**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 2024*

December 2024

## Contents

# I. Summary

**In the third quarter of 2024, banks operated in conditions of significant slowdown of domestic inflation and favorable foreign exchange market, yet amid existing exogenous risks related to the high geopolitical and economic uncertainty.** The National Bank began with prudential monetary policy normalization, thus in September 2024 the policy rate was cut by 0.25 percentage points, to 6.05%, with an additional decrease for the same amount in October. In terms of macroprudential policy, in the third quarter of 2024, the announced higher countercyclical capital buffer rate in the amount of 1% (as opposed to the previous level of 0.75%) became applicable, while at the end of September, the decision on extending the implementation of the countercyclical capital buffer of 1.75% in the fourth quarter of 2025 was made. In such conditions, the growth of the banking system's balance sheet accelerated, to 1.8% quarterly and 8.7% annually. At the same time, the risk exposure indicators of the banking sector remain stable, while the stress tests indicate a solid capacity to deal with assumed shocks. However, the risks from environment remain and there is a need for their further cautious monitoring and prudent policy conduct in order to preserve the banking sector stability in the following period.

**The growth of deposits of non-financial entities accelerated and maintained the credit growth, but also increased the banks' liquid assets.** Deposits of non-financial entities increased by 2.3% quarterly, accelerating the annual growth to 7.9% (6.8% as of 30.6.2024). Long-term savings continue to dominate the growth, as do denar deposits, driven by the National Bank's measures to support denarization and longer-term savings. The growth of loans to non-financial entities slowed down, reducing to 1.5%, while the annual growth accelerated and reached 7.5% (6.5%, as of 30.6.2024). The results of the Bank Lending Survey in the third quarter of 2024 point to further net easing of the overall credit conditions and net increase in the credit demand, in both sectors - companies and households. Most of the quarterly growth in deposits was used to enhance the liquid assets of banks, whose growth accelerated and reached 3.4% quarterly, i.e. 9.7% annually.

**The solvency of the banking system remained high and stable.** The capital adequacy ratio remained at 19.0%, which is the highest level in the last seventeen years. Around 10% of own funds remained free, over the required minimum and together with the capital buffers account for 37% of total own funds of the banking system which may be used to deal with challenges of different nature and intensity. In conditions of high profitability of banks, the banking system's solvency is expected to further improve, especially considering that the National Bank adopted decisions to increase the countercyclical capital buffer on several occasions, the implementation of which will start in the following period. The conducted stress testing shows that the banking system solvency is resilient to the simulated shocks.

**The liquidity of the banking system improved and is at satisfactory level.** In the third quarter of 2024, the growth of liquid assets significantly accelerated, and also improved the liquidity indicators. Thus, as of 30.9.2024, liquid assets accounted for 30.9% of total banks' assets (30.5% as of 31.6.2024), while the coverage of short-term liabilities and household deposits with liquid assets accounted for 54% and 61.3%, respectively (as of 30.6.2024, these indicators equaled 52.1% and 60.5%, respectively). The liquidity coverage ratio of the banking system increased to the level of 289.7%, which is almost three times higher than the regulatory minimum (100%), thus confirming the satisfactory volume of liquidity available to the Macedonian banking system. The liquidity-related stress test results indicate satisfactory resilience of the banking system to the assumed extreme, individual and combined liquidity outflows.

**The quality of loans to non-financial entities registered a slight improvement and the level of credit risk remains moderate.** Total non-performing loans to non-financial sector decreased in the third quarter, by 1.1%, following the growth in the first two quarters of 2024. The decrease was almost entirely noted in the corporate loan portfolio (decline of 6.1%), amid solid collection of these loans, while non-performing household loans increased (6.7%), but at a slower pace compared to the previous two quarters. The share of non-performing in the total loans to non-financial entities slightly improved to 3.0%. Within the corporate loan portfolio, the share of non-performing in total loans reduced to the new record low of 3.5%, while in households, this share slightly increased to 2.6%.

**The exposure of the banking system to currency risk is within acceptable range.** The open currency position of the banking system, as a measure of exposure to currency risk, widened in the third quarter of 2024, amid higher increase in assets compared to liabilities with currency component. However, on 30.9.2024, it took 7.6% of its own funds, which is far below the regulatory limit of 30%. On the other hand, the positive trend of decrease in the presence of the currency component (foreign currency and FX clause) in banks' balance sheets continued in this quarter and reduced to 40.2% in assets and 39.5% in liabilities.

**The exposure to interest rate risk in the banking book increased, yet it remains within the prescribed regulatory limit.** Thus, the weighted value of the banking book, as a measure of the exposure of the banking system to the interest rate risk, recorded an increase in the third quarter of 2024, and as a result, its share in own funds grew to 11.4%, yet remaining below the regulatory limit of 20%. The exposure to indirect interest risk, measured by the share of loans with adjustable or variable interest rate in total loans is still high (67.6%), although slightly decreased.

**In the first nine months of 2024, profitability of the banking system improved compared to the same period last year.** The profit grew by 23%, mostly due to the net interest income, which increased by almost 15%. Solid contribution to the profit growth was also made by other income, primarily capital gain from sales of foreclosed assets and collected previously written off claims, as well as net income from commissions, and reduced impairment costs (due to solid amount of collected claims). Only the higher operating costs (by 11.4%) made a negative contribution to the profit growth, yet their cost-to-income ratio further decreased, to 41.3% (compared to 42.4% for the first nine months of 2023). The rates of return on average assets and average equity and reserves reached 2.6% and 20.2%, respectively, which is a better performance compared to the same period last year, when they equaled 2.3% and 18.3%, respectively.

**The banking system remained stable in the third quarter of the year, kept the high solvency level and improved liquidity and quality of the total loan portfolio.** However, in conditions of high geopolitical and economic uncertainty, risks from environment remain. Therefore, there is a need for further monitoring and caution in risk management and policy conduct, while the National Bank, as before, will take all the necessary measures and use all instruments available, to maintain the stability of the exchange rate, the price levels and the banking sector.

# II. Structure of the banking system

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

**In the third quarter of 2024, the number of banks in the Republic of North Macedonia remained the same and equaled thirteen banks. Nine of them are banks in predominant foreign ownership, five of which are subsidiaries of foreign banks, four of which are from the EU.**

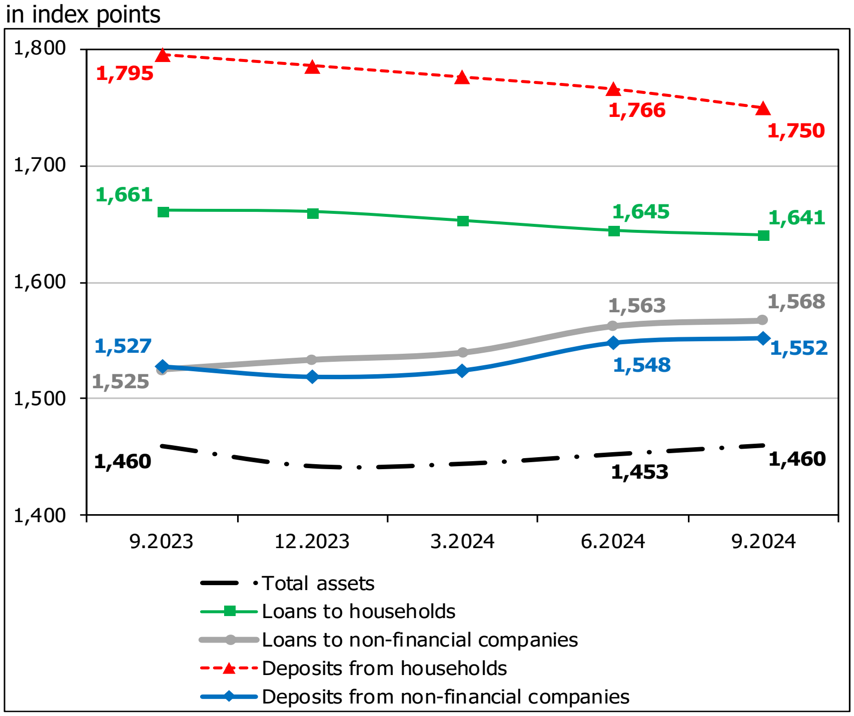
Table 1
Structure of major balance sheet positions by banks' majority ownership (as of 30.9.2024)
in millions of denars and in %

| 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** | **81,424** | **78.4%** | **557,127** | **72.8%** | **382,415** | **82.3%** | **396,985** | **71.3%** | **29,307** | **74.6%** | **11,917** | **69.8%** |
| *- subsidiaries of foreign banks* | *5* | *71,560* | *68.9%* | *468,727* | *61.3%* | *323,466* | *69.6%* | *336,050* | *60.3%* | *24,918* | *63.4%* | *10,464* | *61.3%* |
| - Austria | 1 | 12,390 | 11.9% | 97,081 | 12.7% | 69,377 | 14.9% | 60,988 | 10.9% | 3,862 | 9.8% | 1,630 | 9.5% |
| - Bulgaria | 1 | 1,362 | 1.3% | 12,423 | 1.6% | 7,589 | 1.6% | 9,741 | 1.7% | 474 | 1.2% | 50 | 0.3% |
| - Greece | 1 | 25,714 | 24.7% | 136,310 | 17.8% | 96,010 | 20.7% | 100,578 | 18.1% | 8,416 | 21.4% | 3,815 | 22.4% |
| - Slovenia | 1 | 15,195 | 14.6% | 120,068 | 15.7% | 80,727 | 17.4% | 93,233 | 16.7% | 6,669 | 17.0% | 3,530 | 20.7% |
| - Turkey | 1 | 16,899 | 16.3% | 102,844 | 13.4% | 69,762 | 15.0% | 71,510 | 12.8% | 5,496 | 14.0% | 1,439 | 8.4% |
| *- other banks in dominant foreign ownership* | *4* | *9,864* | *9.5%* | *88,400* | *11.6%* | *58,949* | *12.7%* | *60,936* | *10.9%* | *4,389* | *11.2%* | *1,454* | *8.5%* |
| - Bulgaria | 2 | 3,900 | 3.8% | 29,618 | 3.9% | 19,371 | 4.2% | 21,081 | 3.8% | 1,788 | 4.6% | 480 | 2.8% |
| - Germany | 1 | 5,012 | 4.8% | 49,187 | 6.4% | 33,950 | 7.3% | 32,791 | 5.9% | 2,062 | 5.2% | 768 | 4.5% |
| - Switzerland | 1 | 952 | 0.9% | 9,595 | 1.3% | 5,628 | 1.2% | 7,064 | 1.3% | 539 | 1.4% | 205 | 1.2% |
| **Banks in dominant ownership of domestic shareholders** | **4** | **22,473** | **21.6%** | **207,909** | **27.2%** | **82,445** | **17.7%** | **159,990** | **28.7%** | **9,994** | **25.4%** | **5,150** | **30.2%** |
| *- private ownership* | *3* | *18,841* | *18.1%* | *189,995* | *24.8%* | *82,261* | *17.7%* | *159,990* | *28.7%* | *9,751* | *24.8%* | *5,029* | *29.5%* |
| *- state ownership* | *1* | *3,632* | *3.5%* | *17,914* | *2.3%* | *184* | *0.0%* | *0* | *0.0%* | *243* | *0.6%* | *121* | *0.7%* |
| **Total:** | **13** | **103,897** | **100.0%** | **765,036** | **100.0%** | **464,860** | **100.0%** | **556,975** | **100.0%** | **39,300** | **100.0%** | **17,067** | **100.0%** |

Source: National Bank, based on the data submitted by banks.
*Total revenues and financial result are calculated for the last twelve months (30.9.2023-30.9.2024).

**Banks with dominant foreign ownership prevail in the structure of the major balance sheet positions of the banking system in the third quarter of 2024.** This share ranges from 69.8% (in the financial result) to 82.3% (in the credit activity with the non-financial sector). Thus, in this quarter, **banks with predominantly foreign ownership** strengthened their share in total assets, deposits of non-financial sector and capital and reserves, by 0.3, 0.6 and 1 percentage points, respectively, while their share in total income and financial result decreased by 0.4 and 2.5 percentage points, respectively.

Chart 1
Herfindahl index




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

**As of previous quarterly date, the values of the Herfindahl index[1] mainly registered slight changes on 30.9.2024,** amid growth in its total assets, loans and deposits of non-financial companies, and decline in loans and household deposits where its values are at record high. In all 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 the five banks with the largest share in these positions
in %

| Position | 30.09.2024 | | 30.06.2024 | |
|---|---|---|---|---|
| | **CR3** | **CR5** | **CR3** | **CR5** |
| Total assets | 55.6 | 81.7 | 55.5 | 81.3 |
| Loans to households | 61.1 | 84.2 | 61.4 | 84.2 |
| Loans to non-financial companies | 54.7 | 83.6 | 54.7 | 83.2 |
| Deposits from households | 67.0 | 85.5 | 67.4 | 85.5 |
| Deposits from non-financial companies | 57.0 | 82.2 | 56.3 | 82.1 |
| Financial result* | 72.1 | 90.1 | 70.9 | 90.8 |
| Total revenues* | 60.2 | 84.0 | 59.9 | 83.8 |

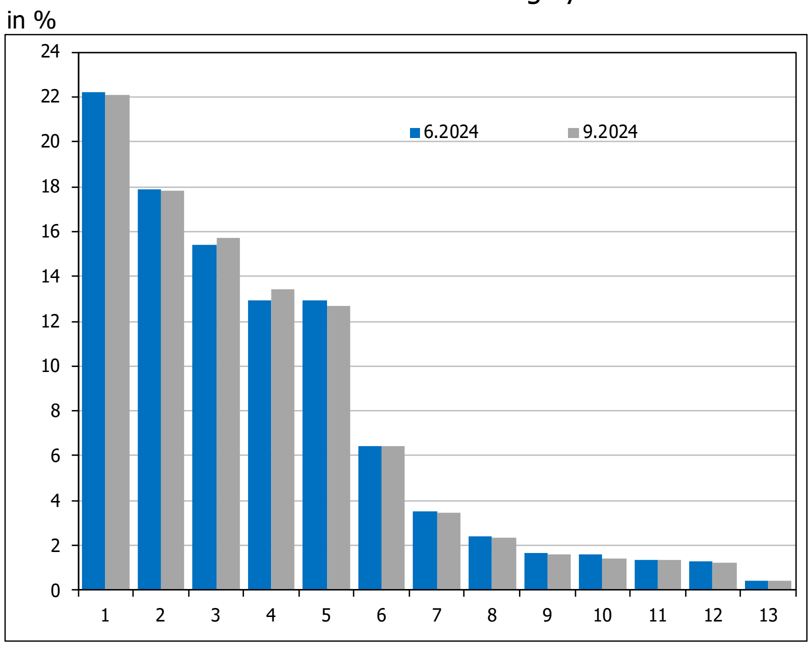
Source: National Bank, based on the data submitted by banks.
*Total revenues and financial result are calculated for the last twelve months (30.9.2023-30.9.2024).

---

[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.), where $n$ 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.

**Most of the important balance sheet positions of the banking system is concentrated in three, i.e. five banks in the system, where the market share (by assets) of the five largest banks cumulatively equals 81.7% which during the third quarter increased by 0.4 percentage points.** The financial result concentration registered the most significant change, where the share of the three most profitable banks increased by 1.2 percentage points, compared to the reduced share of the five most profitable banks by 0.7 percentage points. The increase in the share of the three banks with the largest share in deposits of non-financial corporations of 0.7 percentage points dominates other positions.

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




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

Analyzed by bank, the increase in assets of the third and the fourth bank is more pronounced, amid slight decline in the two banks with the biggest assets. The spread between the bank with the highest market share (22.1%) and the bank with the lowest market share (0.4%) slightly narrowed (by 0.1 percentage point) compared to the previous quarterly date, while the five smallest banks, with an individual market share below 2%, cumulatively account for only 6% of the banking system’s assets.

# II. Bank risks

## 1. Credit risk

**During the third quarter of 2024, after the increase in the first two quarters, non-performing loans to non-financial entities[3], decreased (by 1.1%). The decrease was entirely due to the corporate loans (decline of 6.1%), amid slower quarterly growth of non-performing loans to households. Within the corporate loan portfolio, the decline was mostly due to "construction and real estate activities" and "industry", while analyzed by client, slightly over half of the quarterly decline in non-performing loans was due to collection from one client. In the household sector, consumer loans, which grew twice as slow, were the main growth generator of the non-performing loans in this quarter. The non-performing loans rate in the corporate portfolio reduced to the new record low (3.5%), while in households it increased by 0.1 percentage point (to 2.6%). As a result, the non-performing loans rate for the total non-financial sector slightly decreased (to 3%). The solvency and stability risks to the banking system of default of the entire amount of non-performing loans are limited, due to their relatively high coverage with impairment for expected credit losses, while the share of the non-provisioned part of the non-performing loans further decreased this quarter to the level of 4.9% of own funds. The average risk level in both regular and total loans reduced by 0.1 percentage points each, to 2.1% and 4%, respectively.**

**During the third quarter of 2024, the prolonged and restructured loans registered divergent movement, but still do not represent a source of risk for further deterioration in the credit portfolio quality, due to their small shares in total loans (of 3.9% and 1.6%, respectively). The results of the credit risk stress-test simulations, confirm the banking sector resilience to extreme deterioration of the credit portfolio risk. However, the uncertainties arising from the possible escalation of geopolitical shocks, while the monetary policy is still tightened, point to the need for further caution on the part of banks in monitoring and managing credit risk, as well as of the National Bank, which will take all the available measures if necessary to preserve financial stability and limit credit risks.**

### 1.1 Materialization of credit risk in banks' balance sheets

**The effects of the regulatory changes and the pronounced growth of non-performing loans in early 2024 are gradually exhausted, thus in the third quarter of the year, total non-performing loans to non-financial sector decreased by Denar 150 million, or 1.1%.** Due to such changes in non-performing loans, amid twice as slow growth of total loans on a quarterly basis (from 3% to 1.5%), the total rate of non-performing loans dropped by 0.1 percentage point, to 3%. The decrease in non-performing loans entirely resulted from the corporate sector, while the household portfolio registered a slower, yet quarterly growth of 6.7%, which was annually more pronounced[4].

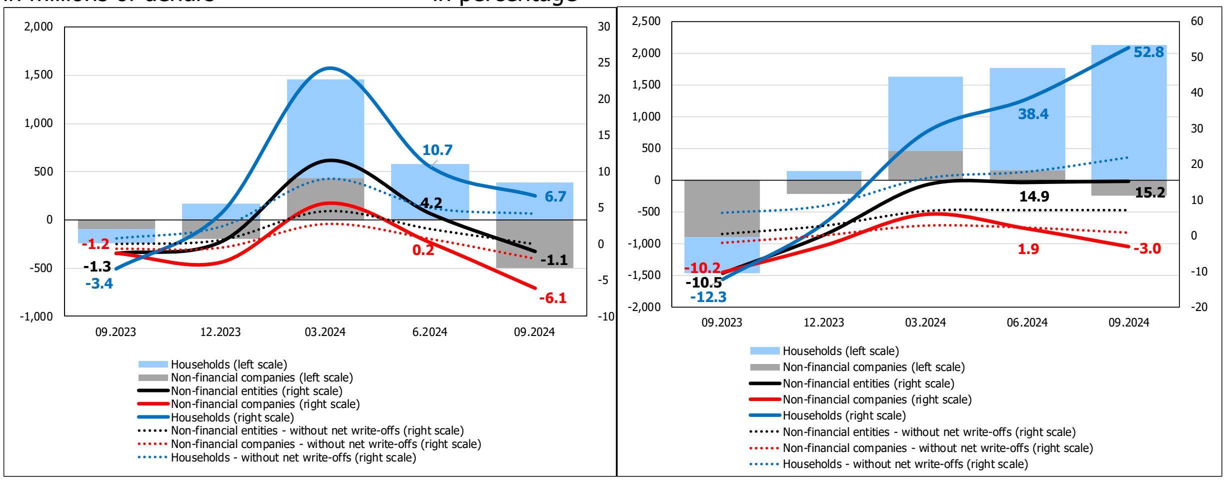
[3] On 1 January 2024, the new Decision on the methodology for credit risk management became effective, which introduces methodological changes that will affect the amount of non-performing loans and on part of the indicators for exposure to credit risk, compared to the previous situation. The Decision is available at the following link: https://www.nbrm.mk/content/Regulativa/Odluka_metodologija_%20za_krediten_rizik_nova.pdf

[4] Due to the low initial, base effect, the annual growth rates of non-performing household loans registered double-digit values in the last three quarters.

Chart 3

Quarterly (left) and annual (right) growth of non-performing loans by sector

in millions of denars in percentage




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

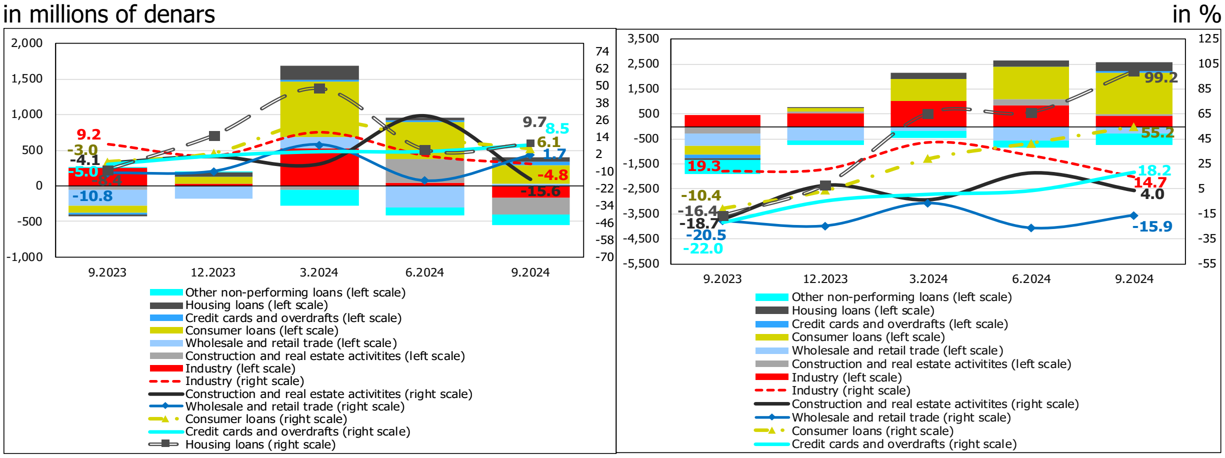
Note: The lines with dots show the increase in the non-performing loans by excluding the effect of all mandatory write-offs.

**The decline in the non-performing corporate loan portfolio[5] amounted to Denar 499 million, or 6.1%.** Thus, around 50% of the quarterly decline in non-performing corporate loans were due to the collection from one client. In terms of activity, a significant decrease in non-performing loans in the third quarter of the year was registered in "construction and real estate activities" (Denar 237 million, or 15.6%) and "industry" (Denar 169 million, or 4.8%). As of this quarter, the amount of collected previously written-off non-performing loans was solid (Denar 178 million)[6], exceeding the amount of written-off claims from this sector.

Chart 4

Quarterly (left) and annual (right) growth rate of non-performing loans, by activity (non-financial companies) and by credit product (households)

in millions of denars in %




Source: Credit Registry of the National Bank.

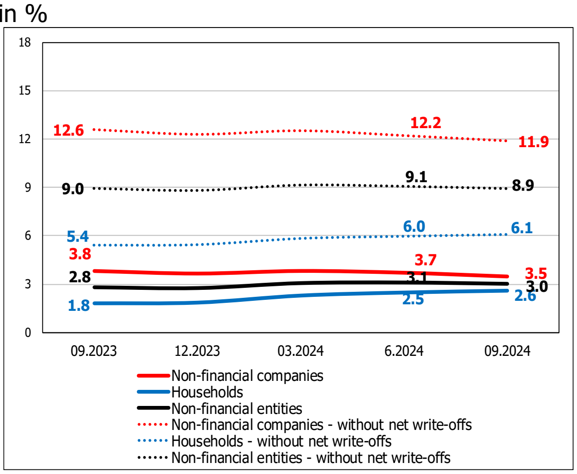
---

[5]The share of non-performing corporate loans in total non-performing portfolio further decreased (by 2.9 percentage points) reaching 55% at the end the third quarter of 2024.

[6] By excluding the effect of mandatory net write-offs, the decline of non-performing corporate loans is lower and amounts to 2%.

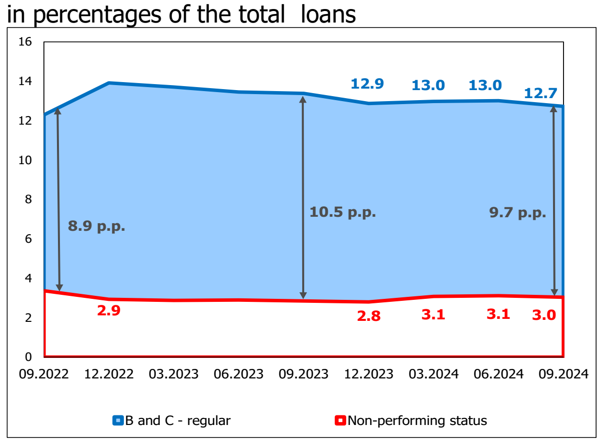
**Non-performing household loans, which started to increase in the beginning of the year, further increased in the third quarter of 2024, yet at a slower pace (6.7%[7] or Denar 387 million).** According to the purpose of loans, consumer loans were the main generators of the increase in non-performing household loans, since the beginning of the year. Thus, in this quarter, 70.3% of the growth of non-performing household loans were due to consumer loans, but they grew twice as slow (increase of 6.1% or Denar 268 million) compared to the previous quarter when a double-digit growth of 13.4% or Denar 520 million was registered. In contrast, accelerated growth was registered in non-performing housing loans, which increased by Denar 62 million or 9.7% in this quarter. Growth was also recorded in non-performing loans in terms of allowed overdrafts on payment accounts and loans based on credit cards (of 8.5%).

Chart 5
Rate of non-performing loans of non-financial corporations, by sector
in %




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

Chart 6
Gap between regular loans in "B and "C risk categories" and non-performing loans*, by their share in total loans
in percentages of the total loans

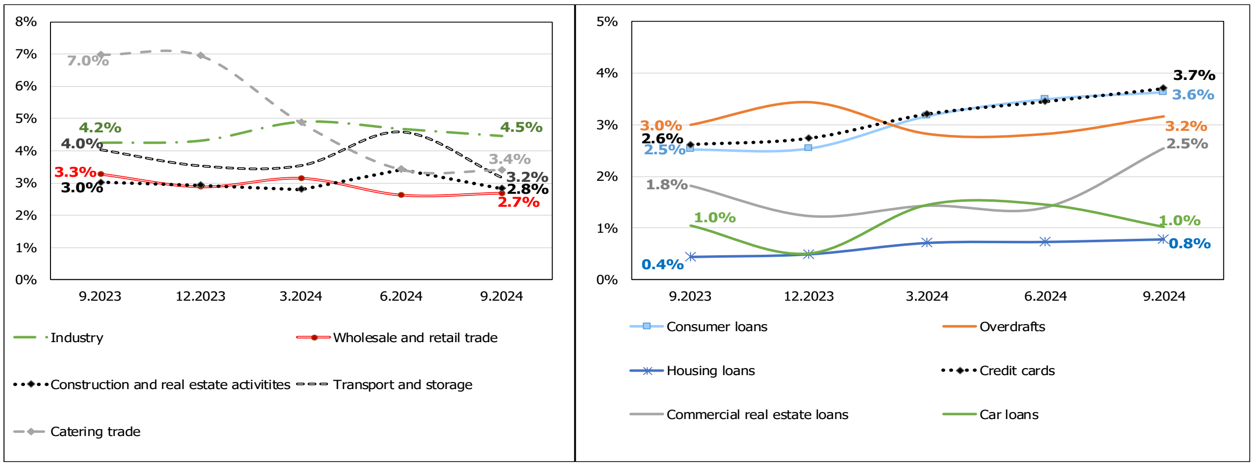



Source: Credit Registry of the National Bank.
*Regular loans classified in B and C risk categories and non-performing loans, are approximation of the so-called group 2 and 3 loans according to IFRS 9, respectively.

**The share of non-performing loans to total loans of non-financial companies also decreased by 0.2 percentage points and reduced to 3.5%, which is the record low ever registered[8].** This rate improved in most of the non-financial corporations' prevailing activities of higher importance, while the most pronounced improvement (of 2.6 percentage points) in "chemical industry", followed by "transport and storage, with a decrease of 1.4 percentage points and "construction" (improvement of 0.8 percentage points, amid significant decline in non-performing loans of 19.4%).

[7]The amount of mandatory write-offs in the third quarter equaled Denar 221 million. If we exclude the effect of these net write-offs, the non-performing household loans increase by 4.2%.
[8]If we exclude the effect of the mandatory net write-offs, the share of non-performing to total corporate loans reduced to 11.9%, which is the ten-year minimum of this indicator.

Chart 7
Rate of non-performing loans, by activity and credit product
in %




Source: Credit Registry of the National Bank.

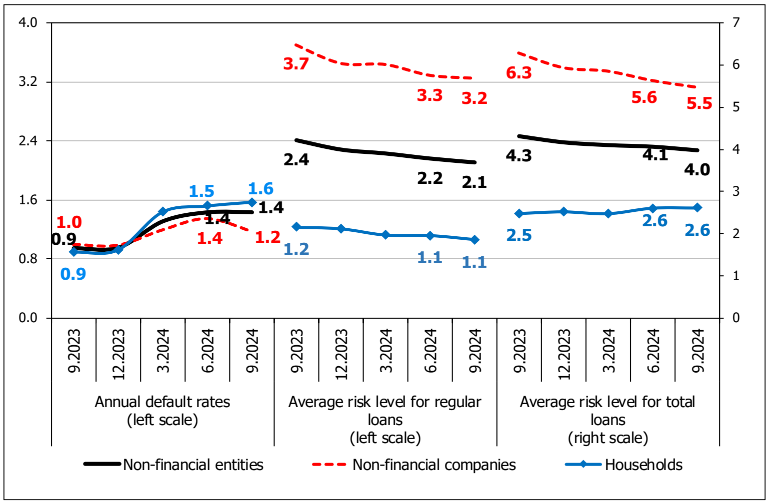
**In the household loan portfolio, the rate of non-performing loans grew by 0.1 percentage points in this quarter, reaching a level of 2.6%[9].** This rate registered the largest increase, of 1.1 percentage point, in loans for purchase and renovation of business property (which represent a small part of the household portfolio and account for only 0.4%), amid insignificant worsening in consumer and housing loans (by 0.1 percentage points) to the levels of 3.6% and 0.8%, respectively. At the same time, equal increase of 0.3 percentage points was evident in overdrafts and credit cards. The lowest non-performing loans rate was registered in housing loans, although twice as higher compared to the same period last year when the new methodology for determining the non-performing status has not been applicable yet, the effects of which were more evident in household portfolio.

**The annual transition rate from performing to non-performing credit exposure of the non-financial sector was unchanged in the third quarter of 2024, amid divergent movements by sector[10].** The average provisioning (average risk level) of performing and total loans to non-financial sector reduced quarterly. The decrease in the average provisioning of regular and total corporate loans occurs in conditions of reduced transition rate from performing to non-performing credit exposure. The allocated percentage of impairment exceeds the realized transition rate in corporations, which is an indicator of banks' perceptions of higher risks of the corporate loans than to households. At the end of the third quarter of 2024, the expected loan losses for regular loans to non-financial corporations equaled 3.2%, which is almost three times higher compared to households (1.1%), although the annual migration rates in both sector are similar, even slightly higher in households (1.2% in the corporate sector, while 1.6% in household). However, the uncertainties from the surrounding still remain, thus banks need to monitor the quality of credit portfolio closely, as well as to appropriately and timely allocate provisions to cover expected credit losses.

---

[9]If we exclude the effect of the mandatory net write-offs, the rate of non-performing household loans slightly increased compared to the previous quarter at 6.1%, which is moderately above its 10-year moving average (5.3%).
[10]The migration rates from performing to non-performing loans are usually low in both sectors, more pronounced in households. The difference that occurs from the beginning of 2024, i.e. the higher migration rates in households, is due to the regulatory changes of the rules for acquiring non-performing status, which mostly affect the household portfolio.

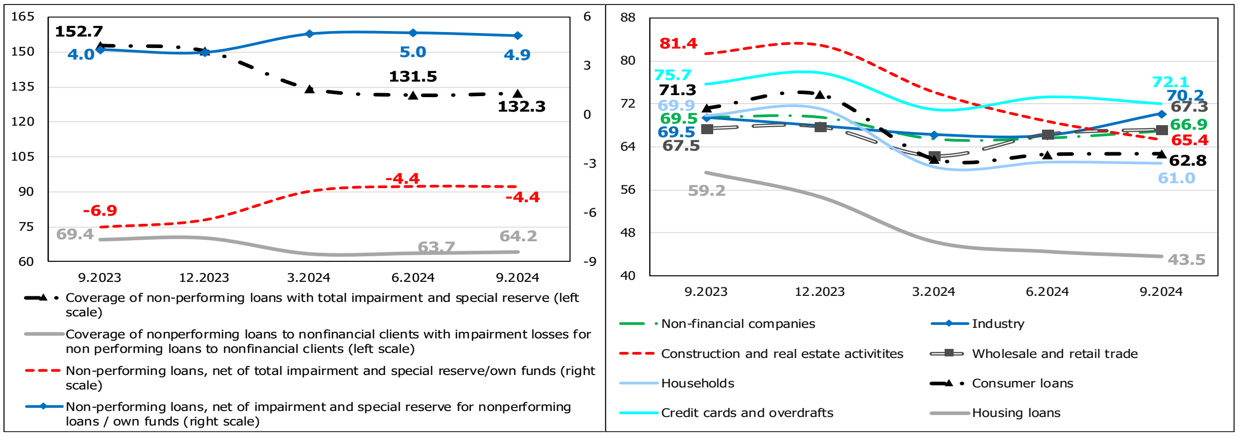
Chart 8
Annual migration rates of regular to non-performing credit exposure and average risk level of performing and total loans, by sector
in %




Source: Credit Registry of the National Bank.

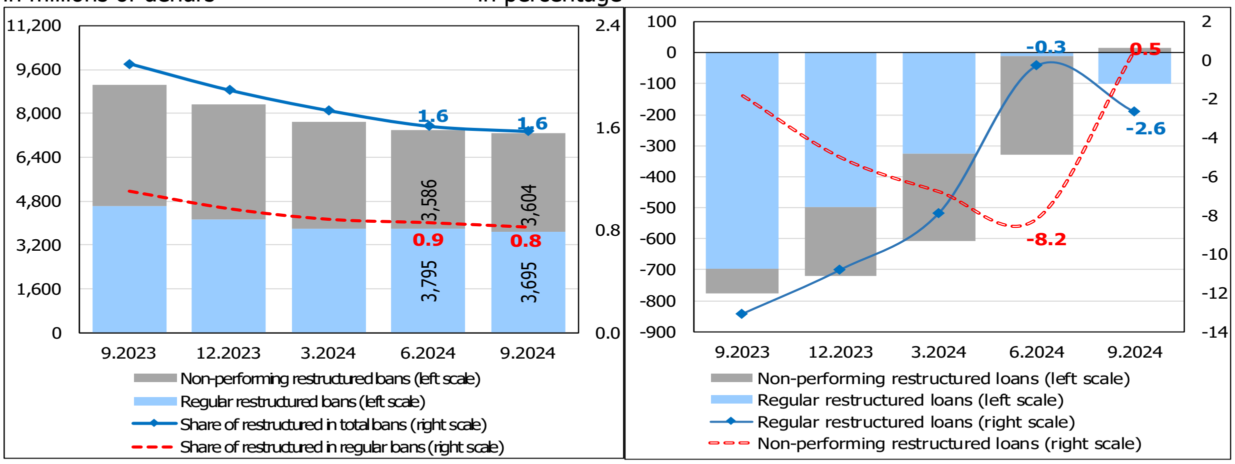
**The possible complete default on non-performing loans, i.e. the volume of unexpected credit losses on this basis would have a limited effect on the solvency of the domestic banking system, due to the high coverage of non-performing loans with impairment.** At the end of the third quarter of 2024, the coverage of the non-performing loans with allocated impairment for these loans equaled 64.2%, which is by half percentage point higher compared to the second quarter of 2024. The non-provisioned amount of non-performing loans additionally reduced to a level of 4.9% of banking system's own funds. Thus, even amid extreme assumption of complete default 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)
in %




Source: Credit Registry of the National Bank.

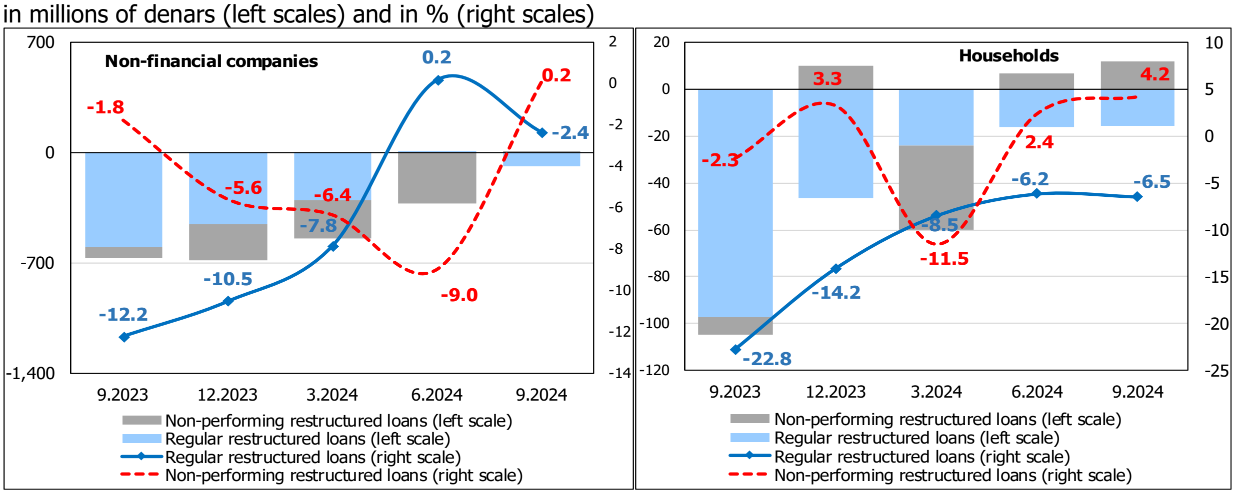
Chart 10 Restructured loans of non-financial entities (left) and their quarterly growth (right)
in millions of denars in percentage




Source: Credit Registry of the National Bank.

**Restructured loans** could be possible growth driver of non-performing loans if the restructuring does not achieve the expected goals of adjusting the credit burden to the financial condition of the client, which requires their cautious monitoring. **In the Macedonian banking system, the decreasing trend of restructuring loans which started almost three years ago, continued in the third quarter of 2024.** The share of these loans in total loans remained at the level of 1.6%. Banks find performing restructured loans at higher risk, thus allocate higher expected credit losses for these loans. Thus, their coverage with impairment as of 30.9.2024 equaled 20%, which is significantly higher compared to the coverage with impairment of total regular loans of 2.1%. In contrast, the coverage of non-performing restructured loans with separate provisions (of 63%) is similar to the coverage of total non-performing loans (of 64.2%).

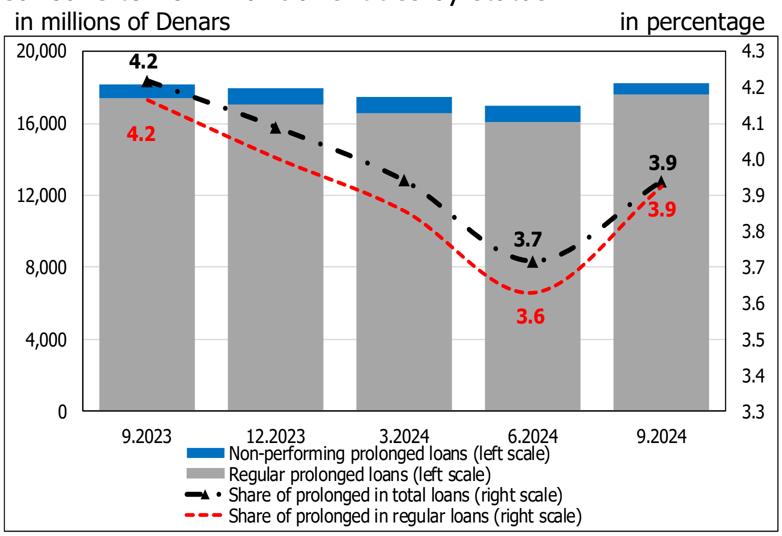
Chart 11 Annual change of restructured loans, by individual sectors
in millions of denars (left scales) and in % (right scales)




Source: Credit Registry of the National Bank.

Analyzing sectors, downward trend was registered in restructured corporate loans[11] (decline of 2.4% or Denar 84 million) and households (decrease of 6.5% or Denar 16 million). Thus, non-financial corporations have the largest share in the structure of the restructured credit portfolio with 92.8%[12].

Chart 12 Prolonged loans to non-financial entities by status




Source: Credit Registry of the National Bank.

**In the third quarter of 2024, prolonged loans significantly grew** (by 7.5% or Denar 1,270 million), **as opposed to the movements in the previous three quarters.** Their structure is still dominated by regular prolonged loans, whose share grew by 2 percentage points (to the level of 96.6%), which entirely determined the quarterly growth in total prolonged loans, while by sector, the most common loans that are prolonged are those extended to non-financial corporations (share of 90.7%). The maturity extension dominates in "construction and real estate activities" and "wholesale and retail trade". The share of prolonged loans in the banks' total credit portfolio slightly grew, and is still low (3.9% as of the end of the third quarter of 2024). Moreover, the share of prolonged loans is higher in the portfolio to non-financial corporations, where the share of prolonged loans is 7.4%, compared to the "household" sector, where the share of these loans is low (0.7%). The risk of prolonged loans is similar to the total credit portfolio to corporations and households.

**Banks are cautious in applying macro-prudential measures for the credit demand quality (of borrowers).** The DSTI and LTV indicators on newly granted credit exposures to natural persons were below the regulatory prescribed levels and decreased during the third quarter of 2024, to 34.1% and 62.6%, respectively.

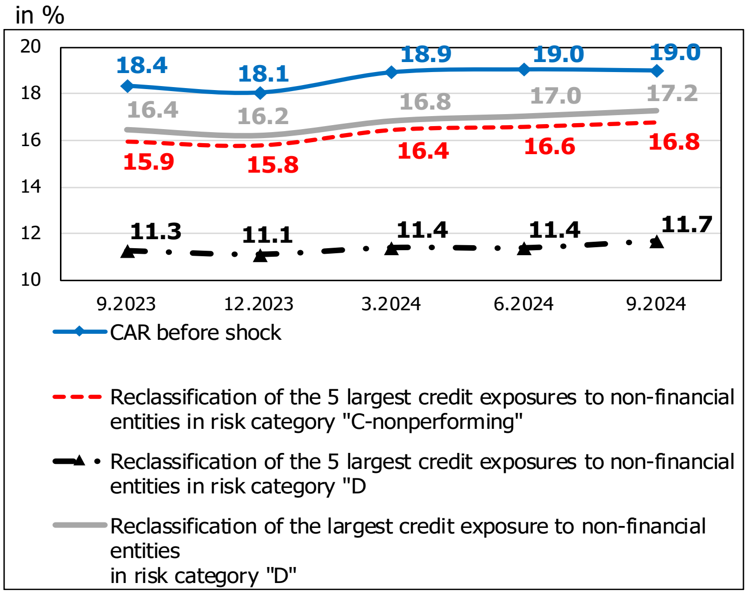
[11]The decrease in regular restructuring corporate loans mostly results from the reduced credit exposure to "wholesale and retail trade".

[12]As of 30.9.2024, the share of restructured loans in credit portfolios of non-financial legal entities and households was 3% and 0.2%, respectively.

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

**The results of the increased credit risk simulation confirm the banking system resilience.** Amid individual hypothetical scenarios, **the capital adequacy ratio of the banking system does not fall below 8%.** In case of a more extreme simulation for increased credit risk i.e. 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 percentage points compared to the initial level, i.e. from 19.0% to 14%, which is a slightly better result compared to the previous quarter.

Chart 13 Effects on the capital adequacy ratio from reclassification of the largest credit exposures to non-financial entities (including the connected parties) in a higher risk category




Source: Credit Registry of the National Bank and National Bank calculations

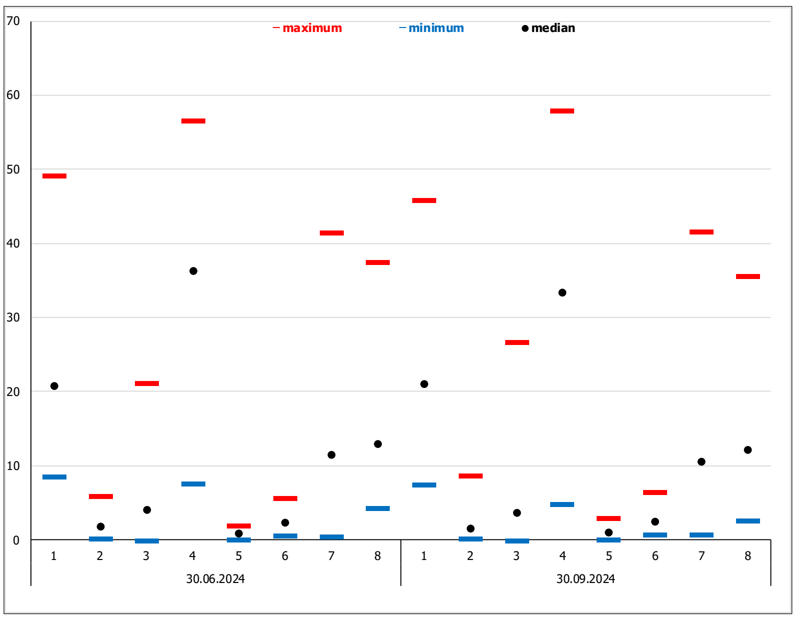
Simulated materialization of concentration risk in the credit portfolio, amid assumption for migration of the five largest clients from non-financial sector of each bank, from the risk category (mostly A), to risk category B- non-performing, reduces the capital adequacy ratio of the banking system from the initial 19.0% to 16.8%. This is a slightly better result compared to the previous quarter, when, in the same simulation, the capital adequacy dropped by 2.5 percentage points. As of 30.9.2024, the capital adequacy ratio does not fall below 8% in any bank, while the decrease would range from 0.5 to 4.2 percentage points.

The banking system resilience is also examined by **extreme simulation based on a combination of eight[13]simulations of hypothetical worsening of the quality of the**

[13]The eight hypothetical shocks of risk exposure to non-financial entities for each bank are as follows: 1. the complete default of the current non-performing credit exposure; 2. part of the regular loans with a delay above 31 days receive non-performing status; 3. total regular restructured exposure currently without a delay in the repayment of liabilities receives a non-performing status; 4. new restructuring of regular credit exposure; 5. Part of the loans with granted grace period acquire non-performing status; 6. Part of the prolonged exposure receives a non-performing status; 7. Part of the regular, non-restructure and non-prolonged credit exposure without current delay in the repayment, receives non-performing status; and 8. Part of the regular loans with a delay in the repayment of liabilities up to 31 days increase the period of delay longer than 31 days. The coverage with impairment after each of the eight shocks is the same as before the shock.

**credit portfolio to the non-financial sector.** 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 5 percentage points, to 13.8% [14](5.2 percentage points as of 30.6.2024). The shocks would absorb 26.5% of the initial capital adequacy ratio, which is below the level of the previous quarter by 1.1 percentage points. (27.5%). The greatest effect on the capital adequacy ratio is that of the assumed new restructuring of the credit risk exposure that banks would carry out on the regular exposure without a current delay in repayment of liabilities (contribution of 38.8% in the decrease of capital adequacy), followed by complete default in current non-performing exposure (contribution of 19.2%) and worsened quality of the credit exposure with an agreed bullet payment falling due next year (contribution of 17.3%).

Chart 14 Distribution of the new expected credit losses, by shock
in %



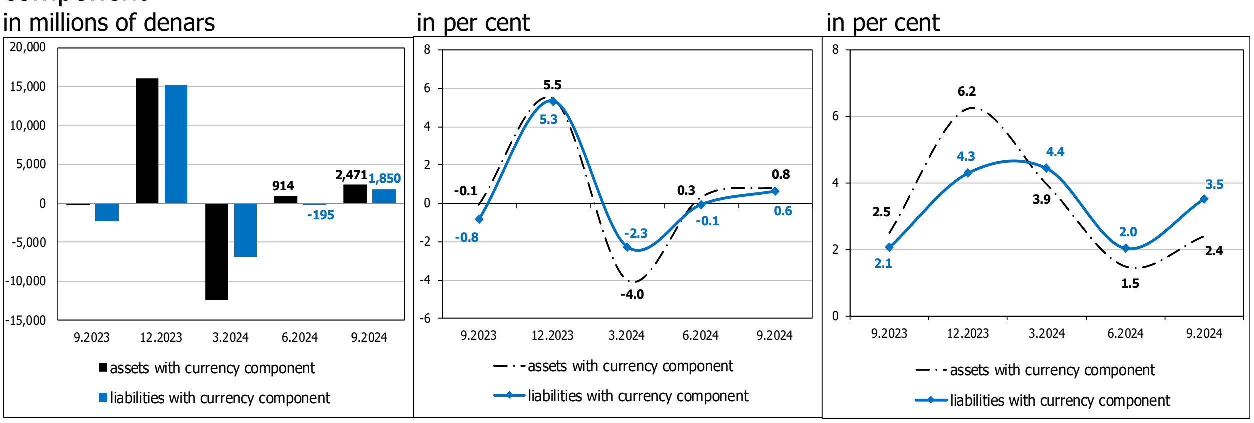

Source: NBRM calculations, based on data submitted by banks.

[14]The initial capital adequacy ratio of the banking system is without DBNM AD Skopje, which is excluded from this simulation

## 2. Currency risk

**The direct exposure of the banking system to currency risk in the third quarter of 2024 is not high. The share of the open currency position in own funds slightly increased to 7.6%, yet remained significantly below the prescribed regulatory limit of 30%. Also, the indirect exposure of the banking system to currency risk further decreased, mainly due to the reduced share of corporate loans with currency component. In conditions when euro loans dominate the structure of loans with currency component, the implementation of the exchange rate targeting strategy has a key role in mitigating the indirect currency risk materialization.**

Chart 15
Quarterly (left and middle) and annual (right) growth of assets and liabilities with currency component*



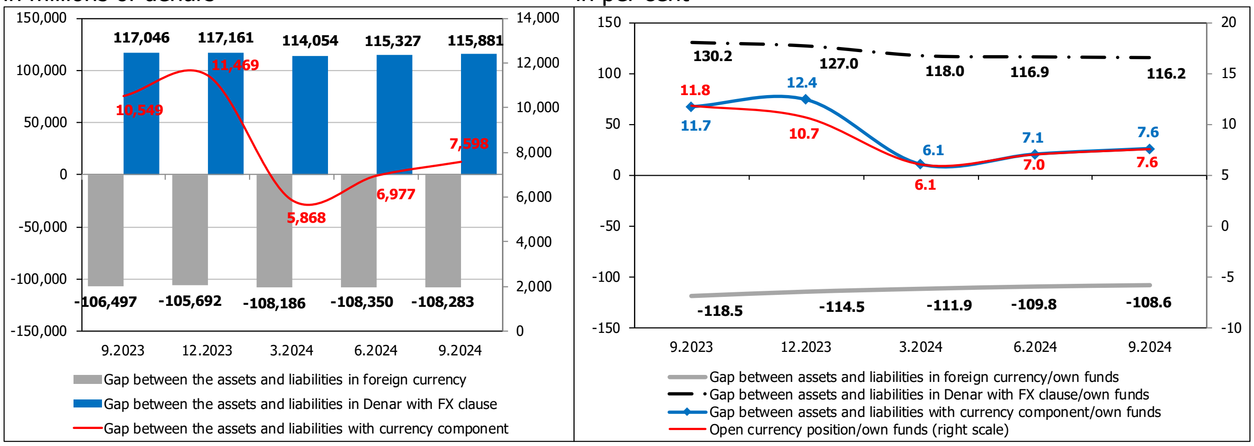

Source: National Bank, i.e. the report on open currency position based on data submitted by banks.
* The assets are on a net basis, reduced by the impairment of claims that are classified in risk categories "C", "D" and "E", in accordance with the regulations on currency risk management. DBNM is not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

**The gap between the assets and liabilities with currency component in the third quarter of 2024 amounted to Denar 7,598 million, which is an increase of 8.9% compared to the previous quarter.** The extended positive gap occurred due to the more pronounced increase in assets (by Denar 2,471 million or by 0.8%)[15] compared to the increase in liabilities (by Denar 1,850 million or by 0.6%)[16]. The positive gap between assets and liabilities with currency clause expended, while the negative gap between foreign currency positions narrowed. The open currency position[17] accounts for 7.6% of own funds at the end of the third quarter and is higher by 0.6 percentage points compared to the previous quarter, but remains significantly below the regulatory limit of 30%. On an annual basis, this ratio significantly decreased (by 3.1 percentage point).

---

[15] The increase in assets with currency component is mainly due to the growth in foreign currency deposits at foreign banks by Denar 2,006 million, as well as the higher financial assets held to maturity by Denar 1,263 million and available for sale by Denar 1,119 million. On the other hand, the increase was mitigated due to the reduced foreign currency loans by Denar 2,287 million and the decline in foreign currency assets by Denar 1,201 million (of which, the funds allocated to the foreign exchange account in MIPS decreased by Denar 1,122 million).
[16] The increase in liabilities with currency component was driven by the growth of foreign currency deposits of natural persons by Denar 2,687 million and current accounts and other short-term liabilities by Denar 949 million, while the growth was mitigated by the reduced foreign currency deposits of non-residents by Denar 2,133 million.
[17] 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.

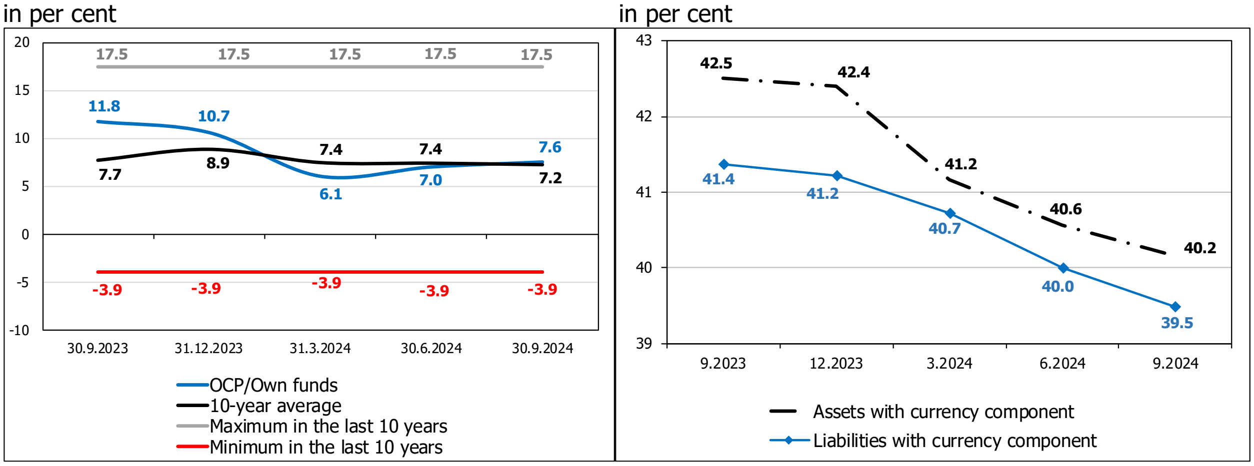
Chart 16
Structure of the gap between assets and liabilities with currency component (left) and share of the assets and liabilities with currency component in own funds (right)
in millions of denars in per cent




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

**The increase in assets and liabilities with currency component is still weaker than the increase in total assets and liabilities, thus the period of reduced euroization of banks' balance sheets continued.** In the third quarter of 2024, the share of assets and liabilities with currency component in total assets reduced by 0.4 and 0.5 percentage points, respectively.

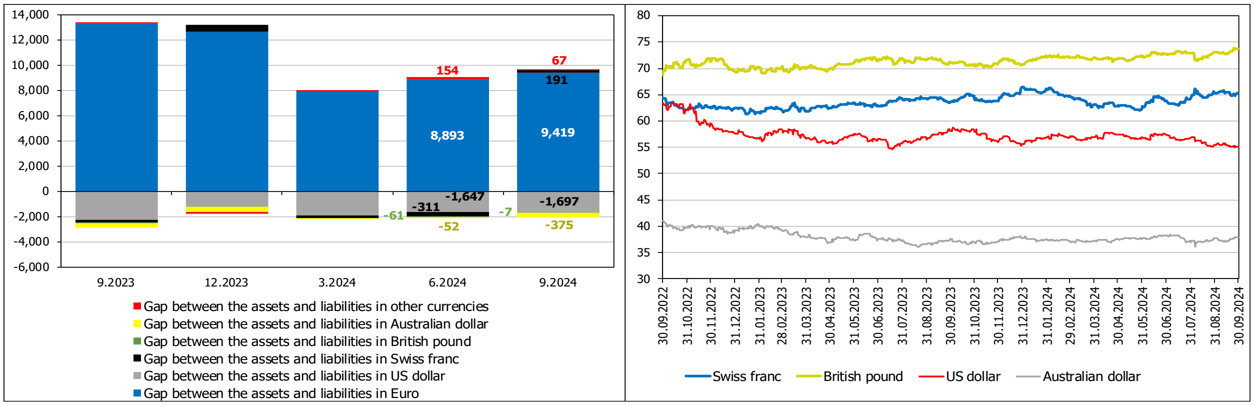
Chart 17
OCP/own funds ratio (left) and share of the assets and liabilities with currency component* in the total banks' assets (right)
in per cent in per cent




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 denars | in denars




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

**Analyzed by currency, the increase in the positive gap in the third quarter of 2024 was due to the expanded long position in assets with euro component, as well as to the changed position from short into long in assets with currency component in Swiss francs.** The positive gap between assets and liabilities with euro component grew quarterly by Denar 526 million or by 5.9% due to the higher increase in assets than liabilities in this currency[18]. The negative gap between assets and liabilities with US dollar component widened compared to the previous quarter (by Denar 50 million or by 3.0%) in conditions of higher growth of liabilities than assets in this currency[19]. The aggregate currency position of banks with other currencies remained short[20], but its contribution to the total gap was very small due to the low share of these currencies in the currency structure of assets and liabilities.

**Loans with currency component to non-financial entities in the third quarter of 2024 reduced their share in total loans, which indicates to a lower indirect exposure of the banking system to currency risk.** As of 30.9.2024, the share of loans with currency component dropped by 0.9 percentage points on a quarterly basis and equaled 39.5%. The decrease was entirely due to the lower share of corporate loans, while the share of household loans was unchanged. It should also be taken into account that 99.9% of loans with currency component are in denar or euro with euro clause, thus the implementation of the fixed exchange

[18] Assets with euro component increased by Denar 2,041 million or by 0.8% due to the increased euro deposits in foreign banks by Denar 2,833 million, financial assets in euro kept to maturity by Denar 776 million and denar loans with euro clause by Denar 764 million, while the growth was mitigated by the decrease in euro loans by Denar 2,236 million. The liabilities with euro component grew by Denar 1,516 million or by 0.6%, mainly due to the increased euro deposits of natural persons by Denar 2,919 million, with a significant decrease in euro deposits of non-residents by Denar 1,930 million.
[19] Assets with US dollar component increased by Denar 376 million or by 1.9%, while the growth was mainly due to increased US dollar financial assets available for sale by Denar 901 million and US dollar financial assets held to maturity by Denar 488 million, while significant decline occurred in cash, cash equivalents, gold and precious metals by Denar 798 million. Liabilities with US dollar component grew by Denar 426 million or by 2.0%, mainly due to the increased current account position and other US dollar short-term liabilities by Denar 686 million, while the growth was mitigated by the decreased US dollar deposits by Denar 383 million.
[20] The foreign currency position with the Swiss franc changed from short to long and equaled Denar 191 million, the negative gap with the British pound significantly narrowed to Denar 7 million, while the negative gap with the Australian dollar registered a multiple widening amounting to Denar 375 million. The aggregate currency position in other unspecified currencies is long and amounts to Denar 67 million and is narrowed compared to the previous quarter.

rate policy is very important to mitigate the effect of the possible indirect currency risk materialization.

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

| Currency | 30.6.2024 | | 30.9.2024 | |
|---|---|---|---|---|
| | Assets | Liabilities | Assets | Liabilities |
| **Euro** | 90.4 | 89.5 | 90.3 | 89.4 |
| **US dollar** | 6.6 | 7.3 | 6.6 | 7.4 |
| **Swiss franc** | 1.3 | 1.4 | 1.5 | 1.5 |
| **Australian dollar** | 0.5 | 0.6 | 0.4 | 0.5 |
| **British pound** | 0.5 | 0.5 | 0.5 | 0.5 |
| **Other** | 0.8 | 0.7 | 0.7 | 0.7 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** |

Source: National Bank, based on the data submitted by 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 | | British pound | | Australian dollar | | Other | | |
| | Long | Short | Long | Short | Long | Short | Long | Short | Long | Short | Long | Short | |
| **under 5%** | 3 | 2 | 7 | 5 | 9 | 2 | 9 | 2 | 5 | 3 | 11 | 1 | 5 |
| **from 5% to 10%** | 2 | | | | | | | | | | | | 2 |
| **from 10% to 20%** | 4 | | | | | | | | | | | | 4 |
| **from 20% to 30%** | 1 | | | | | | | | | | | | 1 |
| **over 30%** | | | | | | | | | | | | | |

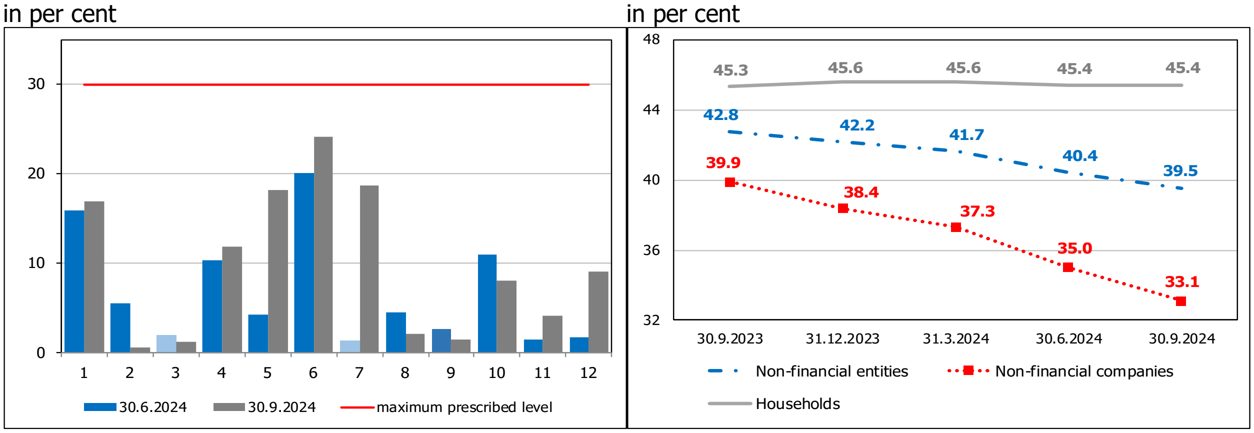
Source: National Bank, based on the data submitted by banks.

**The long aggregate currency position relative to own funds as of 30.9.2024 was registered in all banks and is below the regulatory limit of 30%.** The ratio by bank ranged from 0.5% to 24.2% and it widened compared to the previous quarter.

Chart 19
Aggregate currency position to own funds ratio, by bank* (left) and loans with currency 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.

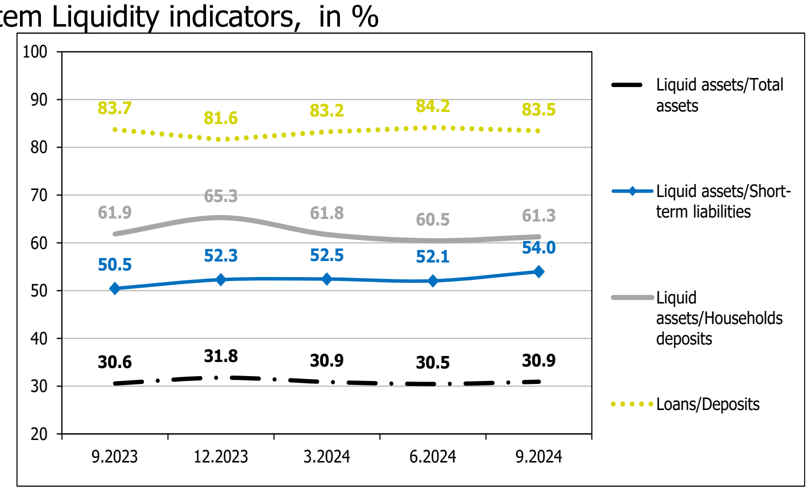
## 3. Liquidity risk

**In the third quarter of 2024, the liquidity position of the banking system was stable and further enhanced. Supported by further deposit growth, liquid assets of the banking system increased quarterly by 3.4%. Within their structure, the largest increase was recorded in assets and banks' placements in government bonds. Increase was also noted in banks' placements in government securities, as well as short-term deposits placed in foreign banks (overnight deposit facilities and deposits from one to three months, and to a lesser extent in deposits up to one month). Thus, the indicators for liquidity monitoring and assessment recorded slight upward shifts and mainly remained within their stable, satisfactory levels. The Liquidity Coverage Ratio of the banking system is significantly higher than the regulatory minimum, thus confirming the solid amount of liquid assets available to banks. The gap between the agreed cash inflows and outflows of up to one year is traditionally negative, but banks expect a relatively high level of deposit stability, as the main source of financing of their activities. The stress test results indicate satisfactory resilience of the banking system to the assumed extreme, individual and combined liquidity outflows.**

### 3.1 Liquidity indicators

**In the third quarter of 2024, amid increase in liquid assets of the banking system, the liquidity indicators increased, yet mainly remained at the usual satisfactory levels.** Therefore, liquid assets make up 30.9% of total bank's assets, providing coverage of more than half of the short-term liabilities and household deposits with liquid assets (of 54% and 61.3%, respectively[21]).

Chart 20 Banking System Liquidity indicators, in %

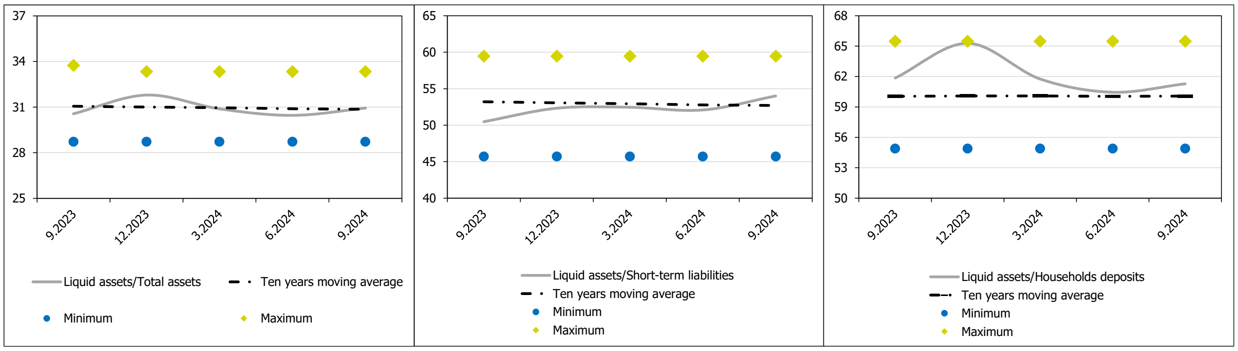



Source: National Bank, based on the data submitted by banks.
Note: The calculation of liquidity ratios of the banking system does not include resident interbank assets and liabilities.

[21] Analyzed by bank, as of 30.9.2024, the share of liquid in total assets ranges between 22.5% and 48.9%, with a median of 28.3% (September 2023: between 20.7% and 50.1%). The coverage of short-term liabilities with liquid assets ranges between 42% and 84.5%, with a median of 53.5% (September 2023 between 35.2% and 76%), and the coverage of household deposits with liquid assets ranges between 40.7% and 90.8%, with a median of 68.7% (September 2023: between 37.3% and 114.5%). The Development Bank of North Macedonia AD Skopje is excluded from this analysis.

Chart 21 Liquid assets / total assets (left), liquid assets / current liabilities (middle) and liquid assets / household deposits (right)

in % in % in %

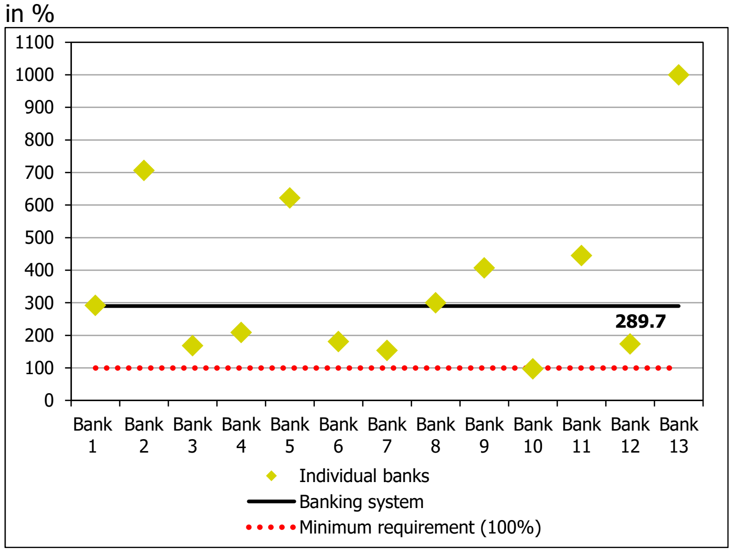



Source: National Bank, based on the data submitted by banks.

The Liquidity Coverage Ratio of the banking system equals 289.7%, which is significantly higher than the regulatory minimum (100%[22]), thus confirming that there is sufficient liquidity available to the Macedonian banking system. Bank-by-bank analysis shows that the liquidity coverage ratios reached 1000% (with a median of 292.1%), which also indicates acceptable liquidity risk frames to which banks are exposed and their stable liquidity management.

Chart 22 Liquidity coverage ratio, as of 30.9.2024

in %




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

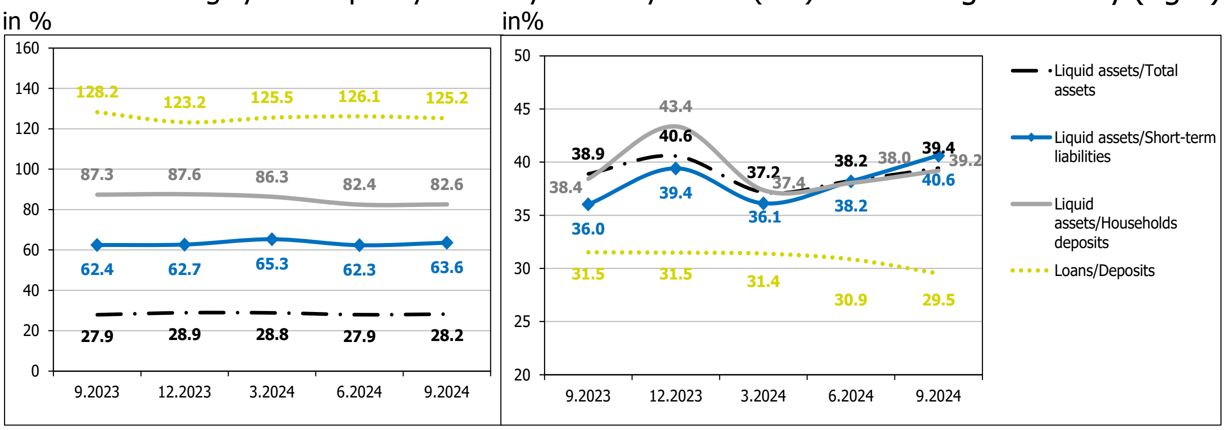
**According to the currency features of liquid assets and liabilities, in the third quarter of 2024, the denar[23] and foreign currency indicators improved,** which is in line with the quarterly increase in denar (of 3.1%) and foreign currency liquidity (of 4.1%). The denar liquidity indicators remain 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

[22] In addition to 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%). Thus, the minimum level of liquidity coverage ratios by currency is not prescribed. As of 30.9.2024, the liquidity coverage ratios for the two significant currencies, euros and denars, were 109% and 310.6%, respectively.

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

lower foreign currency liquidity indicator, compared to denar liquidity, emphasizes the importance of the adequate volume of the foreign reserves and the presence of the National Bank in the foreign exchange market (in order to maintain a stable exchange rate) for covering the demand for foreign currency cash[24].

Chart 23 Banking system liquidity ratios by currency-denar (left) and foreign currency (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 2024, liquid assets[25] of the banking system amounted to Denar 230,871 million.** Amid faster quarterly increase of deposit base (by 2.3%), liquid assets of the banking system increased by 3.4%, i.e. Denar 7,658 million. Analyzed by individual financial instruments that make up liquid assets, the increase was most pronounced in assets (cash and assets on accounts with the National Bank), which increased by Denar 15,245 million, or 40.8%[26]. They are followed by the banks' placements in government bonds (of Denar 2,258 million or 3.3%), in foreign government securities of Denar 1,586 million (or 31.8%) and short-term deposits in foreign banks of Denar 1,529 million (or 5.1%)[27]. On the other hand, banks' placements in overnight and seven-days deposit facilities with the National Bank decreased by Denar 6,130 million (or 70.7%) and by Denar 5,750 million (or 14,1%), respectively)[28]. Also, banks' placements in treasury bills (by Denar 1,074 million or 4.7%), funds on corresponding

---

[24] The European Central Bank (ECB) granted the National Bank access to foreign currency liquidity in euros, with appropriate collateral. This access has been granted in the form of repo line, since August 2020, totaling Denar 400 million, and the deadline for application of the repo line was extended several times (most recently, until 31 January 2025). Funds from this repo line have not been used so far. For more details please visit: https://www.ecb.europa.eu/mopo/implement/liquidity_lines/html/index.en.html.

[25] 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 (up to the daily amount the banks may use), 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 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.

[26] Denar cash increased by Denar 16,446 million (mostly assets on denar account with the National Bank, by Denar 15,463 million), while foreign currency cash declined by Denar 1,201 million (mostly assets on foreign currency account in MIPS, by Denar 1,122 million).

[27] Increase in short-term time deposits of banks placed in foreign banks of Denar 2,340 million, or 10.4% (mostly overnight deposit facilities and from one to three months, and slightly less deposits up to one month).

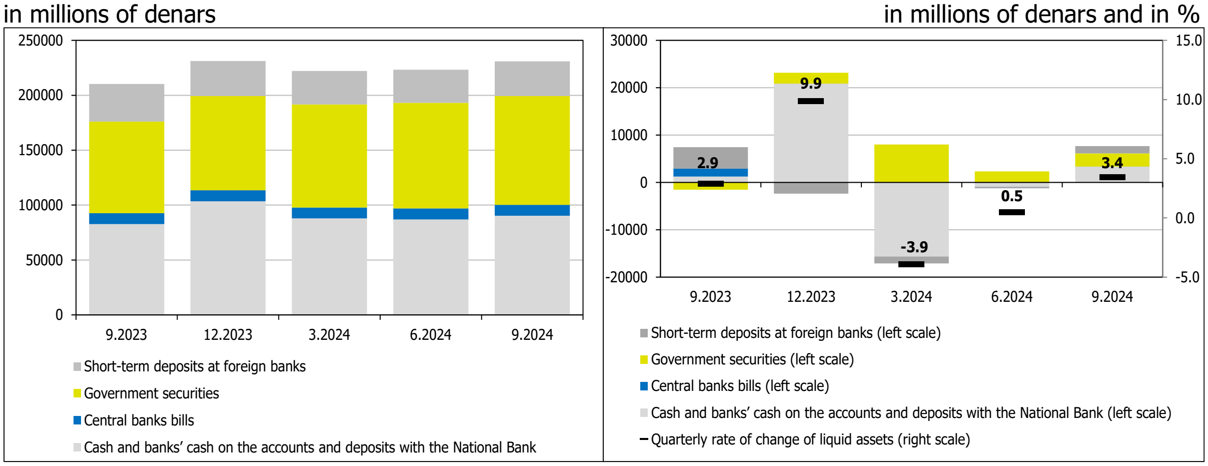
[28] Interest rates on overnight and seven-day deposit facilities remained unchanged, i.e. stood at 4.20% and 4.25%.

accounts (by Denar 810 million, or 10.6%), while banks' placements in CB bills slightly grew by Denar 3 million, or 0.03%)[29].

Chart 24 Liquid assets, structure (left) and growth (right)

in millions of denars

in millions of denars and in %




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

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

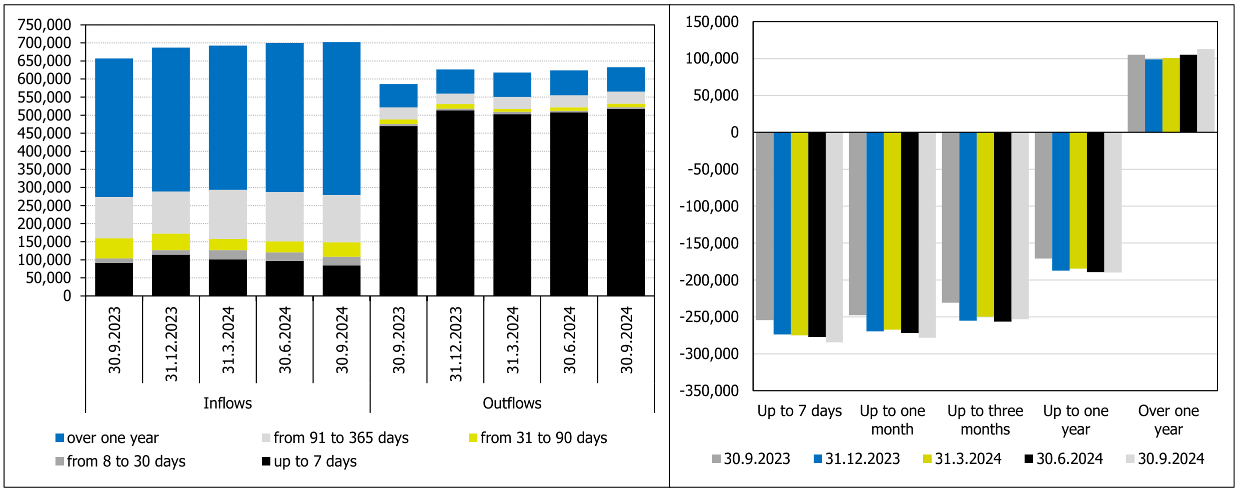
**As of 30.9.2024, the agreed inflows in the period over one year and the agreed outflows in the period up to seven days prevail in the maturity structure of banks' inflows and outflows.** The largest gap between the banks' inflows and outflows is registered in the time periods up to seven days (negative gap) and over one year (positive gap), which results from the inclusion of liabilities on demand and without a maturity in the maturity segment up to seven days (these deposits account for 62.9% of total deposits) and 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 more than 80% of total loans to non-financial entities). In terms of the banking system assets, the cumulative gap up to seven days and the cumulative gap up to one year amounted to 37.2% and 24.8%, respectively).

[29] In the third quarter of 2024, the National Bank started with prudent monetary policy normalization, i.e. cut the policy rate in September by 0.25 percentage points, and in October by additional 0.25 percentage points, to the level of 5.8%. The offered amount of CB bills remained unchanged at Denar 10,000 million.

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

in millions of denars

in millions of denars

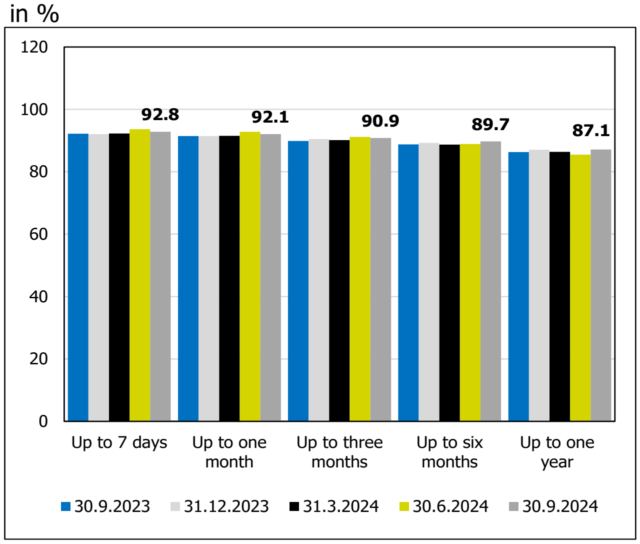



Source: National Bank, based on the data submitted by banks.

Chart 26

Expected deposit stability to the remaining period to maturity,

in %




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

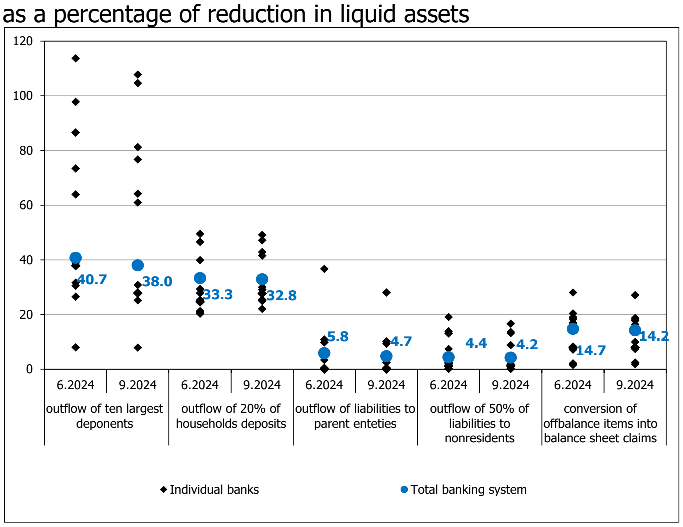
**The banks expect maintenance of the deposit stability as the main source of funding for their activities.** In accordance with the depositors' behavior, banks assessed that the largest part of the agreed cash inflows and outflows (or 87.1%) based on deposits will not be realized by depositors in the next twelve months, which mitigates risks from the pronounced negative short-term gap.

### 3.4 Stress-simulations for liquidity shocks

**On 30.9.2024, the results of the conducted stress simulations for liquidity shocks show solid capacity of the banking system, with sufficient liquid assets to deal appropriately with the 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 almost fully used (or 94%) only in case of significantly extreme simulation of liquidity shock, which covers combined outflows[30] of funds from banks on several bases. Given the extremity of assumptions, for the needs of this simulation, the usual volume of liquid assets was extended with other financial instruments[31] owned by banks, for which it is estimated that banks will quickly and easily collect or turn into cash amid lack of liquid assets.

Chart 27 Contribution of individual combined 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.

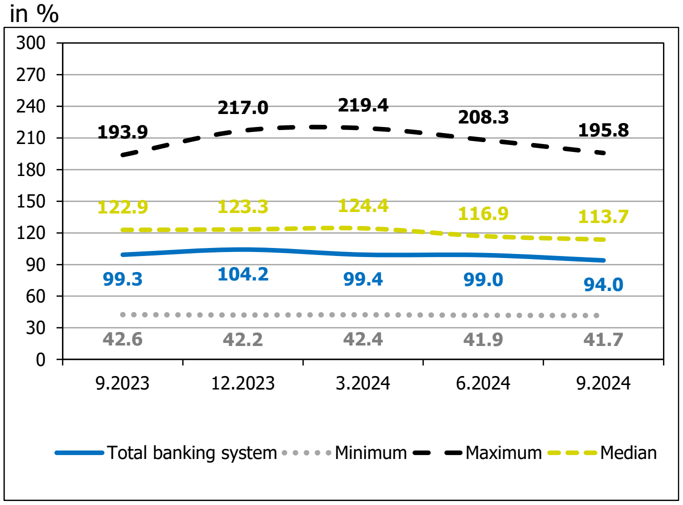
**At individual simulations of liquidity shocks, the high level of liquidity which Macedonian banks have at their disposal provides settlement also of all assumed, individual, extreme liquidity outflows.** The sharpest decline in liquid assets occurs amid outflow simulation of deposits of the ten largest depositors, and 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 greater

[30] 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.

[31] 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.

similarity in the results for individual banks, thereby confirming the importance of public confidence in the banking system. Amid assumed migration of certain off-balance sheet liabilities of banks into on-balance sheet liabilities[32], the banks would spend around 15% 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.

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



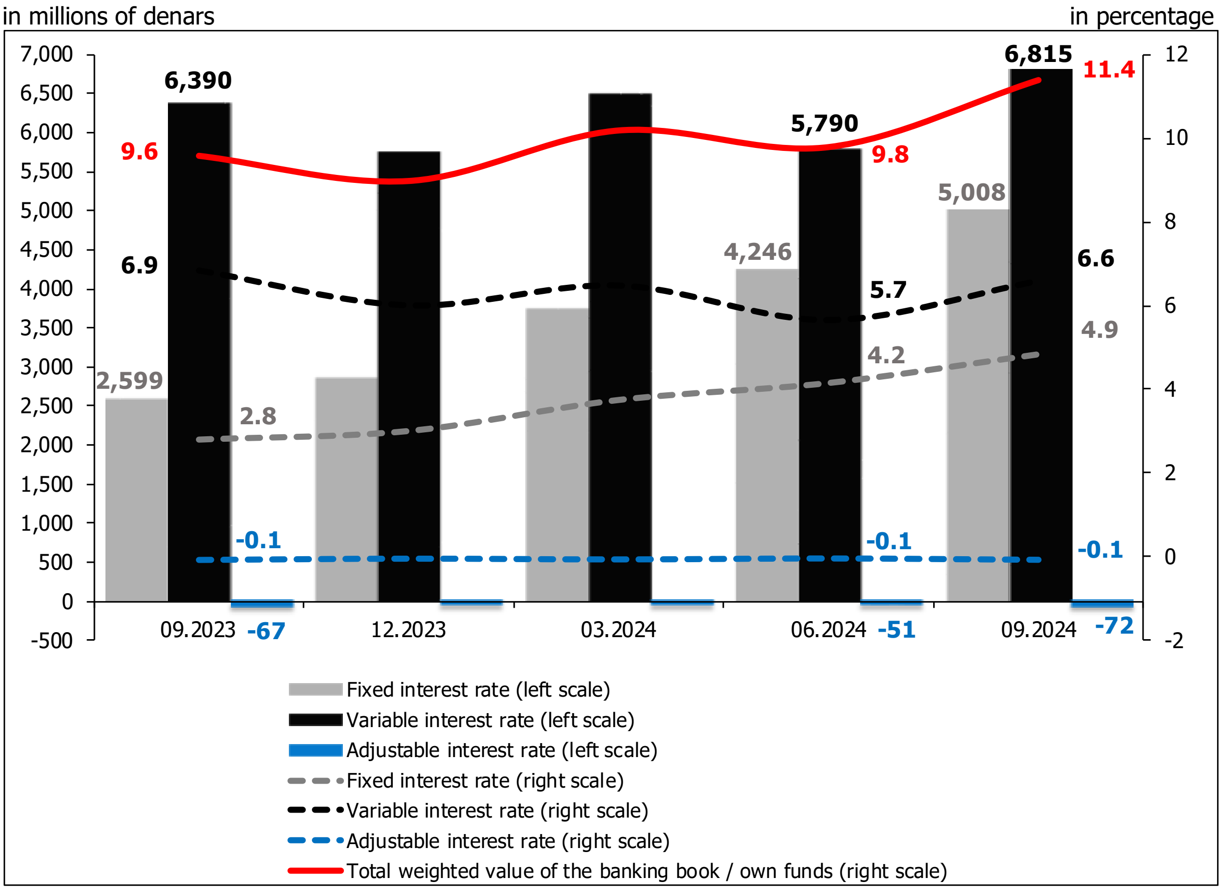

Source: National Bank, based on the data submitted by banks.

[32] 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

**The exposure of the banking system to interest rate risk in the banking book[33] increased in the third quarter of 2024, expressed through the increased weighted value of the banking book[34] which reached 11.4% of own funds. The exposure to indirect interest risk, measured by the share of loans with adjustable or variable interest rate in total loans was still high, yet decreasing.**

Chart 29
Total weighted value of the banking book*, amount (left scale) and to own funds (right scale)

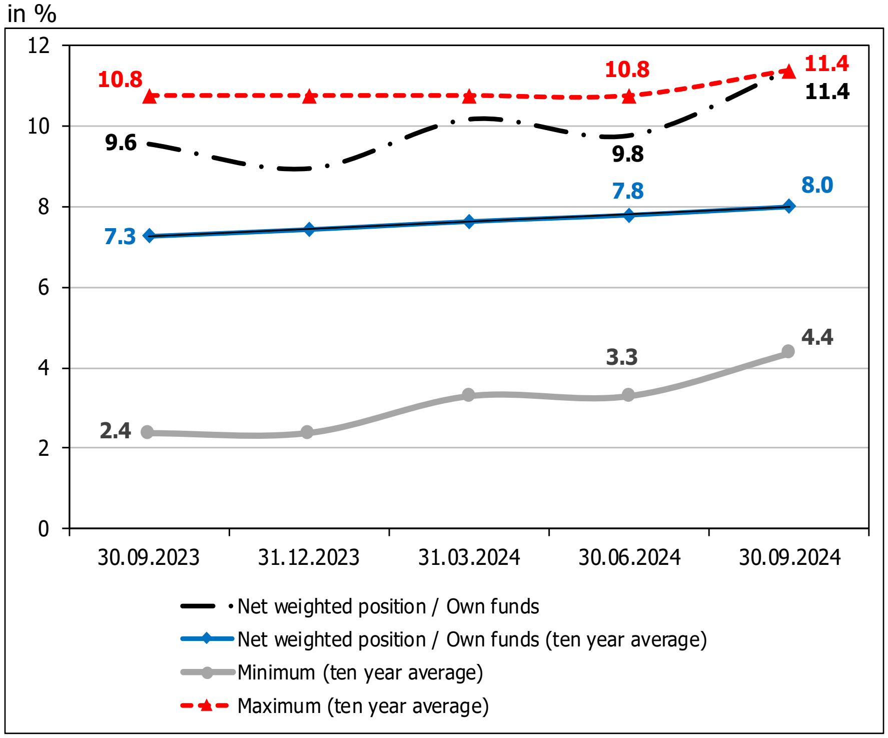



Source: National Bank, based on the data submitted by banks.
*The total weighted value of the banking book denotes the potential loss of the economic value of this portfolio, amid assumed unfavorable interest shock of ±2 percentage points.

[33] In accordance with the regulation, the banks' exposures to interest rate risk which arises from the banking activities, is monitored through the net amount of the interest sensitive assets and liabilities (mainly loans and deposits), to which unfavorable interest shock for growth of interest rates by 2 percentage points is being used, distributed in time zones according to the period in which the interest rate change will occur. At the same time, assets and liabilities with fixed interest rates are distributed according to the maturity period, with variable interest rates according to the interest rate reassessment period and with adjustable interest rates according to the probability and frequency of the interest rate change. Loans with annuity payment which are with combined interest rates (fixed interest rate for a certain period, followed by variable interest rate), are distributed in time zones according to the actual maturity of annuities in the period of the fixed interest rate (for the amount which is actually due in that period), while the rest of the amount to which the variable interest rate will be applied, is presented in the appropriate future time zones according to the period of the variable interest rate reassessment. This net amount of the interest sensitive assets and liabilities is called weighted value of the banking book.
[34]This decrease mostly stems from the shift of a significant part of loans with variable interest rate from time zone with longer to time zone with shorter period until the next interest rate reassessment.

**Compared to the previous quarter, total net weighted value of the banking book[35] increased by Denar 1,776 million, or 17.7%, which increased its share in own funds (as a regulatory measure for the exposure to direct interest risk in the banking book) by 1.6 percentage points, to 11.4%.** Analyzing by bank ratio ranges from 2% to 16.8%, and is below the level of the prescribed threshold of 20%[36].

Chart 30
Indicator of the interest rate risk exposure of the banking activities (net weighted position/ own funds)

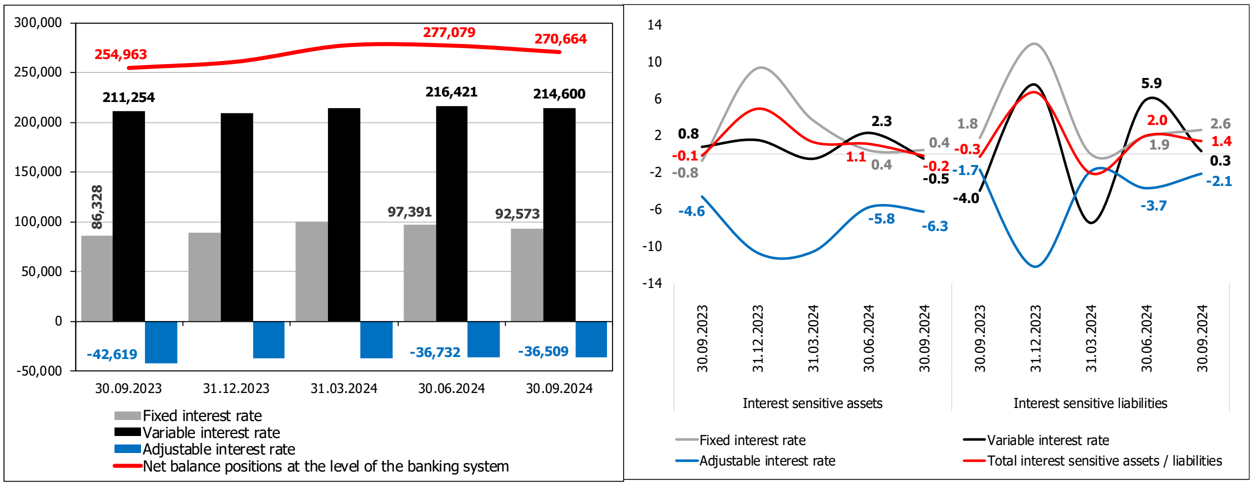


Source: National Bank, based on the data submitted by banks.

**The quarterly growth of the net weighted value of the banking book mostly results from the increased activities with variable and fixed interest rate.** The weighted value of the portfolio with variable interest rate increased by Denar 1,026 million or 17.7% (and as of 30.9.2024 reached 6.6% of banking system own funds), mainly due to the shift of most of the placements in loans with variable interest rates (in the amount of Denar 163,101 million) from maturity with a period until the next interest rate reassessment up to one month to maturities between one and six months. Similar shifts were registered in time deposits with variable interest rate, but in a smaller amount (Denar 8,630 million). The weighted value of the portfolio with fixed interest rate grew by Denar 762 million or 17.9%, which stems for the significant increase in placements in securities and loans with longer residual maturities (over 2 years), amid decrease in liabilities based on time deposits in the same maturities. The weighted value (net) of the portfolio with adjustable interest rate expanded by Denar 21 million, yet it is minor and accounts for only 0.1% of own funds.

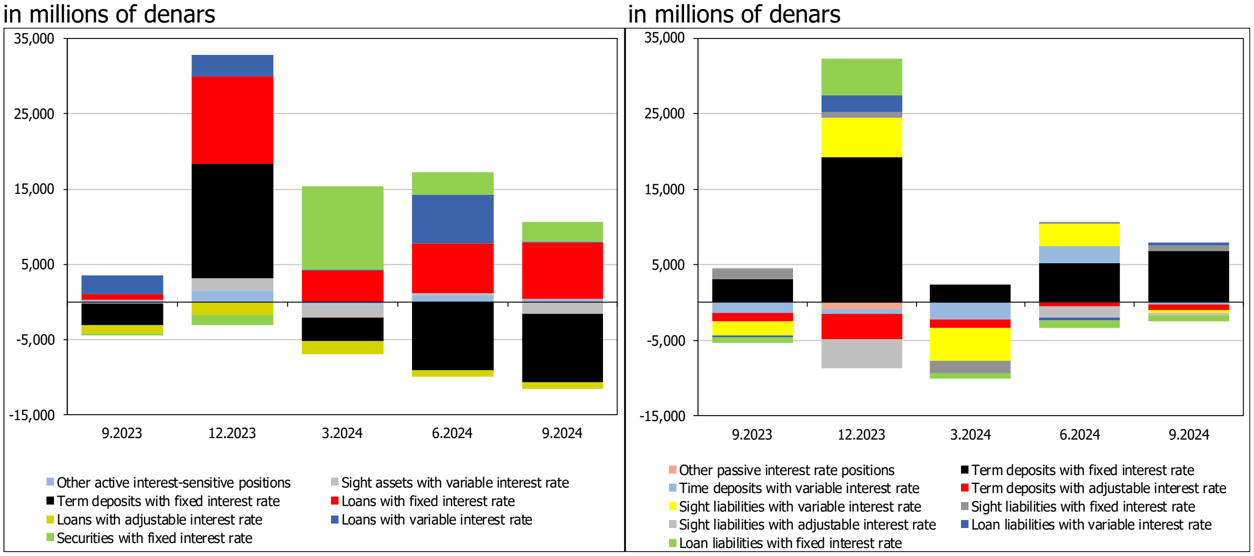
[35]For the explanation of the term weighted value of banking book see the previous footnote.
[36] According to the regulation, when total weighted value of the banking book to own funds ratio exceeds 20%, the bank is required to propose measures to reduce this ratio, and the National Bank may also require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

Chart 31
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.

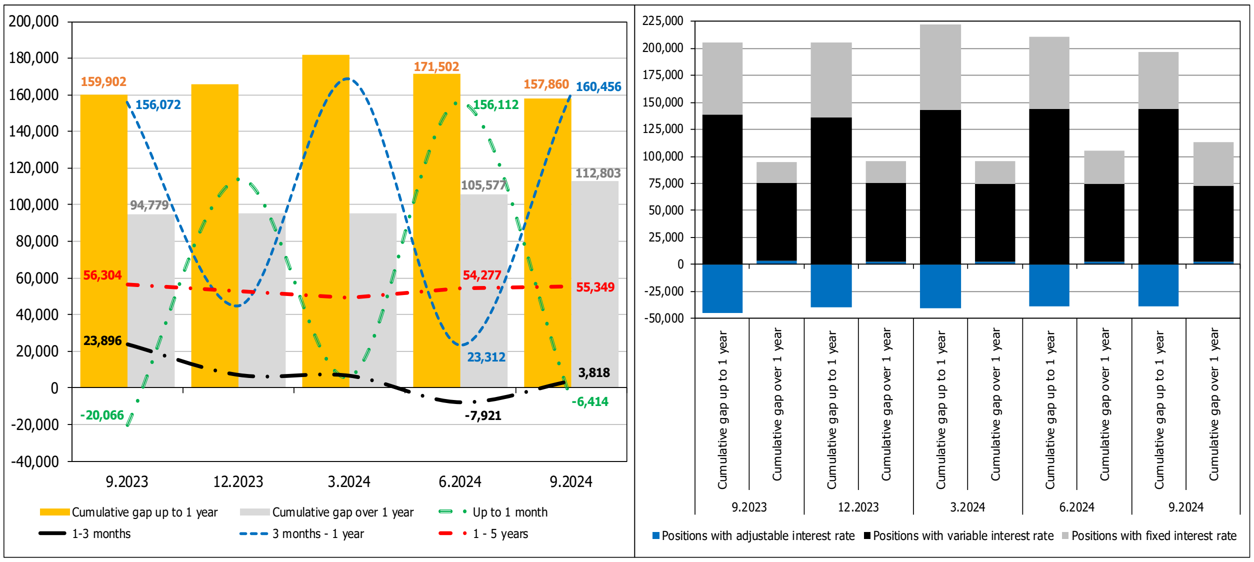
Chart 32
Quarterly changes of the interest sensitive assets (left) and liabilities (right), by type of instrument and type of interest rate
in millions of denars
in millions of denars




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

**Quarterly decline of Denar 6,416 million or 2.3% was registered in nominal (non-weighted) gap between interest sensitive assets and liabilities.** At the same time, the positive gap between fixed interest rate positions narrowed by 4.9% or Denar 4,818 million (mostly due to the decrease in placements in time deposits, with an increase in liabilities based on time deposits with this type of interest rates), and the positive gap between variable interest rate positions also narrowed by Denar 1,821 million, or 0.8% (mostly due to the decrease in assets on demand with this type of interest rates). The negative gap between assets and liabilities with adjustable interest rate further decreased (by Denar 223 million, or 0.6%, due to the larger decline of liabilities based on time deposits with adjustable interest rate compared to the reduction of the placements in loans with this type of interest rates.) Analyzed by the time period until the next interest rate re-assessment, in addition to the aforementioned shifts of most of the placements in loans and time deposit-based liabilities with variable interest rate from maturity up to one month to maturity between one and six months, significant shift were registered in placements in securities with fixed interest rate, from maturity between six and twelve months (Denar 17,267 million) to maturity between one and six months.

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

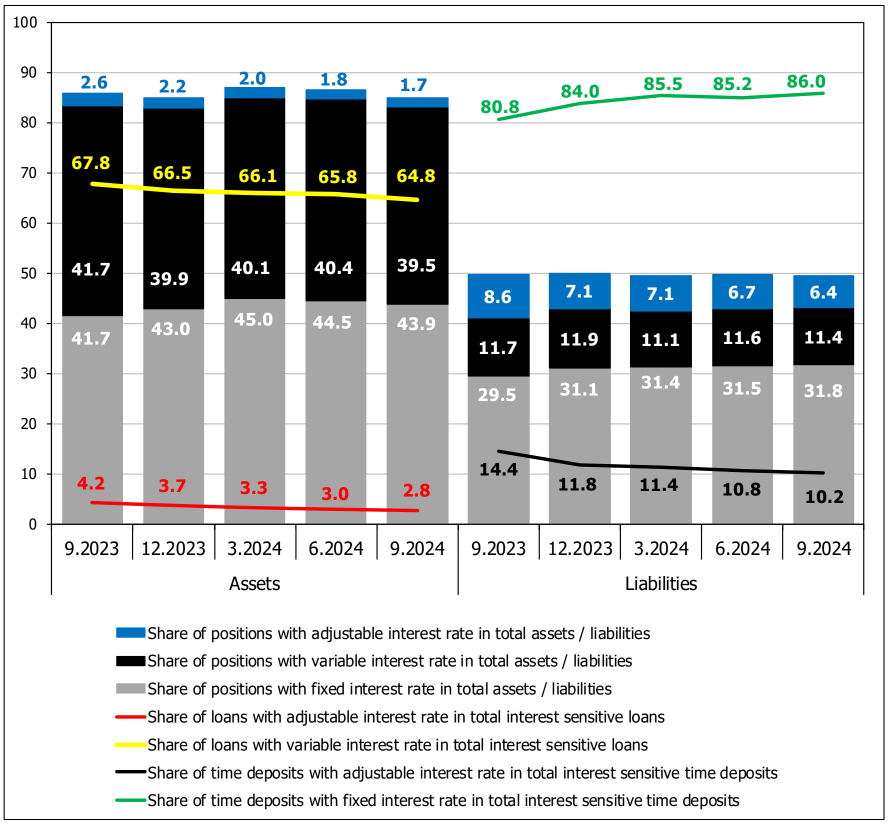



Source: National Bank, based on the data submitted by banks.

**The indirect exposure to interest rate risk, which arises from the presence of loans with adjustable and variable interest rates, remains significant.** As of 30.9.2024, the cumulative share of these loans in total loans amounted to 67.6%, which is a decrease of 1.2 percentage points compared to 30.6.2024. Thus, 64.8% of total loans are with variable interest rate, while 2.8% with adjustable interest rate. It should be borne in mind that in accordance with regulations, in the interest rate risk reports, the amount of all positions (including loans) that are envisaged to be regulated by a different type of interest rate in different time periods to maturity, is distributed depending on the type of interest rate that will apply in the corresponding time period. Thus, as of 30.9.2024, for the purposes of these reports, 17.4% of total loans are shown as loans with variable interest rate, in the respective future time zone which is to apply the variable interest rate, although they are currently regulated by fixed interest rate[37].

[37] Or in other words, as of 30.9.2024, 47.4% of the loans, are with changeable (variable and adjustable) interest rate, while the remaining 17.4% (up to the presented 64.8% as of 30.9.2024), are currently with fixed interest rate, which during the life expectancy of the loans will be replaced by a variable interest rate.

Chart 34
Assets and liabilities structure, by type of interest rate




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

For more details around the structure of interest sensitive position of banks, see the annexes to this report.

## 5. Insolvency risk

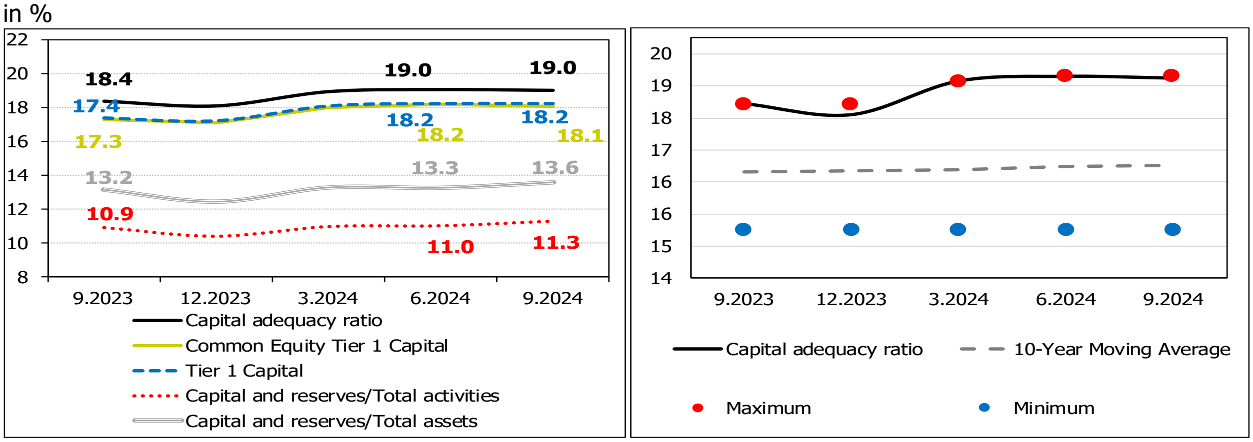
**The solvency and capitalization ratios of the banking system remained high and stable in the third quarter of 2024. Despite the slightly higher increase in risk-weighted assets relative to the growth of own funds, the capital adequacy ratio stood at 19%, which is the highest value in the last seventeen years. The growth of own finds in the third quarter is due to profit distribution of banks from the current year and issuance of capital instruments in the form of Additional Tier 1 capital, while the increase in risk weighted assets results from the increased credit risk weighted assets. Analyzed by purpose, in the third quarter of 2024, the growth of own funds and part of the accumulated available funds were used for meeting each capital requirement, mostly the prescribed countercyclical capital buffer rate, which is higher since this quarter, as well as for capital requirements for credit risk coverage and the capital allowance determined by the supervisory assessment. In conditions of solid profitability, by building capital buffers and strengthening the solvency of the banking system, banks' resilience and their ability to deal with risks and absorb possible losses were improved, without jeopardizing their stability and ability to lend to the private sector. Thus, as of 30.9.2024, 9.8% of total own funds remained free and together with the capital buffers account for 37% of total own funds of the banking system which may be used for dealing with challenges of different nature and intensity. The results of the stress testing of the banking system resilience to the simulated shock with extreme assumptions confirm the banking system resilience. This is particularly important given the environment which is still uncertain. In such circumstances, the solvency of the banking system, which is at a satisfactory level, significantly mitigates the negative effects of any potential risk materialization.**

### 5.1. Solvency and capitalization ratios of the banking system

**The solvency and capitalization ratios of the banking system remained high and stable in the third quarter of 2024.** Quarterly, the capital adequacy ratio remained at 19%, which is the maximum value registered in the past seventeen years.

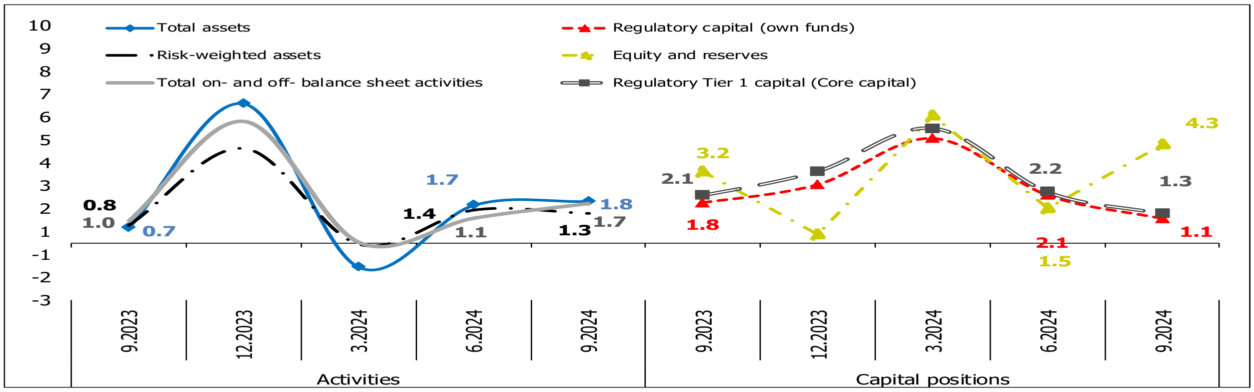
Chart 35 Indicators of solvency and capitalization (left) and capital adequacy ratio movement (right)

in %




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

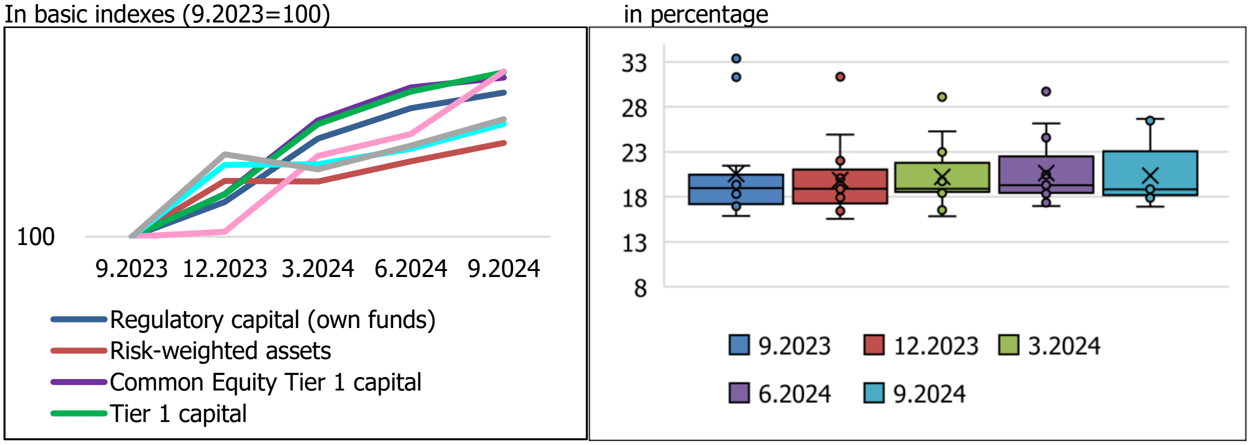
Chart 36
Quarterly rate of change of solvency ratio components
in %




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

The quarterly growth of own funds is entirely a result of the increase in the Tier 1 capital, thus its share in the risk-weighted assets (i.e. Tier 1 capital rate) stood at the same level of 18.2%. The Common Equity Tier 1 capital and the Additional Tier 1 capital almost equally contributed to the growth of the total Equity Tier 1 capital, amid slower percentage growth of the Common Equity Tier 1 capital compared to the risk-weighted assets, the Common Equity Tier 1 capital ratio slightly decreased, by 0.1 percentage point, to the level of 18.1%. At the same time, the percentage growth of Additional Tier 1 capital was rather high, given the low start basis of this segment of the banking system's own funds (as of 30.9.2024, only two banks issued capital instruments to the Additional Tier 1 capital). The shares of capital and reserves[38] in total assets and in total on-balance sheet and off-balance sheet activities of banks grew by 0.3 percentage points.

Chart 37
Trends in nominator and denominator of solvency ratios (left) and dispersion measures of the banking system adequacy ratio (right)
In basic indexes (9.2023=100) in percentage




Source: National Bank, based on the data submitted by banks.
Note on the right chart: The average value is marked with X, while the median value is marked with the middle horizontal line within the column. The column explains the interquartile difference, i.e. indicates the capital adequacy ratios in half of the banks in the system. The dots show capital adequacy ratios by bank.

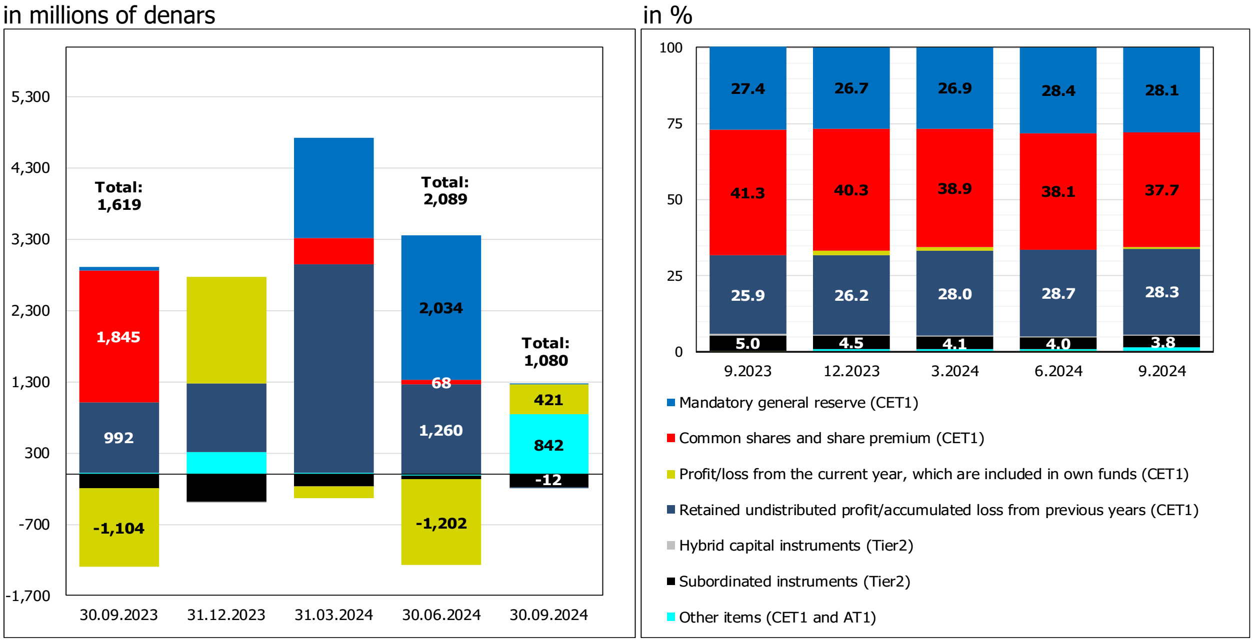
[38]The significantly faster growth of capital and reserves was due to the retained profit available for distribution to shareholders with one bank, which, in accordance with the regulation, is not part of own funds.

**The improvement of solvency ratios during 2024 mainly results from the highest-quality layer of own funds, the Common Equity Tier 1 capital.** The past three quarters registered more pronounced upward trend in capital positions especially in the Common Equity Tier 1 capital, the growth of which almost levels up with the growth of the Tier 1 capital. On the other hand, the growth of assets, total on-balance and off-balance sheet activities as well as risk-weighted assets are milder, which altogether contributes to maintaining the solid banking system solvency. **The dispersion of adequacy ratio in the banking system indicates a stable trend.** The capital adequacy ratio as of 30.9.2024 is higher than 16.9% in all banks.

### 5.2. Quality of own funds of the banking system

**The banking system has high-quality capital positions, which enable satisfactory resilience to possible stress situations.** The highest-quality buffer of the banking system's own funds (Common Equity Tier 1 capital) dominated the total own funds with a share of 95.1% at the end of the third quarter of 2024 (95.5% as of 30.6.2024), while the Additional Tier 1 capital and Tier 2 capital account for 0.8% and 4.1% of the banking system's own funds (0.2% and 4.3% as of 30.6.2024, respectively).

Chart 38
Structure of the quarterly changes (left) and the Structure of the own funds (right)

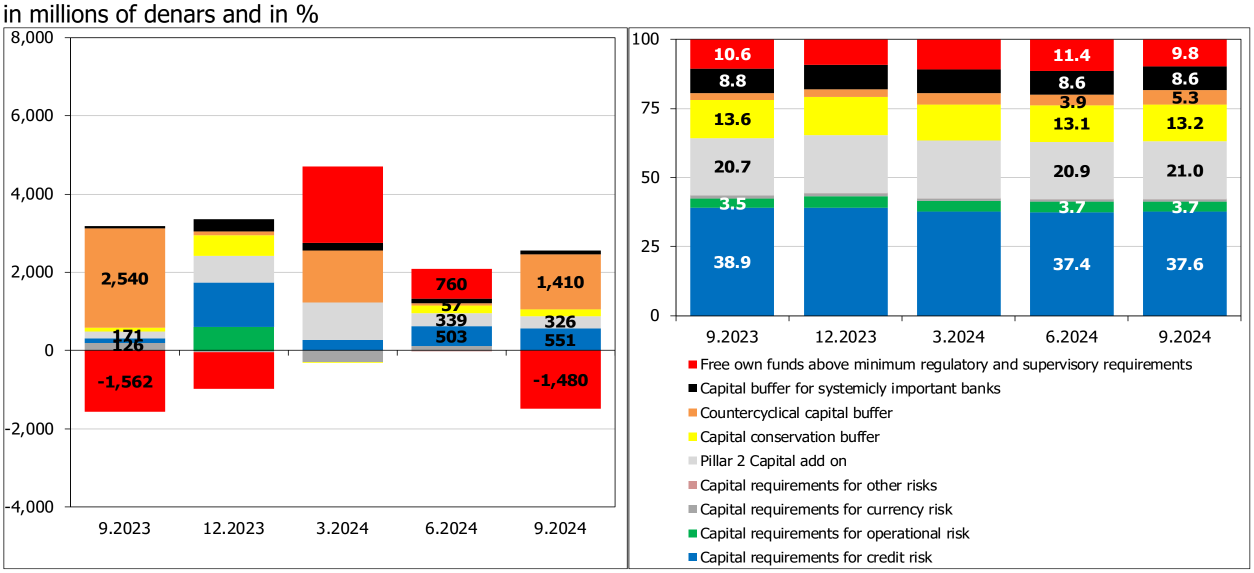



*Other items include capital instruments from Additional Tier 1 capital (AT1); currently, only two banks have issued such instruments with a share of 0.8% in banking system's own funds.
Source: National Bank, based on the data submitted by banks.

**In the third quarter of 2024, banking system's own funds grew by Denar 1,080 million, or 1.1%.** The growth is almost equally due to the increase in the Common Equity Tier 1 capital by retaining the current year profit by one medium-size bank (Denar 427 million), as well as by issuing a new capital instrument in the form of Additional Tier 1 capital by one large bank (Denar 615 million), with a positive contribution from the change in the fair value of the instruments held as available for sale and appropriately reflected revaluation reserves. Certain decrease was registered in subordinated instruments (due to reduction of the allowed amount on the bases of which they are included in the calculation of own funds, due to entering the last five years to maturity). For more details about the level of own funds by group of banks see annexes to this report.

**Analyzed by the purpose of own funds, the growth of own funds, together with part of the already accumulated available own funds, were used for covering the capital buffers, as well as for capital requirements for credit risk coverage and capital supplement determined by the supervisory assessment.** Total amount of capital buffers increased by Denar 1,678 million, or 6.4% on a quarterly basis and at the end of the third quarter of 2024 increased its share to 27.1% in total own funds of the banking system[39]. The increase in the amount of capital buffers was mostly (Denar 1,410 million) due to the countercyclical capital buffer, for which a higher rate (of 1% versus the previous level of 0.75%) was applied from 1 July 2024. In conditions of solid profitability, by increasing the countercyclical capital buffer rate for exposures of banks in the country, we act preventively and further strengthen the domestic bank's capital. Capital requirements for credit risk rose to Denar 551 million (or 1.4%), which mostly stems from the growth of claims on other trade companies and retail loan portfolio, i.e. activities of banks which are included with a risk weight of 75% and 100%. The amount of the capital supplement determined by the supervisory assessment increased quarterly by Denar 326 million, or 1.5%. The capital requirements for covering operational, currency and other risks were almost unchanged. More than half of the capital requirements were provided from accumulated available assets, thus the available own funds above the minimum regulatory and supervisory requirements dropped by Denar 1,480 million or 12.7%, reducing their share in total own assets to 9.8% (11.4% as of 30.6.2024).

Chart 39 Structure of quarterly change (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 %

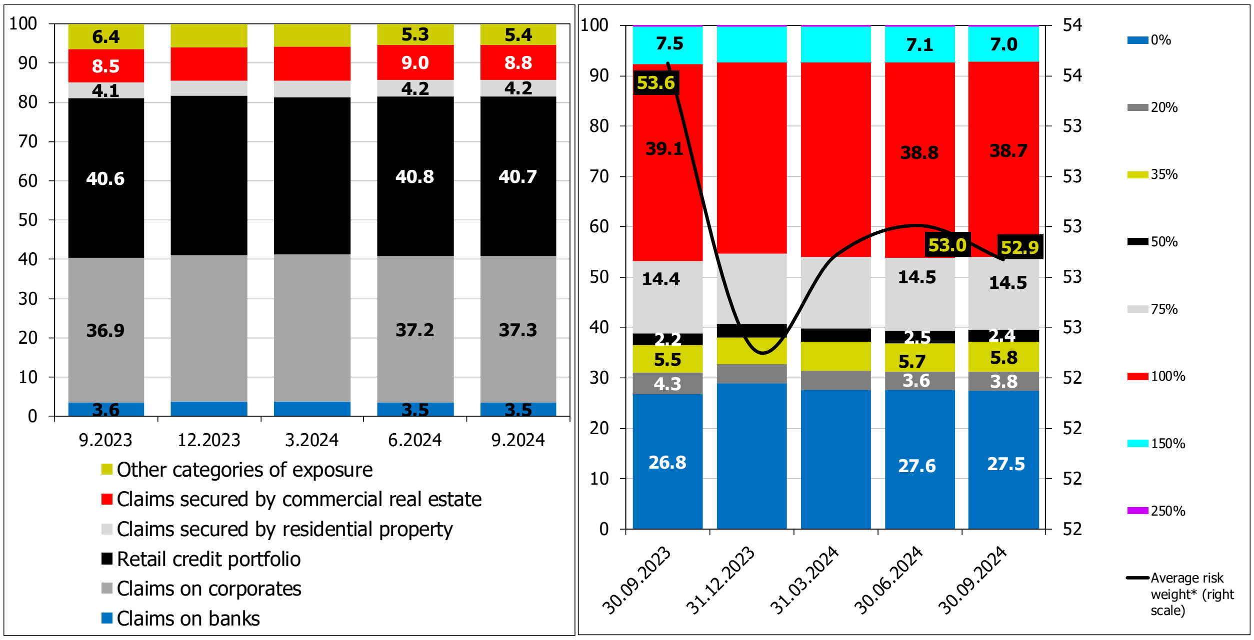



Source: National Bank, based on data submitted by banks

[39] From the four capital buffers specified by the Banking Law, in the third quarter of 2024, all banks were required to meet the capital conservation buffer and countercyclical capital buffer, while the seven systemically important banks the capital buffer for systemically important banks (for more information visit the following link). In September 2024, a Decision was adopted on the rate of countercyclical capital buffer for exposures in the Republic of North Macedonia and for exposures to other countries in the fourth quarter of 2025. A rate of 1.75% was determined, which will be applied in the last quarter of 2025. For more details on the countercyclical capital buffer visit the following link.

Chart 40 Structure of capital requirements for covering credit risk, by category of exposure (left) and total on-balance and off-balance exposure, by risk weights (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 average risk weight of the banking system activities slightly declined.** The lower quarterly growth of risk-weighted assets (1.4%), compared to the growth in total on-balance and off-balance sheet exposure of the banking system (1.7%) resulted in a slight decline (of 0.1 percentage points) of the average risk weight, to 52.9%. 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.

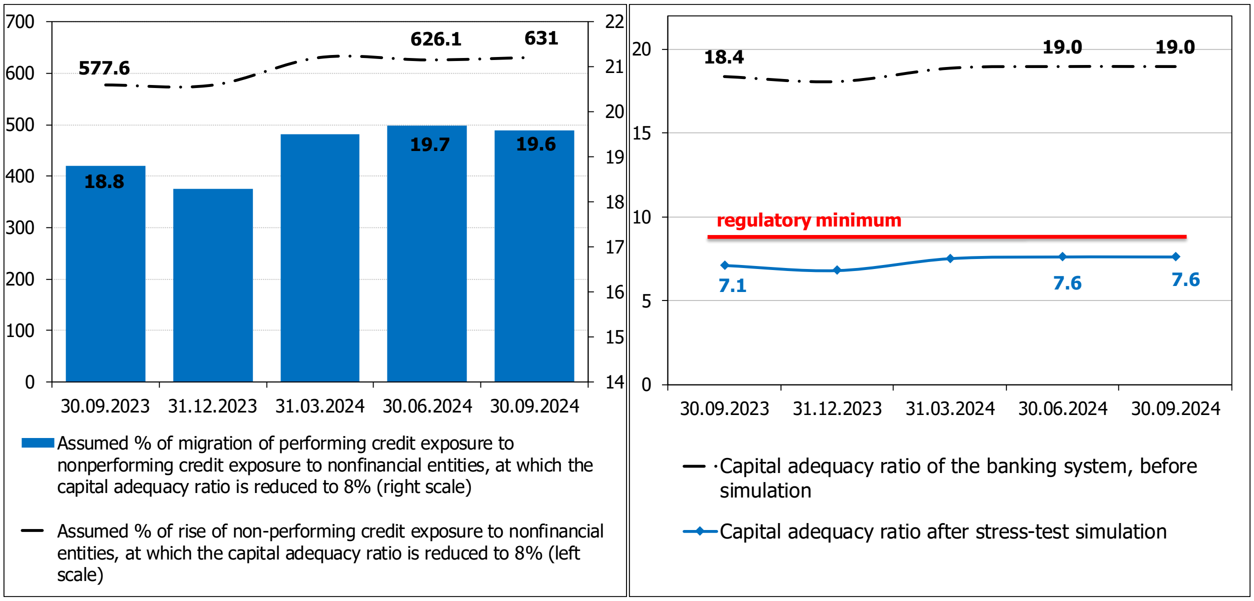
## 5.3. Stress-testing of the banking system resilience to hypothetical shocks

**The banking system shows a satisfactory resilience to the conducted regular simulated shocks, which assume extreme materialization of the credit risk (isolated, or in combination with materialization of the currency and/or the interest rate risk in the banking book).** The results of the stress testing conducted for the third quarter of 2024 are almost identical compared to the previous quarter, amid unchanged initial capital adequacy ratio. For the purpose of this report we represent the results of **the simulation for simultaneous materialization of credit, currency and interest risk[40]**. After such shock,

[40] 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;
- growth of exposure to financial entities which is non-performing by 100%, at the expense of reducing the exposure in risk category A;
- depreciation of the denar against the euro by 30%; and
- growth of lending and deposit interest rates from 1 to 5 percentage points;

the capital adequacy ratio of the banking system reduces below requirement, to 7.6%, which is an identical result compared to the previous quarterly date.

Chart 41
Necessary deterioration of the credit exposure quality, for the capital adequacy of the banking system to drop to 8% (left) and results of combined extreme stress-test simulation (right)
in %




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

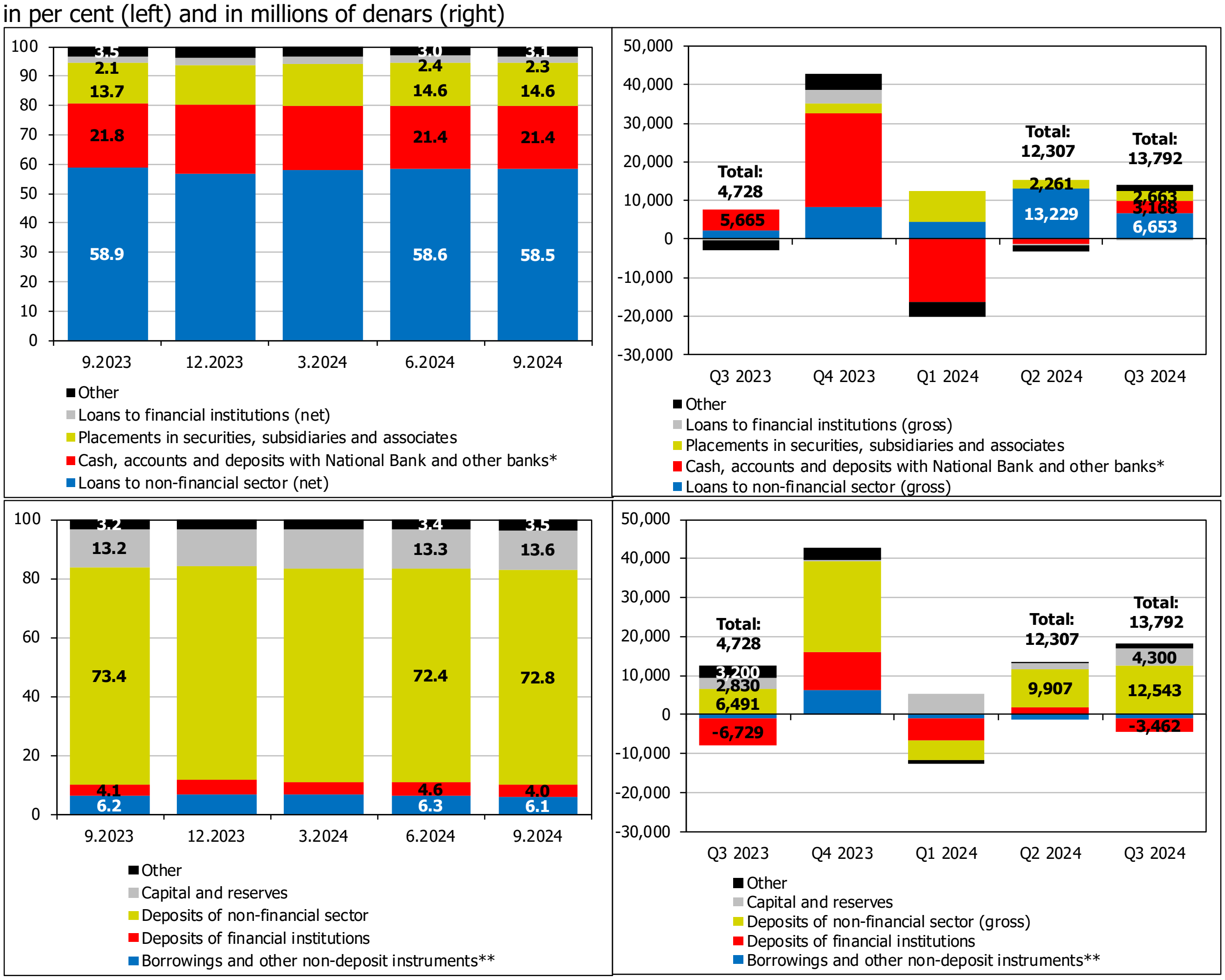
Hypothetical shocks on the part of the credit risk had the greatest impact on the solvency of the banking system. The stress testing results show that it takes growth of 631% of non-performing loan exposure, i.e. migration of 19.6% from performing to non-performing loan exposure, thus the capital adequacy of the banking system drops to 8%. This is a rather extreme simulation, especially in the short run, given that in the third quarter of 2024, only 0.4% of the regular credit exposure to non-financial sector received a non-performing status, while the non-performing credit exposure to non-financial entities fell quarterly by 0.8%. 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

## 6. Bank activities

**The balance sheet of the banking system went up in the third quarter of 2024, mainly due to the increased deposits of non-financial entities. Analyzed by sector, the higher deposits of non-financial entities were mostly due to the increase in household deposits, with a solid contribution of the increase in corporate deposits. Regarding the currency structure, more pronounced growth was registered in denar deposits, while in terms of maturity, the growth was driven by long-term deposits, with an increase in demand deposits as well. With respect to assets, liquid assets and banks' lending activity to both non-financial sectors increased, but they more pronounced in households. By currency, the increase in loans was solely due to the increased denar loans, while loans with currency component declined.**

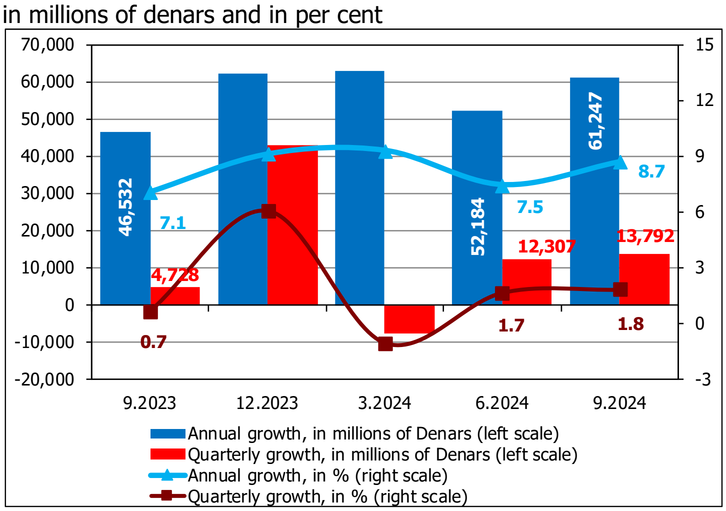
Chart 42
Structure of assets (top left) and liabilities (bottom right) and quarterly changes of the assets (top right) and liabilities (bottom right) of the banking system
in per cent (left) and in millions of denars (right)




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 2024, the balance sheet of the banking system went up by Denar 13,792 million or by 1.8% compared to the second quarter of the year.** The growth mostly resulted from the higher deposits of non-financial entities, as well as the increased capital and reserves due to the retained earnings from the previous year, while the increase was mitigated by the reduced deposits of financial institutions. With respect to assets, the growth was registered mainly in liquid assets (primarily, funds, placements in domestic and foreign government securities and short-term time deposits in foreign banks) and loans to non-financial entities. The assets increased annually by 8.7% amid accelerated growth of both loans and deposits of non-financial entities.

Chart 43
Assets growth of the banking system




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

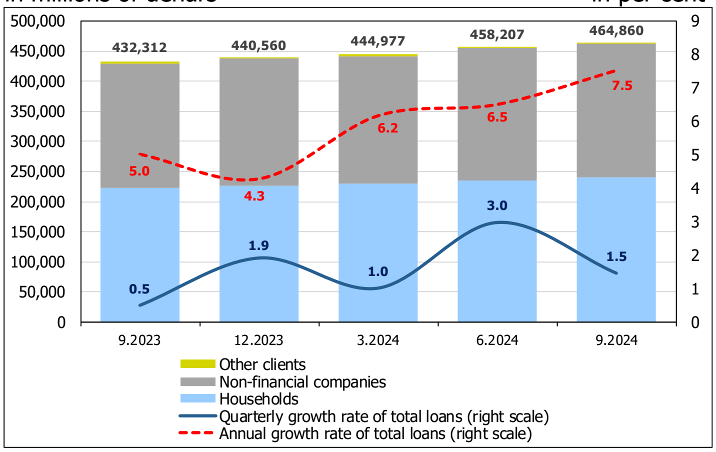
## 6.1. Loans to non-financial entities[41]

**The credit activity in the third quarter of 2024 increased by Denar 6,653 million or by 1.5% quarterly, which is half of the growth compared to the previous quarter.** However, on annual basis, the credit growth further accelerated and reached 7.5%[42]. Almost all banks registered credit growth, with the large banks having highest contribution to the growth with 83.1%.

[41] 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).

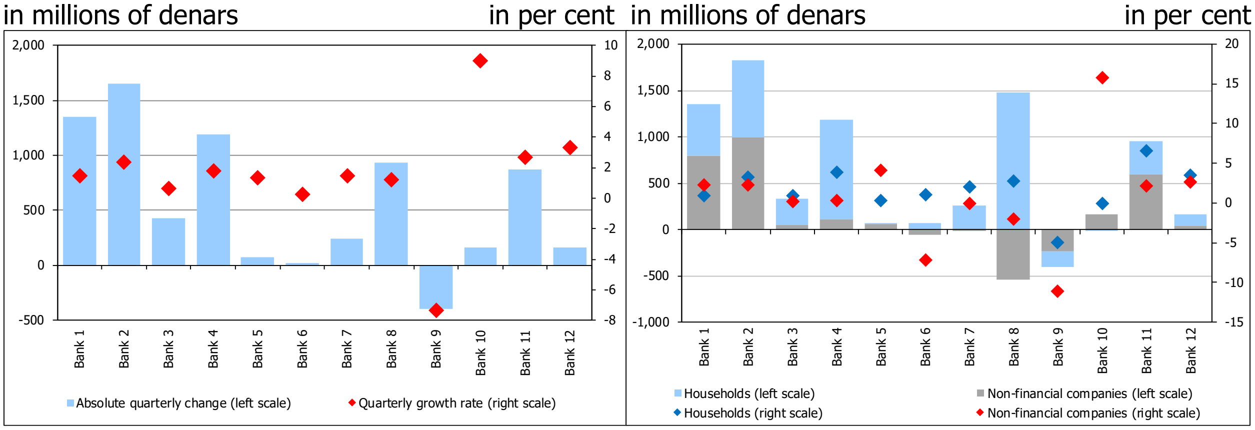
[42] According to the results of the Lending Survey for the third quarter of 2024, net easing was registered in both corporate and household lending, while net increased demand for loans was also noted in both sectors. The policy rate of the National Bank in the third quarter of 2024 decreased by 0.25 percentage points to the level of 6.05%, while in October it was also cut by 0.25 percentage points.

Chart 44
Amount of non-performing loans of non-financial entities by sector




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

Chart 45
Growth of total loans to non-financial entities (left) and of loans to non-financial corporations and households (right), by bank




Source: National Bank, based on the data submitted by banks.
The analysis of loans to non-financial entities does not include DBNM AD Skopje, therefore this bank is not presented in the charts.

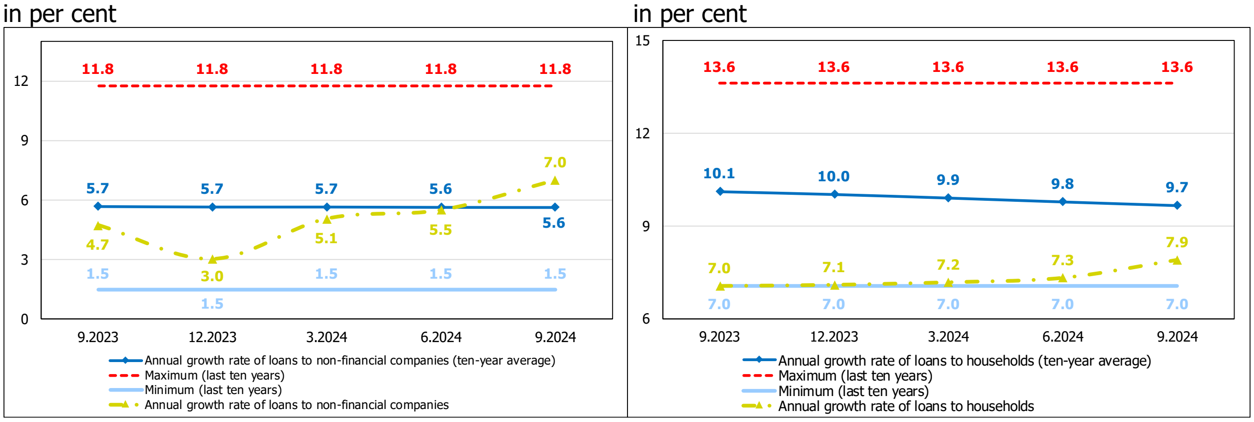
**Corporate lending in the third quarter of 2024 increased by Denar 1,963 million or by 0.9%.** The increased corporate lending is registered to clients in electricity supply (by 6.9%), food industry (by 3.3%), as well as construction and real estate (by 2.3%). The growth of corporate lending was registered amid net easing of credit standards, especially in terms of interest rate, as well as amid increased demand for loans[43]. Corporate landing noted an annual increase by 7.5%[44], which further strengthen compared to the past several quarters. The net easing of credit standards is expected to further strengthen in the fourth quarter of 2024, while the demand for loans will sharply increase.

[43] Source: Bank Lending Survey in the third quarter of 2024.
[44] Excluding the effect of net write-offs, the annual growth rate equaled 7.0%, which is above the ten-year average.

Analyzed by the size of non-financial companies[45], loans to large companies registered the highest share (36.0%), albeit slightly reduced compared to the previous quarter, while loans to micro-enterprises have the lowest[46] share (9.0%), which increased for fourth consecutive quarter. Observing clients' activity, the largest share was registered in corporate loans to the industry sector (33.9%) and wholesale and retail (26.3%), with a significant share of loans in construction (20.3%).

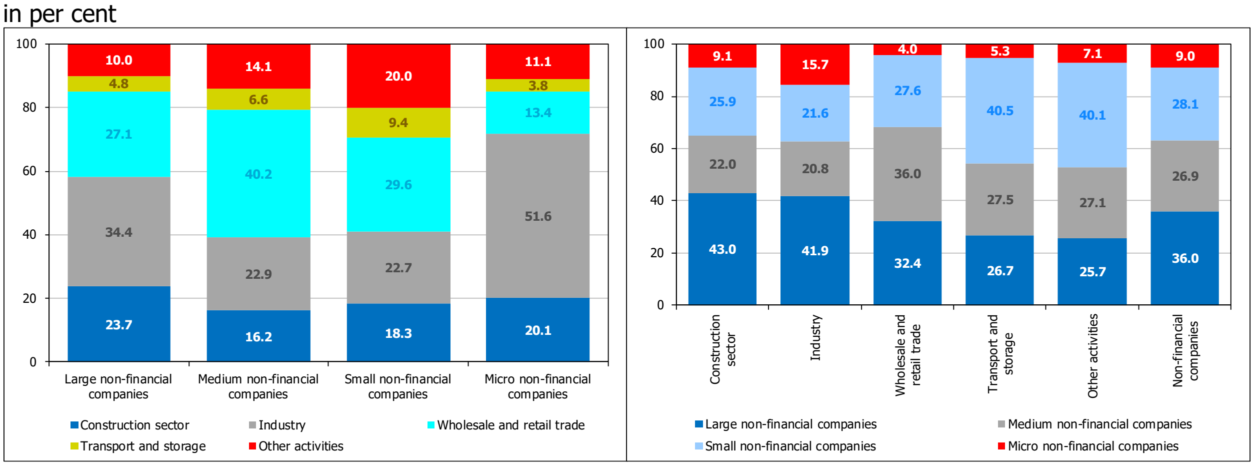
Chart 46
Ten-year moving average of annual growth rates of loans to non-financial corporations (left) and household loans (right)

in per cent    in per cent




Source: National Bank, based on the data submitted by banks.
* Note: Excluding the effect of all mandatory write-offs made in the period 1.1.2016 - 30.9.2024. Starting from December 2019, the data also contains collected compulsorily written-off loans.

Chart 47
Structure of loans to non-financial companies by individual activities and by size of the company
in per cent

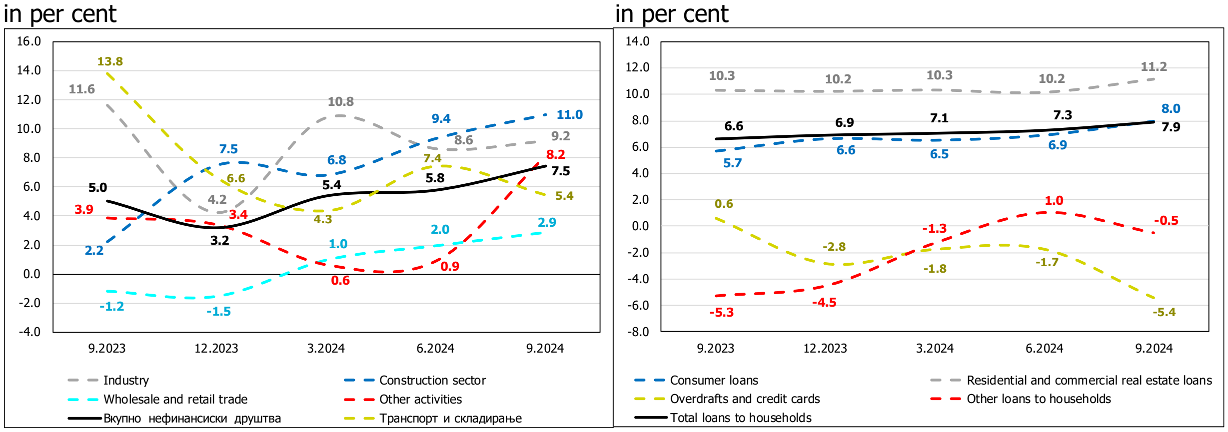



Source: National Bank's Credit Registry based on data submitted by banks.

[45] The criteria for Classification of entities by size (large, medium, small and micro) are defined in Article 470 of the Law on Trade Companies.
[46] Some of the reasons that banks are less prone to financing small and medium-sized enterprises are poor financial literacy, poor corporate reporting and unwillingness of enterprises to disclose and share business information. (see p. 5 in Macedonia 2025 (2020). *Barriers for access to finance for MSMEs in North Macedonia: Stock of existing data and knowledge*.)

**Household lending in the third quarter of 2024 grew by Denar 4,890 million or by 2.1%.** The growth was due to the higher loans for purchasing residential and commercial properties (by 2.7%), as well as the increased consumer loans (by 2.1%). Household loans increased annually by 7.9%[47]. These movements occur amid net easing of credit standards and significant increase in the demand for loans. The credit standards were eased in housing and consumer loans in terms of interest rates, while net easing of individual standards in housing loans were noted in terms of fees, collateral requirements and the coverage of loan with collateral. The fourth quarter of 2024 expects further net easing of the credit standards amid an increase of the demand for loans.[43]

Chart 48
Annual growth rate of corporate loans (left) and household loans (right)




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

Household loans have a slightly higher share in the total structure of loans with 51.6%, which is an increase by 0.4 percentage points compared to the previous quarter. In the structure of loans to natural persons, the largest share of 62.1% was registered in financing non-identified consumption (including consumer loans with a share of 54.0%), which slightly decreased at the expense of the increased share of loans for purchasing residential and commercial properties which equaled 37.7%.

**Analysis of the contribution to the growth by sector and credit product**

The interest rates of loans in different sectors and loans by individual credit product are a significant factor that determines the total growth rate of corporate and household loans, but they do not present a clear picture of the contribution to the growth of each sector or credit product due to differences in their shares in the structure of total loans. Hence, this analysis shows decomposition of quarterly growth rate of corporate loans by sector as well as quarterly growth rate of household loans by credit product.

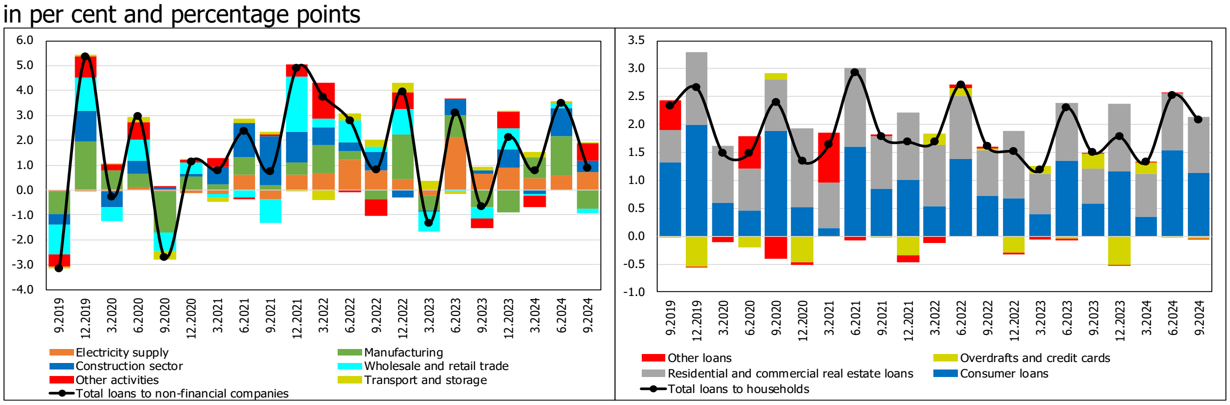
**The largest contribution to the quarterly growth of corporate loans in third quarter in 2024 was recorded in loans to clients in the energy sector.** As of 30.9.2024, the increase in loans to the energy sector contributed with 0.7 percentage points in total growth of corporate loans, with a significant contribution from loans in construction with 0.5 percentage

[47] Excluding the effect of net write-offs, the annual growth rate also equaled 7.9% and is below the then-year average.

points. On the other hand, the largest negative contribution of -0.7 percentage points was made by loans in manufacturing.

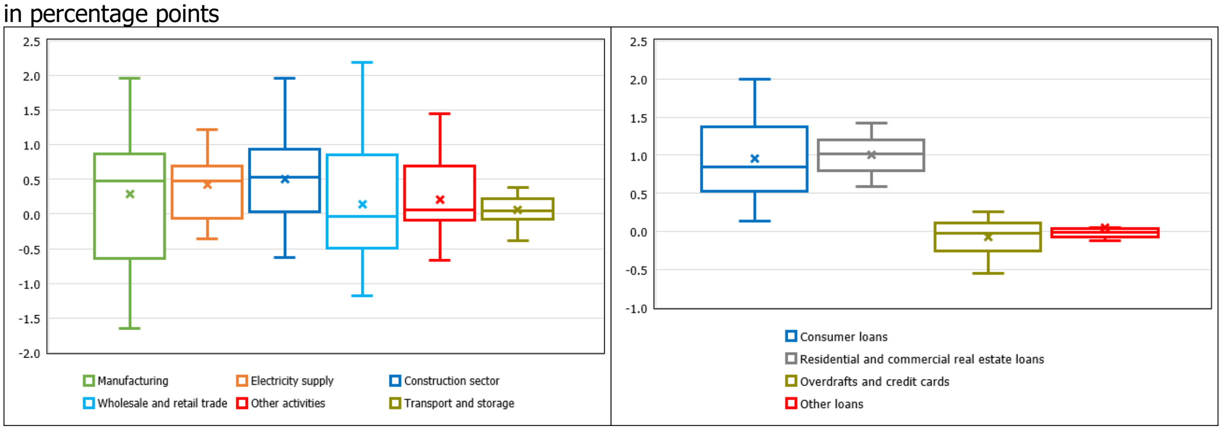
**The contribution of consumer loans and loans for purchasing residential and commercial properties in the quarterly growth of household loans in the third quarter of 2024 was almost equal.** As of 30.9.2024, the contribution of consumer loans amounted to 1.1 percentage points, while the contribution of loans for purchasing residential and commercial properties was 1.0 percentage points.

Chart 49
Growth structure of corporate loans by activity (left) and of household loans by credit products (right)
in per cent and percentage points




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

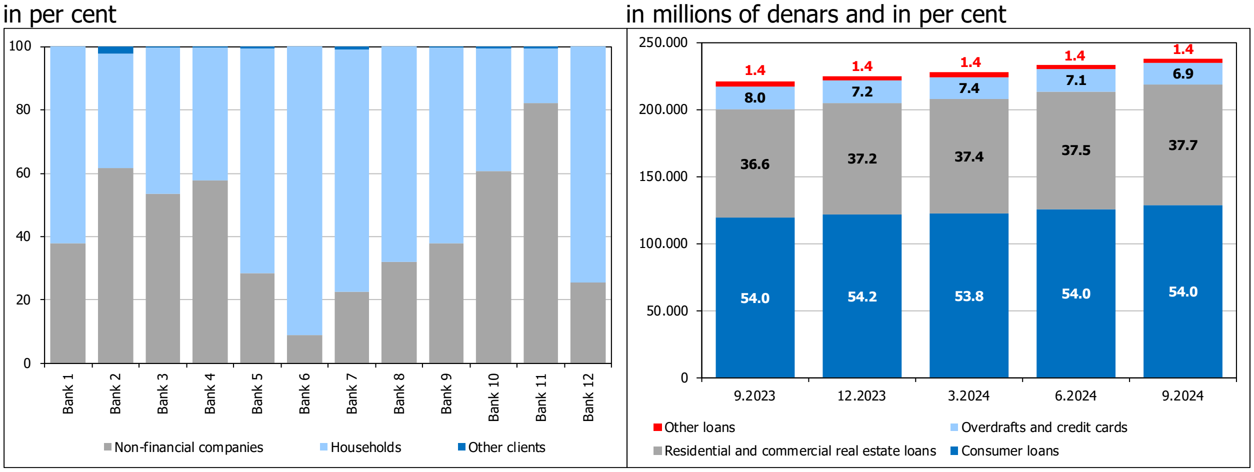
Chart 50
Layout of contributions to the growth of corporate loans by activity (left) and to the growth of household loans by credit products (right) in the past five-year period
in percentage points




Source: The National Bank and the National Bank's Credit Registry based on data submitted by banks.
Note The upper and lower line show the highest and the lowest value respectively, the middle line represents the median, while "x" stands for the mean value.

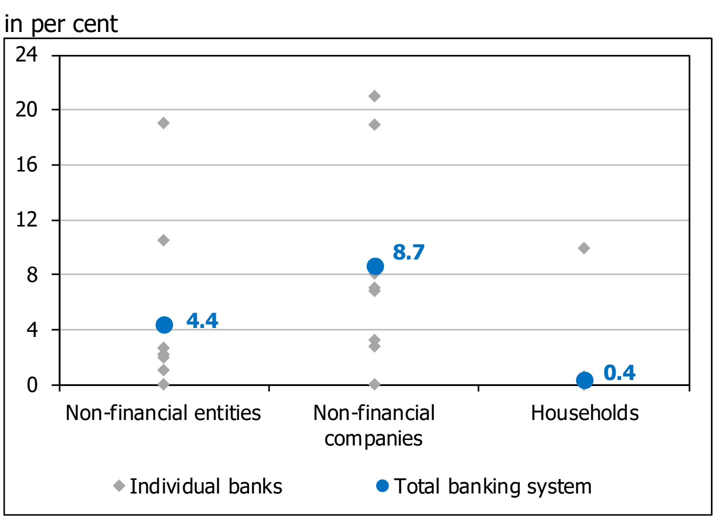
**The long-term analysis of the past five-year period shows that the increased lending to the construction sector made the highest average contribution to the quarterly growth of corporate loans.** In the period from the fourth quarter of 2019 to the third quarter of 2024, the average contribution to the growth of loans to the construction sector amounted to 0.5 percentage points, followed by loans to the energy sector (0.4 percentage points) and loans to manufacturing (0.3 percentage points). **Observing household loans, the average five-year contribution to the growth of consumer loans and loans for purchasing residential and commercial properties was equal and amounted to 1.0 percentage points each.**

Chart 51
Sectoral structure of loans to non-financial entities, by bank (left) and structure of loans to natural entities, by product (right)




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

Chart 52
Share of "green" loans in the total loans to non-financial entities and by individual sectors, by individual bank




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

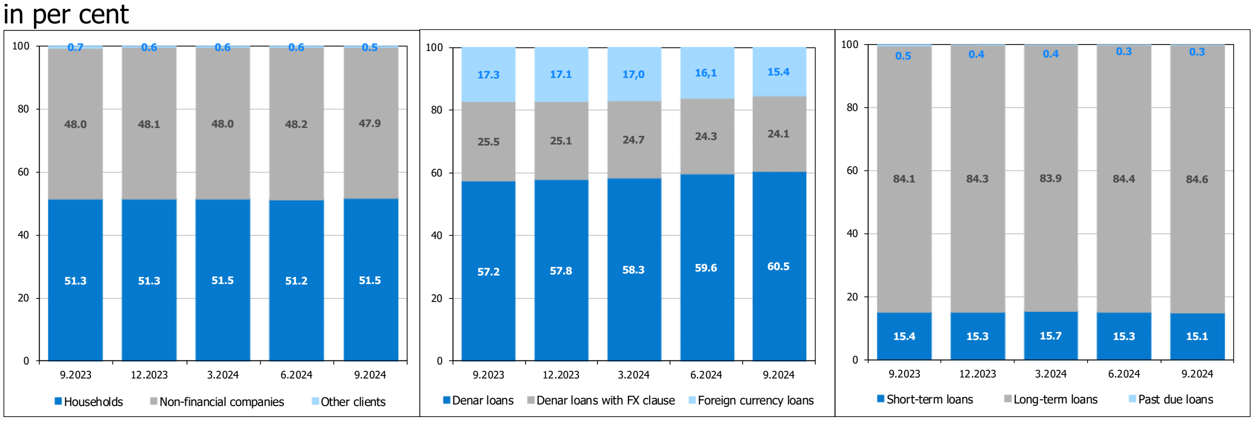
**The share of green loans[48] in total loans amounted to 4.4%, which is a slight decline compared to the previous quarter, with a double-digit share only in two**

[48] For the purpose of this report, green loans denote loans that are intended to improve the energy efficiency of the households and the corporate sector; loans for support of the investments in green technologies, materials and solutions; loans for support of investments

**banks.**[49] As of 30.9.2024, the total green loans to the non-financial sector decreased by Denar 74 million or by 0.4%. Analyzed by sector, green household loans declined by 2.1%, while corporate loans dropped by 0.3%.

**The currency structure analysis shows that denar loans grew quarterly in the third quarter of 2024, while loans with currency component declined.** Compared to the previous quarter, denar loans grew by Denar 8,211 million or by 3.0%[50], while loans with currency component dropped by Denar 1,558 million or by 0.8%[51]. Hence, the share of denar loans in total structure increased quarterly by 0.9 percentage points and reached 60.5%. Within loans with currency component, the share of denar loans with currency component is higher (24.1%) compared to foreign currency loans (15.4%).

Chart 53
Structure of total loans, by sector (left) and currency (middle), and structure of regular loans, by maturity (right)
in per cent




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

**Observing the maturity structure of loans**[52]**, both long-term and short-term loans grew in the third quarter of 2024, while past due loans declined.** Thus, long-term loans still dominate the total structure of loans with 84.6%.

in renewable energy sources, control and prevention of pollution, protection of the environment, mitigation of the risks from climate changes, etc.

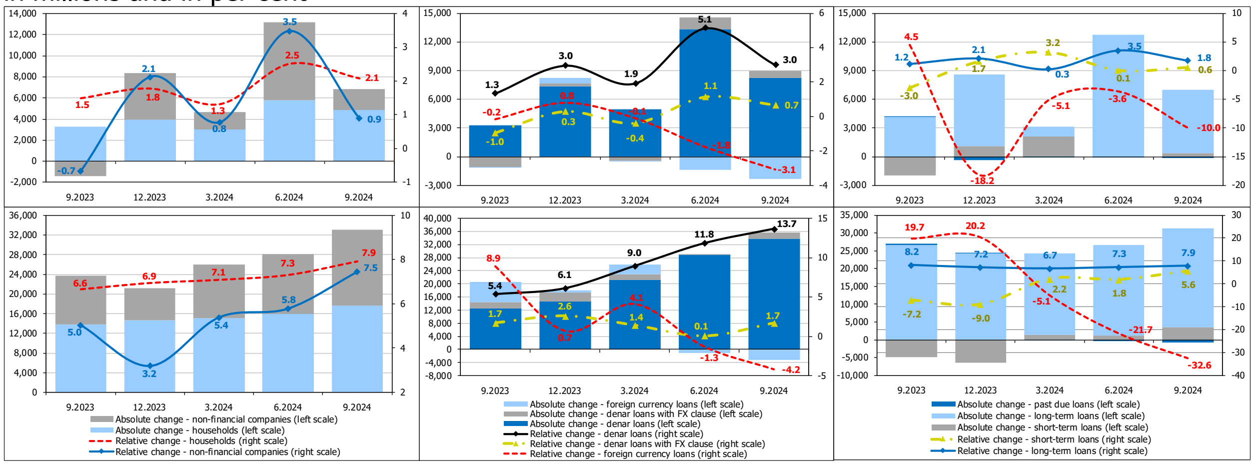
[49] Two out of twelve analyzed banks, as of 30.9.2024 have no green loans in their portfolios. In the banks that have approved such loans, the share of green loans in total loans ranges from 0.03% to 19.1%. Analyzed by sector, the share of green loans in total loans by individual banks is between 0.0001% and 21.0% in corporate loans, i.e. between 0.0% and 10.0% in household loans.

[50] The quarterly growth of denar loans to the non-financial sector is due to the increased corporate loans by Denar 5,510 million or by 3.8% and household loans by Denar 2,732 million or by 2.1%, while loans to other clients registered a decline by Denar 31 million or by 2.5%.

[51] The decline of loans with currency component to the non-financial sector on a quarterly basis is fully due to the reduced foreign currency loans by Denar 2,290 million or by 3.1%, while the decline is mitigated by the increase in denar loans with an FX clause by Denar 732 million or by 0.7%. The decline in foreign currency loans is mainly due to the lower corporate loans (by Denar 2,622 million or by 4.7%), with a contribution to the decline from reduced loans of other clients (by Denar 131 million or by 18.8%), while household loans grew (by Denar 464 million or by 2.6%). The higher denar loans with an FX clause were fully due to the increased household loans (by Denar 1,693 million or by 1.9%), while decrease was registered in corporate loans (by Denar 925 million or by 4.3%) and loans to other clients (by Denar 36 million or by 5.6%).

[52] The analysis of maturity structure excludes non-performing loans.

Chart 54
Quarterly (up) and annual (down) credit growth, by sector (left), currency (middle) and maturity (right)
in millions and in per cent




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

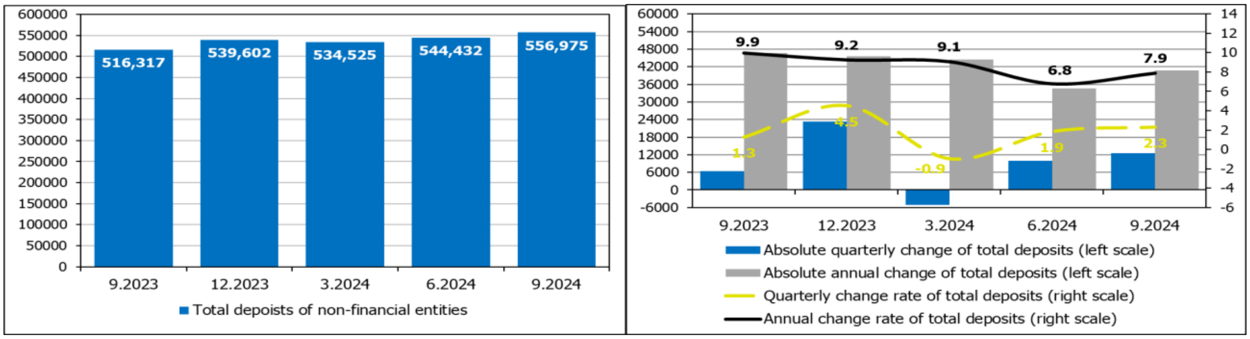
## 6.2. Deposits of non-financial companies

**In the third quarter of 2024, the growth of deposits of non-financial entities accelerated both quarterly and annually.** The quarterly growth in deposits of non-financial entities amounted to 2.3% or Denar 12,543 million (in the second quarter this growth amounted to 1.9%, or Denar 9,907 million), while the annual growth of these deposits, amounted to 7.9% or Denar 40,658 million (on the previous quarterly date, the annual growth amounted to 6.8% or Denar 34,606 million). Long-term savings continue to dominate the deposit growth, as do denar deposits, which is in line with the National Bank's measures to support denarization and long-term savings.

**Observed by sector, the growth of deposits in the third quarter of 2024, mostly resulted from the growth of household deposits, as major depositor in the Macedonian banking system** (with a share of 67.6% in total deposits). The quarterly growth of deposits from this sector, amounted to Denar 7,473 million or 2.0%, with the largest increase in long-term denar deposits (of Denar 5,531 million) and long-term foreign currency deposits (of Denar 4,863 million). At the same time, short-term denar deposits from this sector decreased (by Denar 1,082 million), as well as short term foreign currency deposits (by Denar 1,571 million), and total household demand deposits (Denar 269 million). Annually, household deposits increased by Denar 36,632 million or 10.8%, which is an accelerated growth, compared to 30.6.2024, when the annual growth equaled 8.5%.

Chart 55 Stock (left) and flow (right) of deposits of non-financial entities

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

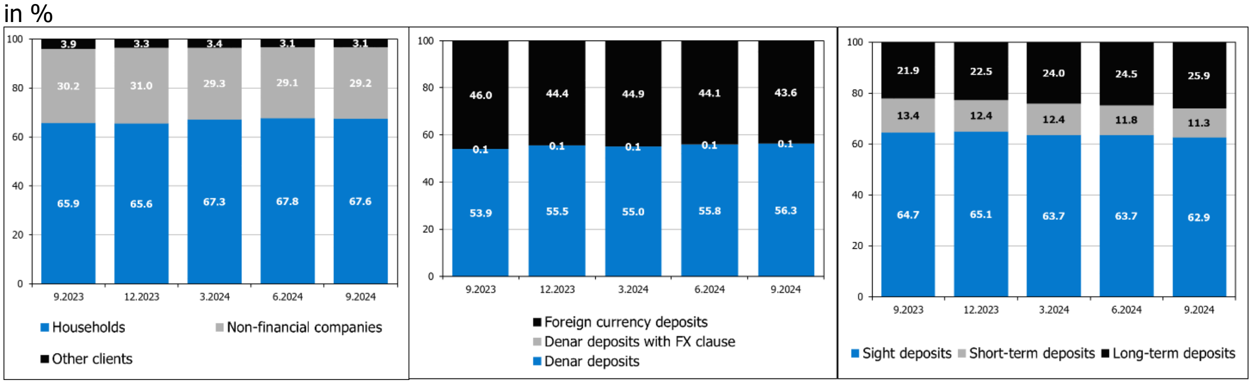



Source: National Bank, based on the data submitted by banks.

**Deposits of non-financial corporations increased both quarterly and annually.** Their quarterly growth accelerated (amounting to Denar 4,487 million or 2.8% compared to Denar 1,798 million or 1.1% in the previous quarter), while the annual growth slowed down (amounting to Denar 6,905 million or 4.4%, compared to 30.6.2024 when it amounted to Denar 8,117 million, or 5.4%).

Chart 56 Structure of total deposits, by sector (left), currency (middle) and maturity (right)

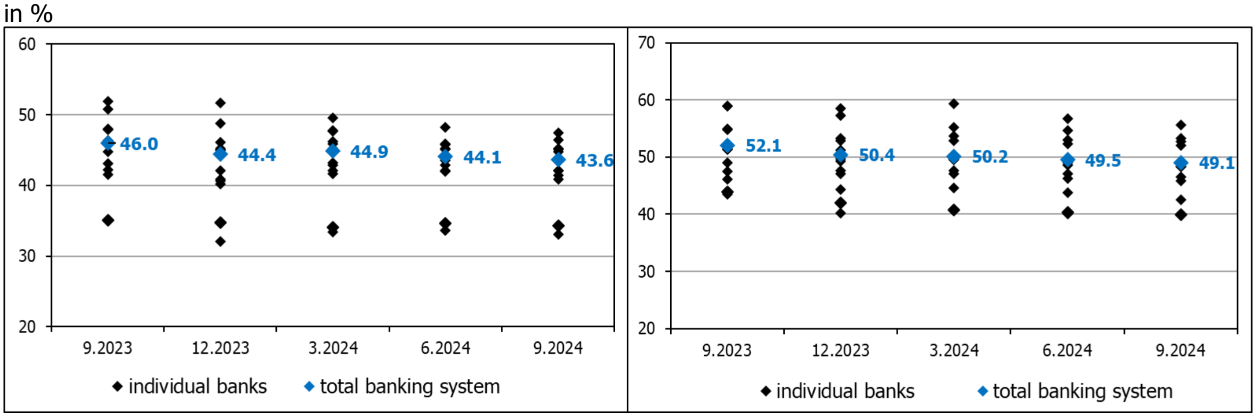
in %




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

Chart 57 Share of total foreign currency deposits in total deposits of the banking system (left) and of the foreign currency household deposits in total household deposits (right)

in %



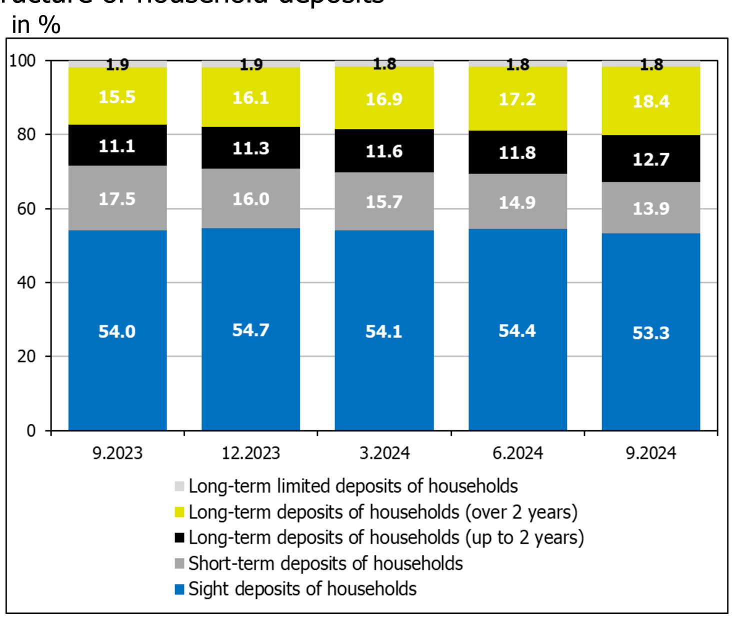

Source: National Bank, based on the data submitted by banks.

**Observing currency, the quarterly increase in total deposit of non-financial entities primarily resulted from the increase in denar deposits (which increased by Denar 9,383 million or 3.1%[53]), followed by the increase in foreign currency deposits (by Denar 3,159 million or 1.3%[54]).** Annually, denar deposits recorded an accelerated growth as well (of Denar 35,206 million or 12.7% compared to Denar 26,286 million or 9.5% as of 30.6.2024), which is significantly larger than the growth in foreign currency deposits (which increased by Denar 5,533 million or 2.3% compared to Denar 8,429 million or 3.6% as of 30.6.2024). Such movements led to certain changes in the currency structure of banks' deposit base, where the share of denar deposits dropped by 0.4 percentage points quarterly, at the expense of the decreased share of foreign currency deposits in total deposits.

**Observing currency, long-term deposits recorded an accelerated growth, both quarterly (Denar 10,507 million or 7.9%), and annually (of Denar 30,995 million or 27.4%) with the largest contribution to the growth of total deposits of banks (83.8% in the quarterly growth and 76.2% in the annual growth)[55].** Demand deposits also registered both, quarterly (Denar 3,440 million or 1.0%), and annual growth (Denar 15,927 million or 4.8%). On the other hand, short-term deposits have been decreasing. Given such movements, the share of long-term in total deposits increased to 25.9% as of 30.9.2024 (at the end of the second quarter, this share amounted to 24.5%).

In household savings, the share of long-term deposits also increased, by 2.1 percentage points in one quarter (from 30.8% as of 30.6.2024, to 32.9% as of 30.9.2024).

Chart 58 Maturity structure of household deposits



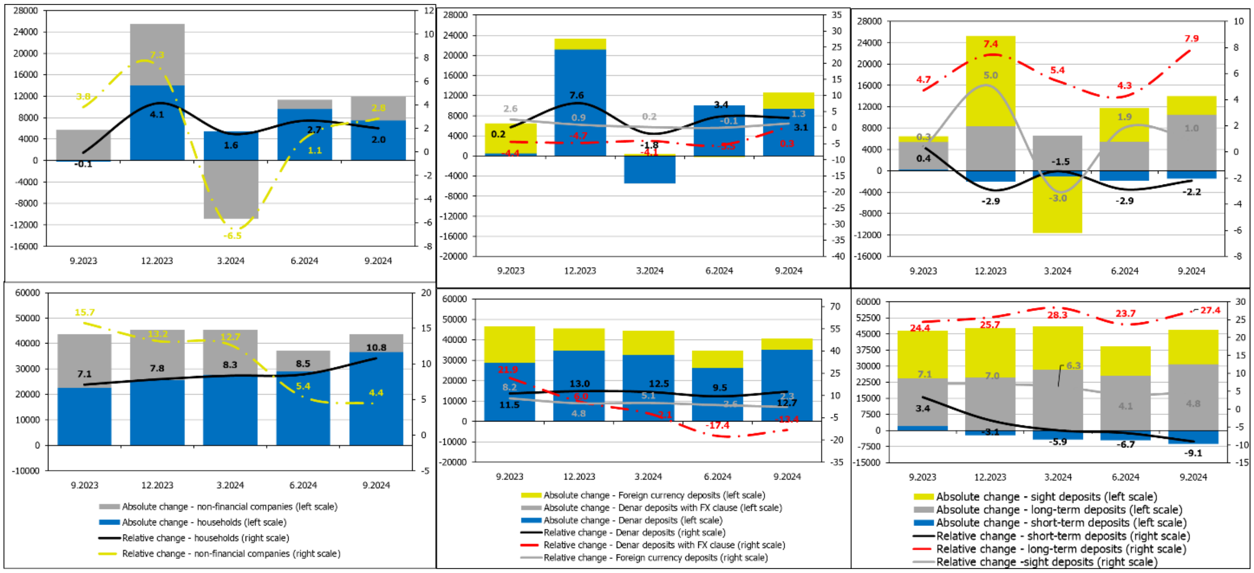

Source: National Bank, based on the data submitted by banks.

[53]Such increase was mostly a result of the increased denar deposits in the household sector (Denar 5,535 million or 3.0%), followed by the increase in denar deposits of non-financial corporations (Denar 3,716 million or 3.4%).

[54]The quarterly growth of foreign currency deposits was primarily conditioned by the increase in household foreign currency deposits (of Denar 1,938 million or 1.1%), followed by the growth of foreign currency deposits of non-financial companies (of Denar 770 million or 1.6%) and other clients (of Denar 451 million or 5.9%).

[55]As of 30.6.2024, the quarterly growth of long-term deposits amounted to Denar 5,459 million or 4.3%, while their annual growth as of 30.6.2024 amounted to Denar 25,586 million or 23.7%.

Chart 59 Quarterly (up) and annual (down) deposit growth by sector (left), currency (middle) and maturity (right)
in millions of denars and in %



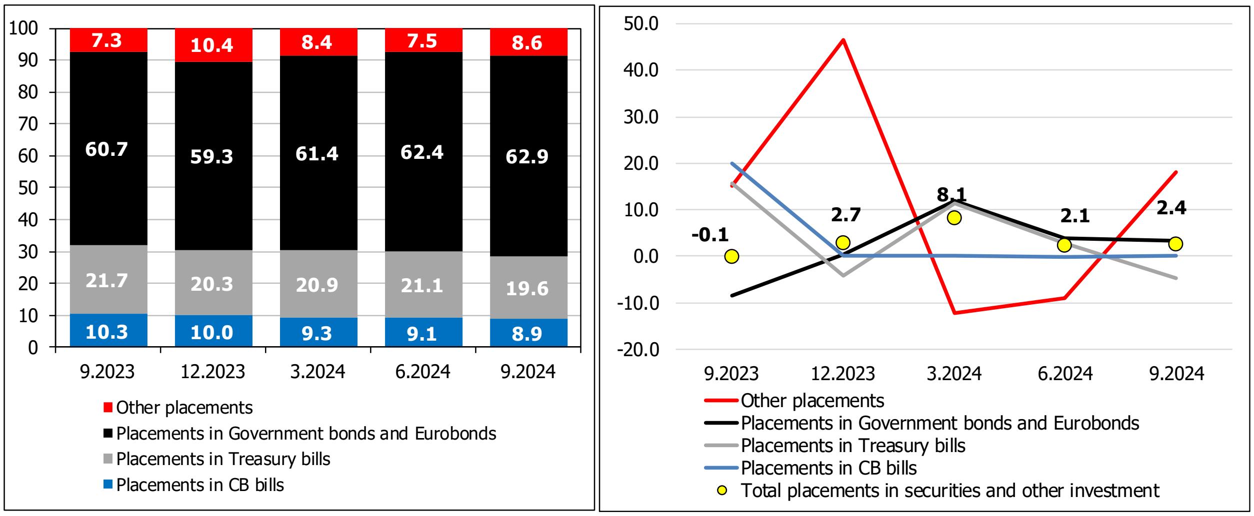

Source: National Bank, based on the data submitted by banks.

## 6.3. Other activities

**The banks' placements in securities, subsidiaries and associates[56] grew in the third quarter of 2024** by Denar 2,663 million (or 2.4%), but their share in total banks' assets remained unchanged (14.6%). The largest quarterly growth was registered in banks' investments in government bonds of Denar 2,258 million or 3.3%[57], followed by other investments of banks in securities, with an increase of Denar 1,476 million or 18%. Banks' placements in CB bills remained at a similar level as in the previous quarter, i.e. slightly increased by Denar 3 million[58]. On the other hand, the investments in domestic treasury bills dropped quarterly by 4.7% (Denar 1,074 million)[59]. On the grounds of such movements, the structure of investments in securities suffered no significant changes, with increased share in the dominating item, i.e. placements in domestic government bonds and Eurobonds of 62.9% (62.4% as of 30.6.2024), as well as increased share in other investments in securities at the level of 8.6% (7.5% as of 30.6.2024), and reduced share in investments in treasury bills at the level of 19.6% (21.1% as of 30.6.2024).

[56] The analyses of these investments are based on their net book value.
[57] In the third quarter of 2024 there were auctions of three-year and fifteen-year government bonds. After the last auction of 3-year government bonds at the end of the fourth quarter in 2023, the interest rate on these bonds dropped by 0.5 percentage points to the level of 3.95%. The interest rate on 15-year government bonds was unchanged compared to the last quarter, i.e. equaled 5.6%.
[58] At the CB bills auctions, held in the third quarter of 2024, the demand was slightly below the level of the offered amount at the first auction, while at the second auction the demand and supply were equal, when the interest rate dropped to 6.05%.
[59] In the third quarter of 2024, the interest rate on one-year treasury bills stood at 3.8%.

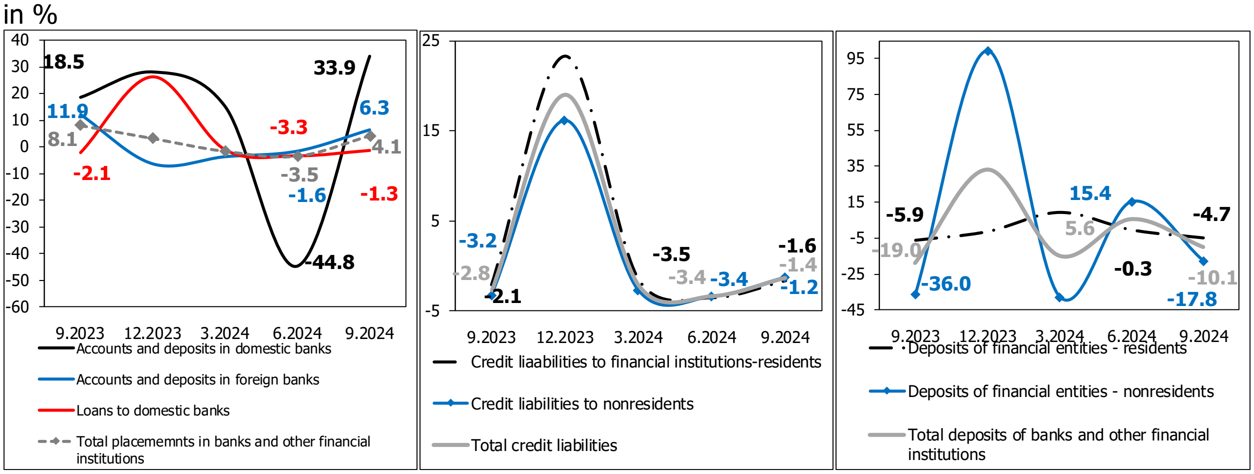
Chart 60
Structure (left) and quarterly change (right) of investments in securities, subsidiaries and associates
in %

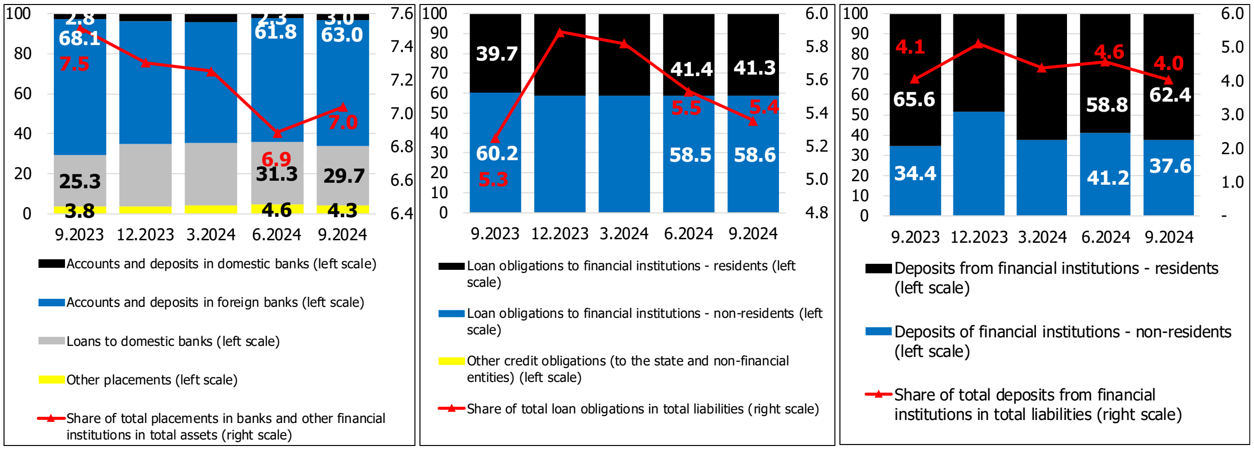



Source: National Bank, based on the data submitted by banks.

**Placements with banks and other financial institutions (account for 7% of the total assets of the banking system) in the third quarter of 2024 increased by Denar 2,146 million, or 4.1%.** This mostly resulted from the increase in assets on the accounts and deposits in foreign banks (by Denar 2,004 million). Quarterly growth (of Denar 406 million or 33.9%) was registered in assets on accounts and deposits with domestic banks, with a quarterly decline of 1.3% or Denar 211 million registered in loans to domestic banks due to loan repayment with DBNM. Such movements caused no significant structural changes in total placements with banks and other financial institutions, with enhanced share (of 63%) of assets on accounts and deposits with foreign banks.

Chart 61 Quarterly change (top) and structure (bottom) of the claims on financial institutions (left), loan liabilities (middle) and deposits of financial institutions (right)
in %



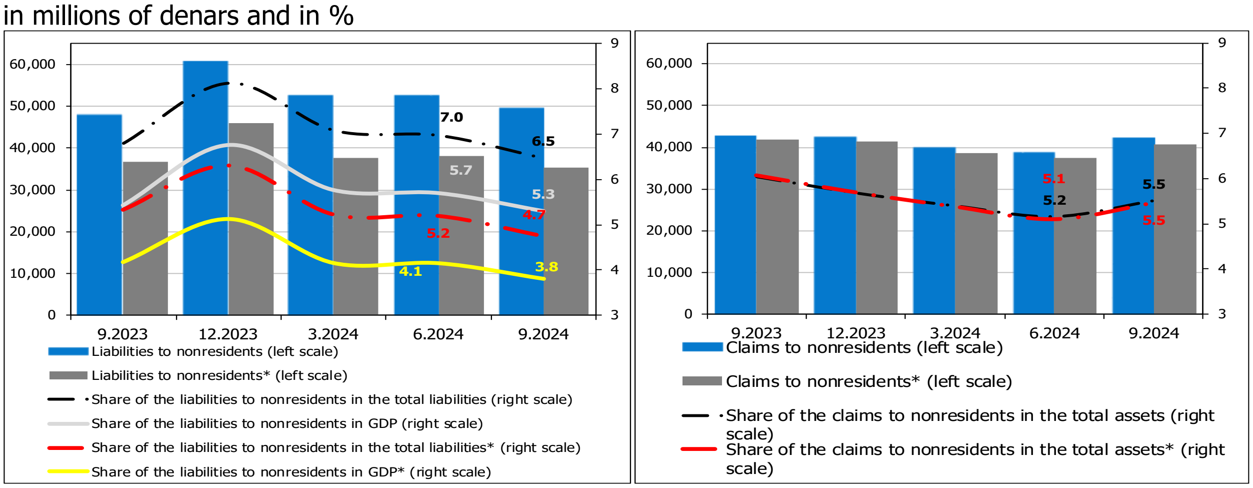



Source: National Bank, based on the data submitted by banks.

**Total loan-based liabilities of banks** (which account for 5.4% of total banking system liabilities) reduced quarterly by Denar 574 million, or 1.4%. The decline almost equally results from the reduced loan-based liabilities to non-resident financial institutions (which registered a quarterly decline of Denar 296 million or 1.2%, due to the decline in liabilities based on long-term loans to non-resident financial institution with one development bank) and reduced loan-based liabilities to -resident financial institutions (with a decline of Euro 277 million or 1.6%). Within the banks' total loan-based liabilities, **the liabilities to non-resident financial institutions prevail.**

**Deposits from banks and other financial institutions** are modest source of banks' financing, accounting for 4% of total liabilities of the banking system. These deposits declined quarterly (by Denar 3,462 million or 10.1%) which mostly results from the decline in deposits of non-resident financial institutions (of Denar 2,519 million, or 17.8%). Less pronounced decline of Denar 943 million or 4.7% was registered in deposits of resident financial institutions. Such movements made no significant change in the structure of total deposits of banks and other financial institutions. Thus, the largest share of 62.4% is still noted in deposits of resident financial institutions.

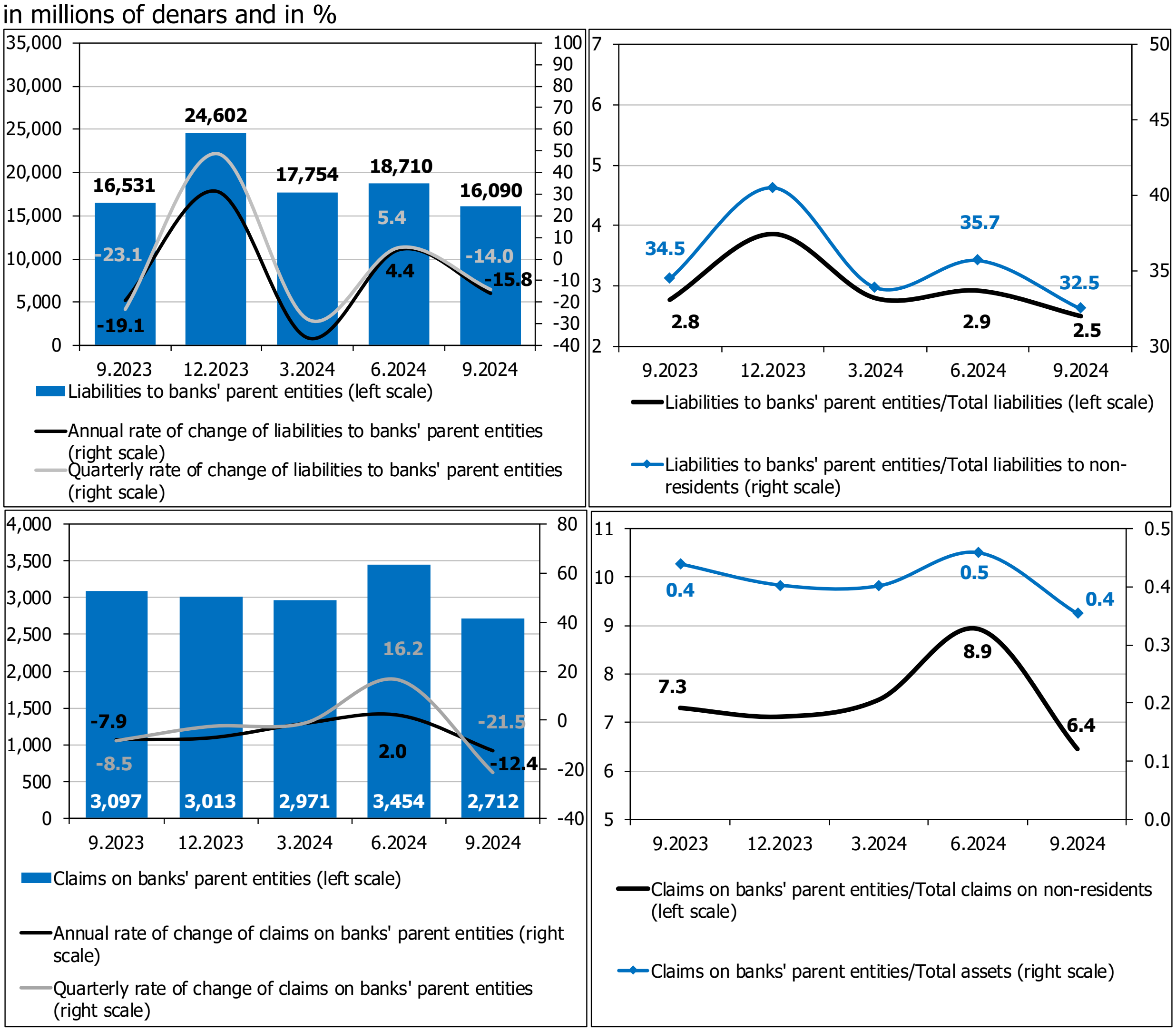
Chart 62 Liabilities to (left) and claims on (right) non-residents
in millions of denars and in %




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

**The volume of banking system activities with non-residents is small. Traditionally, the banking system has more liabilities[60] than claims on non-residents, amid increase in claims and decline in liabilities in the third quarter of 2024.** Domestic banks' liabilities to non-residents decreased quarterly (by Denar 2,891 million or 5.5%), mostly due to reduced liabilities based on short-term deposits of non-resident financial institutions (parent entity). Hence, the share of liabilities to non-residents in total banking system liabilities dropped by 0.5 percentage points to 6.5%[61] as of 30.9.2024. Banks' claims on non-residents went up quarterly by Denar 3,390 million, or 8.8%, mostly due to increased overnight deposits and deposits up to one month in foreign banks, as well as due to investments in foreign debt instruments.

Chart 63 Liabilities to (top) and claims on (bottom) banks' parent entities
in millions of denars and in %




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

**Liabilities to banks' parent entities declined quarterly, being no significant source of financing to domestic banks' activities.** In the third quarter of 2024, banks'

[60] As of 30.9.2024, seven of thirteen banks owe more than they claim on non-residents.
[61] If DBNM AD Skopje is excluded from the analysis, the share of liabilities to non-residents in total liabilities would be 4.7%.

liabilities to their parent entities decreased by Denar 2,620 million (or 14%), which was mostly due to the decrease in short-term deposits of parent entities (and their connected persons/entities) as well as the payment of a subordinated loan. Consequently, 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 2.5% and 32.5%[62], respectively. Claims on parent entities registered a quarterly decline of Denar 742 million or 21.5%, keeping the low share in total asset at the level of 0.4% (0.5% as of 3.6.2024) and claims on non-residents at 6.4% (8.9% as of 30.6.2024).

## 7. Profitability

**In the first nine months of 2024, the banking system profit continued to register a double-digit growth, yet at a significantly slower pace compared to the same period in the previous year. Amid growth in interest-bearing assets, despite the slightly narrowed interest rate spread, the higher financial result was conditioned by the increased net interest income, the growth of which was supported by the interest income from almost all sectors. The profit growth was driven by the higher capital gain from the sale of foreclosed assets, higher collections of previously written-off claims, as well as higher net income from commissions. Contribution to the growth was also made by lower impairment costs, due to the solid amount of collected claims in the analyzed period. The profitability and operational efficiency ratios of the banking system improved. Compared to September 2023, the total interest rate on loans, as well as the interest rate on loans with currency component slightly decreased, while the interest rate on denar loans increased. In the same period, the interest rates on deposits (both denar and foreign currency) went up.**

### 7.1 Banking system profitability and efficiency ratios

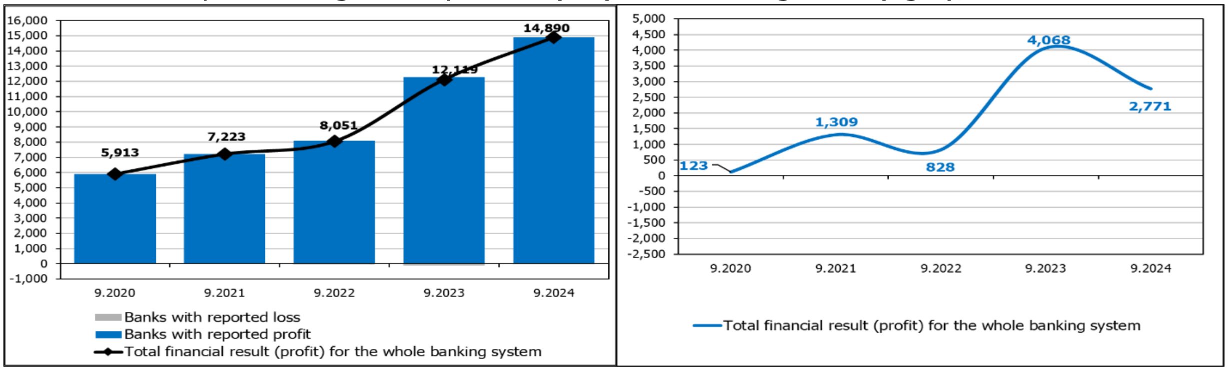
**In the first nine months of 2024, the banking system reported a profit of Denar 14,890 million, which is higher by 2,771 million, or 22.9%, compared to the same period last year. Despite the double-digit value, the growth rate of the return is halved compared to the same period in the previous year, when it amounted to 50.5% or Denar 4,068 million.** Higher profits result mostly from the higher net interest income (by Denar 2,707 million or 14.7%), with a certain contribution from the increase in other regular income (by Denar 616 million or 22.1%)[63], as well as from the net income from commissions (by Denar 329 million or 8.1%), and lower impairment costs which dropped by Denar 327 million, or 11.7%, compared to the same period in 2023. Against such movements, operating costs increased by Denar 1,254 million or 11.4%[64], which made negative contribution to the profit growth. Analyzed by bank, all banks reported positive financial operating result, except one small bank.

[62]As of 30.6.2024, these shares equaled 2.9% and 35.7%, respectively.

[63]The increase in other regular income results from higher capital gains from sales of assets of Denar 425 million or slightly more than 1.5 times and from higher collected previously written-off claims of Denar 134 million or 17.3%.

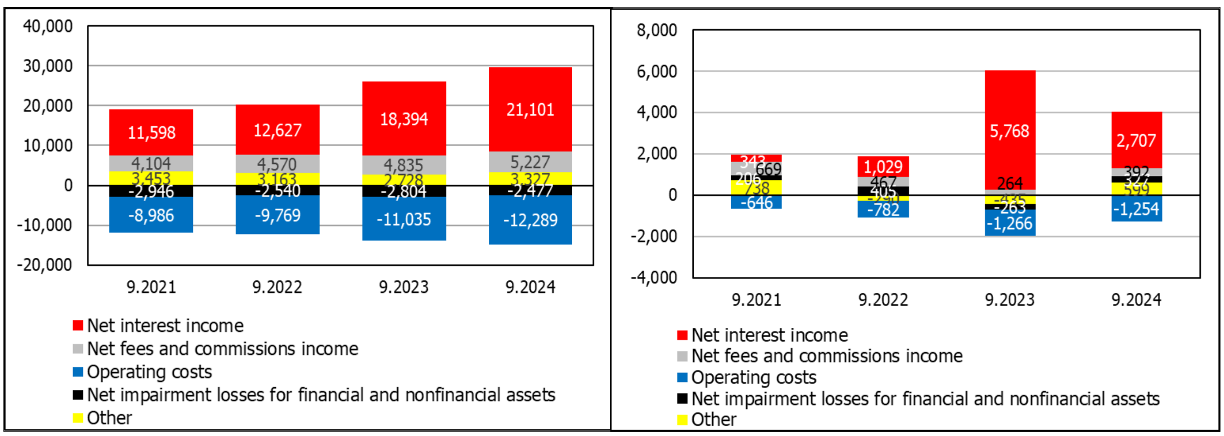
[64]The growth of operating costs results from the increase in employee costs (of Denar 506 million or 10.7%), services costs (of Denar 390 million or 13.4%), additional provisions for pensions and other employee benefits (of Denar 90 million or 58.6%), as well as the increase of other operating costs (of Denar 268 million or 8.3%).

Chart 64 Total profit recognized by banks (left) and annual growth (right), in millions of denars



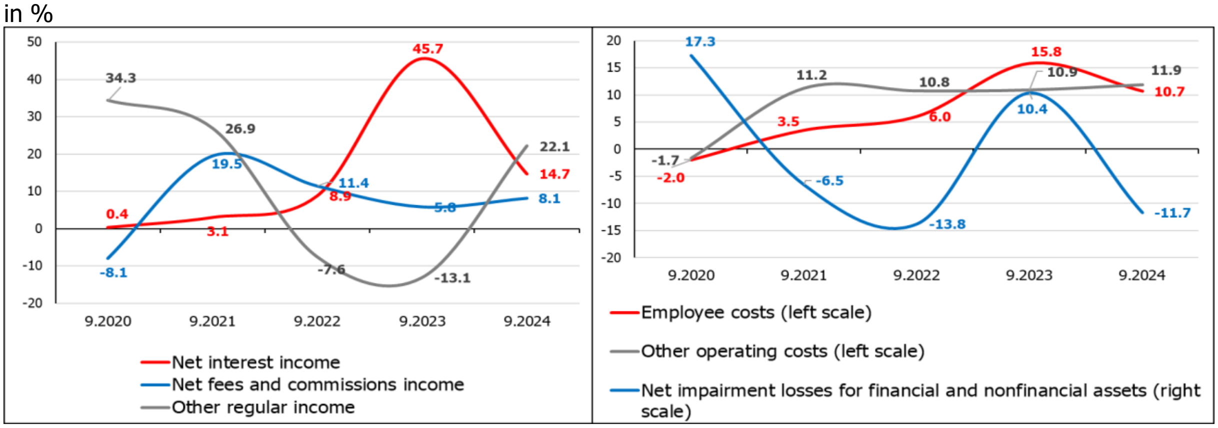

Source: National Bank, based on the data submitted by banks.

Chart 65 Contribution to the formation of profit (left) and to the profit growth (right) of banks in millions of denars




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

Chart 66 Annual growth rate of the main income (left) and expenditure items (right) of banks in %




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

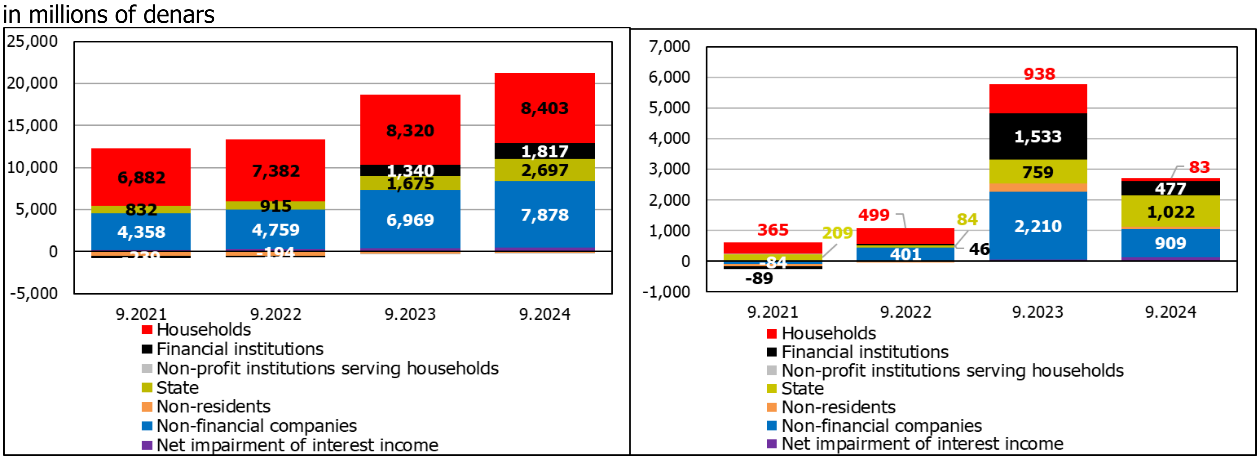
**In conditions of an increase in interest rates on deposits amid minor changes in interest rates on loans, interest expenses grew at twice the growth rate (by 43.6% or Denar 1,594 million) compared to the increase in interest income (of 19.5% or Denar 4,301 million, which is significantly slower compared to the same period of the**

**previous year when it amounted to 48.8%). This caused a significant slowdown in the increase of banks' net interest income, yet it remained double-digit.** Net interest income grew in almost all sectors. Despite the minor change in these nine months[65], the net interest income from the financial intermediation with households still makes the largest contribution to the formation of the total net interest income (39.8%), followed by non-financial companies which reduced their share by 0.6 percentage points to the level of 37.3% (37.9% as of 30.9.2023). The increase in net interest income from the corporate sector (of Denar 909 million or 13.0%) makes up 33.6% of the growth of total net interest income of banks. On the other hand, the largest contribution to the growth of banks' net interest income was made by the government sector (37.8%), the net interest income of which increased by Denar 1,022 million or 61.0%. Increase of Denar 477 million or 35.6% was registered in net interest income from financial institution.

Chart 67

Net interest income of the banking system by sector, structure (left) and contribution to the growth (right)

in millions of denars

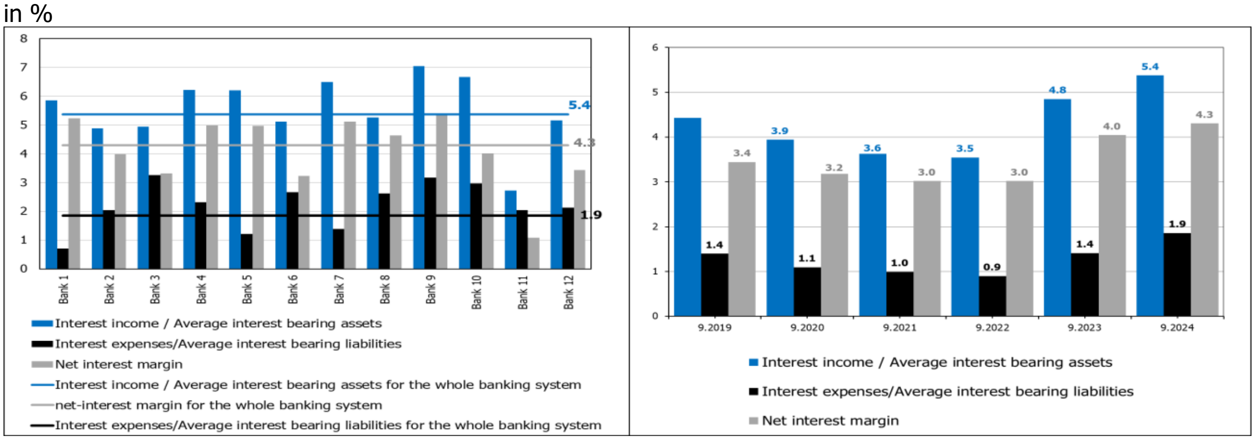



Source: National Bank, based on the data submitted by banks.

Chart 68

Net interest margin as of 30.9.2024, by bank (left)* and of the banking system (right)

in %




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

* Indicators of the banking system are shown in lines.

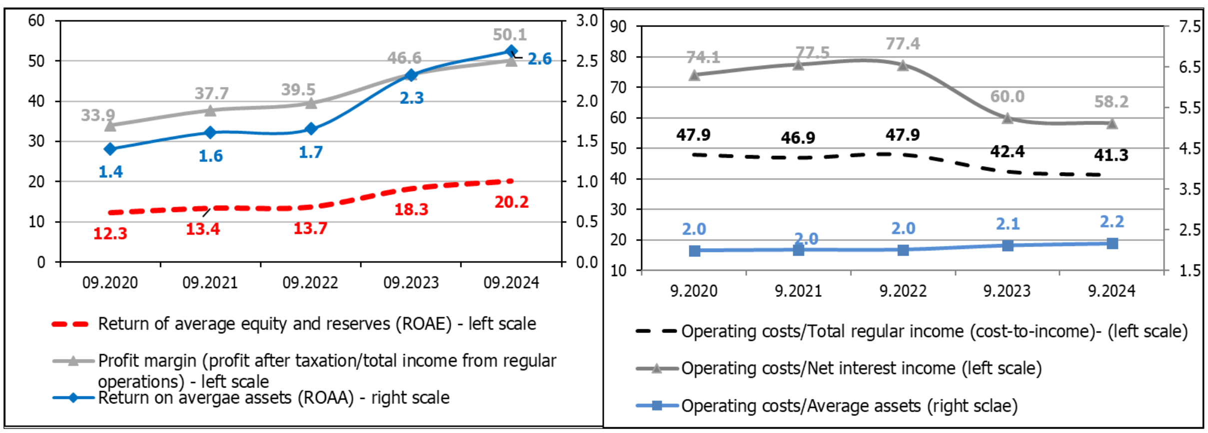
[65]The net interest income from the household sector in the first nine months of 2024 increased by Denar 83 million or 1.0%.

**The net interest margin further expanded.** Thus, at the end of September 2024, the net interest margin reached 4.3%, which is an increase of 0.3 percentage points compared to the same period of the previous year, which results from the more pronounced relative growth of net interest income (14.7%) compared to the growth of the average interest-bearing assets (7.8%)

**In the first nine months of 2024, the main profitability ratios[66] of the banking system improved.** The profit margin, the rate of return on average equity and average assets increased by 3.5, 1.9 and 0.3 percentage points, respectively.

Chart 69
Rates of return on average assets and on average equity and profit margin (left) and operational efficiency ratios (right)

in % in %

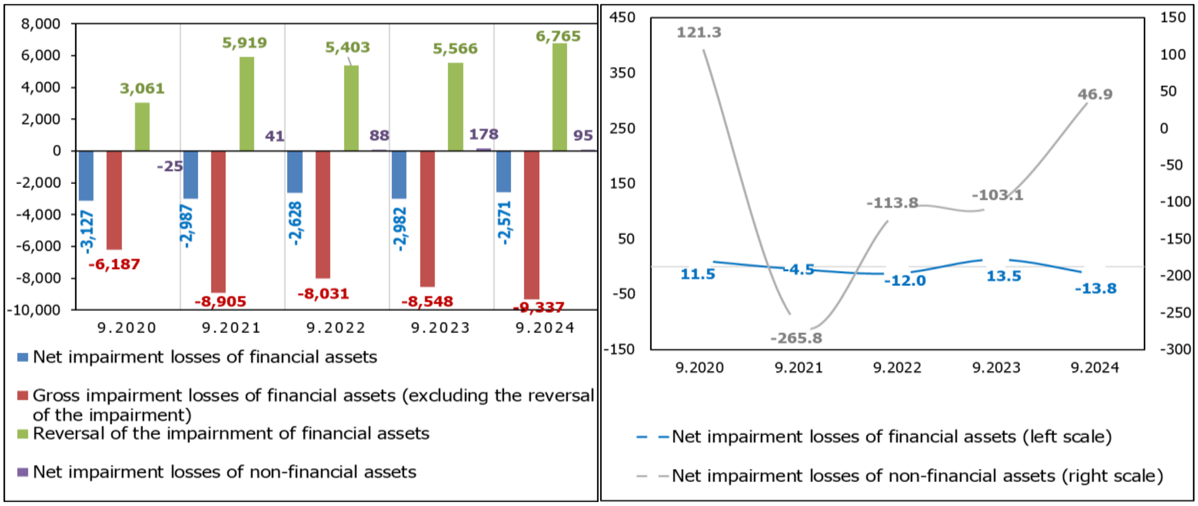



Source: National Bank, based on the data submitted by banks.

**The indicators of the banking system operating efficiency improved as well.** The operating costs to interest income ratio, as well as operating costs to total regular income ratio improved, by 1.8 and 1.1 percentage points, respectively, due to the faster growth of net interest income (14.7%) and total regular income (14.3%) compared to the increase in operating costs (11.4%). Operating costs to average assets ratio slightly increased (by 0.05 percentage points).

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

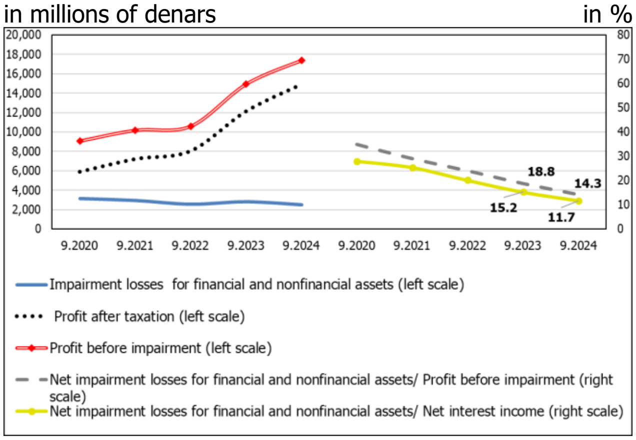
Chart 70
Impairment cost for financial and non-financial assets, stock (left) and annual flow (right)
in millions of denars and in %




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

**In the first nine months of 2024, net impairment costs for financial assets decreased, by Denar 411 million, or 13.8%.** These costs were decreased due to the release of impairment of loans and placements (increase of Denar 898 million, or 19.4%), due to collection of claims, amid increase in gross impairment costs of these assets (by Denar 725 million or 9.8%). The net impairment of non-financial assets is insignificant.

Chart 71
Impairment costs to gain and to net interest income ratios
in millions of denars in %




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

## 7.2. Movements in interest rates[67] and interest rate spread

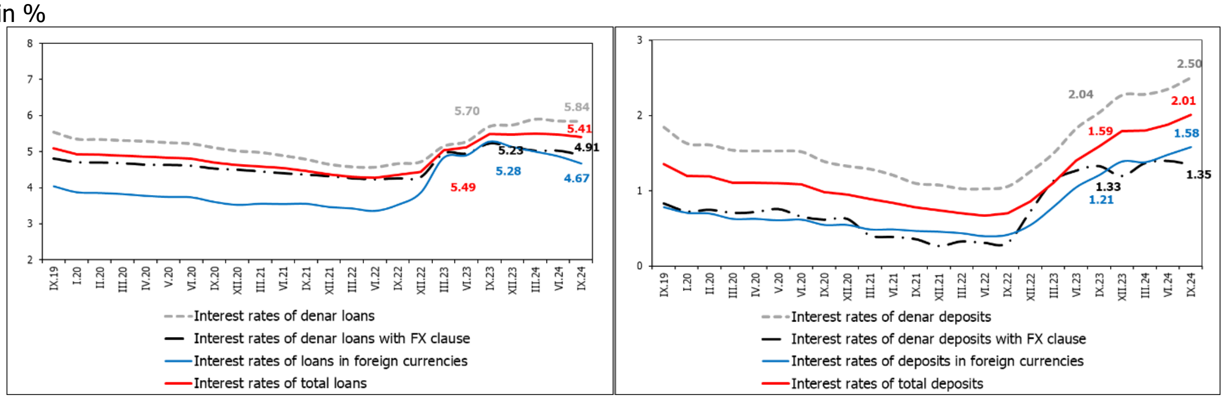
**The total interest rate on loans is lower** compared to the end of September last year (by 0.08 percentage points) and equals 5.41%. Interest rates on loans with currency component decreased (in foreign currency and with FX clause by 0.61 and 0.32 percentage points,

[67]Weighted interest rate analysis, of the appropriate amount of loans and deposits. The foreign currency positions include loans i.e. deposits in euros and US dollars.

respectively), while interest rates on denar loans grew (by 0.14 percentage points). On the other hand, the deposit interest rate further increased and in late September 2024 amounted to 2.01% (increase of 0.42 percentage points, compared to the same period in 2023). **The interest rates on deposits increased** on the basis of all currency features, on denar deposits (by 0.46 percentage points), on foreign currency deposits (by 0.37 percentage points) and on denar deposits with FX clause (by 0.02 percentage points). The higher growth of deposit interest rates, compared to the growth of lending interest rates, **narrowed the interest rate spread** (by 0.5 percentage points) which at the end of September 2024 amounted to 3.4 percentage points.

Chart 72 Lending (left) and deposit interest rates (right)

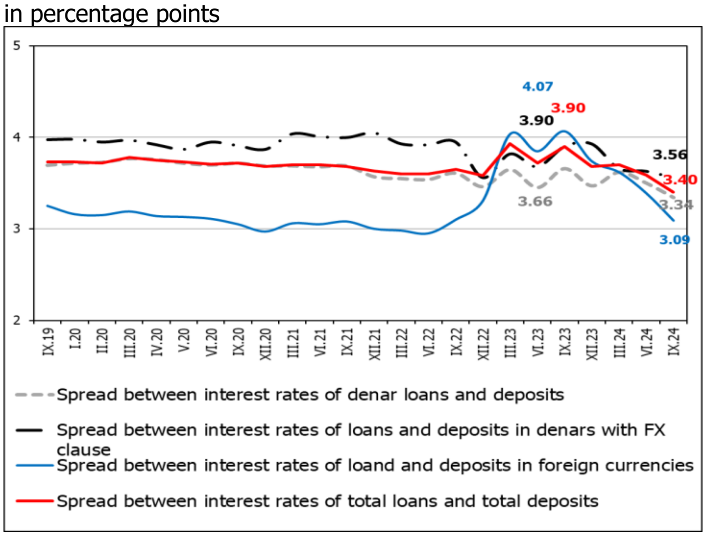
in %




Source: National Bank.

Chart 73 Interest spread

in percentage points




Source: National Bank.