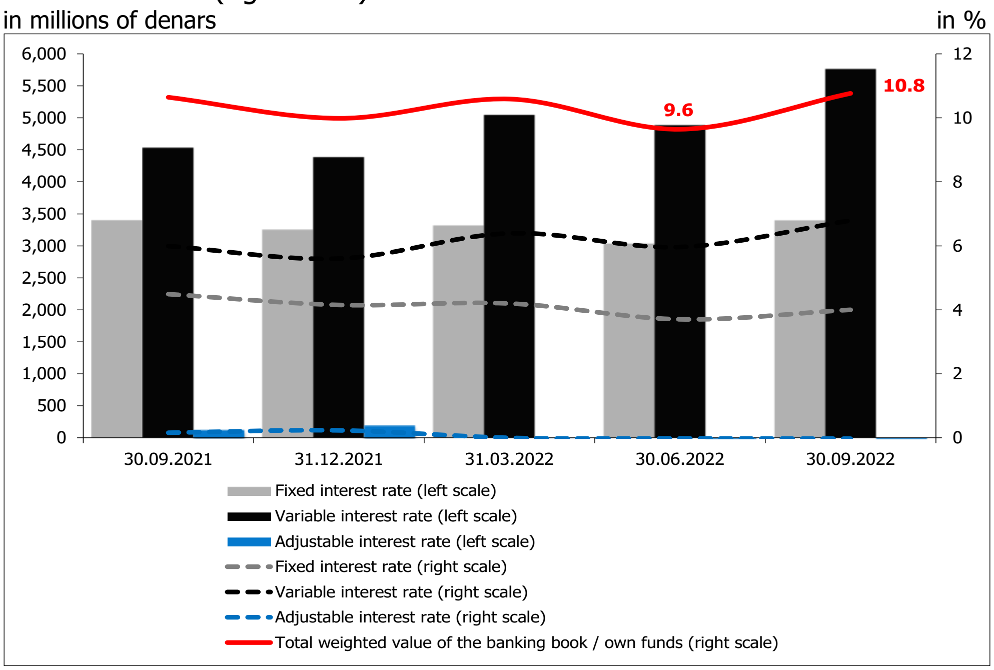
assumed, individual, extreme liquidity outflows. The sharpest decline in liquid assets occurs during a simulation of outflow of the deposits of the ten largest depositors, but the importance of this simulation to individual banks is different, given the differences in the degree of concentration of deposits. On the contrary, simulated materialization of reputation risk and loss of confidence of the population in the banks represented by an outflow of 20% of household deposits shows a significantly greater similarity in the results for individual banks, thereby confirming the importance of deposits to the financing of the banks' activities. In the assumed conversion of certain off-balance sheet liabilities of the banks into on-balance claims[28], the banks would spend slightly less than 20% of their liquid assets. The small share of liabilities to non-residents, as well as to parent entities in the structure of the total sources of funding for banks, causes moderate impact of the shocks associated with them on the overall result of this simulation.

[28] Outflow is assumed as a result of the migration of some off-balance sheet liabilities of the banks (uncovered letters of credit, irrevocable credit lines and unused limits based on credit cards and approved overdrafts on transaction accounts) into on-balance sheet claims.

4. Interest rate risk

In the third quarter of 2022, the exposure of the banking system to the interest rate risk in the banking book increased, due to the growth of the weighted value of the banking book, which increased its share in own funds. The increase in the exposure of the banking system to the interest rate risk is mostly due to the changes in the interest-sensitive positions of banks with variable interest rates, namely the increase and redistribution of credit placements from blocks with shorter to blocks with a longer period that remains until the next revaluation of the amount of the interest rate. Also, the weighted value of the banking book with a fixed interest rate recorded quarterly growth, as a result of the increase in placements in deposits, with a simultaneous reduction in liabilities based on loans. The total (unweighted) gap is positive, which on an aggregated basis exposes the banking system to the risk of a reduction in interest rates, which is less likely in the conditions when the period of low interest rates ends. But on the other hand, in such conditions, banks are indirectly exposed to the interest risk, which is why the credit risk becomes more pronounced than the exposure of their customers to the risk of interest rate growth, in conditions of a substantial share of loans with variable and adjustable interest rates.

Chart 29
Total weighted assets of the banking book*, by interest rate type, in absolute amount (left scale) and relative to own funds (right scale)

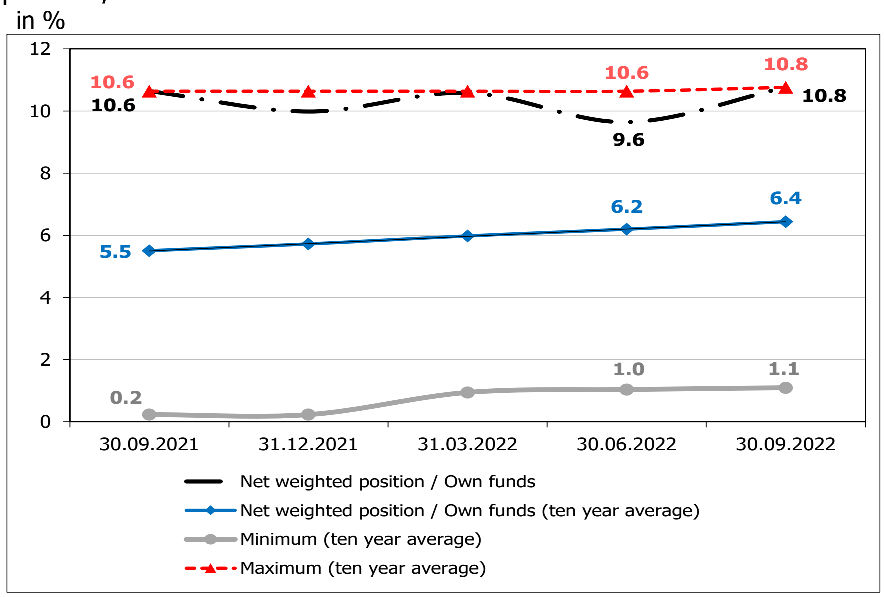


Source: National Bank, based on the data submitted by banks.
*The total weighted value of the banking book denotes the potential loss of the economic value of this portfolio, amid assumed unfavorable interest shock of ±2 percentage points.

The total weighted assets of the banking book registered a quarterly increase of Denar 1,230 million or by 15.6%, that with the growth of own assets (by 3.6%), the

ratio between the weighted value of the banking book and own assets increased by 1.2 pp, to the level of 10.8%. Thus, the indicator equaled the maximum level registered for the last 10 years (10.8%) and is still above the ten-year average of 6.4%. Analyzing by bank ratio ranges from 1.4% to 17.6%, and is below the level of the prescribed threshold of 20.0%[29].

Chart 30
Net weighted position/own funds

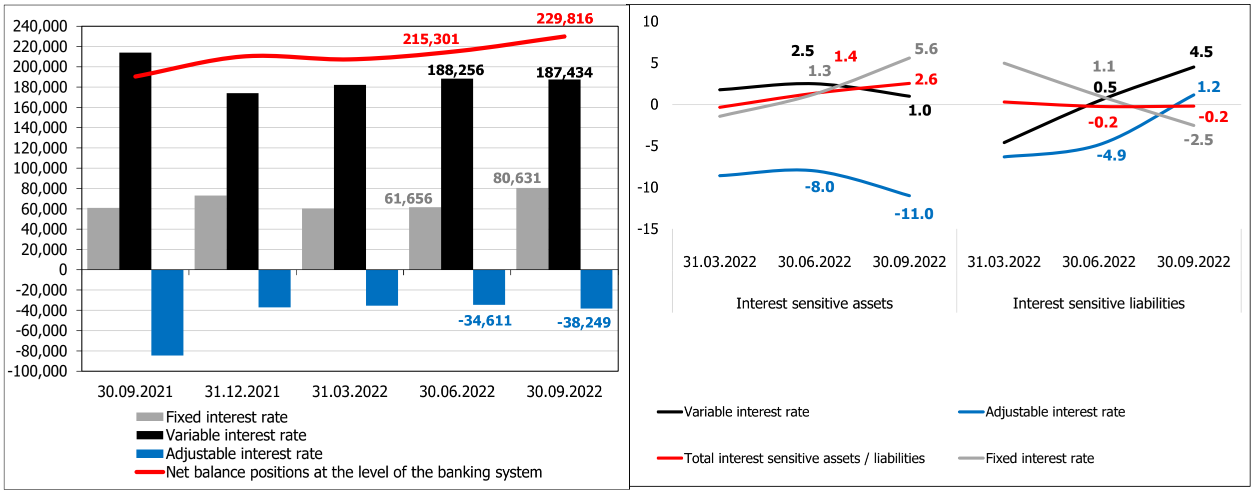


Source: National Bank, based on the data submitted by banks.

Analyzing by the interest rate type, the quarterly growth of the total weighted value of the banking book mostly results from the increase in the weighted value of the portfolio with variable interest rate (by Denar 876 million or 17.9%), as well as the increase in the weighted value of the portfolio with fixed interest rate (Denar 361 million or by 11.9%). The growth of the weighted value of the portfolio with a variable interest rate is primarily due to the increase and redistribution of placements in loans with this type of interest rate, from blocks with a shorter period (up to 1 month) to blocks with a longer period until the next reassessment of the interest rate (3 – 6 months). The increase in the weighted value of the portfolio with a fixed interest rate results from the increase in assets given simultaneously decrease in liabilities with this type of interest rate. The weighted value (negative) of the portfolio with an adjustable interest rate recorded a slight increase (by Denar 8 million).

[29] According to the regulation, when total weighted value of the banking book to own funds ratio exceeds 20%, the bank is required to propose measures to reduce this ratio, and the National Bank may also require allocation of appropriate amount of capital for covering the interest rate risk in the banking book.

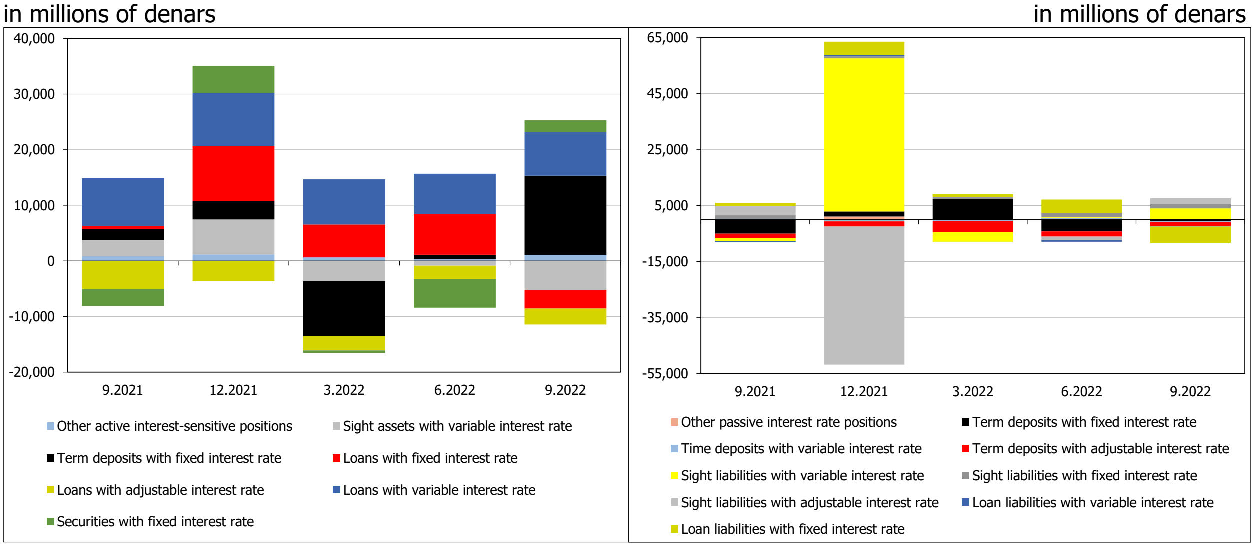
Chart 51
Interest-sensitive assets and liabilities by type of interest rate, gap (left) and quarterly growth (right)
in millions of denars in %



Source: National Bank, based on the data submitted by banks.

The total non-weighted gap between the interest-sensitive assets and liabilities registered a quarterly growth of 6.7%, or Denar 14,515 million. This is mostly due to the widening of the positive gap between the **positions with a fixed interest rate** (by 30.8%, or by Denar18,975 million), and this is mostly due to the increase in placements in short-term deposits, while simultaneously reducing liabilities based on loans. **The positive gap between assets and liabilities with variable interest rate** narrowed (by Denar 822 million or by 0.4%), mostly due to the reduction of the sight deposits, given simultaneous increase in the sight liabilities, with this type of interest rates. **The negative gap between assets and liabilities with adjustable interest rate** widened by Denar 3,638 million or by 10.5%, which arise from the reduction of the placements in loans, given simultaneous increase in the sight liabilities with this type of interest rates.

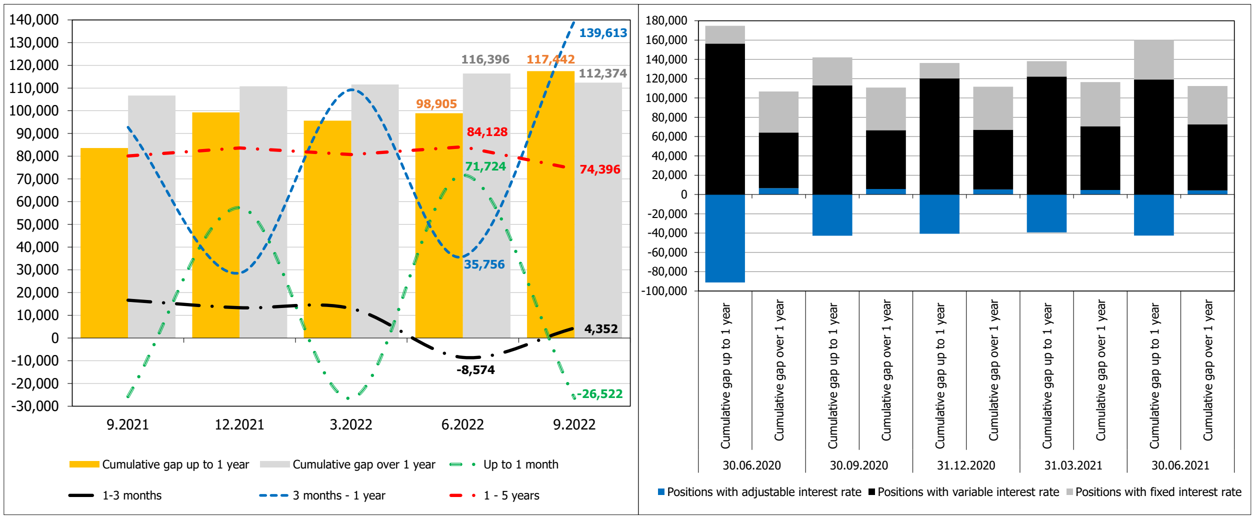
Chart 32
Quarterly changes of the interest sensitive assets (left) and liabilities (right), by type of instrument and type of interest rate



Source: National Bank, based on the data submitted by banks.

Analyzing the time period until the next reassessment of the level of interest rates, the expansion of the total gap between the interest-sensitive assets and liabilities is mostly due to the significant expansion of the gap from 3 months to 1 year, by Denar 103,857 million. This expansion results mostly from increased placements in loans with a variable interest rate. At the same time, the gap from 1 to 3 months increased (Denar 12,926 million), which, in turn, is mostly conditioned by the increase in placements in government securities and short-term term deposits with a fixed interest rate abroad and with the National Bank, given simultaneous reduction of liabilities based on loans with this type of interest rate.

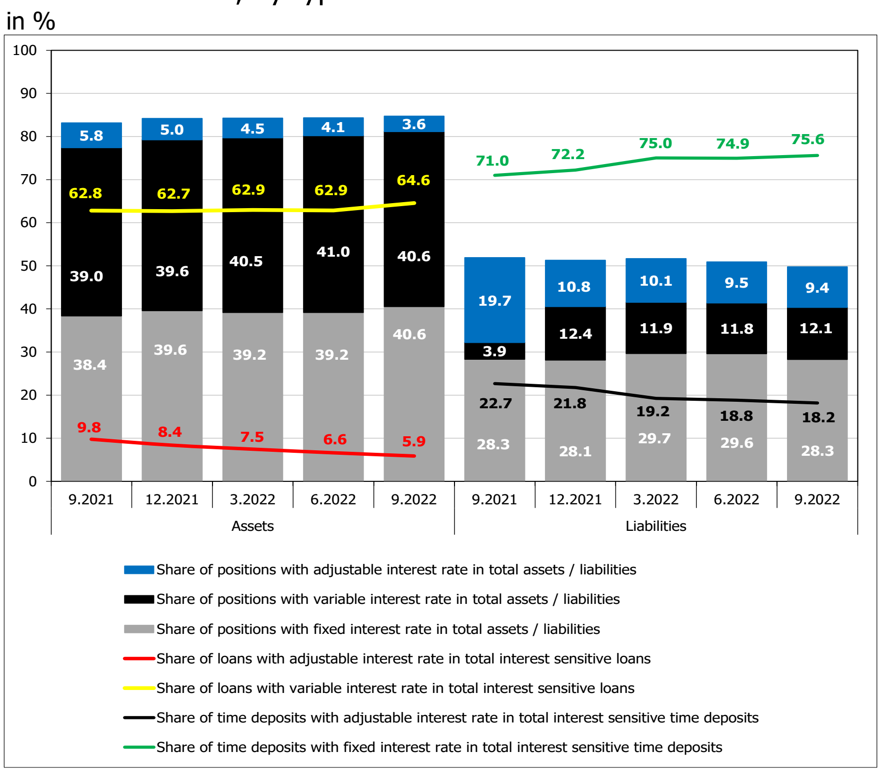
Chart 33
Asset-liability gap, by period until next interest rate revaluation (left) and gap structure by interest rate type (right)
in millions of denars
in millions of denars



Source: National Bank, based on the data submitted by banks.

The indirect exposure to interest rate risk, which arises from the presence of loans with adjustable and variable interest rates, remains significant. As of 30.9.2022, the cumulative share of these loans in the total loans is 70.5% (increase of 1 pp compared to 30.6.2022), whereby 64.6% of the total loans have variable interest rate, while 5.9% are with adjustable interest rate. This exposes banks to indirect credit risk from their clients' exposure to interest rate risk.

Chart 34
Structure of assets and liabilities, by type of interest rate



Source: National Bank, based on the data submitted by banks.

For more details about the structure of interest-sensitive items of the banks see Annexes to this Report.

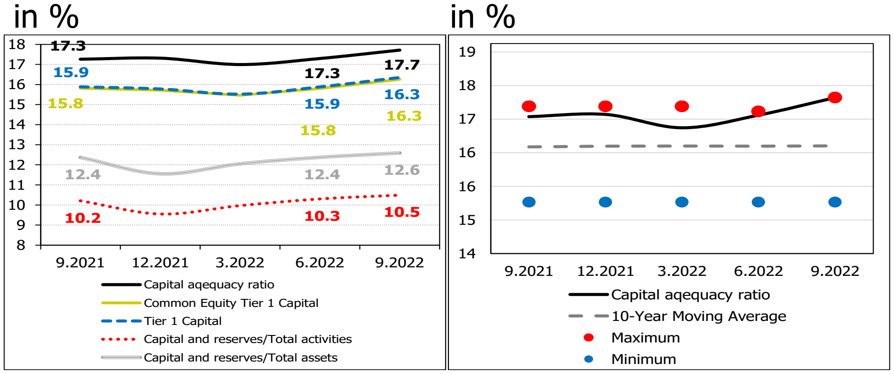
5. Insolvency risk

The solvency and capitalization indicators of the banking system kept up the trend of upward movement in the third quarter of 2022. The capital adequacy ratio increased by 0.4 percentage points, to the level of 17.7%. This growth is the result of the faster quarterly growth of own funds, compared to the increase in risk-weighted assets. The growth of own funds in the third quarter is mostly due to new issues of common shares, while the increase in risk-weighted assets mostly results from exposure to currency risk. About 30% of the quarterly growth of own funds was used to fulfill the supervisory and regulatory requirements regarding the bank solvency, and the remaining part remained free, above the minimum requirements. Moreover, almost 55% of the own funds of the banking system account for the capital supplements determined according to the supervisory assessment, but also for the capital buffers or are free, above the necessary minimum regulatory and supervisory requirements, which is especially important in conditions of crisis episodes, when they can be used as a tool to deal with challenges of different nature and intensity. The conducted stress testing of the banking system resilience to the simulated shocks with extremely conservative assumptions shows increased resilience of the banking system compared with the previous quarter. This is particularly significant, taking into account the existing challenges that banks and their clients are facing, including the higher level of inflation, the still existing and uncertain military conflict between Russia and Ukraine, as well as the energy crisis. In such conditions, the solvency of the banking system, which is at a satisfactory level, significantly mitigates the negative effects of possible larger materialization of any risk.

5.1. Solvency and capitalization ratios of the banking system

Chart 35
Indicators of solvency and capitalization of the Macedonian banking system (left) and capital adequacy ratio (right)

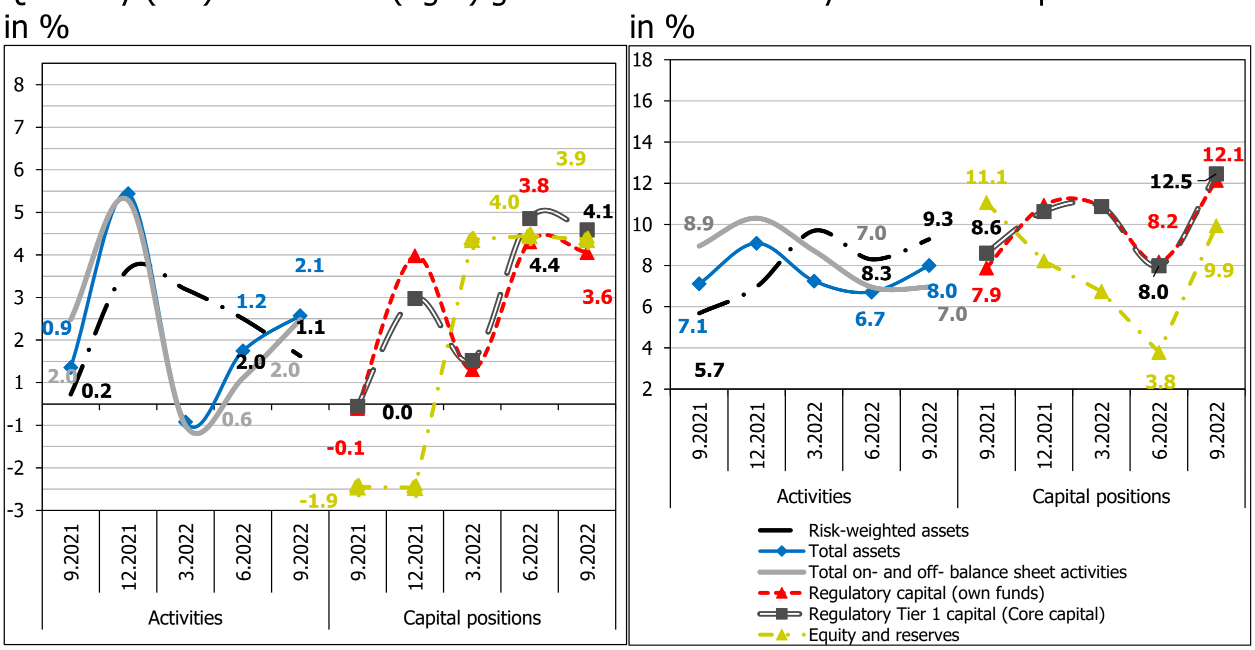
in % in %



Source: National Bank, based on the data submitted by banks.

The solvency and capitalization indicators of the banking system kept improving in the third quarter of 2022. On a quarterly basis, the capital adequacy ratio increased by 0.4 percentage points, to a level of 17.7%, which is the maximum value registered in the past ten basis. The rates of regular Tier 1 and Tier1 capital equalized and amounted to 16.3% (a quarterly increase of 0.5 and 0.4 pp, respectively), while the shares of capital and reserves in total assets and total on-balance sheet and off-balance sheet activities of banks increased by 0.2 pp and reached 12.6% and 10.5%, respectively. This improvement of solvency and capitalization indicators of the banking system results from the faster increase in capital positions compared to the bank activities. Namely, capital and reserves have accelerated the quarterly growth to the level of 3.9%, while own funds registered a growth of 3.6%, which was mostly due to new issues of common shares issued by two large banks in the third quarter of 2022. At the same time, the increase in activities was more moderate (total assets, total on-balance sheet and off-balance sheet activities and risk-weighted assets increased by 2.1%, 2.0% and 1.1%, respectively).

Chart 36
Quarterly (left) and annual (right) growth rates of solvency indicator components



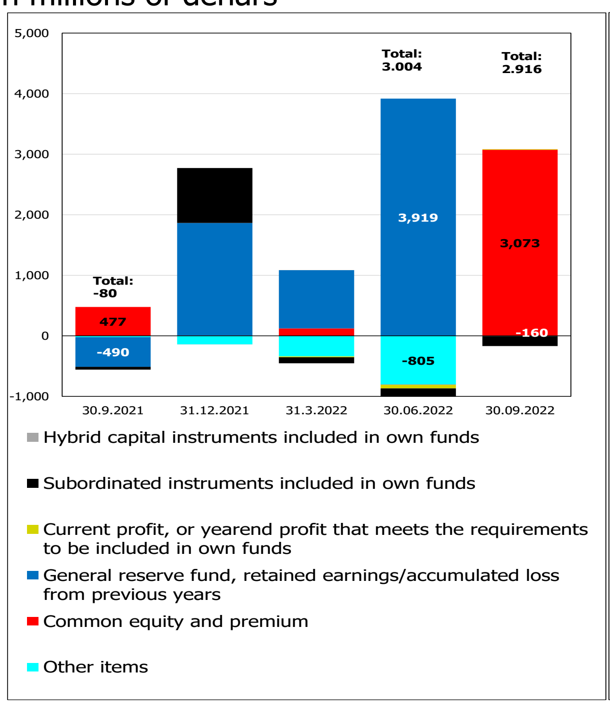
Source: National Bank, based on the data submitted by banks.

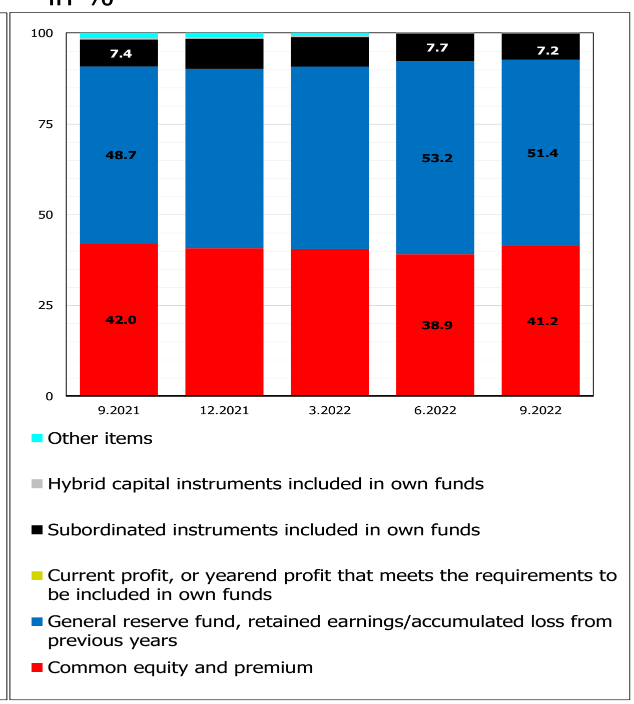
5.2. Quality of own funds of the banking system

The banking system has quality capital positions, ensuring satisfactory resilience to potential stress scenarios. At the end of the third quarter of 2022, the highest quality layer of the banking system's own funds (common equity Tier 1 capital) prevails in total own funds with a share of 91.8%, while additional Tier 1 capital and Tier 2 capital account for 0.5% and 7 .7% of the banking system's own funds.

In the third quarter of 2022, the own funds of the banking system recorded growth of Denar 2.916 mllion, or 3.6%, which is similar to the previous quarter (3.8%), while the annual growth rate recorded an increase. The biggest contribution to the growth of own funds in the third quarter of 2022 was made by the new issues of common shares, while one bank issued perpetual bonds, as well[30]. However, the general reserve requirement (general reserve fund) and the retained undistributed profit retained the main position in the own funds structure with a share of 51.4%. A slight decrease was observed in the third largest position within own funds, subordinated instruments, due to the penetration of a part of the instruments in the last maximum five years until the maturity date[31]. For more details about the level of own funds by group of banks see annexes to this report.

Chart 67
Structure of the annual changes in own funds (left) and the structure of the own funds (right)
in millions of denars in %





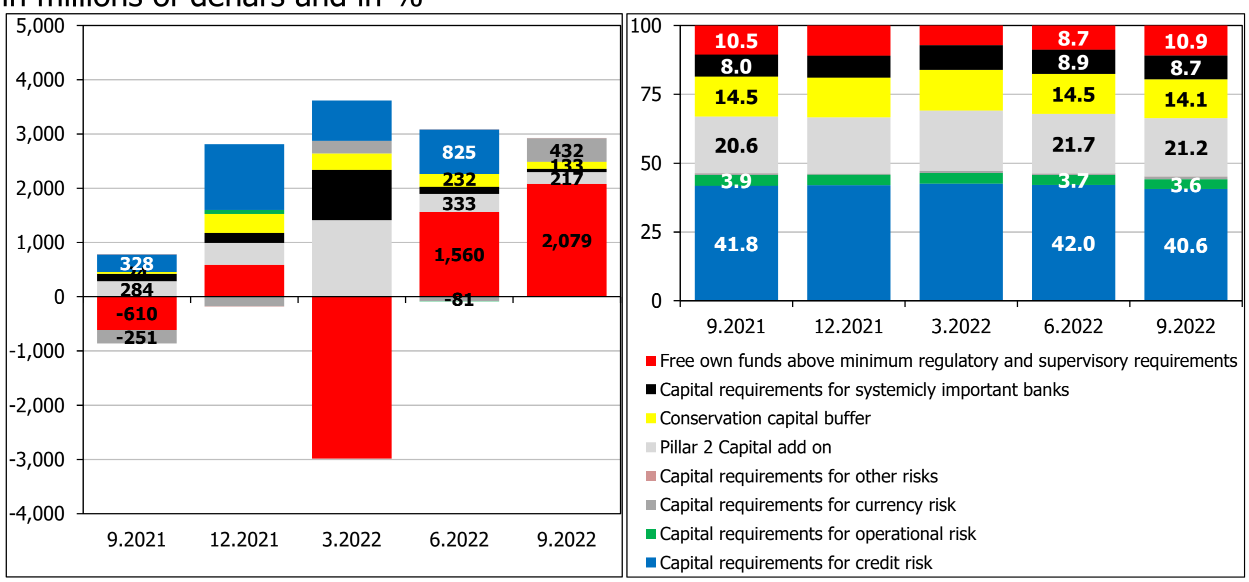
Source: National Bank, based on the data submitted by banks.

[30] During the third quarter of 2022, two large banks had a new issue of common shares, while a medium-sized bank issued perpetual bonds. The common shares were used to increase the common equity Tier 1 capital of the banks, and the perpetual bonds were used to increase the Additional Tier 1 capital of the bank.

[31] In accordance with the Decision on the methodology for determining capital adequacy, during the last five years until their maturity, the subordinated instruments are included at discounted value.

Analyzed by the purpose of own funds, all components of capital requirements recorded growth, except capital requirements for credit risk. The amount of capital requirement for risk coverage increased by Denar 426 million, or by about 1%, but its share in the total own funds of the banking system decreased moderately (from 46.3% as of 30.6.2022 to 45.2% as of 30.9.2022). The quarterly growth of the capital required for risk coverage almost entirely results from the increase in the capital requirements for covering currency risk (by Denar 432 million)[32]. Capital buffers[33] (for capital conservation and for systemically important banks) increased by Denar 195 million, or by 1.0%, on a quarterly level, and at the end of the third quarter of 2022 account for 22.8% of the total own funds of the banking system (23.3% as of 30.6.2022). The amount of the capital supplement determined by the supervisory assessment registered a quarterly increase of Denar 217 million, or by 1.2% and accounts for 21.2% of the total own funds of the banking system. About 71% of the quarterly growth of own funds are used also for increasing the free own funds, above the necessary regulatory and supervisory requirements, which registered solid quarterly growth of Denar 2,079 million, or by 29.1% and reached a share of 10.9% of total own assets.

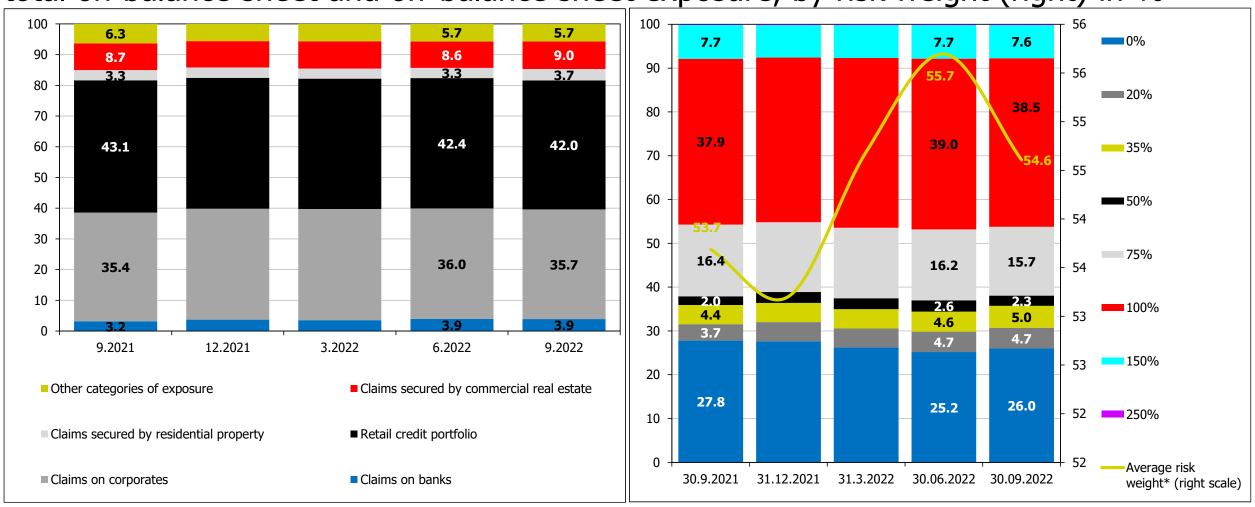
Chart 38
Structure of quarterly growth (left) and balance (right) of own funds, by the requirement for covering risks and for maintaining the required capital buffers
in millions of denars and in %



Source: National Bank, based on the data submitted by banks.

[32] The growth of the capital requirement for covering currency risk is the result of the increased aggregate foreign exchange position in the third quarter of 2022. A more detailed explanation can be found in the currency risk section of the Report.
[33] From the four capital buffers specified by the Banking Law, in the third quarter of 2022, all banks were required to meet the capital conservation buffer, while the seven banks identified as systemically important banks are also required to meet an appropriate rate of capital buffer for systemically important banks. Also, in July 2022, the National Bank Council adopted a decision on introducing a countercyclical capital buffer of the banks for the exposures in the Republic of North Macedonia, in the amount of 0.5% of the risk-weighted assets, with application from 1 August 2023.

Chart 39
Structure of capital requirements for covering credit risk, by exposure category (left) and total on-balance sheet and off-balance sheet exposure, by risk weight (right) in %



Source: National Bank, based on the data submitted by banks.
Note: The average risk weight is calculated as a ratio between risk weighted assets and total banking system balance and off-balance sheet exposure.

The credit risk weighted assets remained almost unchanged (quarterly decline of 0.02% or of Denar 74 million)[34], which, with a moderate increase in the total on-balance sheet and off-balance sheet exposure of the banking system, caused a certain quarterly drop (of 1.1 pp) in the average risk weight, to the level of 54.6%. For more details on the capital requirements for covering risks and on the capital adequacy ratio, by group of banks, see annexes to this Report.

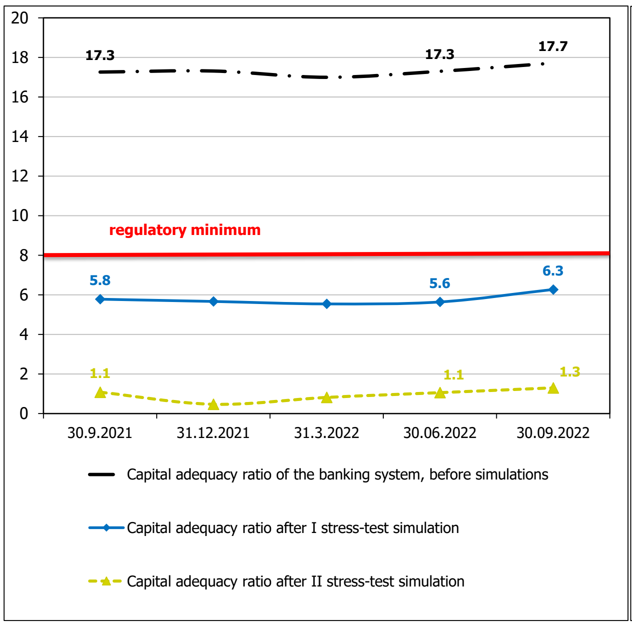
5.3. Stress-testing of the banking system resilience to hypothetical shocks

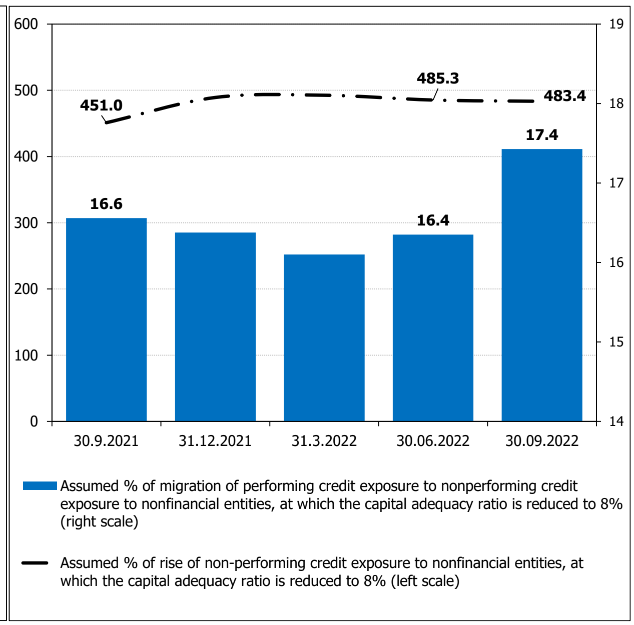
The banking system shows a satisfactory level of resiliance to the conducted regular simulated shocks, which assume an extreme materialization of the credit risk (isolated, or combined with the materialization of the currency and/or interest rate risk). The results of the conducted regular stress-testing of the resilience of the banking system and of the individual banks to simulated shocks indicate improvement compared to 30.6.2022, mostly due to the higher initial level of the capital adequacy ratio. Recently, the scope of simulations that are applied during regular stress tests was revised, whereby the emphasis is placed only on simulations with a high degree of extremity of the assumptions, the probability of which is very low, which is actually the essence of the stress-testing process. For the purposes of this report, **the result of the simulation**

[34] In the structure of credit risk weighted assets, the small loans portfolio (Denar 1,666 million), claims on other trading companies (Denar 1,164 million), claims on banks (Denar 201 million) and on public institutions (Deanr 363 million) recorded a quarterly decline. At the same time, claims covered by residential (Deanar 1,636 million) and business buildings (Denar 1,693 million), as well as other positions (Denar 207 million), recorded a significant growth.

for the simultaneous materialization of the credit, currency and interest risk is shown[35]. At the level of the banking system, after a shock, the capital adequacy ratio decreased below the regulatory minimum, to the level of 6.3%, but the result is better compared to the last quarterly date, when the capital adequacy ratio decreased to the level of 5.6%.

Chart 40
Results of the stress test simulation[36] (left) and necessary deterioration of credit exposure quality, for the banking system capital adequacy to 8% (right)





Source: National Bank, based on the data submitted by banks.

Hypothetical shocks on the part of the credit risk had the greatest impact on the solvency of the banking system. The results of the stress tests show that it takes growth of 483.4% of non-performing loan exposure migration of 17.4% from regular to non-performing loan exposure for the capital adequacy of the banking system to drop to 8%. However, these are rather extreme and less likely simulations, especially in the short

[35] Stress-testing includes simulation of simultaneous materialization of credit, currency and interest rate shocks, through:
- deterioration of the quality of credit exposure to non-financial entities, assuming a migration of 20%, 25% and 30% of the credit exposure to the non-financial sector of A, B and C-performing risk categories, respectively, to C-non-performing, D and E, where the migrated exposure is distributed equally (33.3% each) to the weaker risk categories, while maintaining the same percentage of coverage with impairment;
2) growth of exposure to financial entities government, which is non-performing by 100%, at the expense of reducing the exposure in A risk category;
3) of the denar against the euro by 30%; and
4) of lending and deposit interest rates from 1 to 5 percentage points;

term, given that in third quarter of 2022, only 0.3% of the regular credit exposure to non-financial entities obtained non-performing status. At the same time, the state of non-performing credit exposure to non-financial entities recorded a quarterly increase of 3.5%. For more details on the capital requirements for covering risks and on the capital adequacy ratio, by group of banks, see annexes to this Report.

IV. Major balance sheet changes and profitability of the banking system

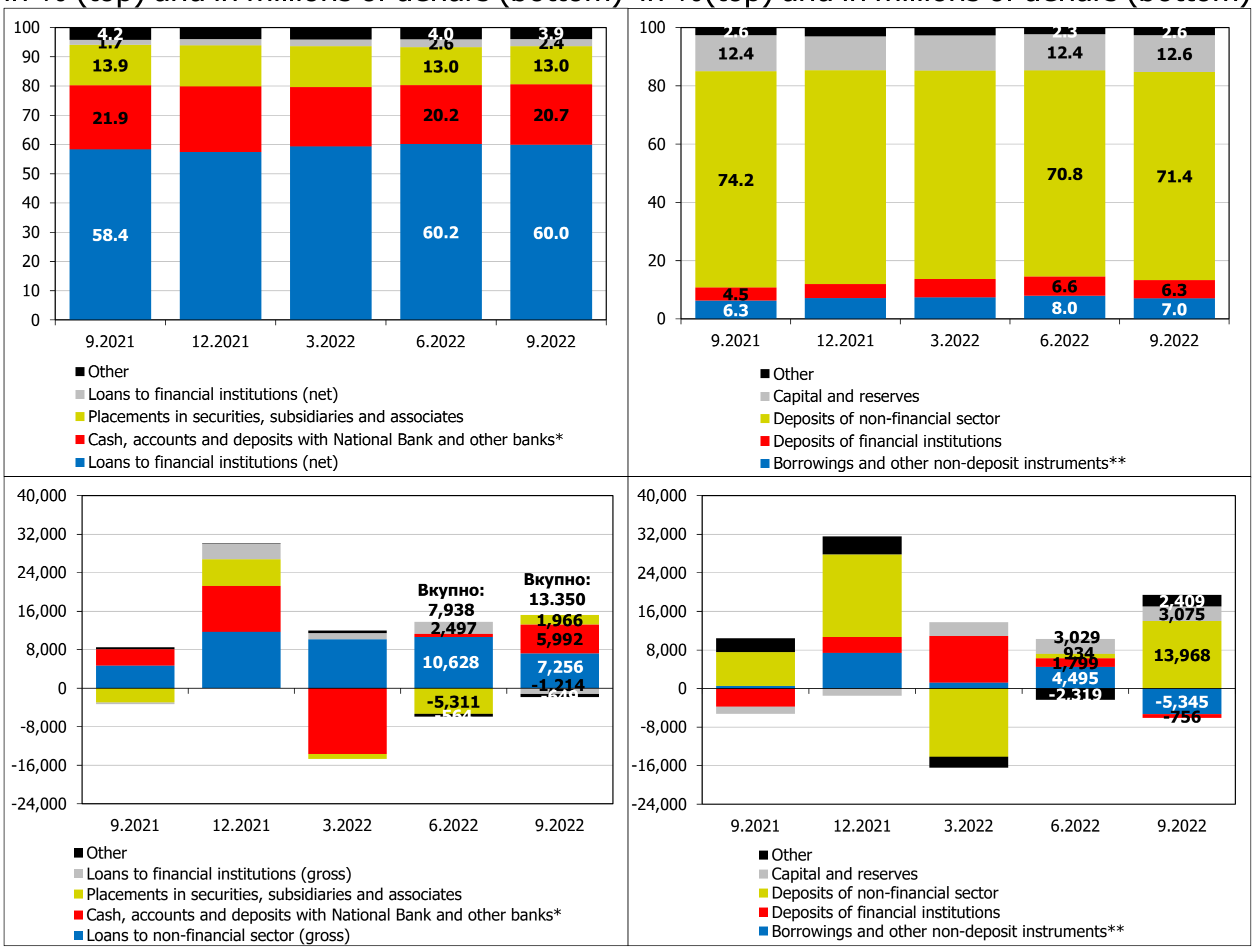
1. Bank activities

The banking system operates under conditions of heightened risks due to the prolonged military conflict in Ukraine, inflationary pressures and challenges from the energy crisis, followed by a tightening of monetary policy and changes in the reserve requirement instrument aimed at reducing euroization in the third quarter of 2022. Despite these circumstances, the banking system's balance sheet continued to grow, with the quarterly increase almost doubling from the previous quarter of 2022.

Movements in sources of funds confirm public confidence in the stability of the banking system, given the accelerated deposit growth. From a sectoral point of view, the contribution of corporate deposits was greater, but household deposits also recorded an increase. Favorable changes in currency trends have been maintained, so that for the second quarter in a row, the contribution of deposits in domestic currency is greater than that in foreign currency, which is due to the measures taken by the National Bank in relation to the division of reserve requirement rates by deposit currency. There are also changes in terms of the maturity of deposits, where despite the usually highest contribution of demand deposits in the increase of the total deposit base, in this quarter, savings with longer terms also recorded a quarterly growth, for the first time since the beginning of the pandemic. The higher level of capital and reserves, due to the recapitalization of two large and one medium-sized bank, and the higher profit from operations, also contributed to the quarterly growth of sources of funds.

In the third quarter of 2022, banks registered slower credit growth. Most of the quarterly growth was aimed at supporting the "households" sector, although lending to enterprises also increased, but slower in both credit portfolio segments, which corresponds to the bank's tightening of crediting terms. Although the representation of lending projects for renewable energy sources, and in general of "green" loans in total loans, is still low, they continued to grow in the third quarter of 2022, and with the changes in the reserve requirement instrument from September 2022, the National Bank contributes to encouraging an even stronger growth of these loans. In addition to the credit activity with the non-financial sector, the placements of the banks in the instruments of the National Bank - deposit facilities and CB bills - also recorded growth.

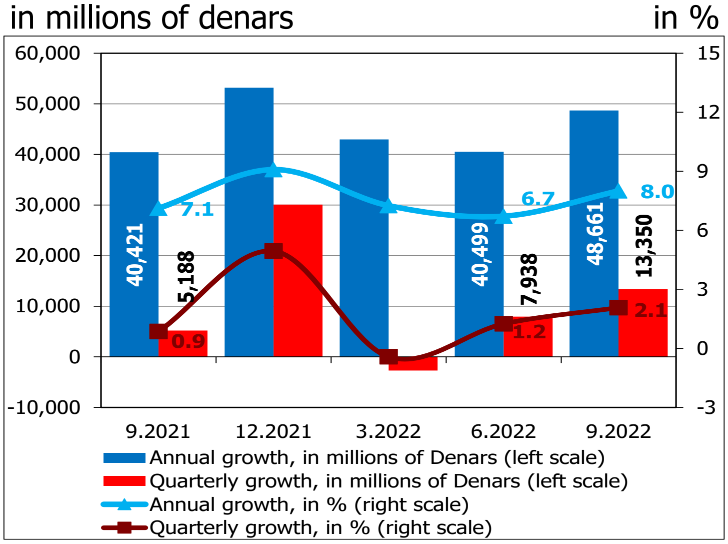
Chart 41
Structure of the assets (up left) and liabilities (up right) and structure of the quarterly changes of the assets (down left) and liabilities (down right) of the banking system
in % (top) and in millions of denars (bottom) in %(top) and in millions of denars (bottom)



Source: National Bank, based on data submitted by banks. Note: * Cash, accounts and deposits with the NBRNM and other banks also include the assets in the guarantee fund of KIBS, as well as the reserve requirement in foreign currency;
** Other issued non-deposit instruments include issued subordinated and hybrid capital instruments.

In the third quarter of 2022, the balance sheet of the banking system registered twice larger growth (which amounted to Denar 13,350 million or 2.1%), compared to the previous quarter (Denar 7,938 million or by 1.2%). More than half of the assets growth is due to the increase in loans granted to non-financial entities, although at a slightly slower pace compared to the previous quarter, and placements in deposit facility and CB bills increased more significantly. The most significant growth generator were deposits from non-financial entitites, but solid positive contribution to the increase in funding sources was made by capital and reserves (due to the increase in share capital through the issuance of common shares by two large banks and the issuance of a perpetual bond by a medium-sized bank) and the higher current operating profit.

Chart 47
Assets of the banking system



Source: National Bank, based on the data submitted by banks.

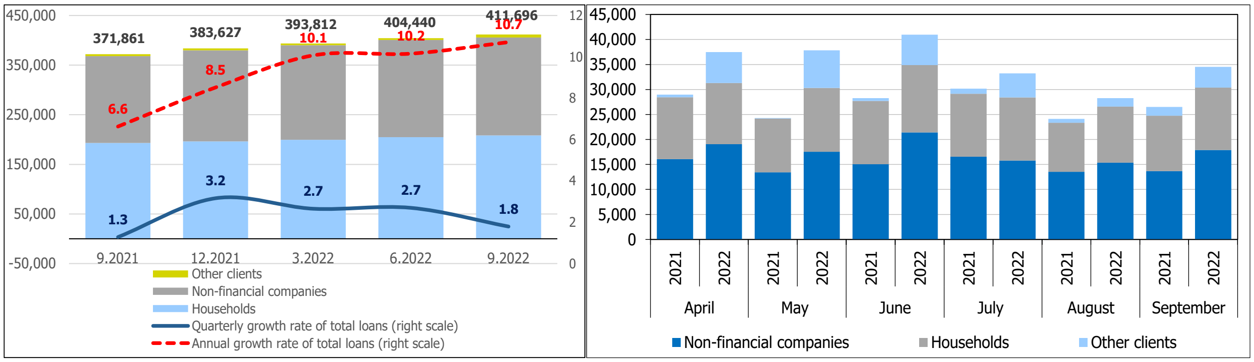
1.1. Loans to non-financial entities[37]

In the third quarter of 2022, the credit activity of banks continues to grow, but at a slower pace compared to the previous quarter, in conditions of moderate and gradual normalization of the monetary policy, so that loans to the non-financial sector increased by Denar 7,256 million, or by 1.8%[38]. In conditions of tightened lending terms by the banks, especially in the case of corporate loans, the slowdown in credit growth is present in both segments of the credit portfolio (a slightly reduced demand for loans is observed among households)[39]. However, the quarterly growth of credit activity mostly resulted from lending to households, while the contribution of loans to non-financial companies was twice as low compared to the population. On an annual basis, credit growth reached 10.7%, which is an acceleration, both in relation to the annual growth recorded as of 30.6.2022 (10.2%), and compared to 30.9.2021 (6.6%).

Analyzed by bank, there is a credit growth on a quarterly basis in ten out of a total of twelve banks[40]. At the same time, three quarters of the total quarterly growth of loans to non-financial entities is determined by two large banks.

[37] Loans to non-financial entities include loans to resident and non-resident non-financial entities, including loans to private and public non-financial companies, central government, local government, non-profit institutions serving households (loans to other clients), sole proprietors and natural persons (loans to households).
[38] In the second quarter of 2022, loans to non-financial entities increased by Denar 10.628 million, or by 2,7%.
[39] Source: Lending Survey from October January 2022.
[40] The DBNM AD Skopje is not taken into account.

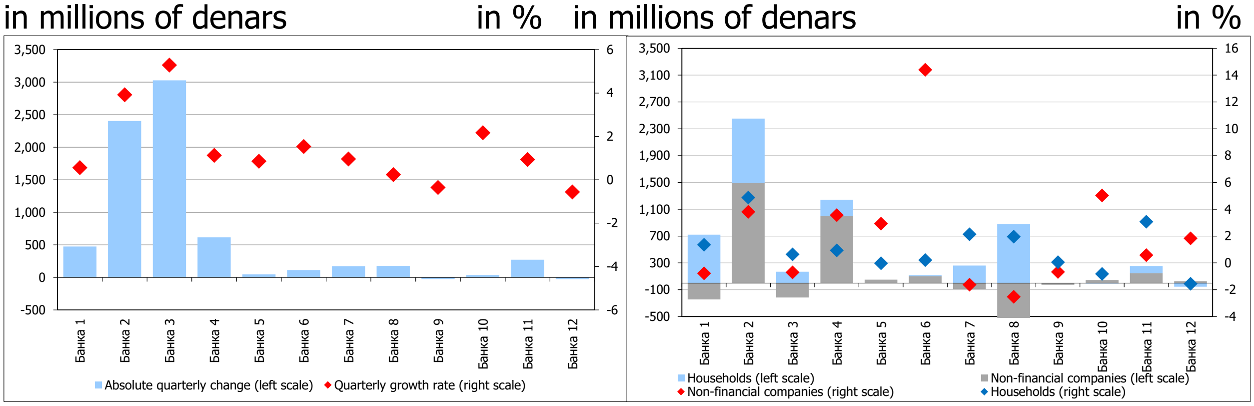
Chart 48
Amount of loans to non-financial entities (left) and newly approved loans by sector (right)
in millions of denars in millions of denars



Source: National Bank, based on the data submitted by banks.

The volume of new loans to the non-financial sector in the third quarter of 2022 decreased by 17.5%, but is higher (by 18.8%)[41] compared to the third quarter of the previous year. Quarterly, a more pronounced decrease has been registered in newly approved loans to enterprises (of 15.5%), with a simultaneous more moderate decline in newly approved loans to households (of 5.5%). If the volume of new loans is analyzed in the first nine months of 2022, then their amount shows a more significant growth compared to the same period last year, in both segments of the loan portfolio.

Chart 49
Growth of total loans to non-financial entities (left) and of loans to non-financial corporations and households (right), by bank
in millions of denars in % in millions of denars in %



Source: National Bank, based on the data submitted by banks.

The credits to non-financial corporations in the third quarter of 2022 have been increasing at decelerated pace, amid growth of loans to this sector of

[41] At a growth of 12% and 8.6% of newly approved loans in corporate and households segment, respectively.

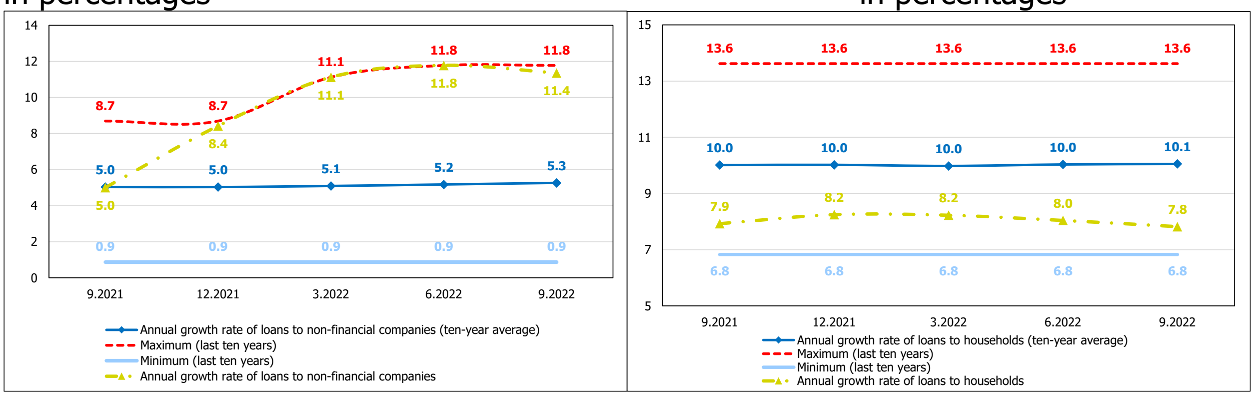
Denar 1,612 million, or by 0.8% (the growth in the second quarter of 2022 amounted to Denar 5,309 million or 2.8%). On an annual basis, corporate loans increased by 12.8%, which is minimally higher compared to the annual growth as of 30.6.2022 (12.7%), but several times higher compared to the annual growth as of 30.9.2021 (5.1%)[42].

The slowdown in credit growth to non-financial corporations can be linked to a stronger net tightening of corporate lending terms, despite a further net increase in total corporate credit demand[43]. For the last quarter of 2022, banks expect further net tightening of the credit conditions for approving corporate loans and net increase in the credit demand by companies.

Chart 410

Ten-year moving average of the annual growth rates of loans to non-financial corporations (left) and household loans (right)

in percentages | in percentages



Source: National Bank, based on the data submitted by banks.
* Note: The effect of all mandatory write-offs carried out in the period 1.1.2016 - 30.9.2022 is excluded. Starting from December 2019, the data also contains collected compulsorily written-off loans.

According to the economic activity of the clients, the structure of loans to non-financial corporations is predominated by loans approved to clients from industry[44] and trade, with a share of 60% in total loans to non-financial corporations. As of, by the size of the non-financial corporations[45], the extended loans to large, medium and small-size

[42] Without the effect of net write-offs, the annual growth rate of corporate loans slowed down slightly and equaled 11.4% (11.8% as of 30.6.2022), which is slightly below the maximum value of annual growth of corporate loans achieved in the last ten years (11.8%). https://www.nbrm.mk/content/MPI%20publikacii/Istrazuvanje_Anketa_kreditna_aktivnost_oktomvri_2022.pdf

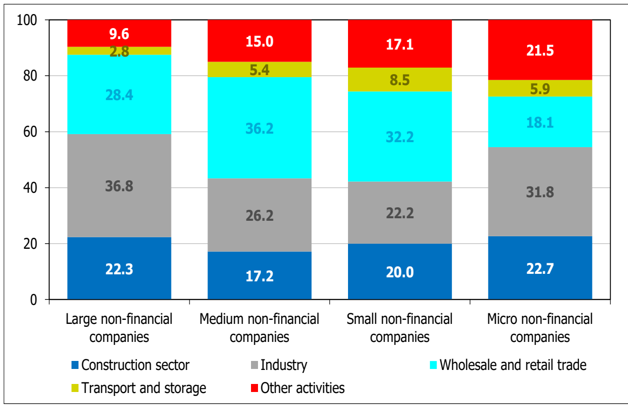
[43] From the aspect of individual lending terms pertaining to enterprises, the banks point to a further net tightening in the interest rates of loans, collateral requirements and non-interest income. Source: Survey on the credit activity of banks in the third quarter of 2022..
https://www.nbrm.mk/content/MPI%20publikacii/Istrazuvanje_Anketa_kreditna_aktivnost_oktomvri_2022.pdf

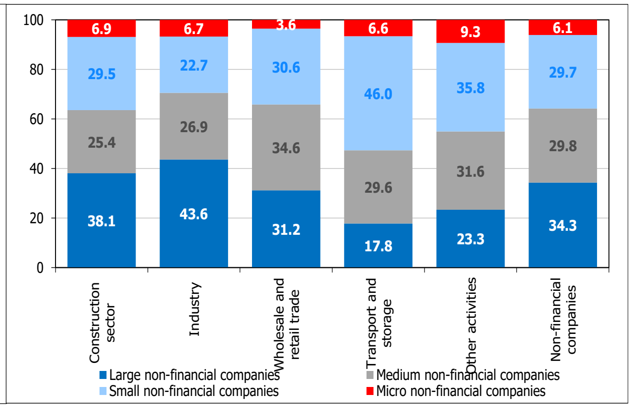
[44] Within the industry activity, since the beginning of 2022, there have been a significant quarterly, and annual growth of loans approved for the supply of electricity, gas, steam and air conditioning, especially in the second half of the year.
Thus, on a quarterly basis, these loans grew by Denar 1,380 million, or by 12.3%, while on an annual basis, they increased by Denar 5,487 million, or by a high 76.9%. At the same time, these loans occupy one fifth of the total loans granted to industrial customers. However, their share in the total loans of non-financial corporations at the end of the third quarter of 2022 is a modest 6.4%.

[45] The criteria for Classification of entities by size (into large, medium, small and micro) are defined in Article 470 of the Law on Trade Companies.

enterprises participated with about 30% in the total corporate loans, each. The large and the medium-size enterprises from the transport and storage activity had the largest contribution to the quarterly growth in the total corporate loans.

Chart 411
Credit structure of the non-financial corporations, by activity and by size of the corporation
in %





Source: National Bank's Credit Registry, based on data submitted by banks.

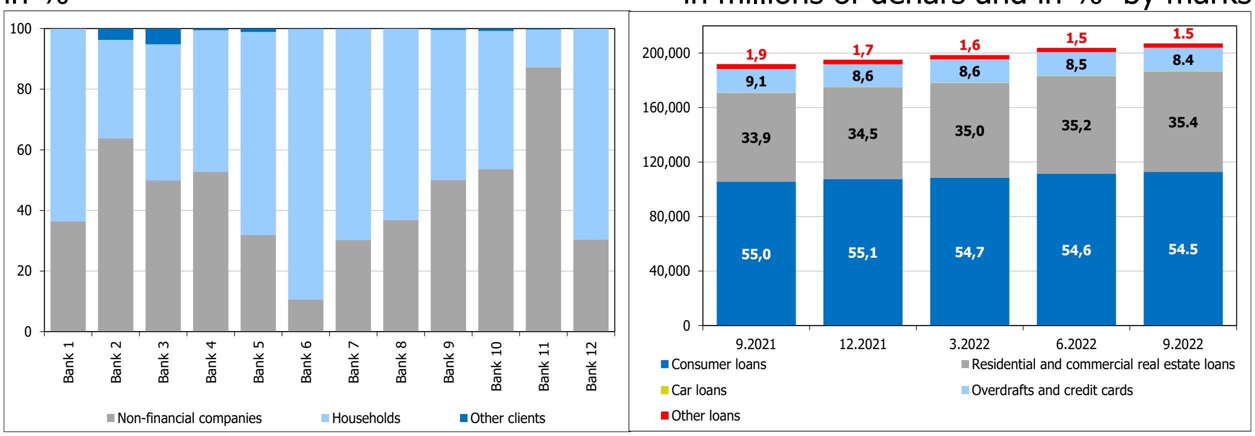
The quarterly growth also shows a slowdown in household loans, which increased by 1.6% or Denar 3,292 million (the growth in the second quarter of 2022 is 2.7% or Denar 5,407 million). On an annual basis, household loans increased by 7.9%, which is slower than the annual growth as of 30.6.2022 (8.1%), but identical to the annual growth as of 30.9.2021 (7.9%)[46].

The credit growth deceleration in households can be associated with the tightening of lending terms (after a longer period of net easing of the standards in this sector) amid simultaneous slightly reduced demand of these loans in the same period. Namely, in the third quarter of 2022, the banks indicate net tightening of the lending terms in household loans[47], which is most evident in housing loans. At the same time, banks reported a slight net decrease in credit demand, which was more pronounced in consumer as opposed to housing loans. In the next quarter, banks expect an even higher net tightening of lending terms for household loans, with an even greater net reduction in credit demand.

[46] Without the effect of net write-offs, the annual growth rate of household loans slowed down to 7.8% (8% as of 30.9.2022), which brought it even closer to the minimum value of the annual growth of household loans registered in the last 10 years (6.8%), and once more slide away from the level of its 10-year moving average (10.1%).
[47] From the aspect of individual lending terms, a greater net tightening in the interest rate and a slightly smaller net tightening in the commissions can be observed in the housing loans. Regarding consumer loans, the banks reported a net tightening only in interest rates. Source: Bank Lending Survey, October 2022.

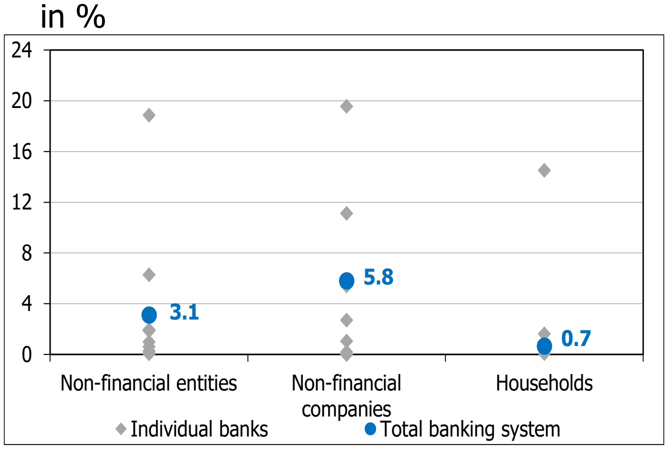
The household sector has the largest share in the total loan portfolio, with a share of 50.6% of total loans, which remained relatively stable at the end of the third quarter of 2022. By credit product, the non-purpose loans to natural persons (consumer loans, overdrafts and credit cards) take 62.9%). In the third quarter of 2022, housing and consumer loans recorded the highest growth and contributed the most to the total increase in loans to natural persons. However, both credit products slowed their quarterly growth to the level of 2.3% (housing loans) and 1.3% (consumer loans), against the growth of 3.3% and 2.6%, respectively, recorded in the second quarter of 2022. The quarterly decrease in loans based on overdrafts (-0.7%) and other loans (-2.5%) further contributed to the slow quarterly growth of total loans to natural persons.

Chart 412
Sector structure of loans to non-financial entities, by bank (left) and structure of loans to natural persons, by product (right)
in % in millions of denars and in % by marks



Source: National Bank's Credit Registry, based on the data submitted by banks.

Chart 413
Share of "green" loans in total loans to non-financial entities and by sector, by bank
in %



Source: National Bank, based on the data submitted by banks.

The activities of the National Bank aimed at encouraging and increasing awareness among domestic lenders for financing "green" projects, i.e. supporting investments in renewable energy, energy efficiency, sustainable agriculture and technological innovations, continue, but the share of these loans in the total credit portfolio at the level of the banking system is moderate, although since the end of 2019, green lending has increased by almost 80%. At the end of the third quarter of 2022, green loans[48] reached Denar 12,876 million and accounted for 3.1% of the total loans to non-financial entities. The growth of green lending is mostly due to loans to non-financial corporations, which account for 5.8% of the total corporate loans.[49]. The growth of green loans to households is smaller and they account for only 0.7% of total household loans.

In September 2022, the National Bank adopted a Decision amending the Decision on reserve requirement, which encourages lending to projects related to domestic production of electricity from renewable sources. In this way, in conditions of energy crisis and strong growth of the global prices of electricity, the National Bank contributes to mitigating the pressures and the structural problems in the economy, and the measure also supports "green finance" and sustainable financing.

In the third quarter of 2022, by currency, credits with a currency component (especially foreign currency credits)[50] completely determined the growth of total credits to non-financial entities, while the contribution of denar credits[51] was negative. The high growth of foreign currency credits, on the one hand, results from the Government borrowing with a short-term foreign currency credit in this quarter, and on the other hand, it results from the stronger growth of foreign currency corporate loans, in conditions of higher prices of energy and imported goods in general. As a result of such movements, the currency structure of total loans is still dominated by denar loans (57%), but their participation continued the trend of narrowing since the beginning of the year and this quarter further decreased by 1.2 pp, at the expense of equal increase in the share of foreign currency loans, which reached a level of 16.7%. The share of denar loans with a foreign currency clause remained unchanged at the level of 26.3%, as in the previous quarter.

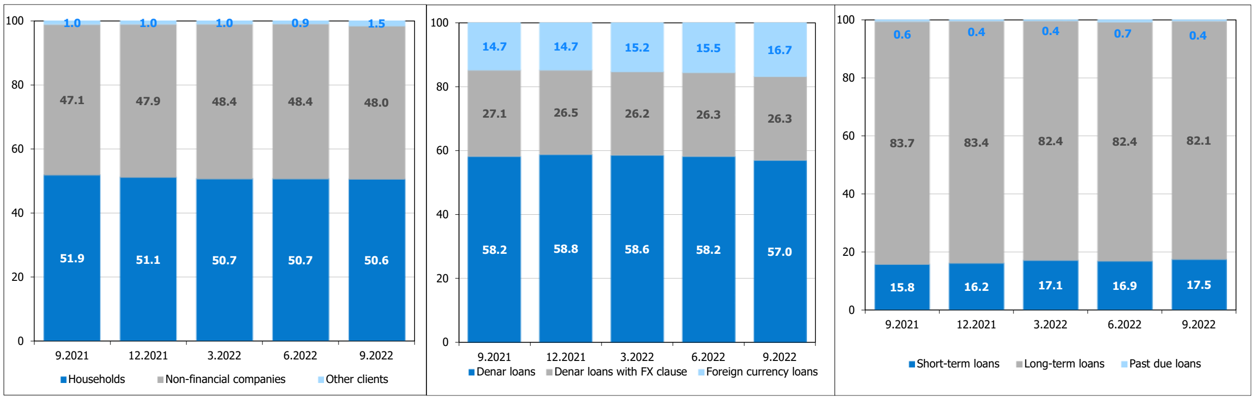
[48] The term "green loan" refers to the manner of financing which allows the borrower to invest exclusively in projects with significant positive environmental impact and in projects that reduce the negative effects from climate.

[49] From the twelve analyzed banks, three banks have not approved "green" loans as of 30.9.2022. In the banks that have approved such loans, the share of "green" loans in total loans ranges from 0.1% to 18.9%. Observed by sector, the share of "green" loans in total loans by individual banks is between 0.004% and 19.6% in corporate loans, i.e. between 0.1% and 14.5% in household loans.

[50] Foreign currency loans increased quarterly by Denar 6,125 million, or by 9.8% which mostly results from loans to non-financial corporations (growth of Denar 3,242 million, or 6.7%) and less from loans to other clients (growth of Denar 2,415 million, or 178.6%), to the Government. Denar loans with currency clause increased annually by Denar 1,869 million, or 1.8%, with larger contribution of household loans (of Denar 1,693 million, or 2.2%) and slight contribution of the non-financial corporations of Denar 230 million, or 0.8%).

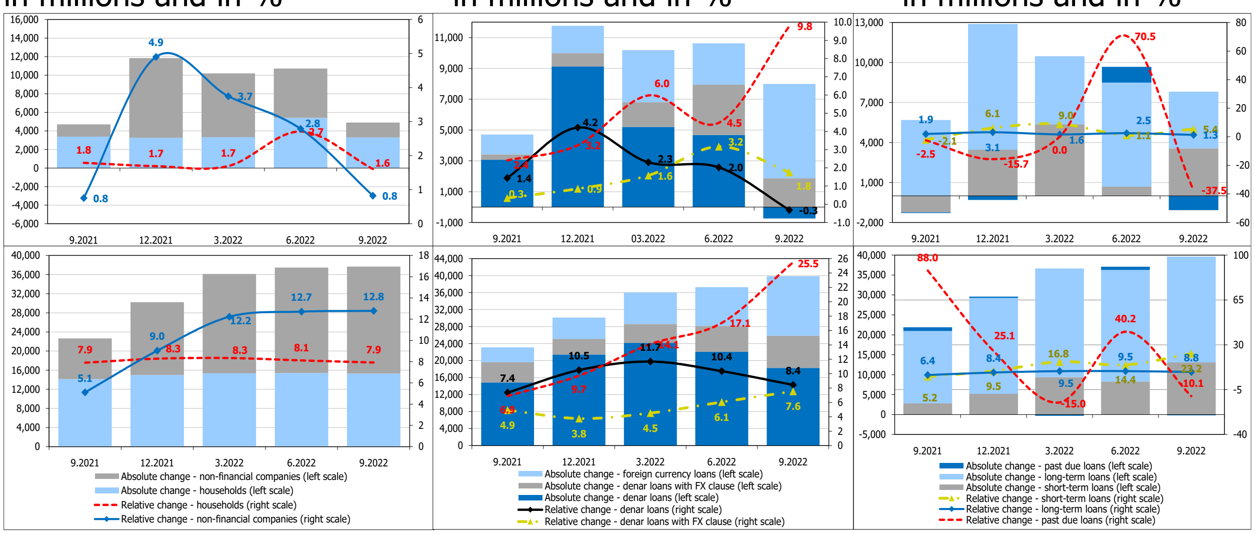
[51] The denar loans reduced quarterly by Denar 738 million or 0.3%, mostly as a result of the decrease in the loans to non-financial corporations (decrease of Denar 1,860 million or 1.6%).

Chart 414
Structure of total loans, by sector (left) and currency (middle) and structure of regular loans by maturity (right)
in %



Source: National Bank, based on the data submitted by banks.

Chart 15
Quarterly (top) and annual (bottom) loan growth by sector, currency and maturity
in millions and in % in millions and in % in millions and in %



Source: National Bank, based on the data submitted by banks.

The biggest contribution to the increased lending activity of banks at the end of the third quarter of 2022 was made by the long-term lending[52], which slightly decelerated this quarter (from 2.5% growth as of 30.6.2022 to 1.3% on 30.92022). In addition, the short-term loans are growing, but at a faster pace (by Denar 3,559 million or by 5.4%). The increase in the long-term

[52] The analysis of maturity structure of loans excludes non-performing loans. The long term loans increased by Denar 4,255 million quarterly.

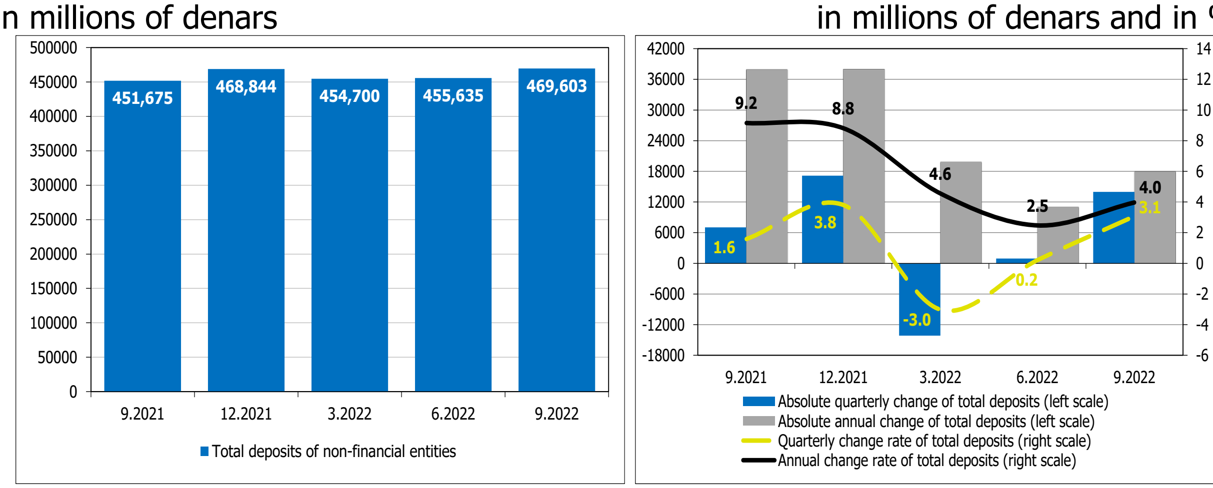
loans is mostly determined by the household loans, while the government sector[53] conditioned the most the quarterly growth of the short-term loans. The due loans are quite variable, which is primarily due to their very small amount[54].

1.2. Deposits of non-financial entities

After the decline in the first quarter and the stagnation in the second quarter of the year, in the third quarter the deposit activity of the banks recovered and registered a solid three-month growth of 3.1%, which is also twice the growth registered in the third quarter of 2021 (1.6 %). On an annual basis, the total deposit base of the banks increased by Denar 17,928 million, or by 4%, which is faster compared to the annual growth as of 30.6.2022 (2.5%), but significantly slower compared to the annual growth as of 30.9.2021 (9.2%). Analyzed by bank, four banks from the group of large banks take more than 85% of the quarterly deposit growth, and only one of them takes about 32% of the total quarterly growth.

Households, which are traditionally the most significant depositors in the Macedonian banking system (with a share of 67.6% in total deposits), in the third quarter of 2022, increased their funds deposited in banks by Denar 5,811 million, or by 1.9% (an increase of 2.2% in the second quarter of 2022). On an annual basis, the growth of household deposits continues in this quarter as well (by Denar 16,249 million, or 5.4%) compared to 30 June 2022 (5.2%), but it is slower compared to 30.9. 2021 (6.7%).

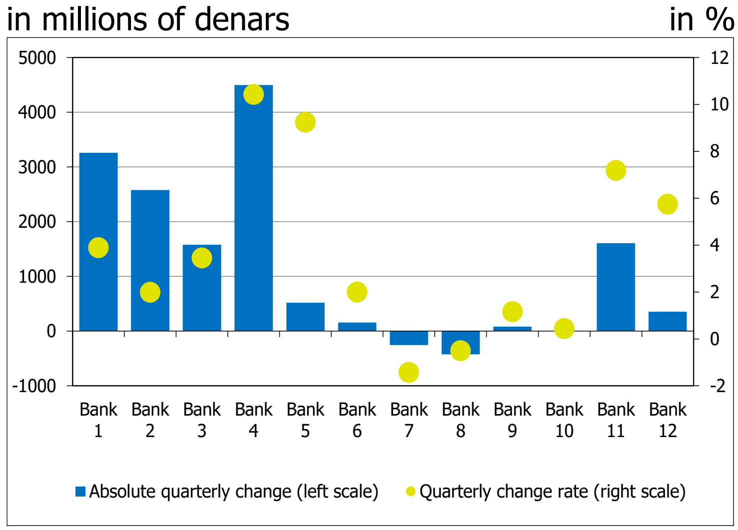
Chart 16
Balance (left) and growth (right) of the deposits of non-financial entities
in millions of denars   in millions of denars and in %



Source: National Bank, based on the data submitted by banks.

[53] The increase in the short-term loans as of 30.9.2022 almost fully originates from the short-term government loan.
[54] The due loans make up minor 0.4% of total performing loans.

Chart 52
Deposit growth of non-financial entities, by bank



Source: National Bank, based on the data submitted by banks.

Deposits of non-financial corporations had a greater contribution to the quarterly growth of the total deposit base, so that on a quarterly basis they increased by Denar 7,616 million or by 6%, against the fall of 3.6% in the previous quarter. After the annual decrease as of 30.6.2022 (-4.3%), deposits of the non-financial corporations slightly increased on an annual basis, by 0.5%, but it is far below the annual growth achieved on 30.9.2021 (15.5 %).

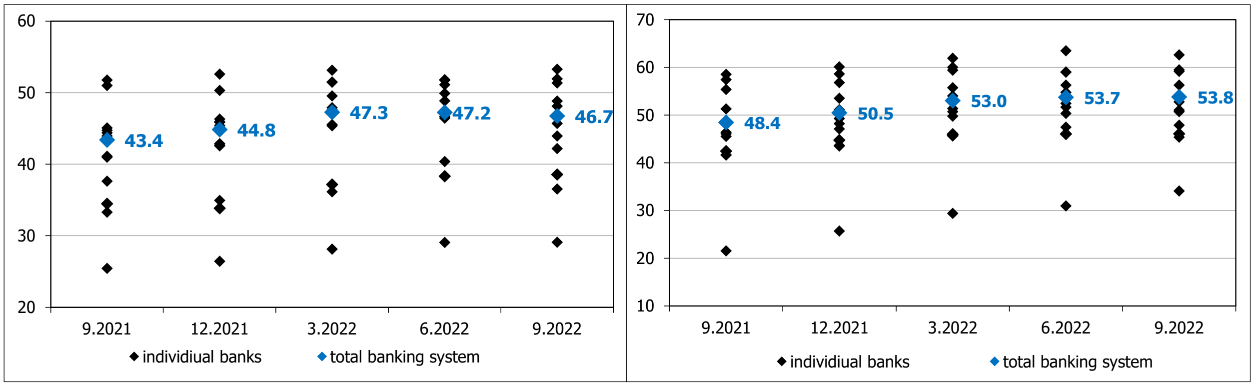
Analyzing by currency, the largest contribution to the quarterly growth of the deposit base for the second consecutive quarter was made by denar deposits (70.4%), which increased by Denar 9.839 million, or by 4.1%. The foreign currency deposits grew by Denar 4.376 million, or by 2%, contributing by 31.3% in the total deposit growth. At the same time, the quarterly growth of denar deposits is mostly determined by the increase of demand deposits, with a more pronounced contribution of the "enterprises" sector, but also a solid growth of the "households" sector"[55]. In the third quarter of 2022, foreign currency deposits increased by 2%, which is faster compared to the second quarter of 2022 (0.1%). The quarterly growth of foreign currency deposits is almost fully due to the growth of demand deposits of the household sector. [56] As a result of such movements, the share of denar deposits in the total deposit base increased, which at the end of the third quarter of 2022 reached a level of 53.2% (52.6% as of 30.6.2022), while the share of foreign currency deposits decreased to a level of 46.7% (47.2% as of 30.6.2022).

[55] The quarterly increase in foreign currency demand deposits of non-financial corporations was Denar 6,309 million, or 8.3%, amid minor increase in denar demand deposits of households which amounted to Denar 2,272 million, or 2.6%.
[56] The quarterly increase in foreign currency demand deposits of households was Denar 2,937 million, or 3.4%, while foreign currency demand deposits of non-financial corporations grew by Denar 790, or by 2.2%, and the growth of foreign currency sight deposits with other sectors by Denar 435 million, or by 6.6%.

Chart 17

Share of the total foreign currency deposits in the total deposits of the banking system (left) and foreign currency household deposits in the total household deposits (right)

in %

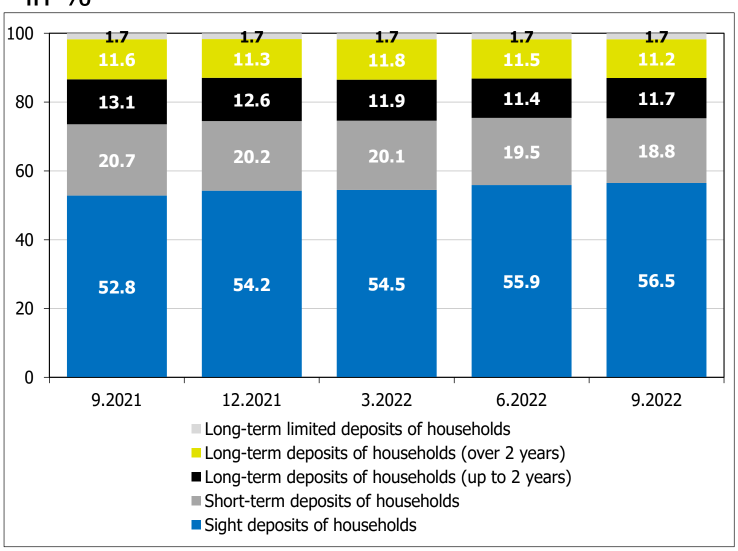


Source: National Bank, based on the data submitted by banks.

Chart 18

Maturity structure of household deposits

in %



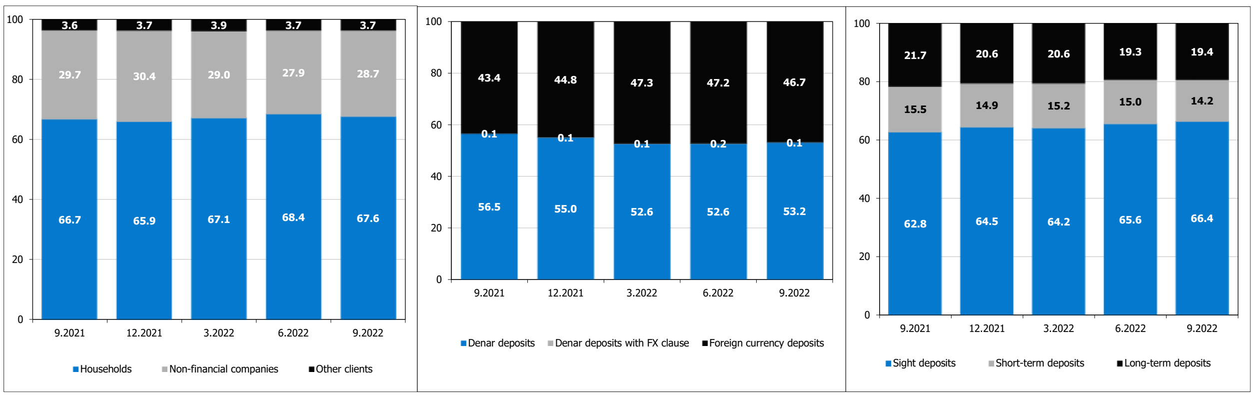
Source: National Bank, based on the data submitted by banks.

By maturity structure, sight deposits and long-term deposits also registered a growth[57]**. The contribution of the sight deposits was larger, and in the third quarter of 2022** they increased by Denar 12,852 million, or by 4.3%, which arises from the deposit growth in both sectors. The opposite trend is observed in short-

[57] The quarterly increase in long-term deposits is mostly the result of the increase in household deposits by Denar 1,768 million , or by 2.3% (while the increase in foreign currency deposits by Denar 1,064 million, or by 2.7% prevails), with the deposit growth of non-financial corporations by Denar 848 million, or by 8.7% contributing to the quarterly growth of the long-term deposits (mainly due to the growth of foreign currency deposits by Denar 647 million denars, or by 26.1%), given a smaller increase in foreign currency deposits of non-residents by Denar 273 million, or by 27.5%.

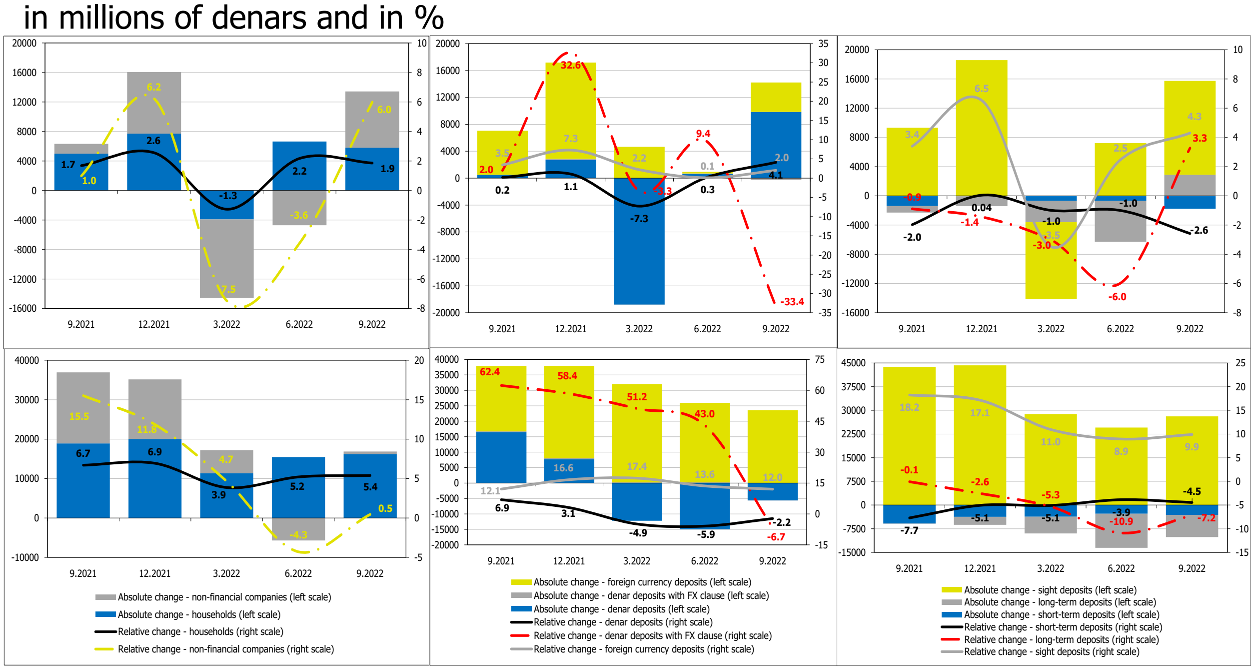
term deposits[58], which continued to decrease (they decreased on a quarterly basis by 1,766 million denars, or 2.6%), which is slightly more than double the decrease present in the previous quarter (a decrease of Denar 695 million, or by 1% as of 30.6.2022).

Chart 19
Total deposits structure, by sector (left) and currency (middle) and maturity (right)
in % in % in %



Source: National Bank, based on the data submitted by banks.

Chart 20
Quarterly (top) and annual (bottom) deposit growth by sector, currency and maturity
in millions of denars and in %



Source: National Bank, based on the data submitted by banks.

[58] The pronounced absolute quarterly drop in short-term deposits is largely due to the decrease in household sector deposits by Denar 1,166 million, or by 1.9% (almost equally denar and foreign currency deposits), but short-term deposits of non-residents and non-financial corporations also having an influence by Denar 526 million, or 57.4%, by Denar 322 million, or 5.6%, respectively (in full with currency component).

The National Bank continued with the monetary policy tightening by applying wider set of monetary instruments, which began at the end of last year, in order to maintain the stability of the exchange rate and medium-term price stability, and in the conditions of prolonged military conflict in Ukraine and deepening energy crisis, which in turn affects changes in the currency and maturity inclination of the depositors. Thus, in addition to the increase in the policy rate, changes were also made in the reserve requirement instrument by separating the reserve requirement rates by currency in favor of denar saving. Accordingly, in this quarter, as in the previous one, there are evident favorable movements in the deposits' currency structure, expressed through an increased preference of depositors to keep their funds in banks in denars[59]. In addition, long-term savings also increased in the third quarter of 2022, for the first time since the beginning of 2021, which is another evidence of the gradual recovery of bank deposit activity.

1.3. Other activities

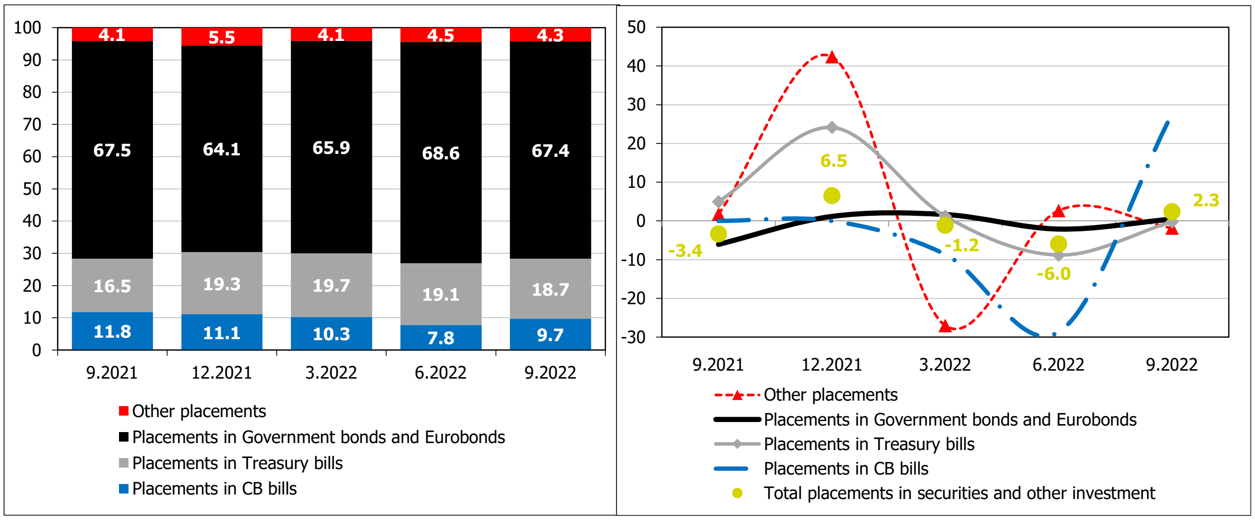
The bank' placements in securities, subsidiaries and associates[60] registered quarterly growth of Denar 1,966 million (or by 2.3%), but their participation in the total assets of the banks remained stable and amounted to 13%, as in the previous quarter. The National Bank placements in CB bills[61] registered the highest quarterly growth of Denar 1,797 million, or 27.6%. In addition, also the banks' placements in government bonds registered an increase of Denar 273 million, or by 0.5%. On the other hand, investments in treasury bills recorded a slight fall of Denar 36 million (or 0.2%) on a quarterly basis. Such developments decreased the share of investment in government bonds in total placements in debt securities and other banks' investment to 67.4% as of 30.9.2022 (68.6% as of 30.6.2022) amid slight decrease in the share of investment in treasury bills (from 19.1% as of 30.6.2022 to 18.7% as of 30.9.2022), for the account of the increase in the share of investment in CB bills (from 7.8% as of 30.6.2022 to 9.7% as of 30.9.2022). It is noteworthy that in the third quarter of 2022, two banks made a small investment in a corporate bond issued by a domestic insurance and brokerage company (the share of this investment is negligible of about 0.01% of total investment in securities and other bank investments).

[59] The National Bank continued to dedicatedly fulfill its legally set goals also after the third quarter of 2022. Namely, in November, a decision on changing the reserve requirement rates of the banks was adopted, in order to further stimulate savings in domestic currency. The change in this instrument, which is the fourth in a row this year, includes an increase in the reserve requirement rate of banks for liabilities in foreign currency from 18% to 19%. The part of the foreign currency reserve requirement that banks meet in euros has also been increased, from 75% to 77%, which strengthens the effect of the change in this instrument.

[60] The analyses of these investments are based on their net book value.

[61] The increased placements in CB bills result from the banks' higher demand for this instrument given the higher interest rates offered at the CB bill auctions and the unchanged offer by the National Bank (of Denar 10 billion) (in September, the interest rate on CB bills was 3%, and increased in October and November, when they reached 4.25%).

Chart 21
Structure (left) and quarterly growth (right) of investments in securities, subsidiaries and associates
in % in %



Source: National Bank, based on the data submitted by banks.

The placements with banks and other financial institutions (accounting 8.2% of the total assets of the banking system) registered a decrease of Denar 1,585 million, or 2.8% in the third quarter of 2022. This reduction was largely the result of the decline in loans to domestic banks (by Denar 1,206 million, or by 7.4%[62]) and from the reduction of the banks' funds on the correspondent accounts in foreign banks by Denar 721 million, or by 2% (with a simultaneous increase in term deposits abroad[63]).

The total **bank liabilities based on loans** (5.9% of the total liabilities of the banking system) reduced on a quarterly basis by Denar 5,322 million, or 12.1%, which is the result of reduced liabilities based on loans to non-resident financial institutions at certain banks[64] and the closed liabilities following repo transactions, which were concluded in the first half of 2022, with the central bank and between banks.

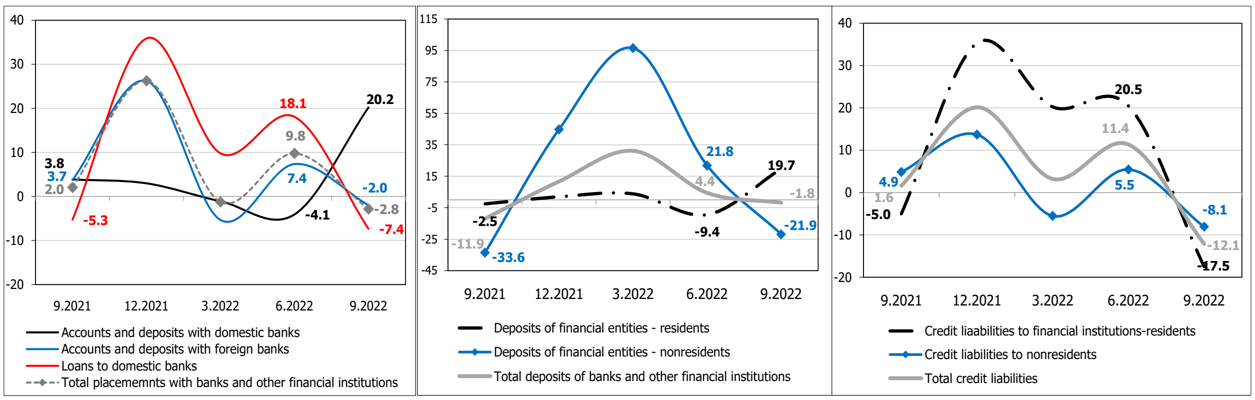
At the end of the third quarter of 2022, deposits from banks and other financial institutions represent an insignificant source of funding for banks, participating with 6.3% in the total liabilities of the banking system. The quarterly downward correction of deposits from banks and other financial institutions of Denar 756

[62] The decrease in this quarter, for the most part, results from closed repo transactions between domestic banks, which were concluded in the first half of 2022, in the amount of Denar 884 million.
[63] The growth of time deposits up to one month abroad amounted to Denar 1,927 million, overnight deposits to Denar 1,184 million, time deposits from three months to one year to Denar 905 million.
[64] The quarterly decrease in liabilities based on loans to domestic banks was mostly due to the decrease in liabilities based on foreign currency loans to one large bank (by Denar 1,455 million) and from two to five years to one medium-size bank (by Denar 285 million).

million (of 1.8%), fully results from the drop in deposits of non-resident financial institutions by Denar 4,791 million denars, or by 21.9%, within which the largest a drop has been recorded in short-term deposits (decrease of Denar 3,525 million denars), where funds spillover between certain term blocks according to the maturity date has also been registered. In contrast to this, the restricted deposits of non-resident financial companies in foreign currency up to one year registered a quarterly growth of 3,066 million denars, with a large bank.

Chart 22
Quarterly growth in the claims on financial institutions (left), liabilities based on loans (right) and deposits of financial institutions (middle)

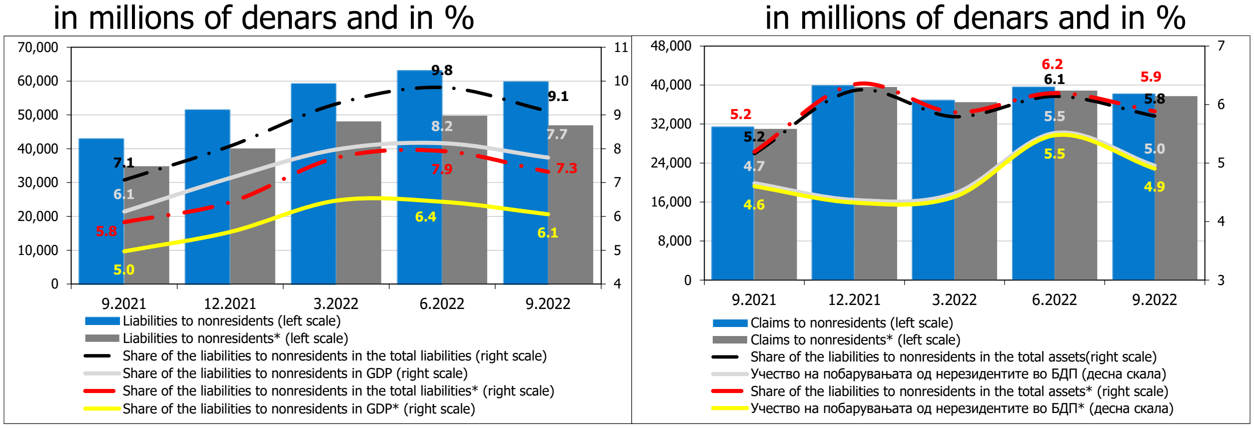
in % in % in %



Source: National Bank, based on the data submitted by banks.

Chart 23
Liabilities (left) and claims (right) to/on non-residents

in millions of denars and in % in millions of denars and in %



Source: National Bank, based on the data submitted by banks.
*Without the share of DBNM.

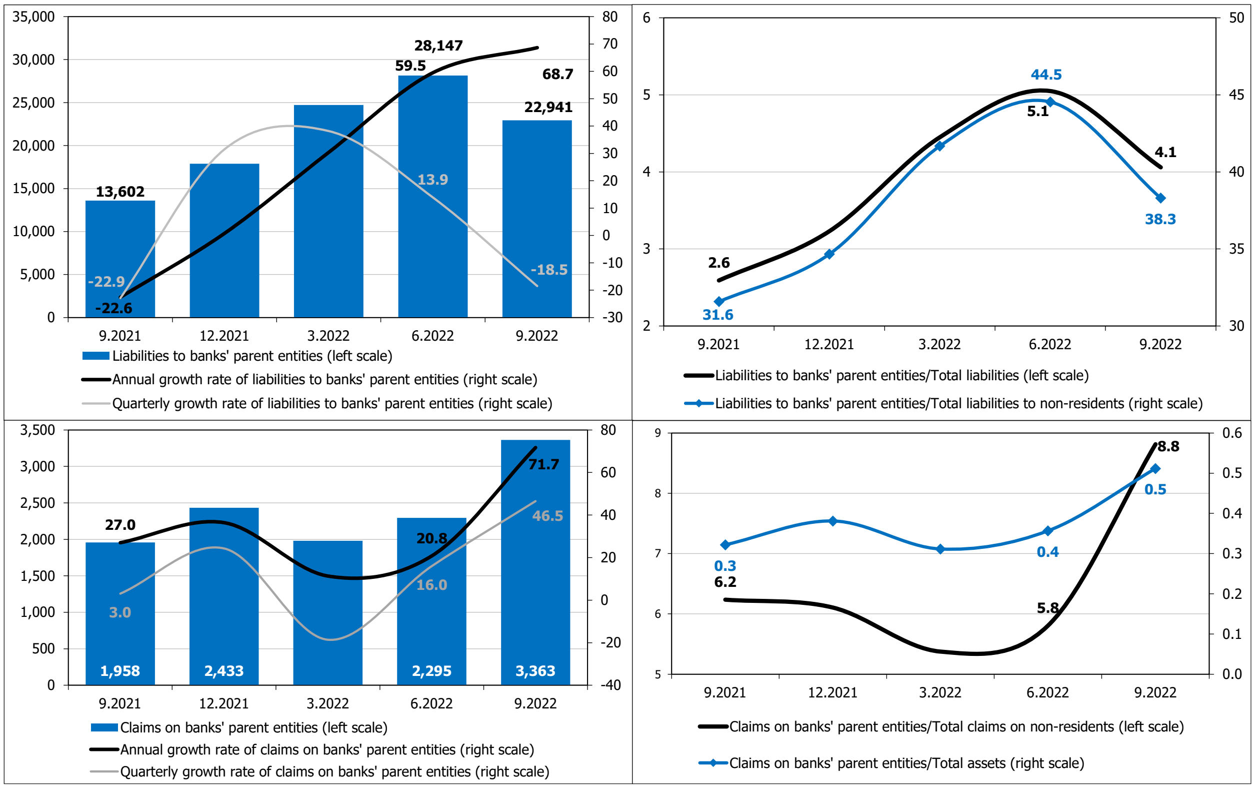
The scope of banking system activities with non-residents is constantly very limited, but there are deviations at a bank level. As usual, as of 30.9.2022,

banks owe[65] more than they claim from non-residents, with liabilities recording stronger decline compared to the decline in claims on non-residents. Namely, the domestic banks' liabilities to non-residents registered quarterly decrease of Denar 3,295 million, or 5.2%, and their share in total banking system liabilities reduced to 9.1%[66] at the third quarter of 2022 (9.8% as of 30.6.2022). This quarterly reduction mostly results from reduced liabilities based on long-term foreign currency loans to non-resident financial institutions with one large bank, and the reduction of current accounts of foreign banks in denars (denar demand deposits of non-resident financial institutions). In terms of banks' claims on non-residents, a quarterly decrease of Denar 1,396 million, or 3.5%, is registered, as a result of the reduction of placements in long-term foreign currency loans of non-resident non-financial corporations with one large bank, as well as reduction of assets at foreign banks' accounts.

The increase in the bank liabilities to parent entities that commenced at the end of 2021, ceased, but it still does not represent a significant source of financing domestic banks' activities, although there are certain bank-to-bank-differences. In the third quarter of 2022, banks' liabilities to their parent entities decreased by Denar 5,206 million (or 18.5%), which is mostly a result of the decrease in short-term deposits (at two large banks), and minimal decline in long-term deposits (at the same large banks) of financial companies. Thus, the share of banks' liabilities to parent entities (including subordinated liabilities and hybrid capital instruments) in total liabilities of the domestic banking system, and in liabilities to non-residents decreased to 4.1% and 38.3%[67], respectively. Claims on parent entities registered a quarterly growth of Denar 1,067 million, or 46.5%, and also in this quarter registered a minimal increase in their small share in the total assets to 0.5%, (0.4% as of 30.6.2022) and in claims on non-residents to the level of 8.8% (5.8% as of 30.6.2022).

[65] As of 30.6.2022, eight of thirteen banks owe more than they claim on non-residents.
[66] If DBNM AD Skopje is excluded from the analysis, the share of liabilities to non-residents in total liabilities would be 7.3%.
[67] As of 30.6.2022, these rates equaled 5.5% and 48.4%, respectively.

Chart 60
Liabilities (left) and clains (right) to/on the banks' parent entities
in millions of denars and in %   in %



Source: National Bank, based on the data submitted by banks.

2. Profitability

In the first nine months of 2022, the domestic banking system reported higher operating profit compared to the same period of the previous year, albeit the profit growth was significantly slower. The higher financial result mostly stems from higher net interest income, with higher net fee and commission income also having a significant contribution, as well as the decrease in the net impairment expenses (primarily from financial assets). As usual, the greatest positive contribution to the formation of net interest income was made by financial intermediation with households. However, in the first nine months of 2022, financial intermediation with non-financial corporations contributed significantly to the growth of net interest income, which was not the case in the same period of the previous year. Namely, the accelerated growth of corporate lending caused higher net interest income in this sector, which was opposite to the trend over the past few years, when net interest income from working with enterprises decreased.

The profit growth contributed towards improvement in the main profitability ratios of the banking system. Operational efficiency ratios of the banking system register divergent movements, amid growth of operating costs.

In the first nine months of 2022, the National Bank reduced the interest rate on CB bills in several occastions, to 3%. In the total interest rates of banks (active and passive), the downward trend stopped and in the third quarter of 2022 they began to record a moderate increase. In September 2022, interest rates are still slightly lower compared to December 2021, while the interest spread is minimally higher.

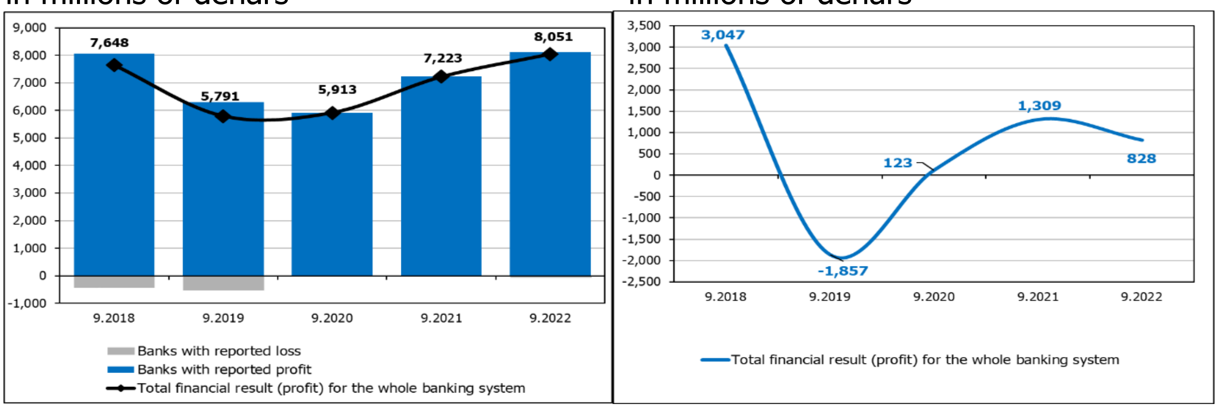
Such movements are in accordance with the National Bank measures taken in the past period to encourage denar savings by changing the reserve requirement instrument and by increasing the policy rate, which is transmitted to the banks' interest rate policy by offering more favorable interest rates on denar deposit products.

2.1. Banking system profitability and efficiency ratios

In the first nine months of 2022, the banking system reported a profit of Denar 8,051 million, which is higher by 828 million, or 11.5%, compared to the same period last year.

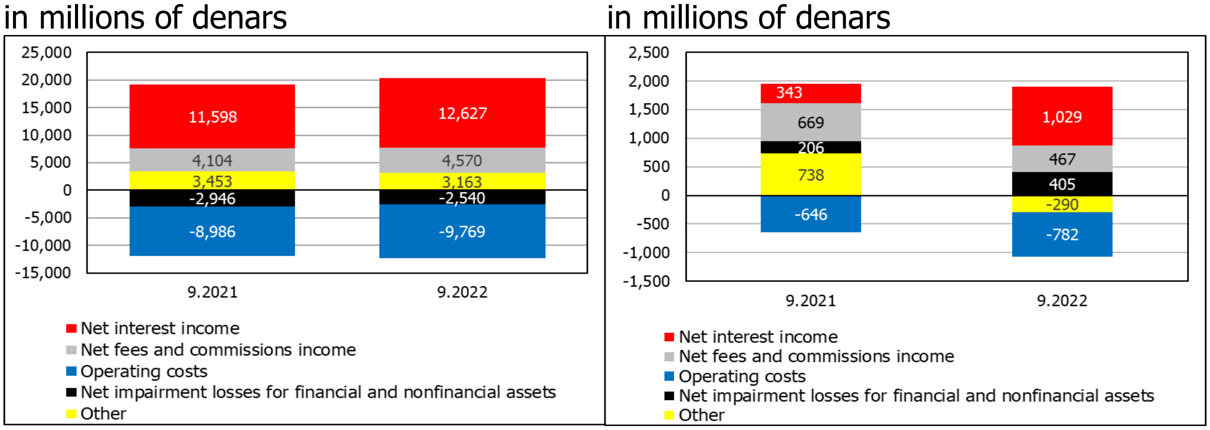
The profit growth decelerated significantly compared to the same period of the last year the profit was higher by 22.1% or Denar 1,309 million compared to the first nine months of 2020. The higher profit mostly stems from the higher net interest income (by Denar 1,029 million or by 8.9%), and the growth of net income from commissions and fees (by Denar 467 million or by 11.4%) also had a certain impact, as and the reduction of the impairment expenses (primarily from the financial assets), which recorded a decrease of Denar 405 million, or 13.8%, compared to the same period of 2021. Against such trends, the operating expenses increased by Denar 782 million or by 8.7%, which had a negative contribution to the profit growth. Analyzed by bank, one medium-size and one small bank registered a negative financial result from the operation, while the rest of the banks worked with a profit.

Chart 624
Dynamics of the total profit recognized by banks (left) and annual growth (right)



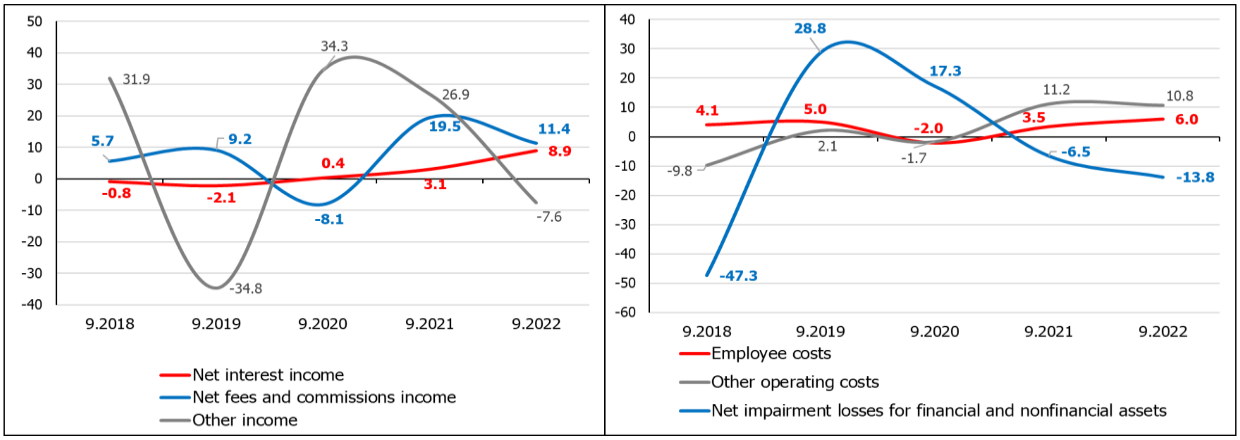
Source: National Bank, based on the data submitted by banks.

Chart 625
Contribution to the profit generation (left) and to the growth of profit (right) of banks



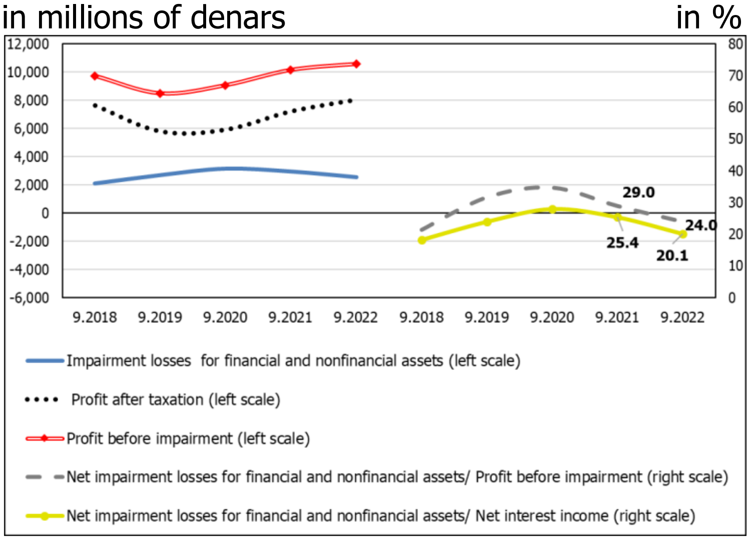
Source: National Bank, based on the data submitted by banks.

Chart 626
Annual growth rate of the main income (left) and expenditure items (right) of banksin millions of denars



Source: National Bank, based on the data submitted by banks.

Chart 64
Indicators on the share of the net impairment expenses in the profit and net interest income



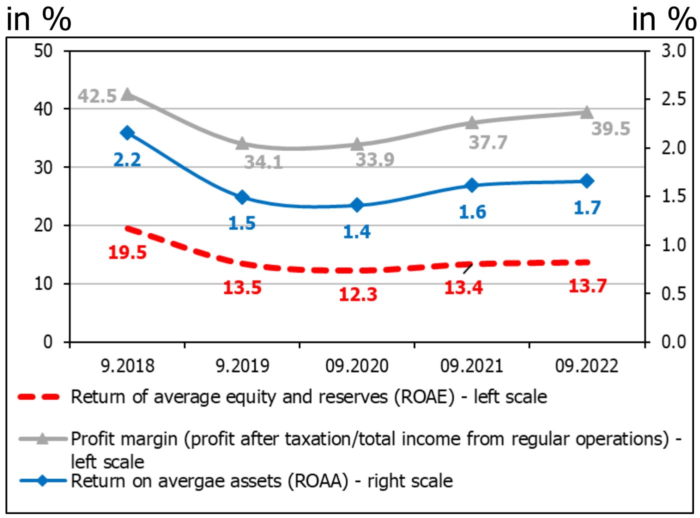
Source: National Bank, based on the data submitted by banks.

The profit growth in the first nine months of 2022 improved the main profitability[68] ratios of the banking system. Compared to the same period of the previous year, the profit margin increased by 1.8 pp, while the indicator of return on

[68] Profitability and efficiency ratios of the banking system and bank groups are presented in the Annexes to this Report.

average capital and reserves on average assets improved by 0.3 and 0.1 pp, respectively.[69]

Chart 627
Rates of return on average assets and on average equity and profit margin



Source: National Bank, based on the data submitted by banks.

In the first nine months of 2022, the downward trend of the net interest margine ceased, retaining the same level of the same period of the 2021. This is due to the approximately same growth dynamics of the net interest income (8.9%) and the average interest assets (8.8%).

Net interest income increased compared to the same period last year, primarily due to higher interest income (by Denar 866 million, or 6.2%), amid certain decrease in interest expenses (by Denar 163 million, or 6.9%). However, the financial intermediation with households contributed the most to the generating (58.5%) and the growth of the net interest income. (48.6%). Net interest income from households rose annually by Denar 499 million, or 7.3%. The absolute growth of interest income (Denar 258 million, or by 3.3%), as well as the reduction of interest expenses (by Denar 241 million, or 25.5%) had an almost equal impact on the growth of these revenues.

Net interest income from non-financial corporations, which accounts 39.0% of total net interest income, increased as well (by Denar 401 million, or 9.2%)[70],, but in this sector, the increase in the interest income is much larger (of Denar 343 million, or 7.4%),

[69] The profit in the first nine months of 2022 recorded almost twice higher relative growth (11.5%) than the growth of total regular income (6.4%). The relative profit growth is higher than the growth of average capital and reserves (9.1%), as well as the growth of average assets (8.5%).

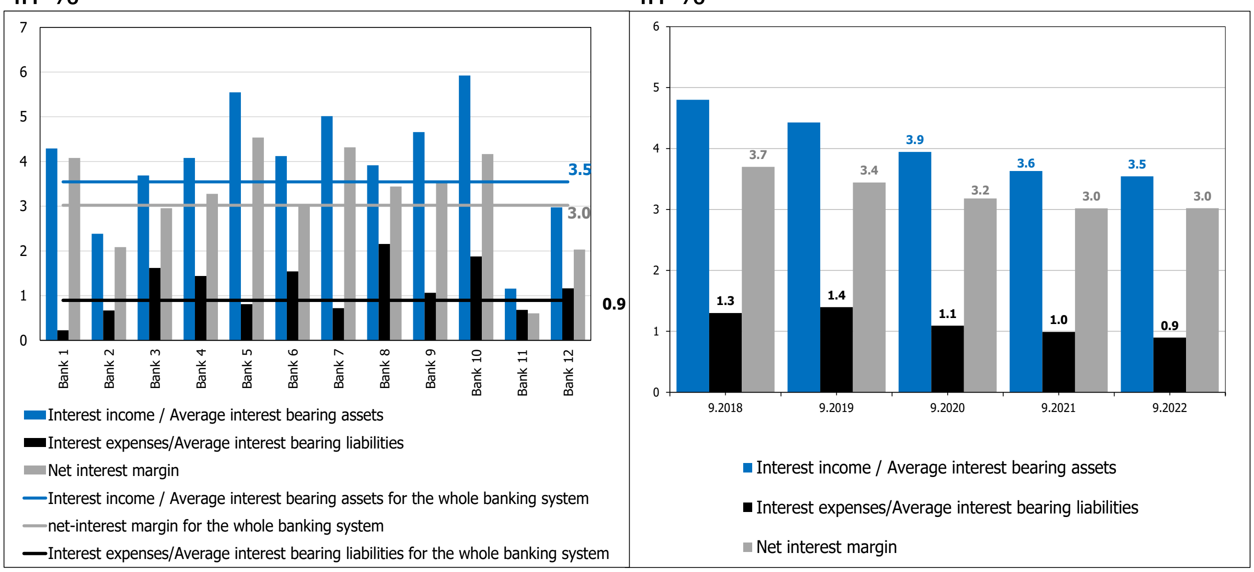
[70]In the same period of the previous year, net interest income from non-financial corporations decreased by Denar 84 million, or 1.9%.

compared to the decrease in interest expenses (of Denar 59 million, or 17.2%). The increased credit support for enterprises in the past period stopped the several-year decline in the net interest income from this sector and conditioned its growth this period of the year.

Net interest income from other sectors (government, financial institutions, non-profit institutions that serve households and non-residents) recorded growth (Denar 93 million, or by 83.4%), which mostly results from the increase in net interest income from the Government. Banks recorded net interest expense from the financial institutions and non-resident sectors, and the growth of net interest income from non-profit institutions serving households was relatively small.

Chart 286
Net interest margine as of 30.9.2022, by bank (left)* and at the level of the banking system (right)

in % | in %



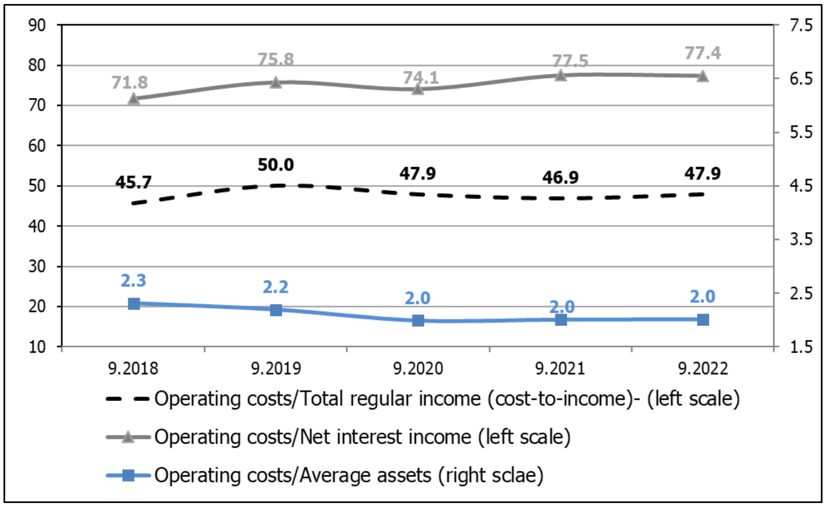
Source: National Bank, based on the data submitted by banks.
* Indicators of the banking system are shown in lines.

The indicators of banking system operating efficiency registered divergent movements. Operating costs to regular income ratio increased by 1 pp, which results from the faster relative growth of operating costs (8.7%)[71], compared to the growth in total regular income (6.4%)[72].. As opposed to the deterioration of this indicator, the ratio between operating expenses and net interest income, although minimal, still improved by 0.1 pp, due to the slightly faster growth of net interest income

[71] The increase in operating costs in the first nine months of 2022 is mostly due to higher general and administrative expenses and employee expenses, with some increase in depreciation expenses and deposit insurance premiums.
[72] In the total regular income structure, the largest growth was recorded in net interest income (by Denar 1,029 million, or by 8.9%), net income from commissions and fees (by Denar 467 million, or by 11.4%) and net income from exchange rate differencials (by Denar 483 million or by 60.2%). In contrast to this growth, revenues based on collected previously written-off claims in the first nine months of 2022 are lower compared to the same period of the previous year (by Denar 752 million or by 39.6%).

(8.9%) relative to operating expenses. The ratio between operating expenses and average assets remained unchanged (2%).

Chart 629
Operationa efficiency indicators
in %



Source: National Bank, based on the data submitted by banks.

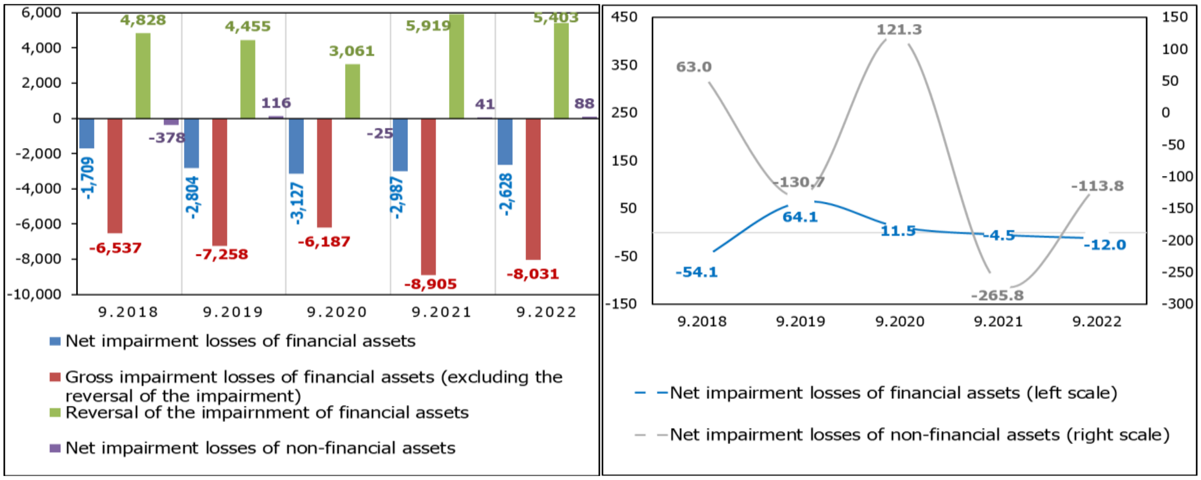
In the first nine months of 2022, the impairment costs on fina ncial and non-financial assets (net) fell by Denar 405 million or 138%. The reduction of these costs mainly results from the impairment costs on financial assets (which decreased by Denar 359 million, net). At the same time, the gross impairment costs on financial assets decreased by Denar 874 million or by 9.8%, while simultaneously reducing the release of impairment on financial assets by Denar 515 million or by 8.7%. The increase in gross impairment costs on financial assets is most evident in loans and other placements (decrease of Denar 507 million).

In the first three quarters of 2022, the net impairment costs on non-financial assets registered sliht decline in the amount of Denar 47 million, thus having a treatment of an income item. Such movements arize from the larger release of impairment on non-financial assets (by Denar 89 million), compared to the increase in the gross impairment cost on these assets (by Denar 42 million).

Chart 630

Impairment cost for financial and non-financial assets, stock (left) and annual flow (right)

in millions of denars in %



Source: National Bank, based on the data submitted by banks.

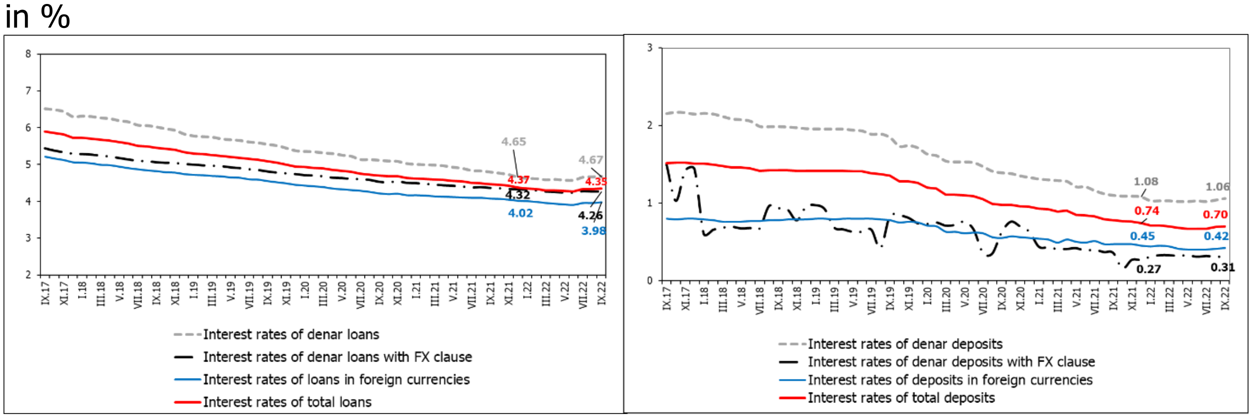
2.2. Movements in interest rates and interest rate spread

In the first nine months of 2022 the National Bank increased the interest rate on CB bills in several occasions by a total of 1.75 pp, to the level of 3%. In relation to total bank interest ratesa (lending and deposit), the downward trend of the interest rates in the third quarter of 2022 ceased, when they began to rise moderately. However, in September 2022 the interest rates are still lower than the ones in December 2021, while the interest rate spread widened minimally. Thus, in September 2022, the total interest rate on loans and total interest rate on deposits equaled 4.35% and 0.70%, respectively, which is a decrease compared to the end of the preceding year, when they equaled 4.37% and 0.74%, respectively.

Chart 631

Lending (left) and deposit (right) interest rates

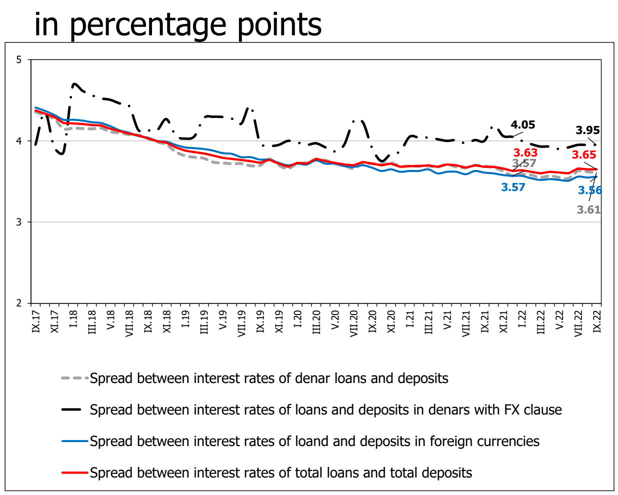
in %



Source: National Bank.

The slightly more pronounced decrease in the interest rate on deposits as opposed to the interest rate on loans contributed to small increase in the interest spread. The interest spread between the total interest rate on loans and the total interest rate on deposits in September was 3.65 pp, compared to 3.63 pp at the end of 2021.

Chart 70
Interest rate spread



Source: National Bank.

If we analyze the interest rates on the newly contracted activities of the banks (credit and deposit) in the first nine months of the year, there are evident changes towards an increase in the interest rates, which is most pronounced in the interest rates on newly received denar deposits. Such movements are in line with the measures taken by the National Bank in the previous period to encourage denar savings through changes in the reserve requirement instrument and the increase in the policy rate, which is transposed to the banks' interest policy by offering more favorable interest rates for denar deposit products. Thus, the interest rate on newly received denar deposits in September 2022 equals 1.45%, compared to 0.74%, as it was at the end of the previous year. The total interest rate on newly received deposits (denar and foreign currency) in September 2022 equals 1.07% and compared to the end of the previous year it has increased by 0.36 pp, with the total interest rate on newly approved loans (denar and foreign currency) also registering an upward trend, and in September equaled 4.09% (3.61% in December 2021).