National Bank of the Republic of Macedonia
Supervision, Banking Regulation and Financial Stability Sector
Financial Stability and Banking Regulations Department

REPORT ON THE RISKS IN THE BANKING SYSTEM OF THE REPUBLIC OF MACEDONIA IN THE THIRD QUARTER OF 2018

December 2018

Contents

Summary

The asset growth acceleration and the improved profitability of the banking system marked, to a large extent, the third quarter of 2018. In the third quarter of 2018, the assets of the banking system increased by 2.6% (1.5% in the second quarter of 2018), which contributed to acceleration of the assets' annual growth, reaching the level of 10.1% (versus 7.5% as of June 30 2018). Deposits from non-financial entities had the largest contribution to the quarterly increase in the sources of funds, with the contribution of the higher financial result and the deposits from financial institutions being also significant. On the assets side, half of the growth in the third quarter of 2018 accounts to loans to non-financial entities, while the remaining half accounts for the liquid assets. Deposits from non-financial entities registered slightly decelerated quarterly growth to a level of 2.1% on 30 September 2018 (2.5% in the second quarter of 2018), but this did not affect the annual change rate which reached a double-digit level of 10.9% (9% on 30 June 2018). The denar sight deposits of non-financial entities and denar and foreign currency demand deposits of households had the largest contribution to the quarterly growth of deposits of non-financial entities. Similar to the deposits, the loans of the non-financial entities decelerated the quarterly growth to the level of 2% (2.7% in the second quarter of 2018), but they increased the annual rate of change from 6.5% on June 30 2018, to 8.3% on 30 September 2018. The household loans, primarily denar loans, contributed the most to the quarterly growth of the total loans to non-financial entities.

The materialization of the credit risk, mirrored through the non-performing loans, decelerated in the third quarter of 2018, when the non-performing loans increased only by 0.5% (2.1% in the second quarter of 2018). The largest portion of the quarterly growth of the non-performing loans accounts to the increase in the non-performing consumer loans of households. The share of the non-performing loans in the total loans of the non-financial entities slightly improved to the level of 5%, which given the unchangeability of this ratio with households (2.4%), arouse from the portfolio of the non-financial corporations (7.7% as of 30 September 2018). The high coverage of the non-performing loans with impairment endured in the third quarter of 2018 as well (79.2%), which in conditions of satisfactory scope and quality of its own funds, limits the adverse effects the uncollectability of these loans may have on the banks' solvency.

The liquidity indicators of the banking system improved, in conditions of solid quarterly growth of banks' liquid assets (in the third quarter of 2018 they increased by 4.5%, while in the second quarter by 1.3%), which explained half of the banks' total quarterly growth of the assets of the banking system. The liquid assets remain to make up roughly one third of the banks' total assets, covering more than half of the short-term liabilities and nearly 60% of the total household deposits. Positive trends in the deposit base of the banking system provide stable sources for financing the credit growth, which is better seen by the movements of the loan to total deposit ratio, which aggregately moves around 87%.

The profits of the banking system earned in the first nine months of 2018 was significantly (by 66.2%) higher compared to the profit registered in the same period in 2017. Thus, ROAA and ROAE reached solid levels of 2.2% and 19.5%, respectively. The main generator of the improved profitability included lower costs for impairment that reflected the banks' activities for collection of non-performing loans, primarily in the first two quarters of 2018. In addition, in the same period the realized capital gain from the sale of a capital investment in another financial institution, as well as the intensified sale of previously foreclosed property, had a positive impact on the higher

profitability. The banking system of the Republic of Macedonia has been improving its operating efficiency for several years now, evident through the downward trend of the cot-to-income ratio (in the periods from 30 September 2017 until 30 September 2018, this indicator registers a decrease from 50% to 45.7%).

The banking system solvency indicators registered slight decrease, but still remaining solid. The new issue of shares with one bank contributed most to the quarterly growth of capital positions, which significantly slowed down in the third quarter of 2018, given the absence of significant reinvestments of gains in banks' capital, which are characteristic for the first half of the year. The capital adequacy ratio of the banking system equals 16.5% (16.3% as of 30 September 2018), while the ratio between the most quality layer of the banking system’s own funds (common equity Tier 1 capital) and risk weighted assets equals 15.0% (14.9% at the end of 2017). Aggregately, the banking system still has “free” capital which exceeds regulatory[1] and supervisory requirement of 7.5% of the total own funds.

The direct exposures of the banking system to currency risk and interest rate risk in the banking book are still small and account for 8.4% and 5%, respectively, in the total own funds. The indirect exposure to these risks, which arises from the presence of loans with currency component and loans with adjustable and variable interest rates in the banks' portfolios is substantial, though decreasing in the last periods.

[1] Including capital buffers.

Structure of the banking system

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

On 30 September 2018, there are 15 banks operating in the Republic of Macedonia, which is the same number as in the previous quarter. Also, the number of banks that are predominantly in foreign ownership (eleven banks), and the number of subsidiaries of foreign banks (six) is unchanged.

Table 1
Structure of major balance sheet positions, by banks' majority ownership (as of 30 September 2018)
in millions of denars and in %

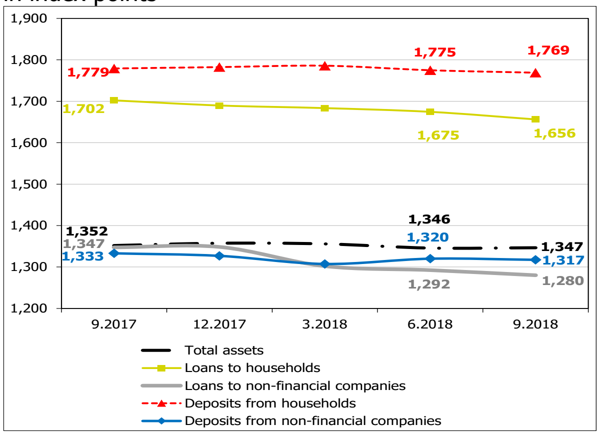
Type of ownership	No. of banks	Capital and reserves		Assets		Loans to non-financial sector		Deposits from non-financial sector		Total revenues*		Financial result*	
		Amount	In %	Amount	In %	Amount	In %	Amount	In %	Amount	In %	Amount	In %
Banks in dominant ownership of foreign shareholders	**11**	**38,768**	**71.4%**	**345,187**	**71.1%**	**246,974**	**79.9%**	**247,956**	**70.0%**	**18,166**	**73.3%**	**6,950**	**72.4%**
- subsidiaries of foreign banks	*6*	*33,415*	*61.5%*	*279,676*	*57.6%*	*201,045*	*65.0%*	*204,192*	*57.6%*	*15,209*	*61.4%*	*6,621*	*69.0%*
- Austria	1	2,262	4.2%	19,733	4.1%	14,356	4.6%	12,854	3.6%	1,003	4.0%	157	1.6%
- Bulgaria	1	1,201	2.2%	9,054	1.9%	6,188	2.0%	6,704	1.9%	357	1.4%	9	0.1%
- Greece	1	11,456	21.1%	89,936	18.5%	65,588	21.2%	72,061	20.3%	5,368	21.7%	2,753	28.7%
- Slovenia	1	8,975	16.5%	77,312	15.9%	53,533	17.3%	61,359	17.3%	4,813	19.4%	2,490	25.9%
- Turkey	1	5,806	10.7%	45,618	9.4%	32,447	10.5%	26,857	7.6%	1,939	7.8%	538	5.6%
- France	1	3,714	6.8%	38,023	7.8%	28,933	9.4%	24,357	6.9%	1,729	7.0%	674	7.0%
- other banks in dominant foreign ownership	*5*	*5,352*	*9.9%*	*65,510*	*13.5%*	*45,929*	*14.9%*	*43,764*	*12.3%*	*2,956*	*11.9%*	*329*	*3.4%*
- Bulgaria	2	1,984	3.7%	21,956	4.5%	15,449	5.0%	15,044	4.2%	1,046	4.2%	151	1.6%
- Germany	1	2,545	4.7%	26,574	5.5%	19,123	6.2%	15,735	4.4%	990	4.0%	228	2.4%
- Switzerland	2	824	1.5%	16,980	3.5%	11,357	3.7%	12,985	3.7%	920	3.7%	-49	-0.5%
Banks in dominant ownership of domestic shareholders	**4**	**15,529**	**28.6%**	**140,099**	**28.9%**	**62,139**	**20.1%**	**106,455**	**30.0%**	**6,608**	**26.7%**	**2,652**	**27.6%**
- private ownership	*3*	*12,974*	*23.9%*	*129,425*	*26.7%*	*62,087*	*20.1%*	*106,455*	*30.0%*	*6,476*	*26.1%*	*2,603*	*27.1%*
- state ownership	*1*	*2,555*	*4.7%*	*10,674*	*2.2%*	*53*	*0.0%*	*0*	*0.0%*	*132*	*0.5%*	*49*	*0.5%*
Total:	**15**	**54,296**	**100.0%**	**485,285**	**100.0%**	**309,113**	**100.0%**	**354,410**	**100.0%**	**24,773**	**100.0%**	**9,602**	**100.0%**

Source: NBRM, based on data submitted by banks.
*Total income and financial result are calculated for the last twelve months (30 September 2017 - 30 September 2018).

In the third quarter of 2018, the banks that are predominantly in foreign ownership solidified their dominant share in assets, lending activity and total income. On the other hand, the share of predominantly foreign-owned banks in both the financial result and the non-financial sector' deposits registered a decrease of 2.2 and 0.2 percentage points, respectively. However, their share in the lending activity remains the highest (79.9%).

The downward trend of concentration in the banking system measured according

Chart 1
Herfindahl index
in index points



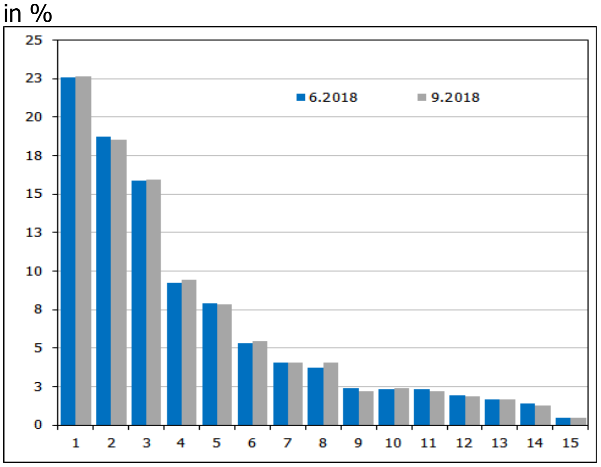
Source: NBRM, based on data submitted by banks.

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

Position	30.09.2018		30.06.2018	
	CR3	CR5	CR3	CR5
Total assets	57.1	74.4	57.2	74.3
Loans to households	60.4	77.8	60.9	78.3
Loans to non-financial companies	49.5	71.5	50.3	72.0
Deposits from households	69.6	79.8	69.8	79.9
Deposits from non-financial companies	50.7	75.8	50.2	76.9
Financial result*	80.1	92.7	79.0	91.0
Total revenues*	63.0	77.8	63.5	78.1

Source: NBRM, based on data submitted by banks.
*Total income and financial result are calculated for the last twelve months (30 September 2017 - 30 September 2018).

Chart 2 Shares of individual banks in the total assets of the banking system
in %



Source: NBRM, based on data submitted by banks.

to the Herfindahl index[2] continued in the third quarter of 2018, with the exception of the total assets, where the index value increased minimally (only for one index point). The largest decrease, out of other analyzed categories of activities, was registered with loans, which is more pronounced with household loans than to non-financial companies. As of 30 September 2018, all Herfindahl index values are within the acceptable values.[3].

On a quarterly basis, the indicators of the share of the three and the five largest banks in the banking system in individual activity categories, confirm the downward trend of concentration. The exception is concentration measured by the financial result. The share of the financial result of the three (Indicator CR3) and the five (Indicator CR5) largest banks, on a quarterly basis, increased by 1.1 and 1.6 percentage points, respectively. Also, the participation of the three largest banks (CR3) in the total deposits of non-financial companies, which was quarterly increased by 0.5 percentage points, is also slightly higher.

The difference in the volume of individual banks' assets is still high, with the spread between the bank with the highest share (22.7%) and the bank with the lowest share (0.5%) being increased by 0.1 percentage point, thus equaling 22.2 percentage points. The market share in the total assets of the three largest banks in the system decreased to 57.1%, while the share of the five banks was almost unchanged compared to the previous quarter (74.4%). Two banks from the group of medium-size banks and three major banks registered slight upward changes in the total assets, while the nine smallest banks, which together account for one-fifth of the total assets, register lower share in the total assets by 0.2 percentage points.

[2] 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.
When the index ranges from 1,000 to 1,800 points, the concentration ratio is considered acceptable.

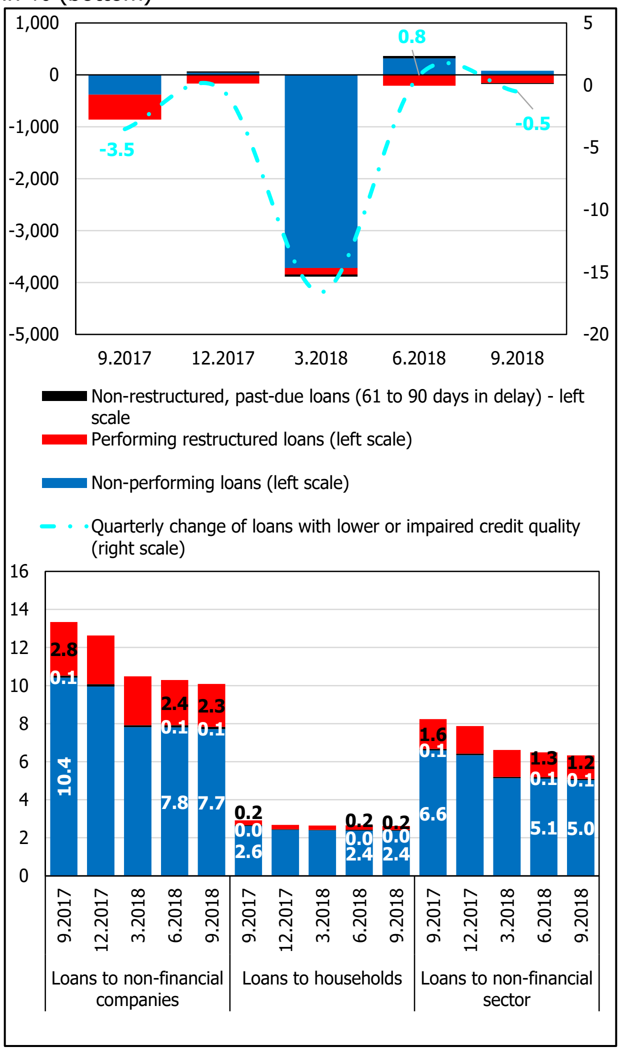
Bank risks

1. Credit risk

In the third quarter of 2018, the growth of non-performing loans slowed down significantly, whereby the share of these loans in total loans to the non-financial sector hit a record low of 5%. The households' non-performing loans, although slower compared to the previous quarter, increased, mainly due to the increase in non-performing consumer loans, with the simultaneous decline in non-performing housing loans. In the portfolio of non-financial companies, the total non-performing loans are almost unchanged, mostly due to the write-off of a larger non-performing loan, given simultaneous rise in the non-performing loans to construction and wholesale and retail trade customers. Regular loans with lower credit quality, i.e. regular restructured loans and arrears where the payment delay ranges between 61 and 90 days (still having regular, functional status), registered a quarterly decline and minimized their share in total loans, to the level of 1.3%. The non-performing loans write-off contributed the most to the reduction of these loans in the banks' balance sheets. The high provisioning of the non-performing loans (79.2% of the total non-performing portfolio, which is full for a good part of the non-performing portfolio), facilitates the managing of non-performing claims and restricts the adverse effects on the banks' capital positions.

In the household sector, in conditions of double-digit annual growth rates, the credit-to-GDP ratio is relatively close to the long-term trend, i.e. it is only 0.6 percentage points lower. In the case of lending to households, several features are combined and can be potentially a future source of credit risk materialization: long maturities and increasingly frequent prolongation of the maturities, presence of currency clauses in credit agreements, application of variable and adjustable interest rates, granting loans with uncertain or any collateral. The credit growth of non-financial corporations significantly lags behind households and has more pronounced volatility. The corporate sector's demand for loans is relatively low, reflected through the continuously poor liquidity and efficiency indicators of the domestic corporate sector and the lack of quality projects that would attract adequate credit support from the banks.

Chart 3
Non-performing loans and regular loans to non-financial entities with lower credit quality*, annual growth (top) and share in total loans to non-financial entities (bottom)
in millions of denars (top) in percentage (bottom)
in % (bottom)



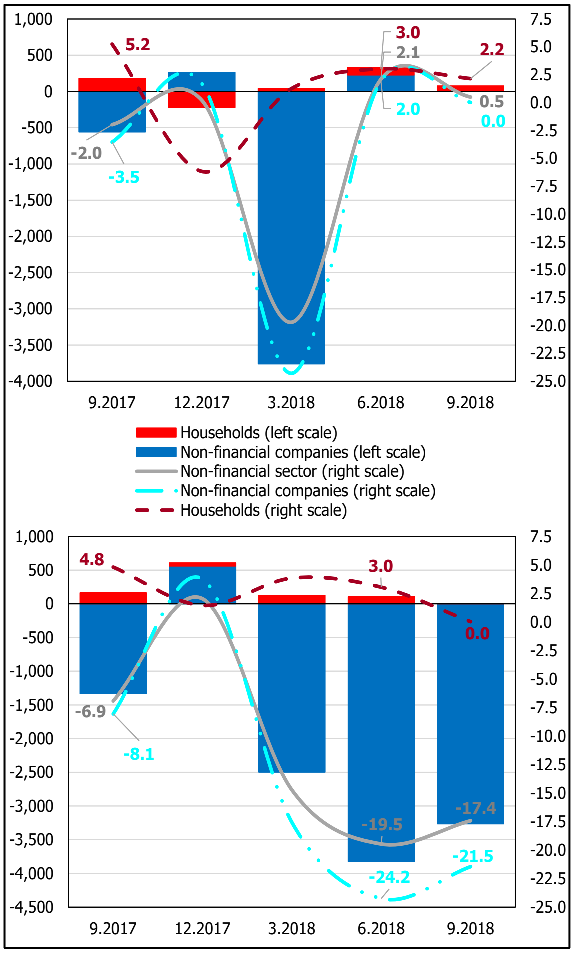
Source: NBRM, based on the data submitted by banks.
*For the purposes of this analysis, regular loans with reduced credit quality are considered as regular restructured loans and regular unstructured loans where the payment delay ranges between 61 and 90 days.

1.1 Materialization of credit risk in banks' balance sheets

In the third quarter of 2018, total non-performing loans to non-financial entities increased by 0.5% (78 million denars), which is slower by four times compared to the growth recorded in the previous quarter of the year. Analyzed by individual credit sub-portfolios, non-performing loans registered divergent movements. Although slower than the previous quarter, non-performing loan portfolio comprised by households increased by 2.2% or by Denar 75 million, largely due to the increase in consumer loans (Denar 87 million or 4.3%[4]). At the same time, the non-performing housing loans decreased in the third quarter of 2018, by Denar 23 million (or 4.7%).[5]. After growth recorded in the second quarter of 2018, non-performing loans of the non-financial corporations were almost unchanged in the third quarter of 2018 (they increased by minor Denar 2 million). Analyzed by activity, the highest quarterly growth of Denar 206 million, or 9.4% was registered by non-performing loans to construction and real estate clients, followed by non-performing loans to wholesale and retail customers, which increased by Denar 115 million, or by 3%[6]. In contrast, in the third quarter of 2018, non-performing loans to customers in the processing industry for the production of metals, machinery, tools and equipment decreased by Denar 323 million, or by 67.7%[7], mostly as a result of the write-off of a loan of an enterprise in bankruptcy.

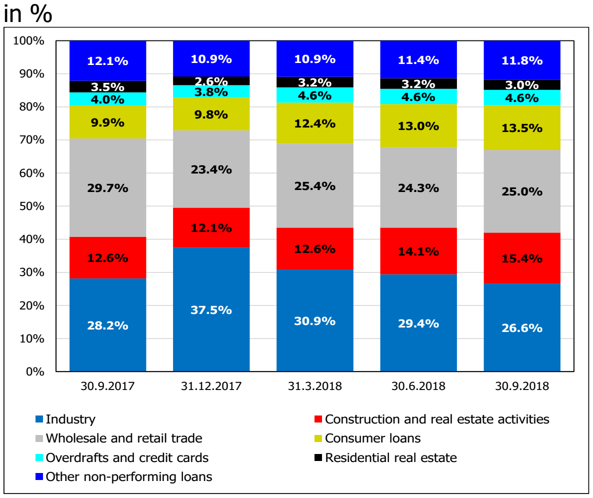
[4] In the second quarter of 2018, the non-performing consumer loans went up by Denar 131 million, or 7%.
[5] In the second quarter of 2018, the housing loans recorded an increase of Denar 5 million or 1%.
[6] In the second quarter of 2018, the non-performing loans of clients from construction and real estate activities increased by Denar 268 million, or 14%. Simultaneously, the non-performing loans of the clients from trade activity fell by Denar 78 million, or 2%.
[7] These loans also declined in the previous quarter of 2018, but far less, by Denar 24 million, or by 4.8%.

Chart 4
Quarterly (up) and annual (down) growth rate of non-performing loans to non-financial entities
in millions of denars in %



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

Chart 5
Structure of the non-performing loans of the banking system, by activity (non-financial corporations) and credit products (households)
in %



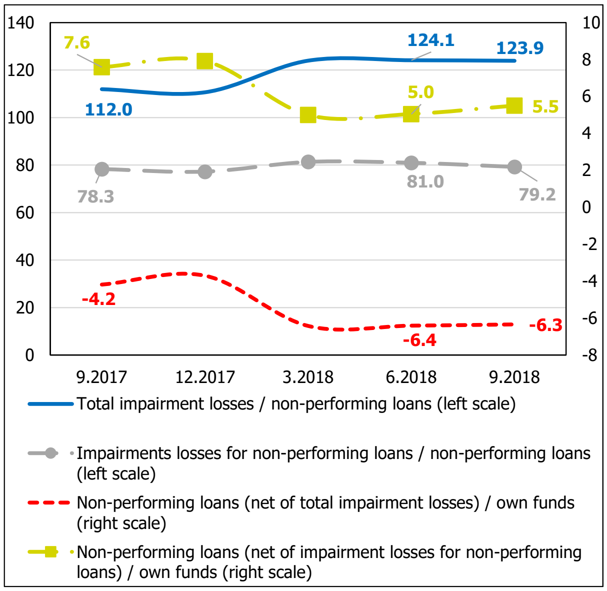
Source: NBRM's Credit Registry, based on data submitted by banks.

The regular credits with lower credit quality[8] reduced in the third quarter of 2018. Namely, regular restructured loans (which are very likely to become non-functional if the restructuring was not carried out) quarterly decreased (by Denar 158 million, or 4%), while regular loans where the payment delay ranges from 61 to 90 days decreased by Denar 16 million or by 6.4%. Analyzed by sector, the quarterly decline in regular loans with lower credit quality was more prominent among non-financial corporations, although it was also registered with households. About half of the quarterly decrease in regular restructured loans stems from the transfer of these loans to non-performing status.

In the third quarter of 2018, the share of non-performing loans in the total loans of non-financial entities decreased by 0.1 percentage points and equaled 5% as of 30 December. If the amount of regular loans with lower credit quality is added to the amount of non-performing loans, then their total share in the total loans in non-financial entities is 6.3% (6.5% on 30 June 2018). The portfolio of non-financial corporations registered minimal quarterly improvement in the share of non-performing loans in the total loans, where 7.7% of the total loans were non-performing. Analyzed by activity, the share of the non-performing loans in the total loans to customers from industry improved by 1 percentage point (8.9% as of 30 September 2018). In contrast, the ratio between non-performing and total loans increased by 0.2 percentage points (up to the level of 9.6%) in "construction and real estate" clients,[9], i.e. 0.3 percentage points (to the level of 7.5%) in "wholesale and retail sale trade" activity. In the household loan portfolio, the share of non-

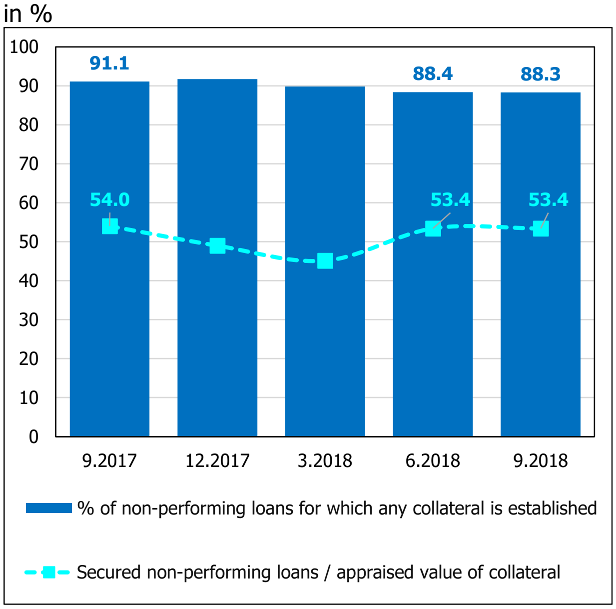
[8] For the purposes of this analysis, regular loans with reduced credit quality are considered the regular restructured loans and the due regular unstructured loans where the payment delay ranges between 61 and 90 days.
[9] The share of the non-performing loans in the total loans in constructions registered quarterly increase of 0.2 percentage points, and as of 30 September 2018, it reached 11.7%.

Chart 6
Coverage of non-performing loans with impairment
in %



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

Chart 7
Collateralized non-performing loans and LTV indicator
in %



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

performing loans in total loans remained unchanged on a quarterly basis (2.4%). This ratio increased by a minimum of 0.1 percentage point in consumer loans (reaching 2.6%), while in the segment of housing loans, the share of non-performing loans in total loans improved by an identical 0.1 percentage point and at the end of the quarter was 1.1%.

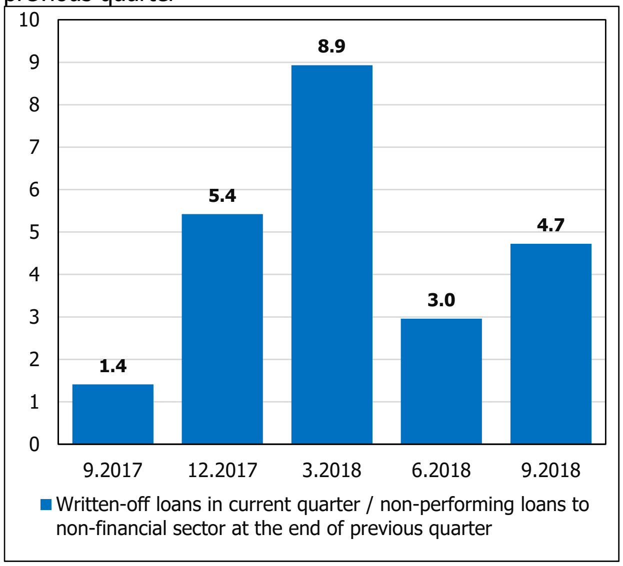
The largest share of the banks' non-performing loan portfolio accounts for loans to non-performing corporations (76.9%). The largest share among non-performing loans to enterprises are those of the non-financial corporations from industry[10] and from the wholesale and retail trade, which occupy slightly more than half of the total amount of non-performing loans. Within the household portfolio, non-performing consumer loans have the highest share in the banks' total non-performing loan portfolio (13.5%). Last year, the share of the non-performing loans to non-financial corporations in the total non-performing loans decreased by almost 4 percentage points, which is mostly due to the bank write-offs and sale (collection) of some non-performing claims.

The negative effect of the possible full uncolectabillity of the non-performing loans, i.e. the volume of the unexpected losses on these basis, which would influence the solvency positions of the banking system, are restricted. Namely, the value of the non-performing loans has already been corrected (provisioned) properly, by 79.2% in the bank balances, while the remaining part, assuming its full uncollectability, would "impair" only 5.5% of the total own funds of the banking system. In addition, about 88% of the non-performing loans are collateralized, the estimated value of which is almost twice higher than the amount of non-performing loans for which collateral is established.

The write-off of non-performing loans is the most frequent and most

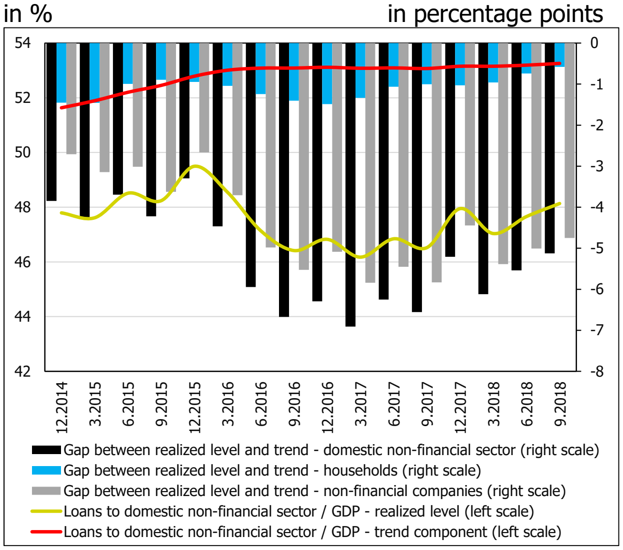
[10] Industry covers the manufacturing industry, mining and quarrying, electricity, gas, steam and air conditioning supply and water supply, waste water and waste management and environmental remediation activities.

Chart 8
Written-off non-performing loans
in percentage of non-performing loans at the end of the previous quarter



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

Chart 9
Deviation of loan to GDP ratio* from the long-term trend
in % in percentage points

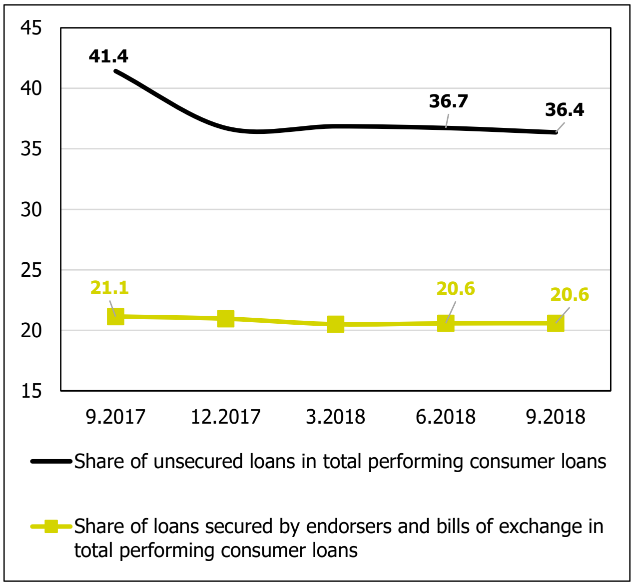


Source: NBRM, based on the data submitted by banks.
*The GDP data for the third quarter is projection.

significant form of reduction of these loans in the banks' balance sheets in the past three years, after the introduction of the measure for compulsory write-off of non-performing claims that are fully provisioned in at least the last two years. The high, even full provisioning of non-performing loans facilitates this form of dealing with uncollectible claims, which in turn stems from the banks' so-far comfortable profitable and and bank solvent positions. The sale of non-performing loans are not an unknown practice for our banks (at the beginning of 2018, sale of substantial amounts of non-performing loans by three banks was carried out), but are not regular, and usually are not in high amounts. The foreclosed property based on uncollected (non-performing) claims register a constant decline in the banks' balance sheets (in the last one-year period, the foreclosed property decreased by almost 28%, or by 3.7% in the third quarter of 2018), which is the result of the sales conducted on this property, but it is also largely due to the banks' aversion to collect new assets (set as collateral), for which quick and easy sale is questionable[11]. Larger engagement of the banks in managing default loans is evident in the loans restructuring domain, having in mind the fact that almost one third of the non-performing loans of the non-financial entities are loans where the banks had tried to meet the financial hurdles of the clients by changing the contractual terms and conditions. However, during the last one-year period, the restructured non-financial loans registered substantial drop of 30.3% (in the third quarter of 2018, these loans fell by Denar 317 million, i.e. 5.9%), which is mostly a result of the written-off claims. Thus, the required write-offs of the non-performing loans, fully provisioned in the last two years, are the most common and the most extensive form of reduction of these loans in the

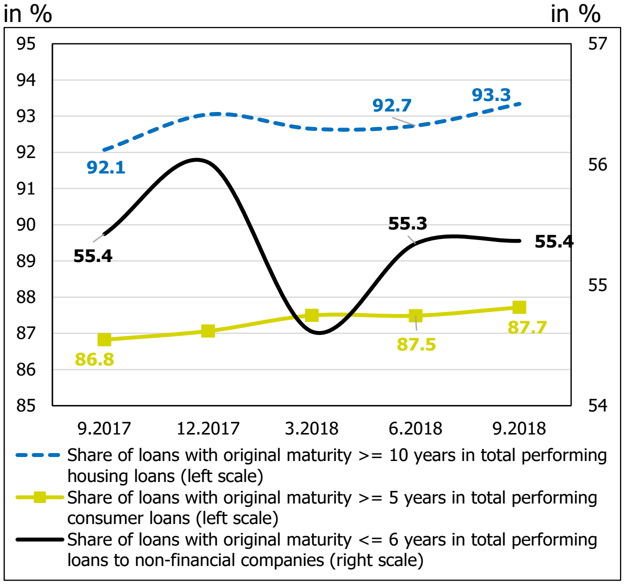
[11] This behavior of banks has been instigated, to some extent, by the amendments to the regulations in the area of foreclosed assets on 2013. Namely, pursuant to these amendments, the banks shall correct the value of the foreclosed property in the balances, and to reduce the value of the foreclosed assets to zero for the period of up to five years. In addition, the possible current gain from foreclosure on a foreclosed non-performing asset that was estimated at higher cost banks should not disclose in the income statement (unless they sell the property) and thus not divide it into a form of dividend to their shareholders Thus, after the adoption of the amendments to the 2013 regulation, it was justified to limit the current practice of banks to convert credit risk into foreclosure risk, as well as to display gains in profit or loss (typically, property values) at the time of the acquisition is higher than the net carrying amount of the non-performing asset which is closed by that acquisition).

Chart 10
Uncollateralized and consumer loans secured with guarantor and bill of exchange
in %



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

Chart 11
Share of loans with selected maturities in total regular loans
in % in %



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

last three years. In the third quarter of 2018, the banks have written off Deanr 731 million, i.e. 4.7% of the total non-performing loans on 30 June 2018[12]. The mandatory write-off of non-performing loans will continue in the following period, having in mind that as of 30 September 2018, 39.9% of these loans are fully covered with impairment and for the next two years at most (or at most one year, after 1 July 2019, in accordance with the new Credit Risk Management Regulation), are expected to be written-off if not collected in the meantime.

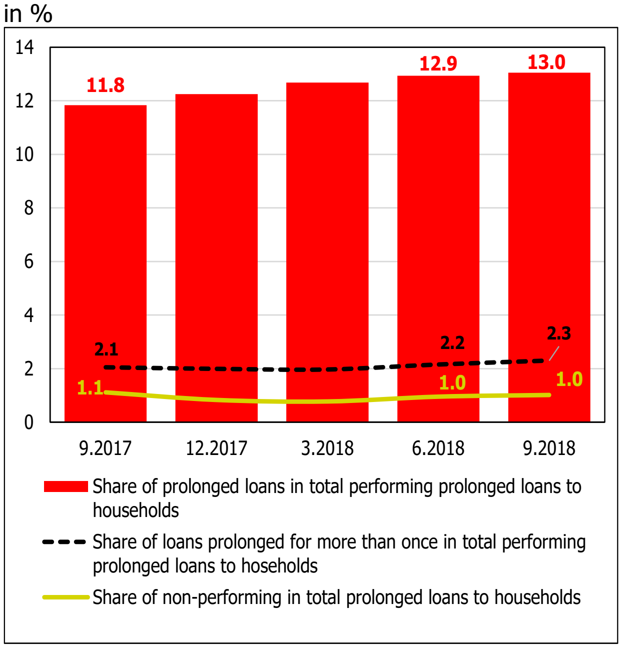
1.2 Potential sources of future materialization of the credit risk

In conditions of future net relaxation of the total crediting terms[13], the credits of the non-corporate sector increased in the third quarter of 2018, as well despite the slowdown of the quarterly growth in the loans to non-financial corporations, and householdloans. On the other hand, the annual increase in lending accelerated, which mostly arise from faster growth of lending to non-financial companies, although household lending continued to grow at a solid pace and contributed the most to total credit growth (with about 60%). Despite the relatively solid credit growth, the level of the ratio of loans to domestic non-financial sector and GDP remains below the calculated long-term trend[14] for this ratio (the negative gap equals 5.1 percentage point). Analyzed by sectors, the negative gap between the level of the indicator of loan participation and the calculated long-term trend is 0.6 percentage points with household loans, i.e. 4.7 percentage points to loans to non-financial corporations.

Household lending has registered relatively high and stable growth (about 10% a year) in the last 5-6 years, prompted by several factors, both on the supply and on

[12] For a year, from 1.10.2017 to 30.09.2018, banks have written-off a total of Denar 3.9 billion of non-performing loans (or 22% of non-performing loans as of 30 September 2017). Out of the total write-offs of non-financial sector, 87.4% are mandatory write-offs of non-performing loans that are fully provisioned, at least in the last 2 years.
[13] Source: Bank Lending Survey, third quarter, 2018.
[14] Calculated using the one-sided Hodrick-Prescott filter, λ=400,000.

Chart 12
Prolonged loans to households
in %



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

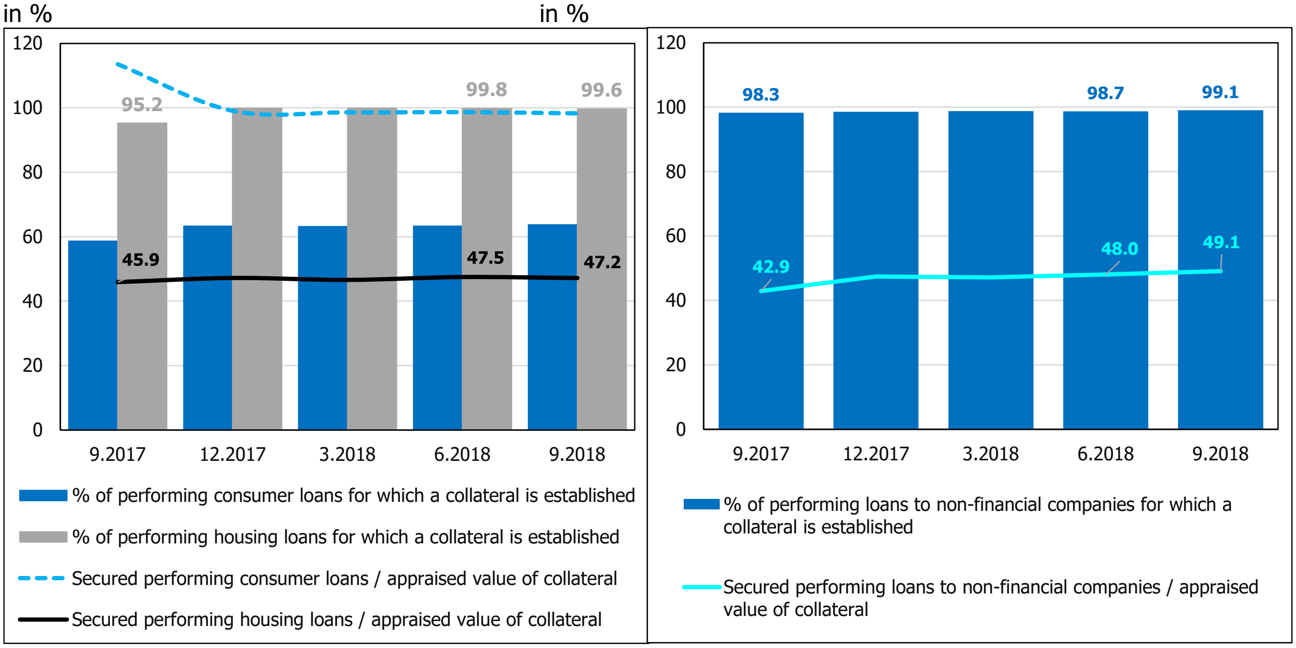
the demand side of these loans. Most household loans have been intended to finance consumption of natural persons, accounting for about 70% of the total loans in this sector. However, as of mid-2015, home loans are the fastest growing segment of the household loan portfolio, with annual growth rates currently accounting for around 15% and exceeding the annual growth of consumer loans by several percentage points, as the highest credit product in loans to this sector (54.1% as of 30.09.2018). Despite the obvious positive effects of the greater diversification of the banks' loan portfolios and the solid household loan repayment so far, at an aggregate level, some adverse trends should not be overlooked. Thus, much of the growth is attributable to longer-term loans to households (respectively, the uncertainty of creditworthiness of clients by the repayment deadline is higher), especially given the still high (albeit declining) share of currency component loans and [15] loans with variable and unilaterally adjustable interest rates[16]. Furthermore, consumer loan structure is dominated by loans without[17], or with uncertain secondary source of repayment in the event of default (for example, in case when the loan is collateralized by a guarantor, or bill of exchange). Also, in the past two years, there has been some easing of banks' requirements for the ratio between the monthly repayment of loan and the income of the natural persons. In recent years, there has been a stronger trend of extension of

[15] On 30 September 2015, regular loans with currency component extended to households accounted for 45.4% of the total regular loans in this sector (45.7% on 30.6.2018 and 46.2% on 30.9.2017). By comparison, this share of non-financial corporations' regular loans is 40.4%. In the past five years, the share of regular currency component loans in total non-financial corporations' regular loans decreased by 16.5 percentage points, while in the regular household loan portfolio, this share decreased by only 2.3 percentage points.

[16] As of 30 September 2015, regular loans with variable and unilaterally adjustable interest rates participate with 22.5% and 30%, respectively, in total regular loans to households (22.2% and 32.5%, respectively, on 30.6.2018 year and 18.8% and 41%, respectively, as of 30 September 2017).

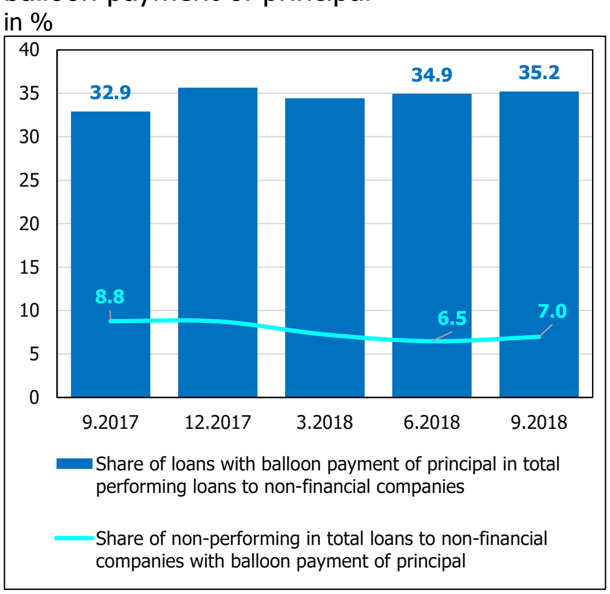
[17] In some of the credit agreements where there is no formal collateral, there is a possibility of establishing so-called executive clause (in accordance with the Law on Enforcement and the Law on Notaries), which allows banks to repay the loan from the borrower's property in the event of default. However, the National Bank does not have any data on the amount of loans with this clause included in the agreements.

Chart 13
Regular consumer*, housing loans (left) and loans of non-financial companies (right), which are collateralized and LTV indicator



Source: NBRM's Credit Registry, based on data submitted by banks.
* Banks do not enter the amount of collateral in cases where the collateral is in the form of a guarantor and / or bills of exchange or co-applicant. This is particularly relevant for consumer loans, where a guarantor and / or promissory note is a relatively common type of collateral.

Chart 14
Loans of non-financial companies with balloon payment of principal



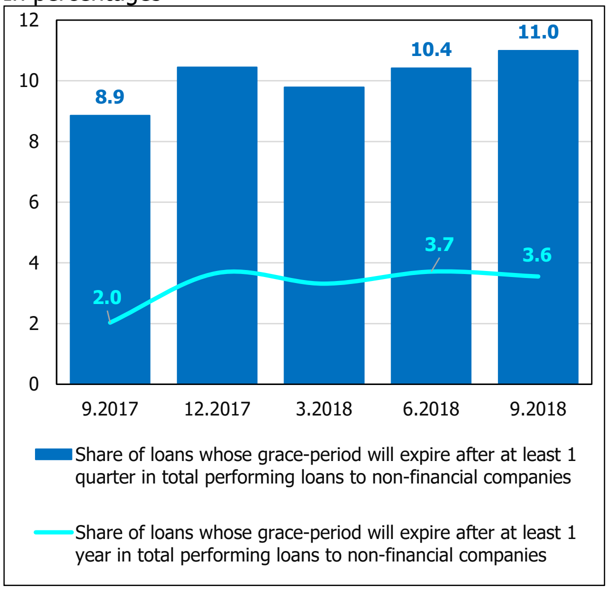
Source: NBRM's Credit Registry, based on data submitted by banks.

the maturity[18] of household loans, or their refinancing among banks, which may hinder the true creditworthiness of some households. However, the share of the non-performing in the total delayed household loans has been maintained on a relatively low level of 1%.

The growth of non-financial corporations' loans is less stable and lags behind the usual growth of household loans. Thus, in the regular loan portfolio, loans to non-financial corporations have already lost the largest share, accounting for 48.7% of total non-financial sector loans. About 80% of total loans to non-financial corporations have been extended to three sectors (industry, wholesale and retail trade, and construction and real estate activities)[19], whose

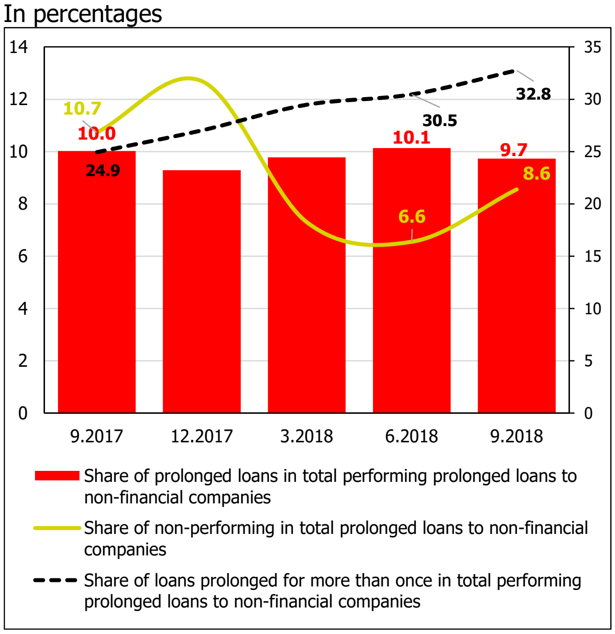
[18] As of 30 September 2018, 13% of regular household loans have an extended maturity (for comparison, about four years ago, this share was only 0.5%).
[19] In the third quarter of 2018, most of the credit support was directed to these activities, which participate with 86.6% in the total quarterly growth of the loans to the non-financial corporations.

Chart 15
Loans to non-financial companies where grace-period is still not expired
In percentages



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

Chart 16
Prolonged loans to non-financial companies
In percentages



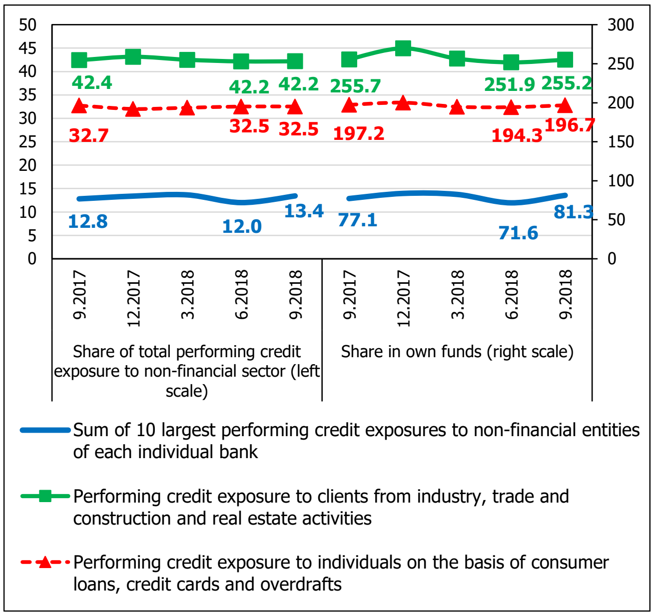
Source: NBRM's Credit Registry, based on data submitted by banks.

performances are particularly important for the quality of the banks' loan portfolio. In addition, the loan portfolio comprised of banks' clients from these activities[20] register the highest levels of the indicator of the share of the non-performing in the total loans. In general, the demand for corporate sector loans is relatively poor, reflecting particularly in the rather weak indicators of the liquidity and efficiency of the domestic corporate sector and the lack of quality projects and ideas that would receive adequate credit support from banks. Hence, banks usually "back" the credit support for this sector by establishing collateral (about 99.1% of the regular loans to non-financial companies have been collateralized), whose appraisal can be even more complicated and less precise (compared to the appraisal of apartments, for example with household loans), given the specificity of the collateral that can potentially be offered by domestic companies (equipment, tools, facilities, warehouse, etc.), that is, no liquid or functional market for this type of assets and property. Other features of the loans to non-financial companies include the relatively high and stable share of loans with one-time principal repayment (about 35% in the past three years), loans with a grace period longer than 1 year (about 18-19% in the past three years) and on rollover loans (around 10%[21]), which indicates that banks take into account the needs of companies in structuring the loan features, although they willingly accept probably greater uncertainty (and usually higher risk) over the timely repayment of loans.

In terms of concentration by activity, credit exposure to "industry", "wholesale and retail" and "construction and real estate activities" accounts for about 40% of total regular credit exposure to non-financial entities. Such share of the credit exposure to the clients belonging to these activities reflects the economic structure of the

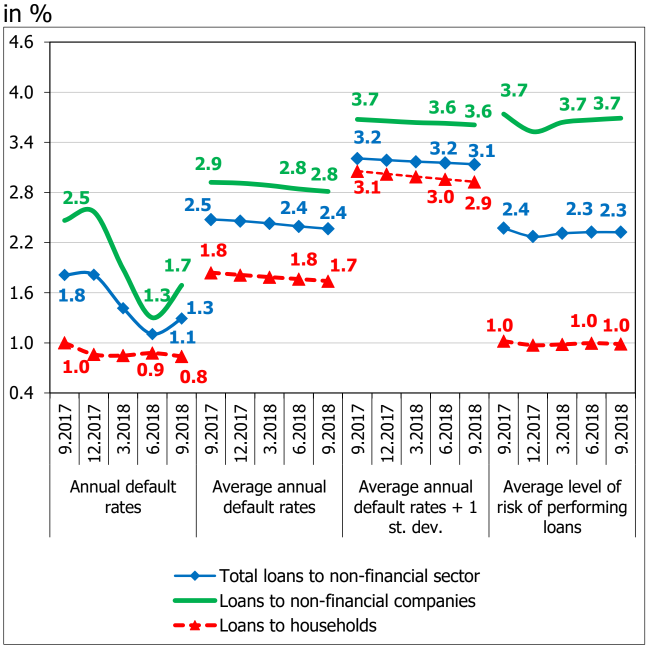
[20] The share of non-performing loans in total loans to manufacturing industry (for example, in other manufacturing activity this indicator was 16.2% as of 31 December 2017) is the highest.
[21] Even in one third of regular prolonged loans to non-financial corporations the maturity was prolonged more than once which may indicate potentially deteriorated creditworthiness of these clients.

Chart 17
Concentration of regular credit exposure to non-financial entities



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

Chart 18 Annual default rates * and average risk level of regular loans



Source: NBRM's Credit Registry, based on data submitted by banks.
The annual rate of default is calculated as a percentage of performing credit exposure, which for a period of one year transforms into exposure with non-performing status. The average annual default rates and standard deviation are calculated from the annual default rates calculated for the period from 31 March 2009 to the date on which the average, i.e. standard deviation, is calculated.

Republic of Macedonia. In addition, these activities include a number of branches which dilute the concentration risk. Although most of the regular credit exposure to natural persons is intended for consumption, still a mitigating factor in terms of the level of such concentration is the fact that it is usually quite diversified by individual clients and parties, i.e. it consists of a large number of credit parties that are in smaller amounts. The ten largest regular bank exposures to non-financial entities account for 13.4% of total regular credit exposure, but eventual full default on these exposures would "spend" about 80% of banks' own funds.

So far, the credit quality of the largest regular credit exposures of banks is relatively high, i.e. banks have recorded "impairment" of only 2.1% of the value of these exposures.

Compared to 30 June 2018, the annual default rate on regular credit exposure to non-financial corporations increased by 0.4 percentage points, while for households, this rate was minimally reduced. Analyzed by sector, the annual default rate increased by 0.7 and 0.5 percentage points, respectively, with regular credit exposure to construction and real estate activities (up to 3.8%) and to wholesale and retail trade (up to 1.3%). The average risk level of regular loans (i.e. the percentage of regular loans value adjustments in the banks' balance sheets) is quite stable and is higher than the annual default rates of these loans over the past one year.

Exposure limits on efficient management of concentration risk in the banks' credit portfolio

In order to efficiently manage the concentration risk of the credit exposure by the banks in the Republic of Macedonia, Articles 71 and 72 of the Banking Law (Official Gazette of the Republic of Macedonia No. 67/07, 90/09, 67/10, 26/13, 15/15, 153/15 and 190/16) and the Decision on exposure limits (Official Gazette of the Republic of Macedonia No. 31/08, 163/08, 43/09, 91/11, 100/12, 127/12 and 26/17) prescribe the exposure limits. **The exposure limits** refer to the bank's total exposure to individual person/entity, that includes the bank's total on-balance sheet and off-balance sheet claims to such person/entity and persons/entities connected thereto and that arises from the banking book and from the trading book. The total exposure to individual person/entity and persons/entities connected thereto must not exceed 25% of the bank's own funds, the total exposure to bank's subsidiary and to shareholder with qualified holding in the bank and persons/entities connected thereto must not exceed 10% of the bank's own funds, while the exposure to a person with special rights and responsibilities and persons/entities connected thereto must not exceed 3% of the bank's own funds. The total exposure to a subsidiary, a shareholder with qualified holding and persons/entities connected thereto and to a person with special rights and responsibilities and persons/entities connected thereto must not exceed 65% of the bank's own funds.

According to the provisions of the Banking Law and the bylaws, large exposure to the person/entity and persons/entities connected thereto denotes the exposure equal to or higher than 10% of the bank's own funds, whereby the total amount of large exposures of the bank should not exceed eight times the amount of bank's own funds.

The bank is required to constantly observe the exposure limits. By exception, the exposure limits may be exceeded as a result of reasons on which the bank could not or cannot affect or as a result of merger and acquisition of two legal entities, when the bank is required, within five business days, to notify the National Bank of the reasons behind the exceeding, as well as of the activities it has taken to reduce the exposure limits within the prescribed limits.

In their internal acts, the banks may also apply stricter limits than the legally set limits, and they are also required to envisage limits on the other aspects of concentration of exposures, for example, by activities, by location, sector etc.

In case of exceeding the exposure limits, prescribed by the regulations governing the banks' operations or their internal procedures, or if the exceeding of the limits poses a risk of disturbing the safety and soundness of the bank or the banking system as a whole, the Governor of the National Bank, in accordance with the Banking Law, takes measures and sets periods for their implementation.

As part of the process of supervisory assessment of the determined internal capital, the National Bank monitors the concentration risk of the exposure of each bank. If the concentration risk is assessed as significant or high, the National Bank requires from the bank to increase the minimal level of the capital adequacy ratio by a certain amount. Also, when determining the necessary level of capitalization, one can take into account also the effects of the stress test in terms of the deterioration of the creditworthiness of large exposures.

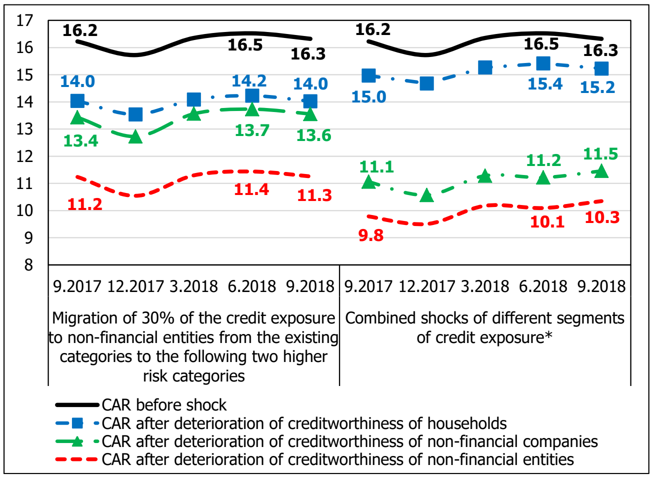
1.1 Stress-testing of the resilience of the banking system to increased credit risk

The results of stress testing confirm the resilience of the banking system to the simulated shocks. The capital adequacy ratio of the banking system does not go below 8% in individual hypothetical shocks.

Assuming a migration of 30% of the credit exposure to non-financial entities, from the existing categories to the following two higher risk categories, the capital adequacy ratio of the banking system is reduced to a level of 11.3%, which is minimally weaker in comparison with the result of the same simulation carried out at the end of the previous quarter. If the same stress-simulation is carried out for the credit exposure by activity, as expected, the capital adequacy ratio reduces the most, in case of assumed deterioration of the creditworthiness of the clients from those activities where the concentration of the total credit exposure is the largest. Thus, the capital adequacy ratio is reduced to a level of 15.6% in the case of worsening of the creditworthiness of the clients from the industry (15.8% as of 30 June 2018), i.e. to 15.4% in the case of worsening of the quality of the credit exposure to wholesale and retail trade (15.6% as of 30 June 2018) and to a level of 15.9% amid a reduced creditworthiness of construction companies (16.1% as of 30 June 2018). Amid assumed migration of 30% of the credit exposure to households, from the existing categories to the following two higher risk categories, the greatest negative impact on the capital adequacy ratio is that of the exposure based on consumer loans. Thus, in the case of isolated worsening of the quality of this segment of the exposure to natural persons, the capital adequacy ratio is reduced to a level of 15.2% (15.4% as of 30 June 2018).

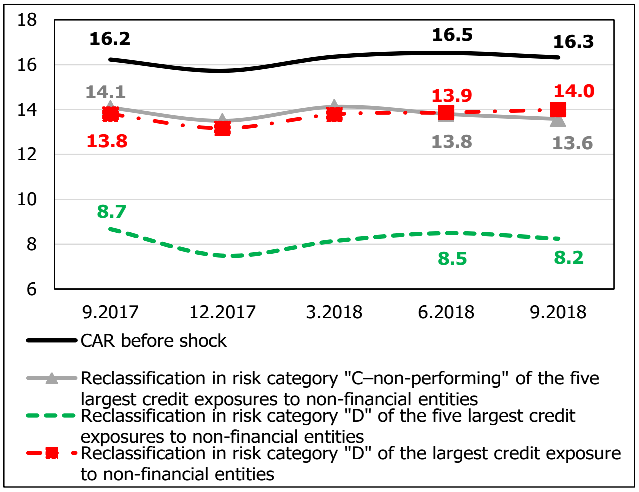
The resilience of the banking system is also examined by carrying out an extreme simulation based on a combination of seven hypothetical shocks of worsening of the

Chart 19
Capital adequacy ratio before and after hypothetical shocks
in %



Source: NBRM's Credit Registry, based on data submitted by banks.
Note: * Combined shocks (from the right part of the chart) include seven hypothetical shocks in the total credit exposure to non-financial entities (also conducted for individual sectors - households and non-financial companies): 1. complete default on the existing non-performing loans; 2. the total past due loans receive non-performing status; 3. the total regular undue restructured exposure receives non-performing status; 4. banks carry out new restructurings of the regular undue part of the credit exposure which according to the volume correspond with the amount of restructured exposures which received a non-performing status, from the previous item; 5. 10% of loans with granted grace period which expires after a period of 1 quarter to 1 year receive a non-performing status; 6. 20% of the undue prolonged exposure receives a non-performing status; 7. 30% of regular bullet loans with residual maturity of up to 1 year (which are not prolonged, nor restructured) receive a non-performing status.

Chart 20
Effects on the capital adequacy ratio from reclassification of the largest credit exposures to non-financial entities (including the connected entities) in a higher risk category
in %



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

quality of the credit exposure to non-financial entities[22]. In carrying out this stress-simulation, the capital adequacy ratio of the banking system reduces by 6 percentage points, to the level of 10.3%, which is a slightly better result in comparison with the result of the same simulation carried out on the previous quarterly date (10.1%). The highest negative effect on the capital adequacy ratio is that of the assumed deterioration in the quality of bullet loans, which contributes to one third of the total reduction of capital adequacy in the combined shock. In addition, the negative effect of the hypothetical worsening of the quality of prolonged loans (accounting for 26% of the total reduction of the capital adequacy ratio of the banking system) is also high, as well as the assumed complete default on non-performing loans to non-financial entities (14.5% of the total decline in capital adequacy in the combined shock).

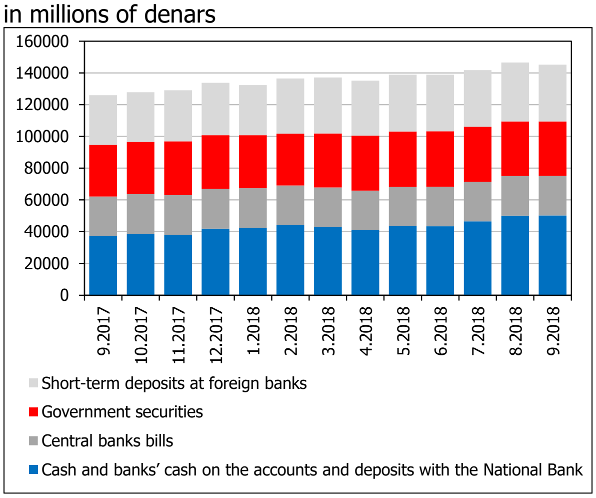
[22] The seven hypothetical shocks are the following: 1. complete default on the existing non-performing loans; 2. the total past due loans receive non-performing status; 3. the total regular undue restructured exposure receives non-performing status; 4. banks carry out new restructurings of the regular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

2. Liquidity risk

In the third quarter of 2018, the liquidity of the banking system remained satisfactory and stable. Banks' liquid assets grew rapidly on both annual and quarterly basis, and in their structure, generator of the growth were the increased placements in overnight deposit facility with the National Bank. The share of liquid assets in the total assets of the banking system grew, and a slight upward movement was also registered with the indicators of coverage of short-term liabilities and household deposits with liquid assets. The satisfactory volume of liquid assets allowed banks to smoothly carry out their business activities and maintain an acceptable level of liquidity risk. This is also confirmed by the simulations of combined liquidity shocks, whose results indicate an appropriate liquidity risk management by banks and a satisfactory resilience to the assumed extreme liquidity outflows.

2.1. Dynamics and composition of liquid assets

Chart 21
Banks' liquid assets structure
in millions of denars

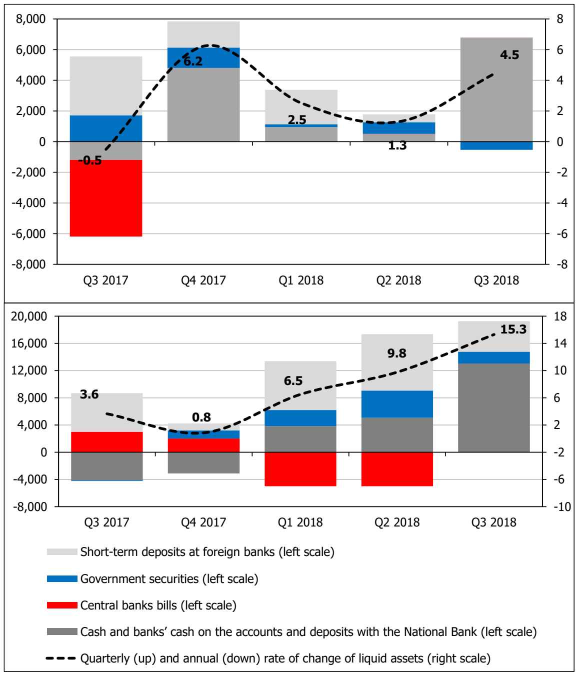


Source: NBRM, based on the data submitted by banks.

At the end of the third quarter of 2018, the liquid assets[23] of the banking system amounted to Denar 145,202 million and registered a quarterly increase (of Denar 6,262 million), for the fourth consecutive quarter. Their quarterly growth rate accelerated and was higher by 3.2 percentage points as of 30 September 2018 compared with 30 June 2018. At the same time, growth was noticed in liquid assets also on an annual basis, which amounted to Denar 19,259 million, or 15.3%. Quarterly growth of liquid assets was entirely due to the increased placements in overnight deposit facility with the National Bank, which contributed the most to the growth of liquid assets on an annual basis. The other components of the banks' liquid assets registered divergent movements (the banks' placements in government securities decreased, while short-term foreign assets in foreign banks registered a slight increase).

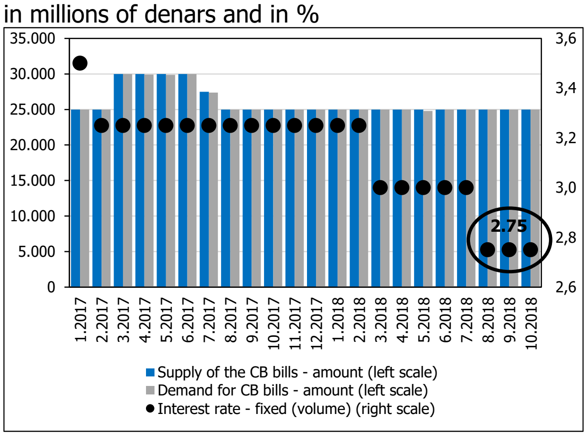
[23] The liquid assets encompass: 1) assets and claims on the National Bank, which include cash, assets on the accounts of banks with the National Bank, deposit facility with the National Bank and CB bills; 2) short-term deposits with foreign banks, including the assets of the banks on their correspondent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

Chart 22
Quarterly (top) and annual (bottom) growth rate of liquid assets, by component
in millions of denars and in %



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

Chart 23
CB bills of the National Bank, supply, demand and interest rate
in millions of denars and in %



Source: NBRM.

Cash and bank assets with the National Bank are still predominant financial instruments in the structure of banks' liquid assets, with a share of 51.8% at the end of the third quarter of 2018. Given that banks' investments in CB bills have been virtually unchanged for four consecutive quarters, the main driver of the quarterly increase in total cash and bank assets placed with the National Bank in the third quarter of the year (by Denar 6,782 million or 9.9%) was the growth of the banks' placements in overnight deposit facility with the National Bank[24] (amid reduced banks' investments in deposit facility with the National Bank with a maturity of seven days). During the third quarter of 2018, the CB bills auctions were conducted through a limited volume tender and fixed interest rate. During the third quarter of 2018, the NBRM in August, second time since the beginning of the year, cut its policy rate by 0.25 percentage points, i.e. from 3% to 2.75%. The decision to cut the NBRM policy rate was made in conditions of sound economic fundamentals and absence of imbalances, as seen through the constant favorable movements on the foreign exchange market, the solid external position and the stable expectations of economic agents.

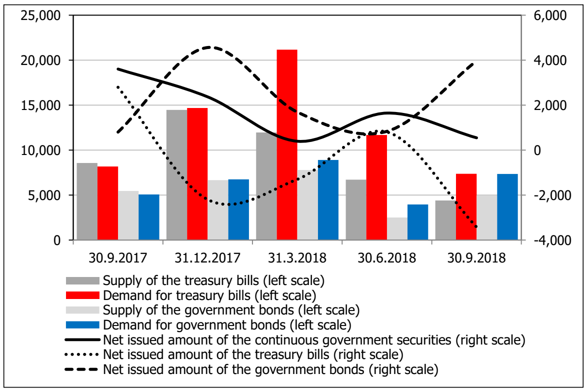
In the third quarter of 2018, the **net issued amount[25] of government securities** increased by Denar 550 million, which is less than the growth registered in the previous quarter (Denar 1,650 million). On the other hand, the total nominal amount of issued continuous[26] government securities registered a modest growth (by 0.6% on a quarterly basis, i.e. by 8.3% on an annual basis), while the banks' placements in domestic government securities recorded a quarterly decline of 1.8% (according to their face

[24] According to the Decision on deposit facility (Official Gazette of the Republic of Macedonia No. 49/12, 18/13, 50/13, 166/13 and 35/15), the banks could place deposits with the National Bank every working day with a maturity of one business day and once a week with a maturity of seven days. These deposits are placed without the possibility of partial or full early withdrawal. In the third quarter of 2018, the interest rates on these deposits remained unchanged (from the latest change in March 2018) and equaled 0.15% on overnight deposits and 0.30% on seven-day deposits.

[25] Net issued amount of government securities is calculated as the difference between the realized amount at the auctions of government securities for a certain time period and the amount of government securities that falls due in the same time period.

[26] Continuous government securities include treasury bills and government bonds issued in the domestic financial market, but exclude structural securities, i.e. denationalization bonds.

Chart 24
Net issued amount and supply and demand of domestic government securities
in millions of denars

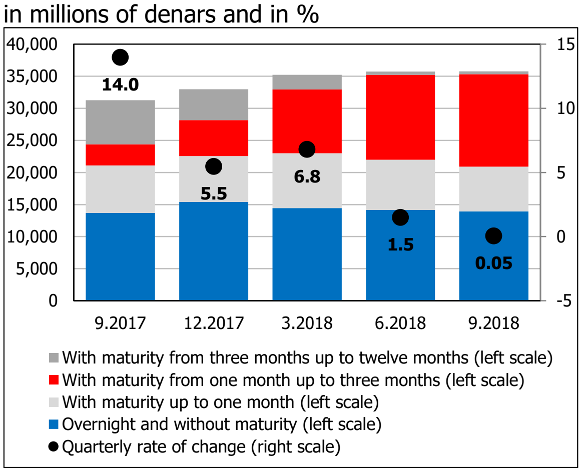


Source: Ministry of Finance and the National Bank.

value)[27], which entirely resulted from the decline in the placements in treasury bills.

In the structure of government securities owned by banks, the share of treasury bills, compared to government bonds, is still more pronounced, which suggests a further propensity of banks to invest in government securities with shorter contractual maturity. This is confirmed by the fact that nearly three quarters of the maturity structure of the government bonds owned by banks, account for the two-year or the three-year bonds[28]. Investments in government bonds issued by foreign countries have a modest share of only 2% in the total portfolio of government securities of banks.

Chart 25
Accounts and short-term deposits with foreign banks, structure and growth
in millions of denars and in %



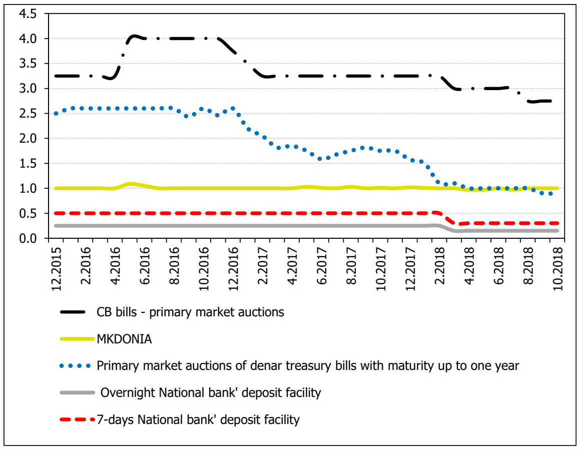
Source: NBRM, based on the data submitted by banks.

In the third quarter of 2018, the deposits placed in foreign banks with contractual maturity shorter than one year, kept on increasing, but at a slower pace. These financial instruments constitute the main part of the foreign currency component of the banks' liquid assets[29], so that their slower quarterly growth (by Denar 18 million or 0.05%) decelerated the growth of liquid assets in foreign currency from 1.9% as of 30 June 2018, to 0.5% as of 30 September 2018. The largest quarterly increase was registered in the assets kept in foreign banks between one and three months, the amount of which in the third quarter of 2018, for the first time exceeded the amount of the assets invested in foreign banks overnight, i.e. held on the correspondent accounts of domestic banks abroad.

The yield borne by liquid financial instruments of banks is directly dependent on fluctuations in market interest rates. Thus, in the third quarter of 2018, in accordance with the decline in the key interest rate of the

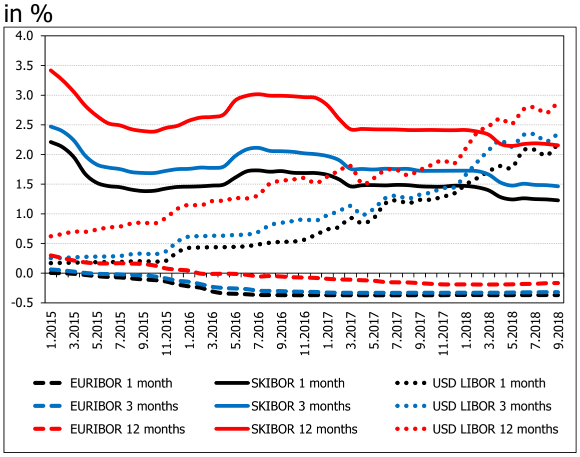
[27] The share of banks in the issued continuous government securities equaled 35.2% at the end of September, as opposed to pension funds which accounted for 38.5%.
[28] The Ministry of Finance issues government bonds with a maturity of 2 years, 3 years, 5 years, 10 years, 15 years and 30 years.
[29] Foreign currency liquid assets comprise the short-term deposits with foreign banks, including assets in corresponding accounts, investments in foreign government securities, foreign currency liquid assets and placements of foreign currency deposits with the National Bank.

Chart 26
Movement of market domestic interest rates
in %



Source: NBRM.

Chart 27
Movement of the basic interbank interest rates SKIBOR, EURIBOR and LIBOR for the US dollar
in %



Source: NBRM and the website of the European Money Markets Institute for Euribor and the website of the Federal Reserve Bank of St. Louis (so-called FRED) for LIBOR for US dollars.

National Bank[30], the indicative interest rates for interbank trading in deposits (SKIBOR)[31] moved in a downward direction, while money market interest rates in the Republic of Macedonia (MKDONIA and MBKS)[32] remained relatively stable.

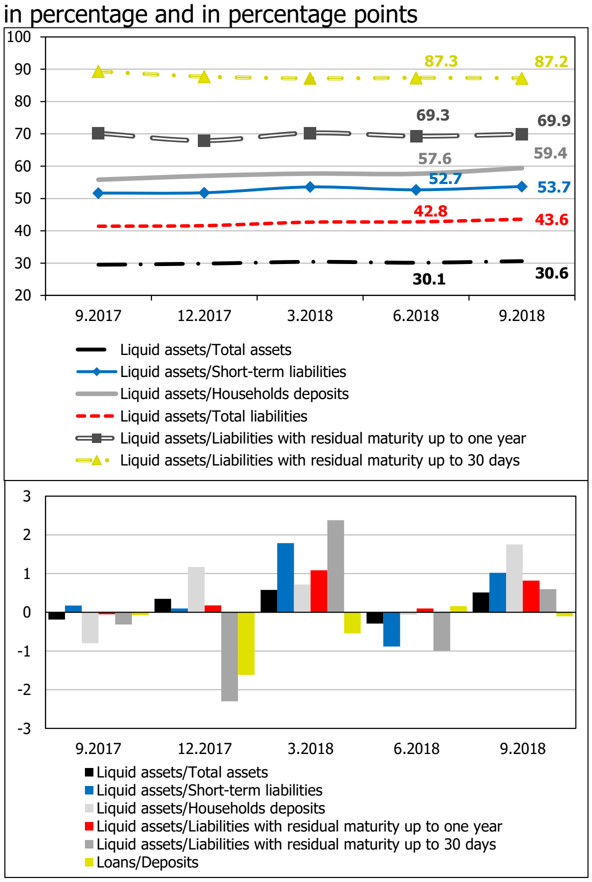
The interest rates in interbank markets in the euro area registered no significant changes and remained extremely low (even negative for certain maturities), which corresponds to the unchanged setup of the monetary policy of the ECB during the third quarter of 2018 (keeping the interest rate on the main refinancing operations at the level of the last change in March 2016, when it was reduced from 0.05% to 0.00%). On the contrary, as a result of the normalization of the US monetary policy (which began at the end of 2015 and continued in the third quarter of 2018, when the Fed further increased the interest rate[33]), the interbank interest rate LIBOR for US dollars continued to increase.

2.2. Liquidity ratios

In the third quarter of 2018, the liquidity of the banking system remained satisfactory, as seen through the relatively stable share of liquid assets in total assets and the satisfactory coverage of household short-term liabilities and deposits with liquid assets. Namely, in circumstances of a rapid growth of the liquid assets of the Macedonian banking system, the liquidity indicators of the banking system[34] improved, but without major shifts from their usual amount - liquid assets account for about one third of banks' total assets, covering more than half of short-term

[30] In August 2018, the National Bank reduced the interest rate on CB bills from 3.00% to 2.75%.
[31] SKIBOR (Skopje Interbank Offer Rate) - interbank interest rate for selling unsecured Denar deposits, calculated as an average of the quotations of reference banks, for the following standard maturities: one week, one month, three months, six months and twelve months.
[32] MKDONIA is the interbank interest rate for concluded overnight transactions by reference banks as sellers of denar deposits. It is calculated as the weighted average interest rate, so the interest rate on each transaction is weighted by the appropriate amount of cash. MBKS is the interbank interest rate for trading on the interbank deposit market.
[33] At the regular meeting in September 2018, the Fed made a decision on new increase in the target range of the policy rate by 25 basis points, whereby it now equals 2% - 2.25%.
[34] The calculation of liquidity ratios of the banking system does not include resident interbank assets and liabilities.

Chart 28
Movement (top) and quarterly change (bottom) of the liquidity indicators of the banking system
in percentage and in percentage points



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

Analyzed by bank, as of 30 September 2018, the share of the liquid in the total assets is between 21% and 49.1%, with a median of 25.4% (September 2017: between 14.1% and 44.7%). The coverage of short-term liabilities with liquid assets is between 39.7% and 89.5%, with a median of 52.3% (September 2017: between 30.5% and 104.2%), the coverage of liabilities with residual contractual maturity up to 30 days between 45.2% and 139.5% with a median of 66.2% (September 2017: between 35% and 258%), and the ratio between loans and deposits of non-financial entities between 53.8% and 121.5%, with a median 95.7% (September 2017: between 60.5% and 125.8%).

liabilities and nearly 60% of the total household deposits.

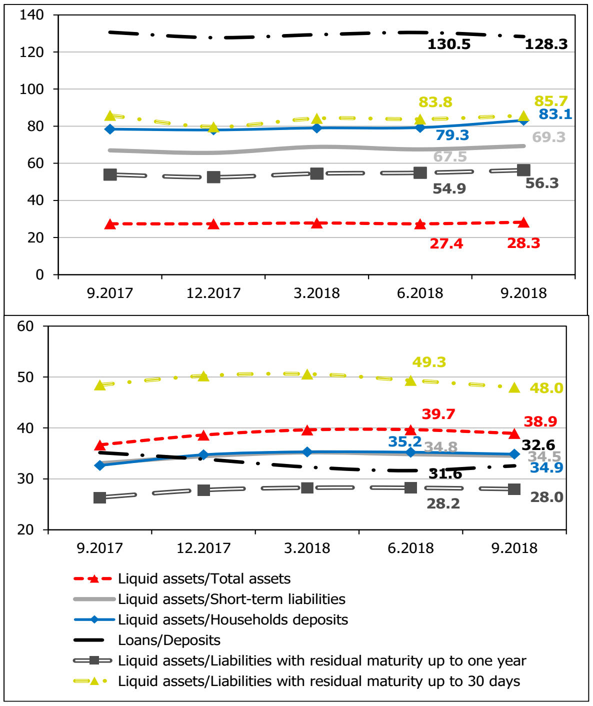
In terms of the currency features of liquid assets and liabilities[35], the improvement is **present only in denar liquidity indicators**[36] (considering that the denar liquid assets were the main driver of the quarterly growth of liquid assets in the third quarter of 2018), while the foreign currency liquidity indicators deteriorated. At the same time, 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 lower level of the foreign currency liquidity indicators is "mitigated" by the possibility of the banks, through the National Bank interventions on the foreign exchange market, to provide the required foreign currency liquid assets at any time.

Positive trends in the deposit base of the banking system provide stable sources for financing the credit growth, which is better seen by the movements of the loan to total deposit ratio, which aggregately moves around 87%.

Regulatory liquidity ratios of the banking system[37], presented as ratios between assets and liabilities that mature in the next 30 days and 180 days, are above the minimum requirement of 1 also at the end of the third quarter of 2018, thereby confirming the sufficient amount of liquidity available to the Macedonian banking system, which allows banks to carry out their obligations.

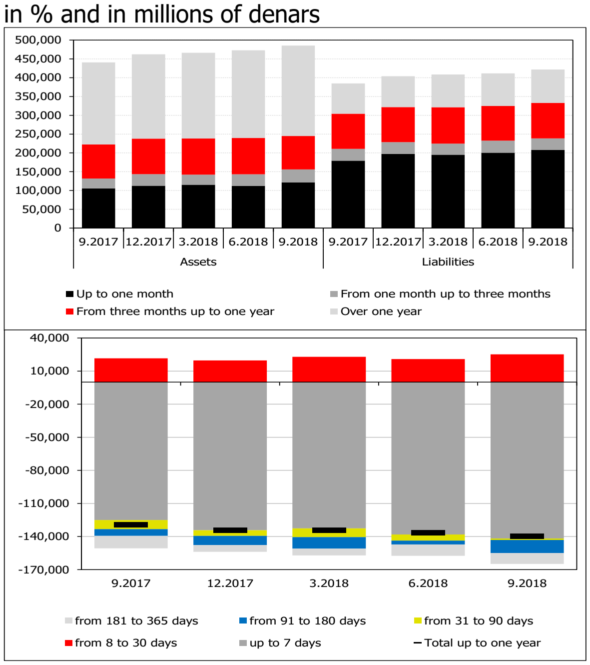
[35] Banks accept and return denar liabilities (deposits) and liabilities (deposits) in denars with foreign exchange clause in denars, creating cash flow (inflow or outflow) in denars. Banks accept and return foreign currency liabilities, in accordance with the Law on Foreign Exchange Operations, in the corresponding foreign currency and consequently have expected cash flow (inflow or outflow) in foreign currency.
[36] Claims and liabilities with FX clause are considered as denar claims and liabilities, since their cash flow is in denars.
[37] The method of calculation of liquidity ratios up to 30 and up to 180 days is determined by the Decision on the liquidity risk management of banks (Official Gazette of the Republic of Macedonia No. 126/11, 19/12 and 151/13).

Chart 29
Banking system liquidity ratios according to currency structure, Denars (top) and FX (bottom)
in %



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

Chart 30
Composition of assets and liabilities of banks according to their contractual residual maturity (top) and the gap between assets and liabilities, with contractual residual maturity of up to one year (bottom)
in % and in millions of denars



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

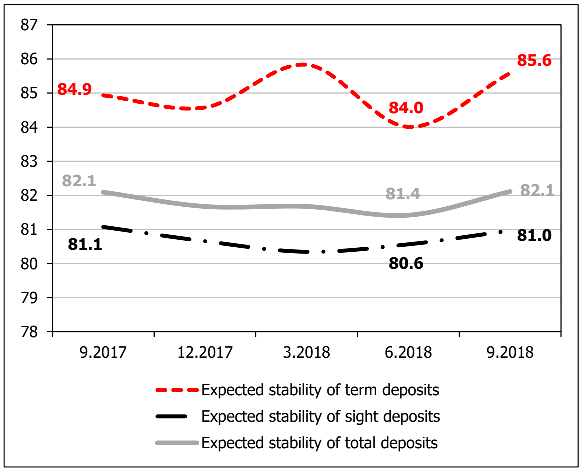
2.3. Maturity structure of assets and liabilities

In the third quarter of 2018, shifts in the composition of assets and liabilities, according to their residual maturity, mainly pointed to their increase in almost all maturity segments. Reduction was registered only in the amount of assets with maturity from three months up to one year (amid slower quarterly growth of short-term loans), while, on the liabilities side, minimal decline was registered in the liabilities with residual maturity from one up to three months (amid a quarterly decline in short-term deposits).

The largest mismatch between assets and liabilities according to their contractual residual maturity is still registered in the maturity bucket up to seven days, which usually results from the inclusion in this maturity bucket of banks' liabilities on demand and without determined maturity (including transaction accounts).

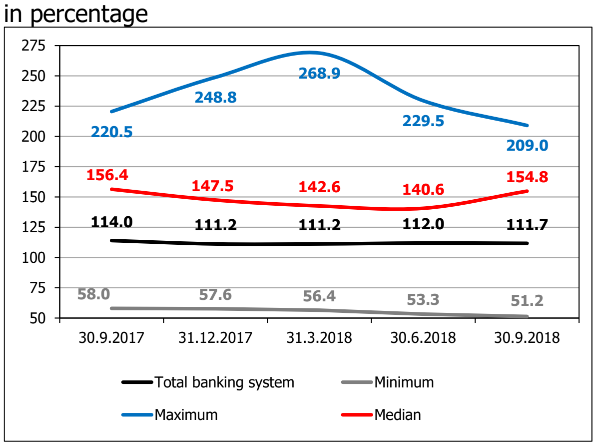
In the third quarter of 2018, the banks' expectations for the level of stability of deposits as the main source of financing, have improved. Thus, as of 30 September 2018, banks expect that 85.6% of time deposits with residual maturity of up to three months (84% as of 30 June 2018) will be stable, i.e. remain in the banks, while for total deposits and demand deposits, the percentage of expected stability is somewhat smaller (82.1% and 81%, respectively), but still increased compared to the previous quarter (by 0.7% and 0.4%, respectively). During the third quarter of 2018, banks maintained the expectations for the existence of a positive gap between assets and liabilities, according to their residual maturity, both aggregately and by individual maturity segments (for more details see the annexes to this Report).

Chart 31
Expected stability of deposits with residual maturity of up to three months, by banks
in %



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

Chart 32
Reduction in liquid assets after the simulation for combined liquidity shocks (after all shocks)
in percentage



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

2.4. Stress-simulations for liquidity shocks

The resilience of the Macedonian banking system to liquidity shocks was maintained during the third quarter of 2018. Simulations of liquidity shocks carried out as of 30 September 2018, confirm the stable liquidity position of banks, mainly due to their satisfactory level of liquid assets. Full use (or 111.7% as of 30 September 2018) of liquid assets would arise in a significantly extreme simulation of liquidity shock, that includes combined outflows[38] based on several types of liabilities outside of banks. If for the purpose of this simulation the usual coverage of liquid assets is expanded with other financial instruments[39] owned by banks, for which it is estimated that banks will quickly and easily collect or will turn into cash, then the reduction in liquid assets at the level of the banking system would be smaller and would amount to 100.8%.

When applying individual simulations of liquidity shocks, banks show that they hold sufficient liquid assets to repay simulated outflows. The sharpest decline in liquid assets occurs during a simulation of outflow of the deposits of the twenty largest depositors, but the importance of this simulation to individual banks is different, given the differences in the degree of concentration of deposits. On the contrary, simulated materialization of reputation risk and loss of confidence of the population in the banks represented by an outflow of 20% of household deposits shows a significantly greater similarity in the results for individual banks,

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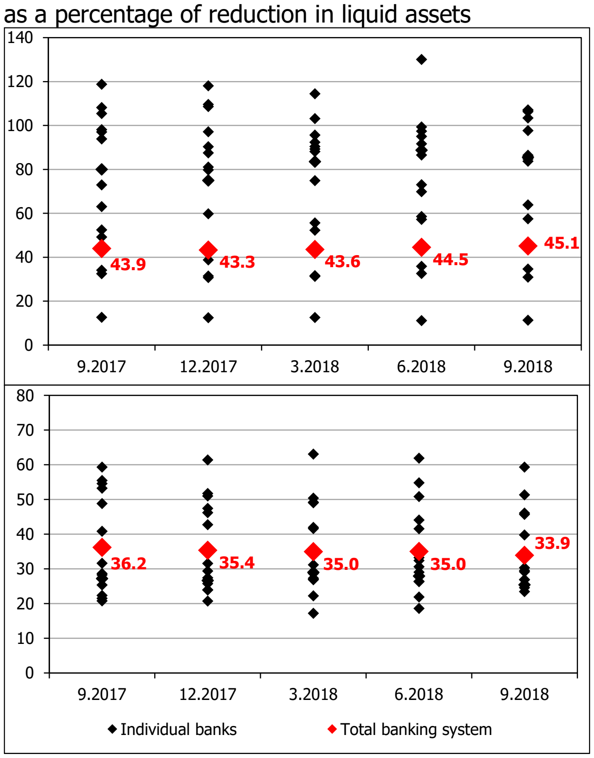
[38] The simulation assumes outflow of: deposits of the twenty largest depositors, 20% of household deposits, liabilities to parent entities (liabilities on subordinated instruments and hybrid capital instruments are excluded from the simulation as, according to the regulations for calculating capital 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 MBPR AD Skopje.
[39] 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.

Chart 33
Results from the simulation for withdrawal of the deposits of the twenty largest depositors (top) and for withdrawal of 20% of the household deposits (bottom)
as a percentage of reduction in liquid assets



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

thereby confirming the importance of deposits to the financing of the banks' activities. Hence, the sustainability of the liquidity position of banks, as well as the potential growth of their activities, are directly dependent on developments and the banks' participation in the deposit market and the maintenance of the confidence of domestic depositors in Macedonian banks. In case of an assumed conversion of certain off-balance sheet liabilities of the banks into on-balance sheet claims[40], the banks would spend about 20% of their liquid assets, which although is less compared to the simulations of outflow of deposits[41], yet this assumed reduction in liquid assets can be considered significant.

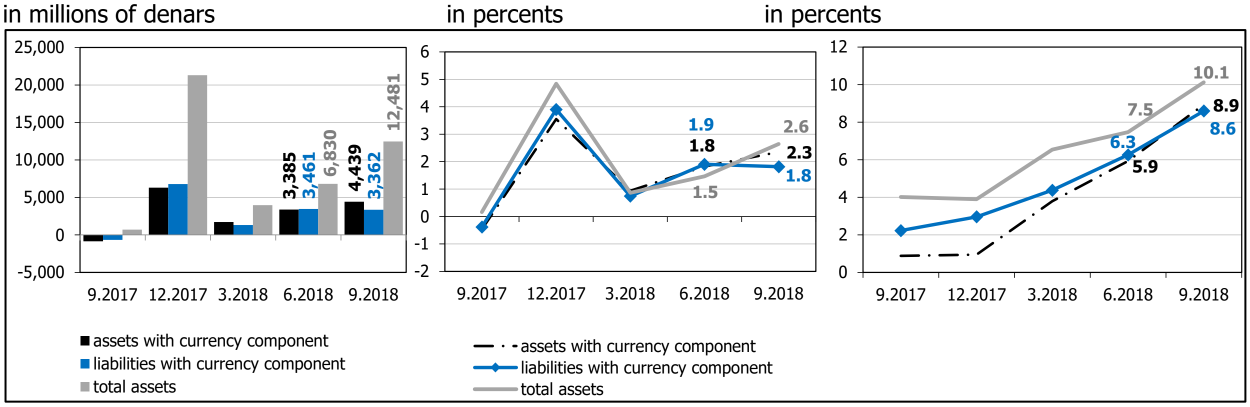
The small share of the liabilities to non-residents, as well as to parent entities in the structure of the total sources of funding for banks, causes moderate impact of the shocks associated with them on the overall result of this simulation.

[40] Outflow based on 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 on-balance sheet claims.
[41] During a simulation of outflow of the deposits of the 20 largest depositors, the liquid assets of the banking system are reduced by 45.1%, while in case of assumed outflow of 20% of the household deposits, liquid assets are reduced by 33.9%.

3. Currency risk

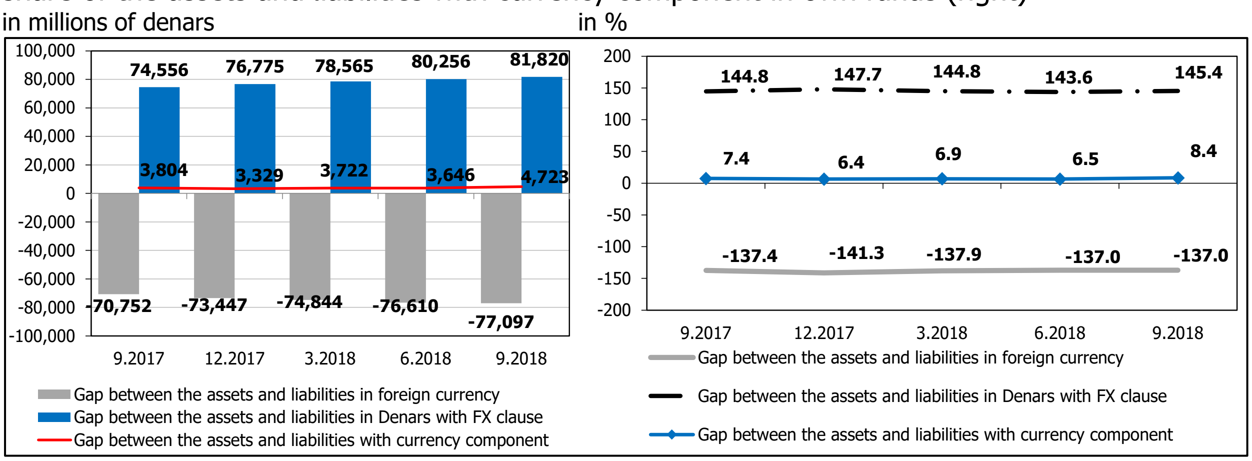
In the third quarter of 2018, the banking system's exposure to currency risk increased, as measured by the share of the gap between assets and liabilities with FX clause in the own funds. However, it remained at a moderate level of 8.4%. The quarterly expansion of the total gap between assets and liabilities with currency component almost entirely results from the gap in euros (with foreign exchange clause). Amid rapid growth of the total assets (liabilities) of the banking system, the shares of claims and liabilities with currency component in the total assets (liabilities) of the banking system, decreased (by 0.4 and 0.2 percentage points, respectively) on a quarterly basis. The Euro still dominates the banks' balance sheets.

Chart 34 Quarterly (left and middle) and annual (right) growth of assets and liabilities with currency component



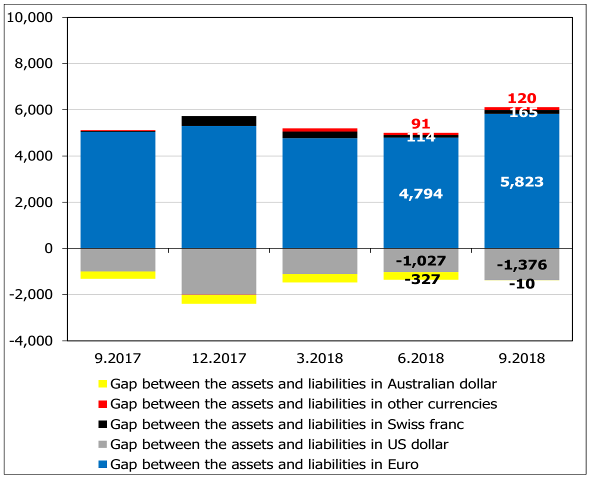
Source: NBRM, based on the data submitted by banks.

Chart 35 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)



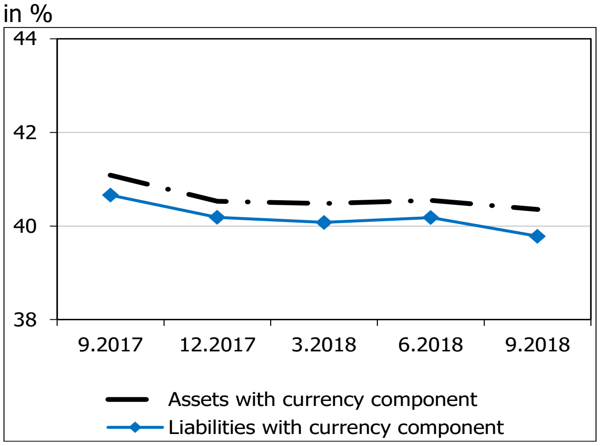
Source: NBRM, based on the data submitted by banks.

Chart 36
Dynamics and structure of the gap between assets and liabilities with currency component, by currency
in millions of denars



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

Chart 37
Share of the assets and liabilities with currency component* in the total assets and liabilities of banks
in %



Source: NBRM, based on the combination of several reports and data submitted by banks.
*Within the assets, loans are shown on a net basis i.e. adjusted for the impairment. MBDP AD Skopje is not included.

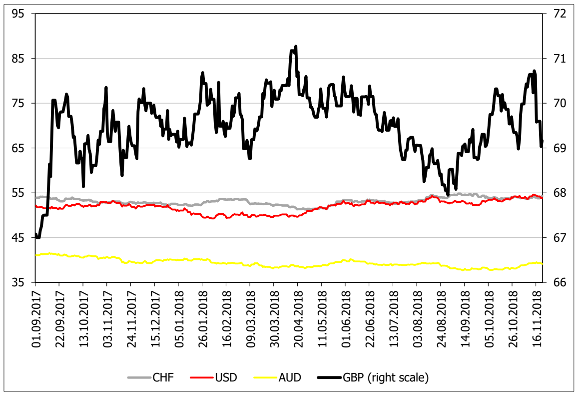
In the third quarter of 2018, the positive gap between assets and liabilities with currency component significantly increased by Denar 1,077 million or 29.5%. The widening of this gap almost entirely results from the increase in the gap in euros, which deepened by Denar 1,029 million on a quarterly basis. The widening of the total gap between assets and liabilities with currency component results from the higher quarterly growth of asset positions (growth of Denar 4,439 million or 2.3%)[42] compared with the increase in the liabilities with currency component (of Denar 3,362 million or 1.8%)[43].

At the same time, the percentage share of the gap between assets and liabilities with currency component in the own funds increased by 1.9 percentage points and reached 8.4%[44], which entirely resulted from the widening of the gap in denars with foreign exchange clause. Amid faster growth of total assets than the growth of assets and liabilities with currency component, the shares of assets and liabilities with currency component in total assets (and liabilities) are reduced by 0.4 and 0.2 percentage points, respectively.

The Euro minimally strengthened its leading role in the assets and liabilities with currency component of the banking system, reaching shares of 88% and 87.1%, respectively. At the expense of this increase in the Euro of 0.2 percentage points, on a quarterly level, there are small downward changes in the shares of the US dollar, by 0.4 and 0.2 percentage points, in assets and liabilities, respectively. Such currency structure indicates that the implemented strategy of a stable nominal exchange rate of the Denar against the Euro is extremely important for maintaining a low probability of materialization of

[42] Nearly two thirds of the increase in the assets with currency component results from the increase in loans with currency component (with foreign exchange clause).
[43] On the side of liabilities with currency component, the largest contribution to the quarterly increase was made by the growth of liabilities based on foreign currency loans, and a smaller contribution was also made by the increase in current accounts and short-term liabilities.
[44] 8.1% by including the off-balance sheet positions in foreign currency.

Chart 38
Exchange rate of the denar against the British pound, US dollar, Swiss franc and the Australian dollar
in denars



Source: NBRM.

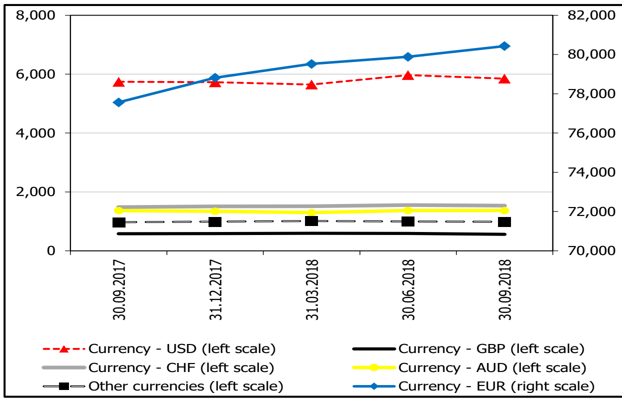
currency risk in the banks' balance sheets. The other currencies have a relatively small share in assets and liabilities with currency component, so that the fluctuations in their values would not affect significantly banks' stability.

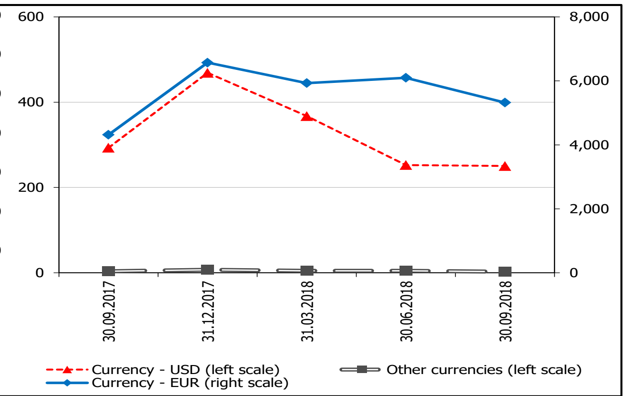
Table 3
Structure of assets and liabilities with currency component, by currency
in %

Currency	30.06.2018		30.09.2018	
	Assets	Liabilities	Assets	Liabilities
Euro	87.8	87.0	88.0	87.1
US dollar	7.5	8.2	7.1	8.0
Swiss franc	2.0	2.0	2.1	2.0
Australian Dollar	0.9	1.1	1.1	1.1
British pound	0.7	0.7	0.7	0.7
Other	1.0	1.0	1.1	1.1
Total	**100.0**	**100.0**	**100.0**	**100.0**

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

Chart 39
Deposits with currency component* of the natural persons (left) and non-financial corporations (right)
in millions of denars





Source: NBRM.
*The deposits do not include transaction accounts of the natural persons and non-financial corporations, due to unavailability of data on sector structure by currencies.

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

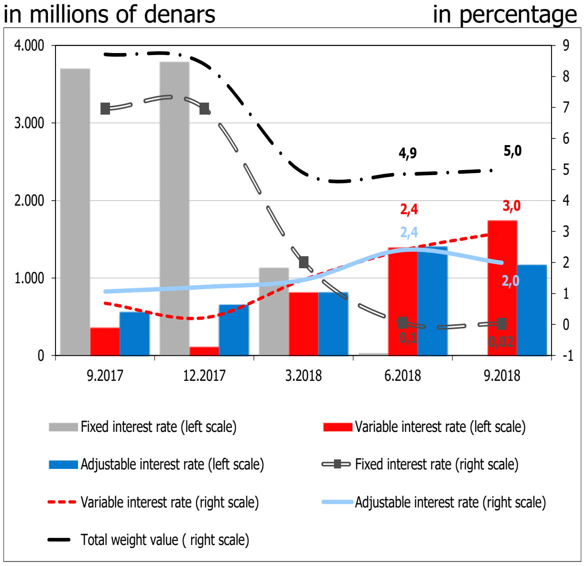
Items	Number of banks										
	Open currency position by currency / own funds										Aggregate currency position / own funds
	Euro		US Dollar		Swiss franc		Australian Dollar		Other		
	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	
under 5%	3	3	11	3	10	3	9		12	2	6
from 5% to 10%	1	1									2
from 10% to 20%	3										2
from 20% to 30%	2										3
over 30%	1										1

Source: NBRM, based on data submitted by banks.

4. Interest rate risk in the banking book

In the third quarter of 2018, banks' exposure to interest rate risk in the banking book somewhat increased. Namely, the weighted value of the banking book grew faster than in the previous quarter, thus slightly increasing its ratio to own funds. Amid further narrowing of the positive gap with fixed interest rate positions and widening of the negative gap in the adjustable interest rate positions, the increase in the weighted value of the banking book reflects the widening of the variable interest rate positions.

Chart 40
Total weighted value of the banking book*, by interest rate type (left scale) and to own funds (right scale)
in millions of denars in percentage

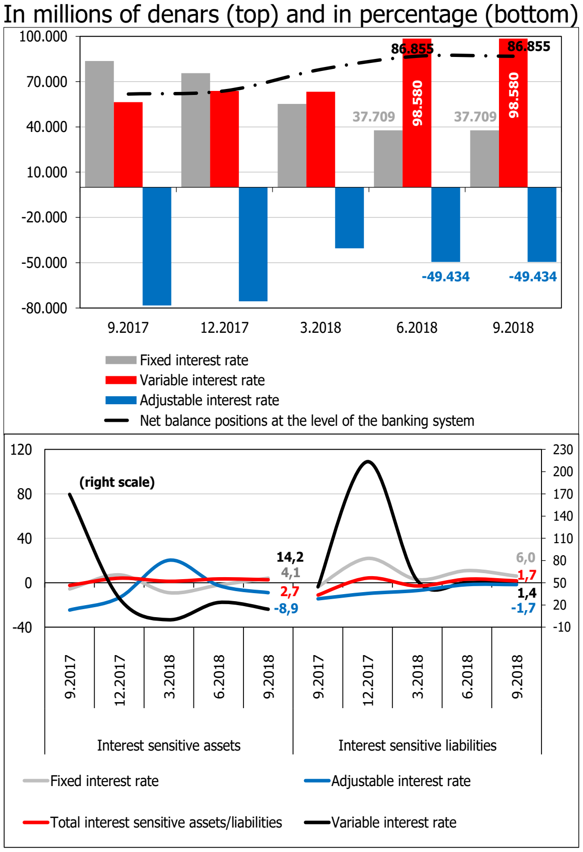


Source: NBRM, based on the data submitted by banks.
*The total weighted value of the banking book denotes the potential loss of the economic value of this portfolio, amid assumed unfavorable interest shock of ±2 percentage points.

In the third quarter of 2018, the total weighted value of the banking book experienced slightly faster growth of 3.3%, or Denar 95 million (in the second quarter of 2018, this growth was Denar 64 million or 2.3%). As of 30 September 2018, total weighted value to own funds ratio increased slightly to 5%. Analyzed by bank, this ratio ranged from 0.7% to 10.1%, which is well below 20%, which is a regulatory threshold whose exceeding may require capital allocation[45]. The quarterly increase in the total weighted value of the banking book results from the widening of the gap in the volatile interest rate positions. Conversely, the weighted value of the banking book with adjustable interest rates decreased due to the widening of the negative gap in the adjustable interest rate positions, while the weighted value of the banking book of fixed interest rates further decreased considering the narrowing of the gap between lending and deposit positions with fixed interest rates.

[45] 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 require allocation of appropriate amount of capital for covering the interest rate risk in the banking book.

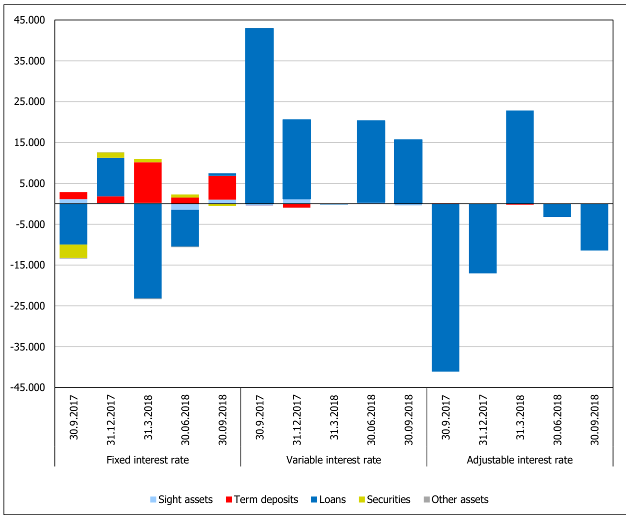
Chart 41
Interest-sensitive assets and liabilities by type of interest rate, gap (up) and quarterly growth (down)
In millions of denars (top) and in percentage (bottom)

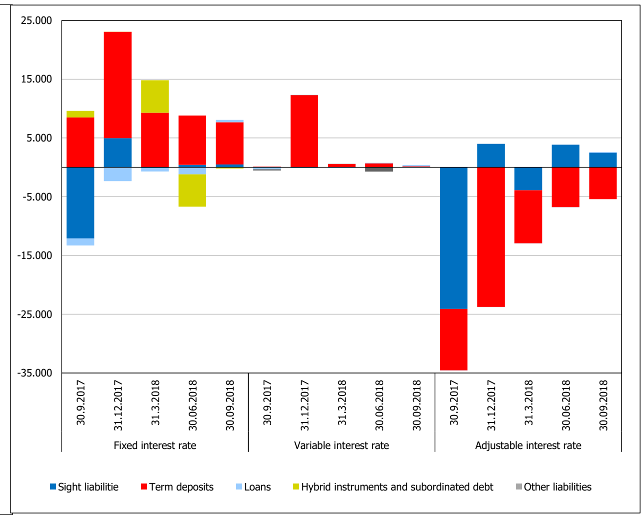


Source: NBRM, based on the data submitted by banks.

The total gap between the interest sensitive assets and liabilities registered a quarterly growth of Denar 5,392 million (or 6.6%), mostly due to the increase in the gap with volatile interest rate positions by Denar 14,946 million (or 17.9%). The widening of the gap with the volatile interest rate positions results from the higher growth of loans with this type of interest rate (by Denar 15,701 million, or 13.9%) (the growth was the highest in loans to non-financial companies), as opposed to the significantly weaker growth of time deposits with this type of interest rate on the liabilities side (of Denar 166 million, or 1.2%). The growth of volatile rate loans, starting from the current low interest rates, increases the significance of the indirect lending risk for the banks. The widening of the negative gap with the positions with adjustable interest rates is due to the significant quarterly decrease in the loans with adjustable interest rate (of Denar 11,440 million, or 8.9%), compared to the decrease in the collected time deposits with adjustable interest rate (Denar 5,418 million, or 6.5%). The very small reduction in the gap with fixed interest rate positions results from the pronounced growth of liabilities (of Denar 7,872 million, or 6%) compared to the growth of assets with this type of interest rate (Denar 6,957 million, or 4.1%). The high quarterly growth of time deposits with fixed interest rate (of Denar 7,179 million, or 7%), which corresponds to the banks' preference for interest rate fixing amid low interest rates, conditioned almost entirely the quarterly increase of liabilities with this type of interest rates. On the fixed interest rate assets side, higher placements in time deposits with this type of interest rates contributed the most to the increase in fixed interest rate assets.

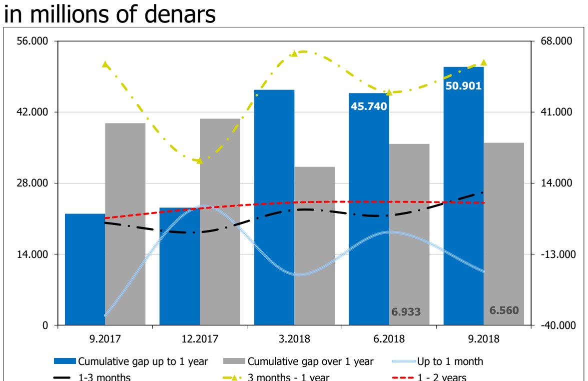
Chart 42 Quarterly growth of individual items of interest sensitive assets (left) and liabilities (right), by type of interest rates
in millions of denars

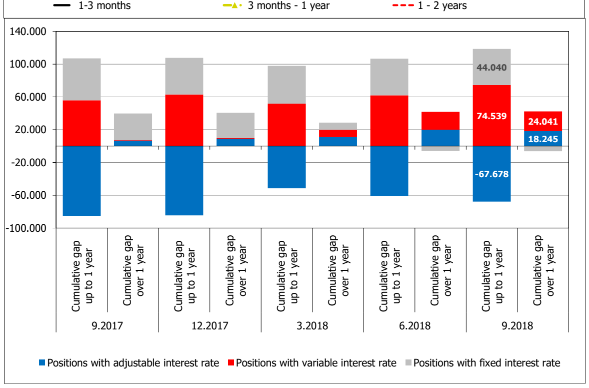




Source: NBRM, based on the data submitted by banks.

Chart 43 Asset-liability gap, by period until next interest rate revaluation (left) and gap structure by interest rate type (right)
in millions of denars

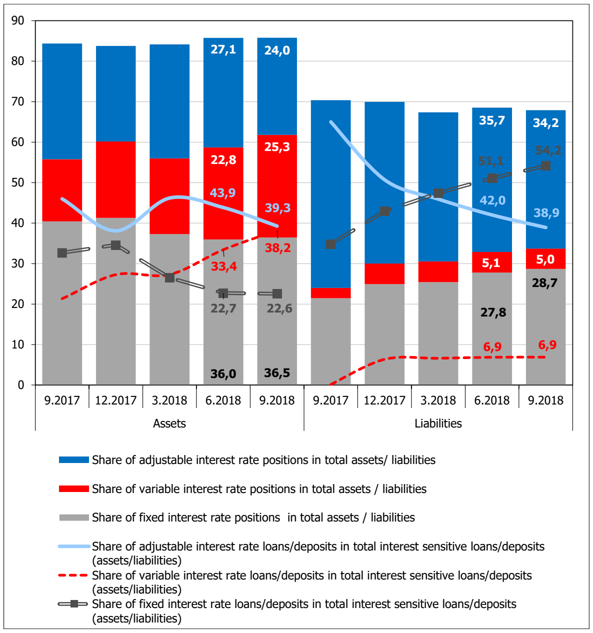




Source: NBRM, based on the data submitted by banks.

Analyzed by time to the next interest rate revaluation, the widening of the gap between interest rate sensitive assets and liabilities was concentrated in positions where the next interest rate revaluation is in the period up to 1 year, with variable interest rate.

Chart 44 Assets and liabilities structure, by type of interest rate
in %



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

Due to the gradual abandonment of the unilaterally adjustable interest rates on banks' new loans and deposits, followed by the increased use of volatile interest rates on loans, as well as the transformation of the deposit base from positions with adjustable to positions with fixed interest rates, the share of adjustable interest rates in the structure of interest sensitive assets and liabilities decreased. Stimulated by the National Bank's recommendations[46], and in order to reduce legal and reputational risk, banks replaced some of their lending with adjustable interest rates with volatile rate loans, while the downward shift in fixed interest rate loans is due to the expiry of the period in which the fixed interest rate is applied[47].
The increased use of volatile rates on the loan side allows for greater transparency to borrowers about the amount and the change in debt based on the interest rate, but may also cause greater volatility of interest payments. The application of volatile interest rates, especially on long-term loans, exposes banks to indirect credit risk due to the potentially deteriorating creditworthiness of borrowers, should the amount of repayment increases amid rise in the interest rate banchmark (which is a realistic expectation on short or medium term given the current historically low interest rates).

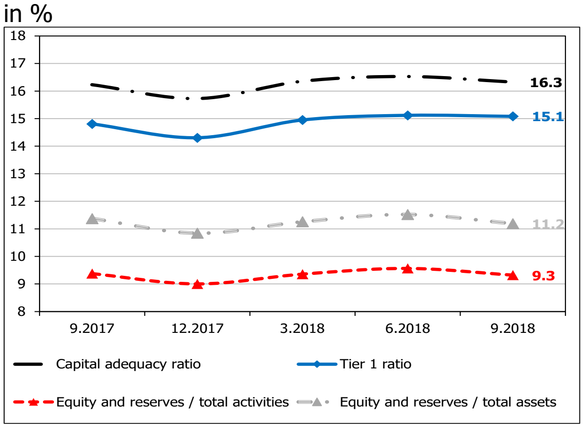
On the other hand, with the increased application of fixed interest rates on deposits, amid low interest rates and expectations for their future growth, banks limit the potential increase in interest expenses[48]. Such switch towards volatile and/or fixed interest rates requires banks' capacity building for interest rate risk management by identifying appropriate level and type of interest rates at the time of loan approval or deposit acceptance, taking into account the maturity of contracts, client-based risks, etc. It also requires greater banks' capacity to forecast future economic developments and the implications and effects of these movements on them and their customers.

[46] In October 2016, the National Bank in a letter recommended banks to exclude the application of unilaterally adjustable interest rates in new loan and deposit agreements with customers.
[47] It refers to loan products whose interest rates are fixed only for a certain period (the first years), followed by period of variable or (often) adjustable interest rates.
[48] In addition to shorter terms, banks also offer long-term fixed-rate deposit products (with the most common maturity up to three years).

5. Insolvency risk

The solvency and capitalization of the banking system remain high and stable. The capital adequacy ratio slightly declined to 16.3% in the third quarter of 2018, which is primarily a result of the significantly slower growth of banks' capital positions, given the further solid growth of activities. Quarterly growth of own funds mostly stems from the new issue of shares in a bank. In the third quarter, there were no significant reinvestments of gains in banks' capital, which are typical for the first half of the year, which contributed to slower quarterly growth of own funds. Aggregately, the banking system still has available capital over the regulatory and supervisory requirement of 7.5% of the total own funds. Risk-weighted assets increased as a result of the growth of credit risk-weighted assets caused by solid credit growth, amid loose credit standards. The results of the stress-test are slightly weaker compared to the previous quarter, which is conditioned by the minor fall in the capital adequacy ratio of the banking system before simulations.

Chart 45
Solvency ratios
in %



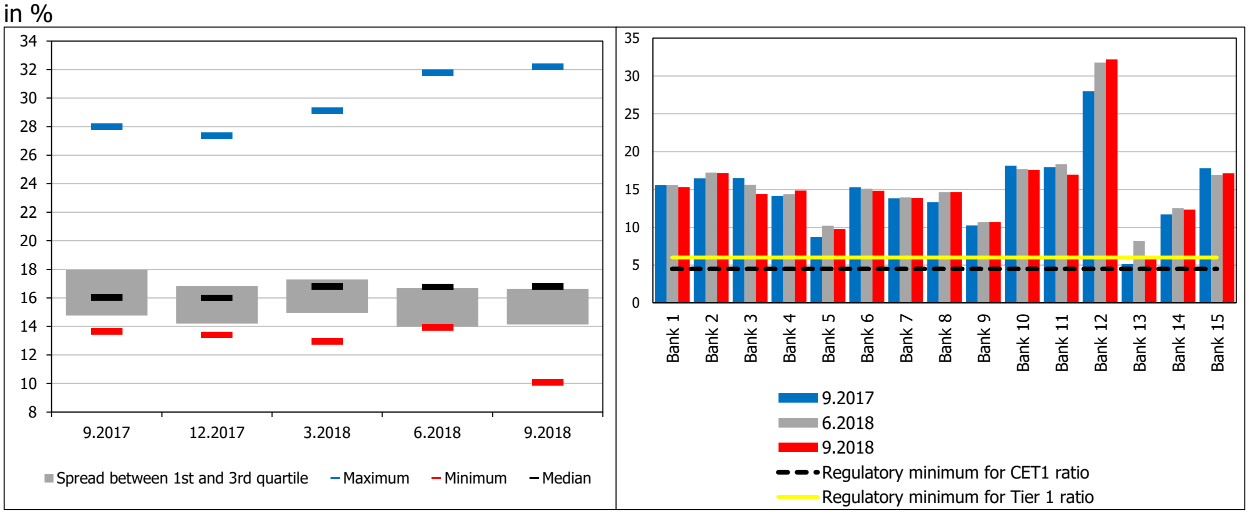
Source: NBRM, based on the data submitted by banks.

5.1. Solvency and capitalization ratios of the banking system and risk level of the activities

In the third quarter of 2018, **solvency and capitalization ratios** of the banking system registered a slight decrease, ranging from 0.2 to 0.3 percentage points. The capital adequacy ratio was 16.3% as of 30 September 2018, down by 0.2 percentage points on a quarterly basis.

The reason for such developments in the third quarter of 2018 includes mainly the lower

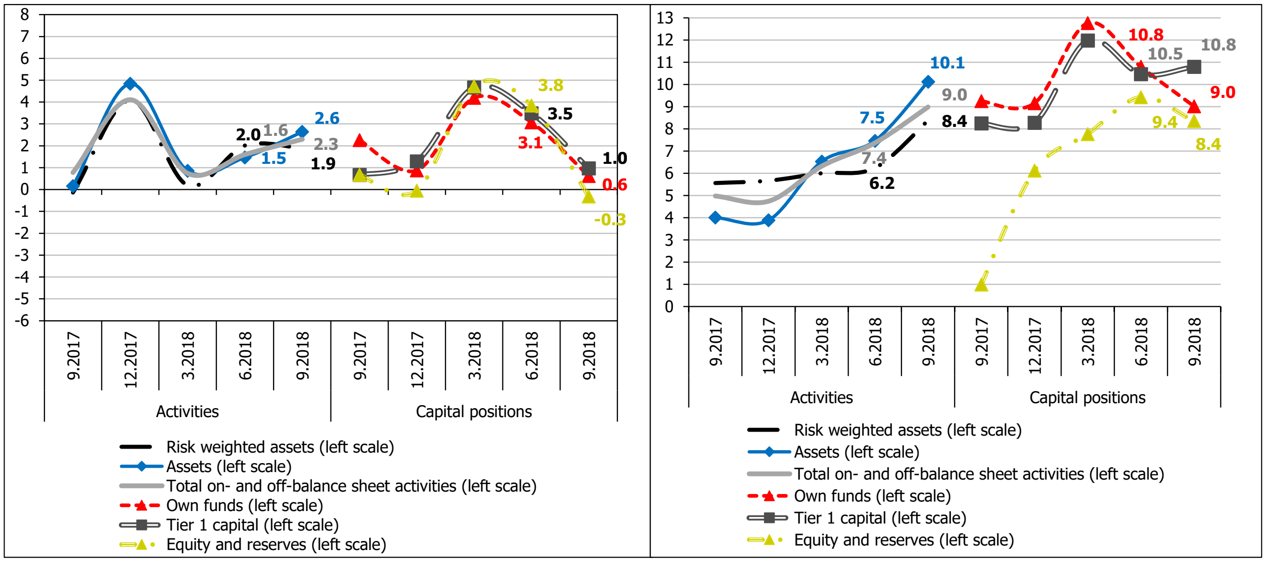
Chart 46
Measures for distributing capital adequacy ratio in the banking system (left) and Tier 1 capital rate, by bank (right)
in %



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

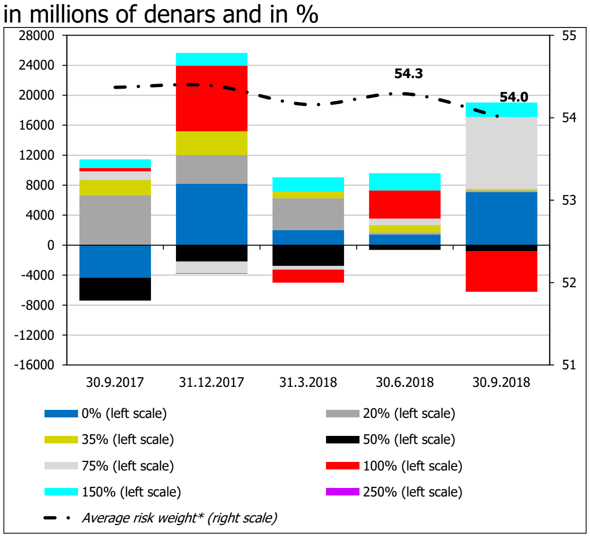
quarterly growth rates of the capital positions[49] of the banking system, compared to the activities[50] of the banking system, primarily the banks' further solid lending activity (to households and non-financial companies).

Chart 47
Growth of components of solvency ratios, quarterly (left) and annually (right)
in %



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

Chart 48
Quarterly changes in the total on-balance sheet and off-balance sheet exposure, by risk weights
in millions of denars and in %

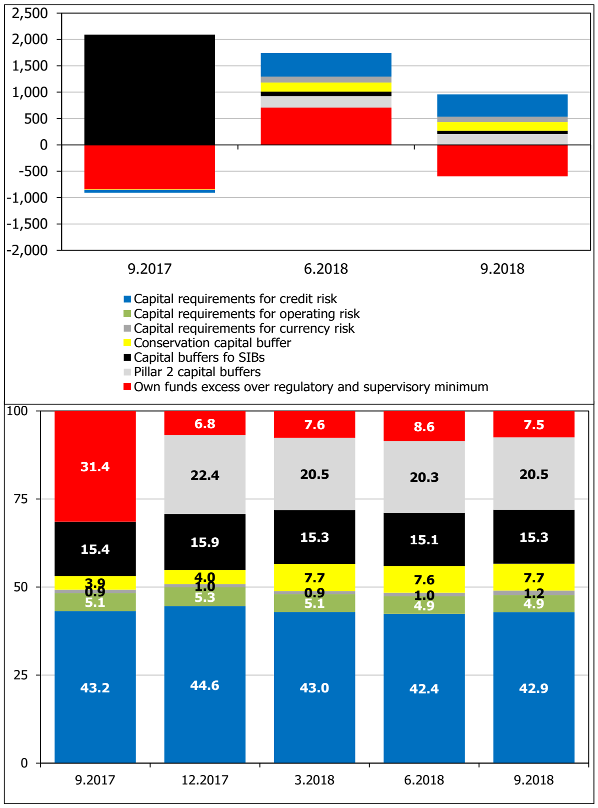


Source: NBRM, based on the data submitted by banks.
Note: *The average risk weight of net on-balance sheet and off-balance sheet exposure is calculated as a ratio between credit risk weighted assets and net on-balance sheet and off-balance sheet exposure of banks.

The risk level of the bank lending activities, measured as a ratio between credit risk-weighted assets and total on-balance sheet and off-balance sheet exposure decreased by 0.3 percentage points and totaled 54% as of 30 September 2018. Such decrease in the average risk weight is mostly due to the significant quarterly growth of positions with 0% risk weight (growth of liquid assets of the banking system) and the decrease of positions with 100% risk weight (as a result of the shift of some positions of the retail loan portfolio, from 100% risk weighted positions to 75% risk weighted positions in a large bank). On the other hand, the bank lending especially to households, continues to grow strongly, which is seen by the

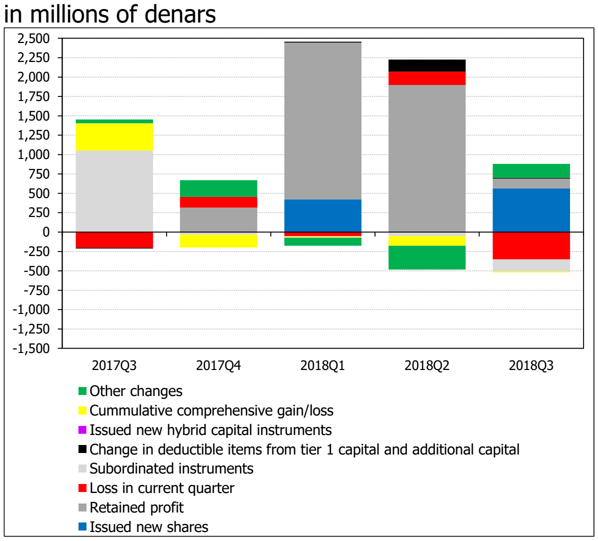
[49] In the third quarter of 2018, fixed capital and own funds increased by only 1% and 0.6%, respectively, while equity and reserves registered minor decrease (of 0.3%).
[50] Total risk-weighted assets increased by Denar 6,598 million, or 1.9% (quarterly decrease of merely 0.1 percentage point), which was almost entirely due to the growth of credit risk-weighted assets (growth of 1.7%, or by Denar 5,302 million).

Chart 49
Structure of quarterly growth (up) and balance (down) of own funds, by the requirement for covering risks and for maintaining the required capital buffers
in millions of denars and in %



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

Chart 50
Structure of the quarterly growth of own funds
in millions of denars



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

increase in 75% and 150% risk weighted positions.

5.2. Quality of own funds of the banking system

In the third quarter of 2018, the banking system's own funds grew at a significantly slower pace than in the previous quarter. The quarterly growth of own funds (by Denar 362 million, or 0.6%) is almost entirely a result of new issues of shares in one large bank[51]. On the other hand, the current loss in the third quarter of 2018 incurred by one bank made an adverse contribution to the quarterly growth of own funds. Also, in the third quarter, there were no significant reinvestments of gains in banks' capital (typical for the first half of the year), which contributed to slower quarterly growth of own funds.

The quality of own funds is high with a share of Common Equity Tier 1 capital (the highest quality component of own fund) in total own funds of 91.3%. For more details about the level of own funds by group of banks see annexes to this report.

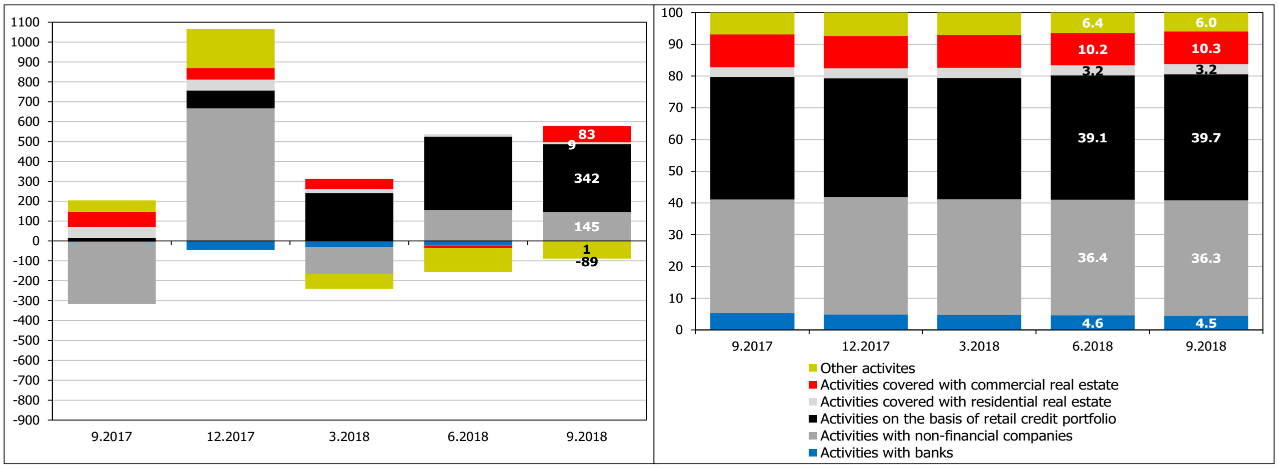
Amid high capitalization and upon activating the capital buffers[52], the banking system has an available capital (above the minimum required to cover risks) in place for covering contingent loss. Namely, 7.5% of the banks' total own funds is available capital (8.6% as of 30 June 2018). Analyzed by risk, most of the minimum capital requirement is used

[51] The bank made two issues of shares in the amount of Denar 1,548 million. The shares of one of the issues were made on the basis of dividend payment in shares to the shareholders, and as a result, the total net amount of increase of the bank's own funds based on these issues of shares was lower than the total amount of shares issued and amounted to Denar 564 million.

[52] As of 31 March 2017, banks have been required to maintain a capital conservation buffer of 2.5% of the risk weighted assets. Besides, the seven systemically important banks were to achieve a capital buffer for systemically important banks from 1% to 2% by 31 March 2018, i.e. from 1% to 2.5% by 31 March 2019.

primarily for covering credit risk (42.9%), and then for covering operational risk (4.9%)[53].

Chart 51 Quarterly growth rates (left) and structure (right) of capital requirements for credit risk, by exposure category
in millions of denars and in %

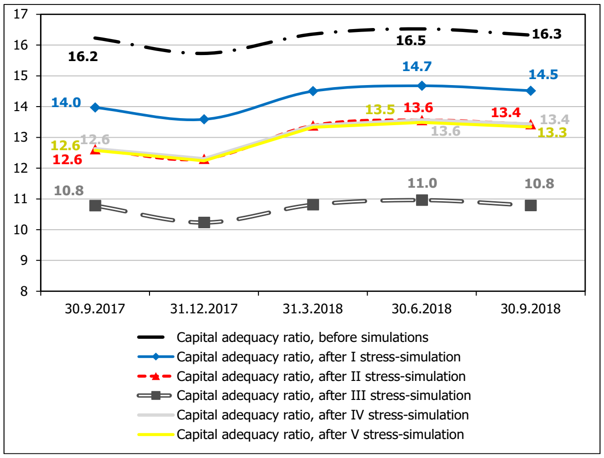


Source: NBRM, based on the data submitted by banks.

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.

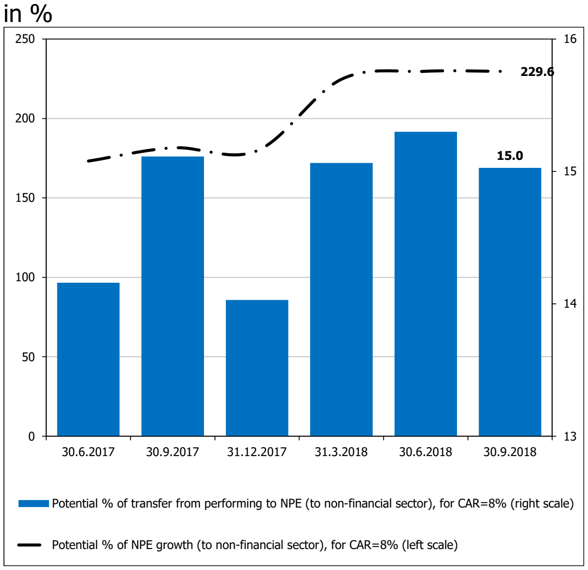
[53] The quarterly growth of regulatory capital (required for covering risks) was Denar 528 million, or 1.9%, mostly due to the increase in the capital requirement for credit risk (growth of Denar 424 million, or 1.7%), primarily from the retail portfolio. Also, the capital requirement for currency risk registered a quarterly growth of Denar 104 million, or 17.1%.

Chart 52
Results of stress-test simulations
in %



Source: NBRM, based on the data submitted by banks.
*Stress testing includes the following simulations:
I: Increase in non-performing loan exposure to non-financial entities by 50%;
II: Increase in non-performing loan exposure to non-financial entities by 80%;
III: Migration of 10% of the regular to non-performing loan exposure to non-financial entities;
IV: Increase in non-performing loan exposure to non-financial entities by 80% and increase in interest rates from 1 to 5 percentage points;
V: Increase in non-performing loan exposure to non-financial entities by 80%, depreciation of the Denar exchange rate by 30% and increase in interest rates from 1 to 5 percentage points;

Chart 53 Deterioration of the credit expoure quality is needed for the capital adequacy of the banking system to drop to 8%
in %



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

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

The stress testing of the resilience of the banking system and individual banks in the Republic of Macedonia to simulated shocks indicates slightly poorer results compared to 30 June 2018. Such results of the stress tests are mostly conditioned by the slight decrease in the capital adequacy of the banking system in the third quarter of 2018 (before simulations). The capital adequacy of the banking system does not fall below 8% in any of the simulations, although individual banks reveal hypothetical need for recapitalization in the simulated extreme shocks.

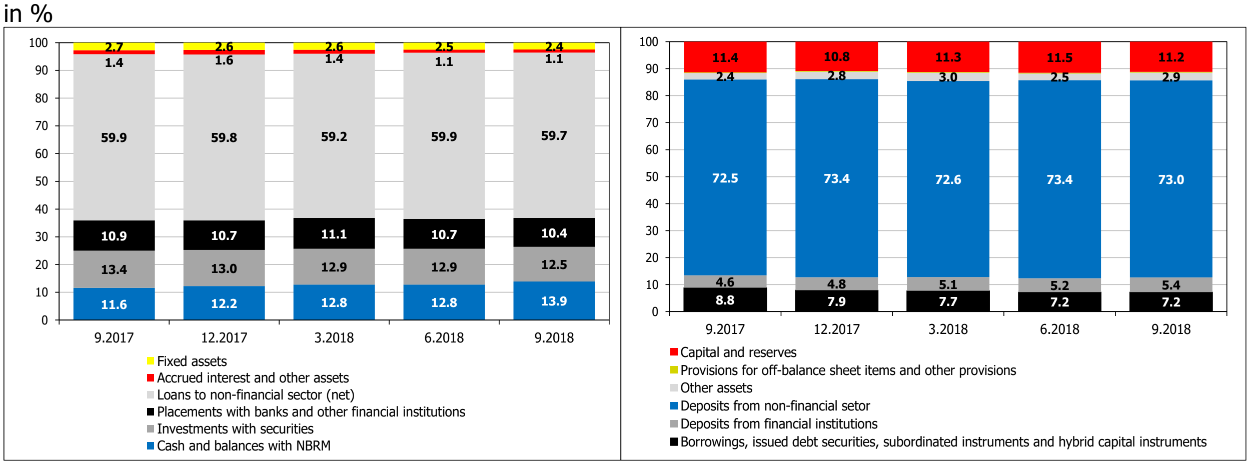
Hypothetical shocks on the part of credit risk had the greatest implication on the stability of the banking system. Within the credit exposure to non-financial entities, the simulations show that the capital adequacy of the banking system would drop to 8% only if the non-performing loan exposure rises by 229.6%, i.e. in case of migration of 15% from regular to non-performing loan exposure. This assumption is extreme, considering that in the third quarter, the growth of nonperforming loan exposure to non-financial entities was merely 0.3%. Also, analyzes show that only 1.3% of regular credit exposure has received a non-performing status for a period of one year.

Major balance sheet changes and profitability of the banking system

1. Bank activities

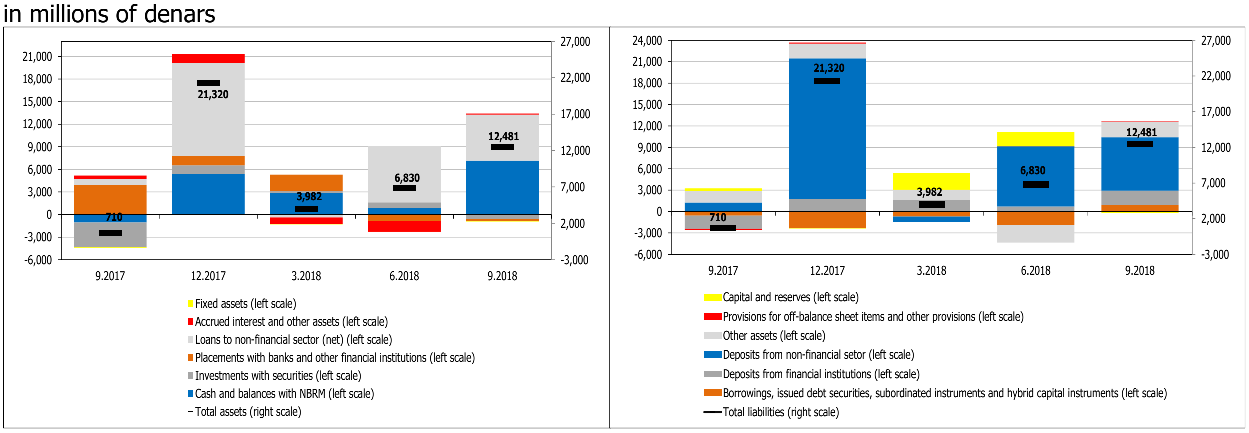
Total assets of the Macedonian banking system continued to grow at a faster pace, compared to both the previous quarter and the same period last year. The quarterly assets growth is mainly driven by the deposit growth, which was solid, yet at a slower pace compared to the previous quarter of the year. The growth of deposits of non-financial entities stemmed from the growth of denar deposits of non-financial companies, amid further growth in household deposits. The increased financial potential was used to almost equally increase the liquid assets of banks and loans. The increase in lending was largely due to the household denar loans and to a lesser extent the increased credit support to corporate clients.

Chart 54
Structure of the assets (left) and liabilities (right) of the banking system
in %



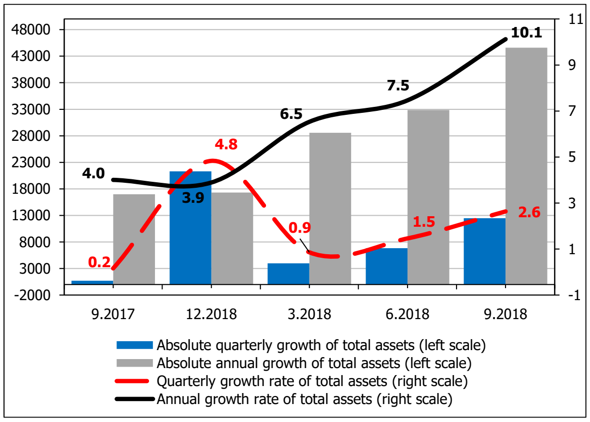
Source: NBRM, based on the data submitted by banks.

Chart 55
Quarterly growth of components of assets (left) and liabilities (right) of the banking system
in millions of denars



Source: NBRM, based on the data submitted by banks.
Note: The loans are presented on net basis, reduced by impairment.

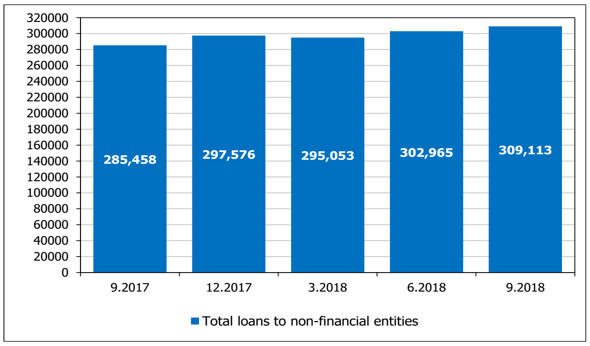
Chart 56
Assets of the banking system
in millions of denars and in %



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

As of 30 September 2018, total assets of the banking system was Denar 485,285 million worth, which is a faster quarterly increase of Denar 12,481 million, or 2.6%. The growth of assets was almost equally a reflection of the increased liquid assets of banks (primarily, placements in overnight deposit facilities with the NBRM) and the growth of lending to non-financial entities. On the liabilities side, there was an increase in the banks' deposits (of both non-financial and financial entities), the financial result and liabilities to banks' parent entities.

Chart 57
Amount of loans to non-financial entities
in millions of denars

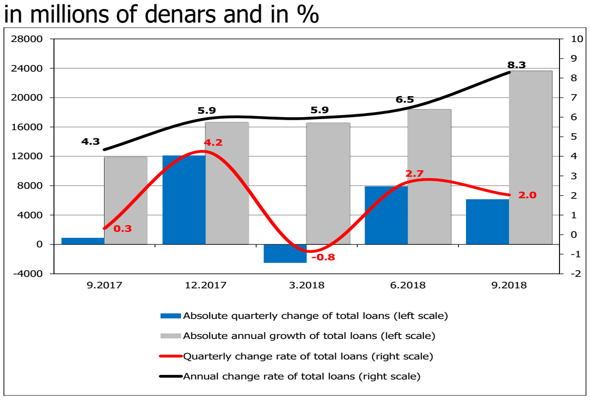


Source: NBRM, based on the data submitted by banks.

2.1. Loans to non-financial entities

In the third quarter of 2018, lending to non-financial entities registered a slower quarterly growth. Loans to non-financial entities[54] increased by Denar 6,148 million, or by 2.0% (2.7% in the second quarter of 2018). On the other hand, there was a faster growth of lending annually, with an increase in loans of Denar 23,655 million, or 8.3% (6.5% as of 30 June 2018)

Chart 58 Growth of loans to non-financial entities
in millions of denars and in %

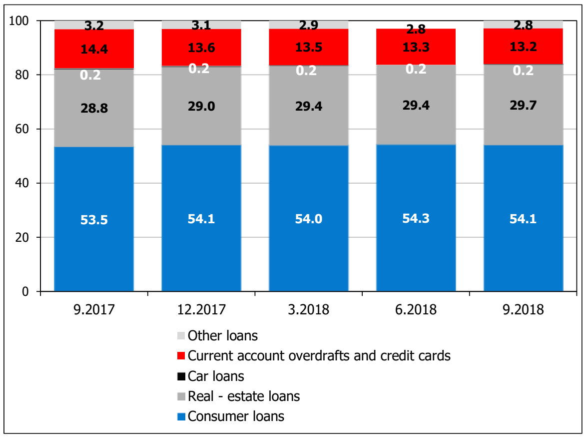


Source: NBRM, based on the data submitted by banks.

Increased lending to households contributed more to the quarterly loan growth, compared to the contribution of corporate lending. Namely, household loans increased by Denar 3,715 million, or by 2.5% in the third quarter of 2018 (growth of Denar 4,742 million, or 3.3% in the second quarter of the year). On an annual basis, household loans grew rapidly and reached a solid growth rate of 10.5% (10.1% as of 30 June 2018). Corporate loans registered a slower quarterly growth of 1.1% (or Denar 1,726 million), while the annual growth rate (6.0%) accelerated and is almost twice as high as at 30 June 2018.

[54] 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).

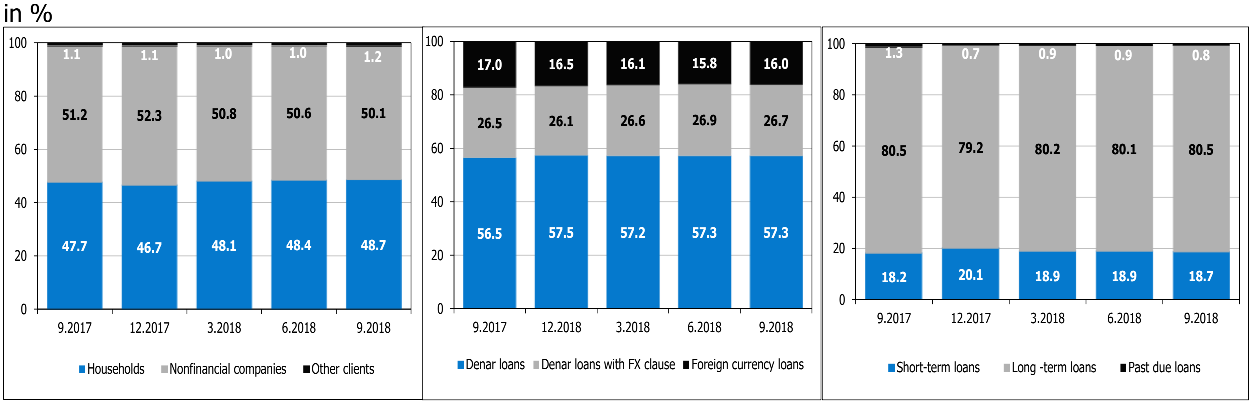
Chart 59
Structure of loans to natural persons, by product
in %



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

Banks continue to show a greater propensity for lending to households, with divergent trends and a steady approximation of the share of household loans and corporate loans in total bank loans in recent years. In the third quarter of 2018, the structural shares of households and corporate clients in total loans accounted for 48.7% and 50.1%, respectively[55]. In six of the fourteen banks[56], the share of household loans in the banks' loan portfolio is higher than the share of corporate loans.

Chart 60
Structure of total loans, by sector (left) and currency (middle), and structure of regular loans, by maturity (right)
in %



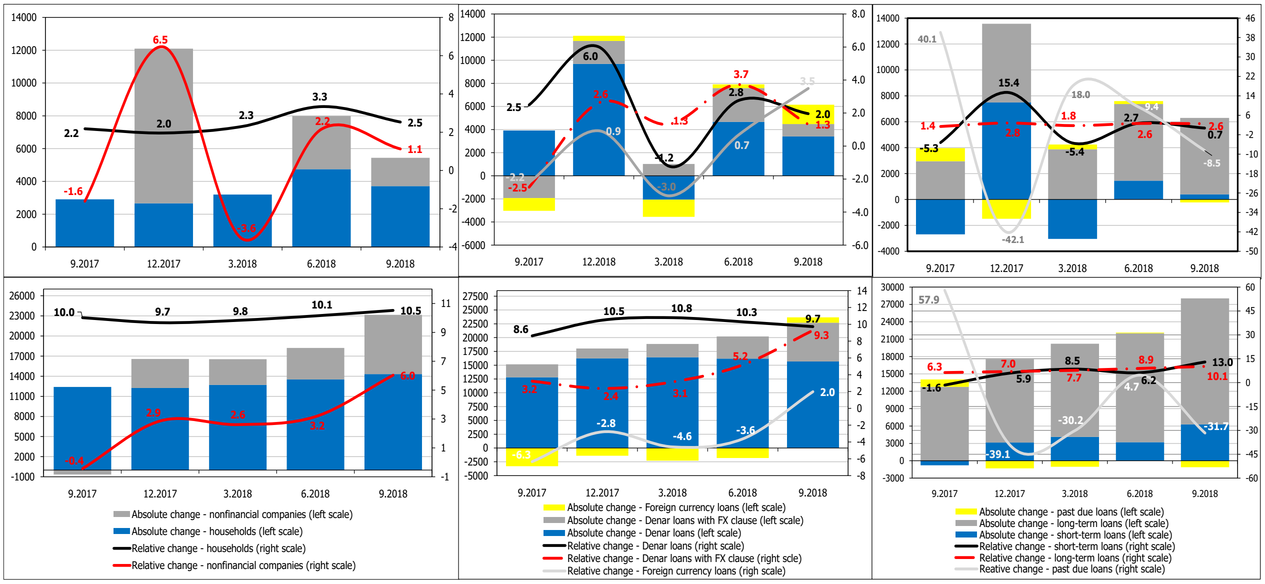
Source: NBRM, based on the data submitted by banks.

In the third quarter of 2018, denar loans increased significantly, compared to the growth of lending with currency component. Denar household loans[57] increased at a faster pace (growth of Denar 2,522 million or 3.1%), compared to the corporate loans (growth of Denar 834 million or 0.9%). The increase in the denar loans with FX clause[58] was mostly driven by households, while the growth of foreign currency loans[59] was generated similarly by both

[55] 38.2% and 61.6% respectively at the end of 2010.
[56] MBDP AD Skopje was excluded from this analysis.
[57] Denar loans increased quarterly by Denar 3.406 million, or 2.0%.
[58] Denar loans with FX clause increased by Denar 1,070 million (or 1.3%), with contribution of household loans of 70.1%.
[59] Foreign currency loans increased by Denar 1,672 million (or 3.5%) quarterly. Thereby, the contribution of loans to non-financial corporations (31%) is slightly larger than the contribution of loans to households (26.5%) in the growth of foreign currency loans. The rest (42.5%) of the growth of foreign currency loans is due to loans to other clients, i.e. the growth of long-term loans to non-residents in foreign currency.

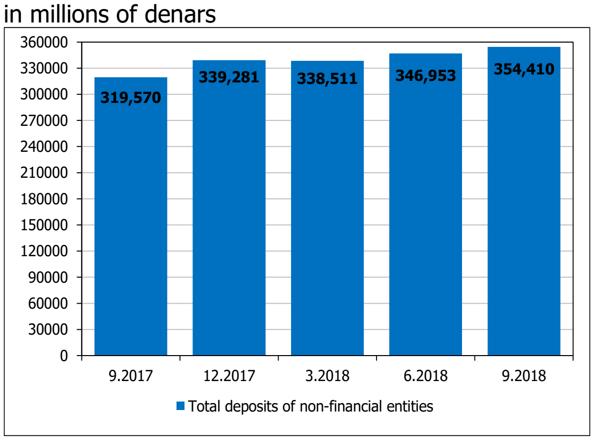
households and corporations. Denar loans kept the leading role in the currency structure of loans, with share of 57.3%.

Chart 61
Quarterly (up) and annual (down) growth of loans, by sector, currency and maturity
in millions of denars and in %



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

Chart 62
Stock of deposits of non-financial entities
in millions of denars



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

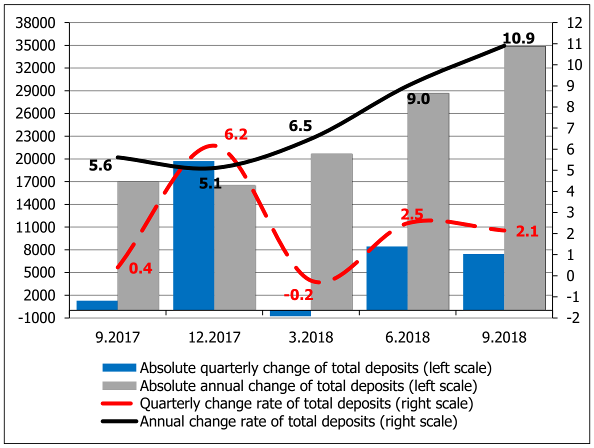
In the third quarter of 2018, the loan portfolio maturity continued increasing. Long-term lending registered a quarterly growth of denar 5,897 million (or 2.6%), further strengthening its share in the structure of total loans (76.4%). Most (57.8%) of the growth of long-term loans was due to household loans[60]. In this quarter, short-term lending contributed less (6.5%) to the growth of total lending (18.3% in the second quarter of 2018). Thereby, the growth of short-term loans was entirely due to denar loans to households[61]).

2.2. Deposits of non-financial entities

After the solid growth in the second quarter of the year, in the third quarter of 2018, the deposits of non-financial entities

[60] Long-term loans to households registered a quarterly increase of Denar 3,407 million, primarily reflecting the growth of long-term denar loans to households (about Denar 2,173 million), mainly consumer and housing loans.
[61] Short-term loans increased by Denar 398 million (or 0.7%) on a quarterly basis, which was mainly due to the growth of denar loans to households (by Denar 226 million, or 2.4%).

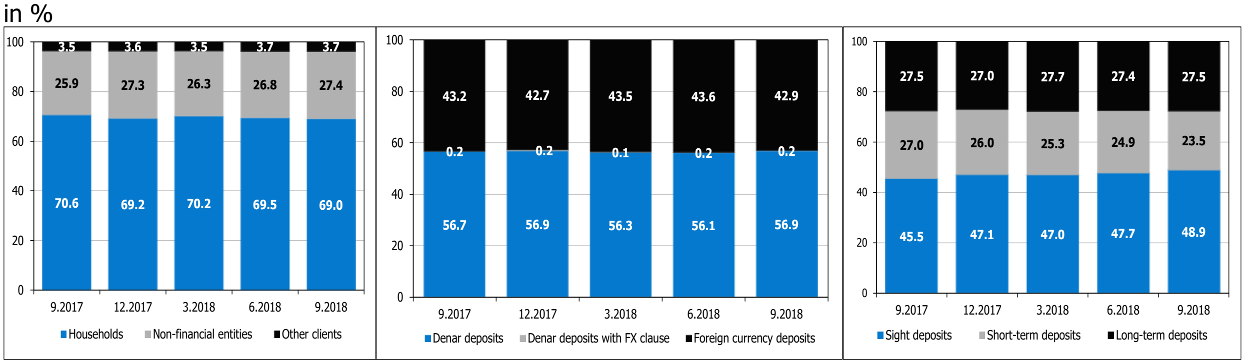
Chart 63
Growth of deposits of non-financial entities
in millions of denars and in %



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

continued to grow, but at a slower pace. Yet, the annual growth rate accelerated compared to 30 September 2017. Banks' quarterly deposit growth was Denar 7,457 million, or 2.1% (2.5% in the second quarter of 2018), while the annual growth reached Denar 34,840 million, or 10.9% (9% as of 30 June 2018). **Households**, as traditionally the most important depositor in the Macedonian banking system (with a share of 69% in total deposits), increased their assets in banks by Denar 3,434 million, or 1.4%, in the third quarter of 2018. However, in this quarter, **deposits of non-financial corporations** increased significantly (by Denar 3,885 million or 4.2%) compared to the growth of household deposits. On an annual basis, corporate deposits registered a solid growth rate of 17.2% (or Denar 14,198 million). The annual growth of household deposits in the third quarter of 2018 was higher, compared to corporate deposits (Denar 18,843 million, or 8.3%).

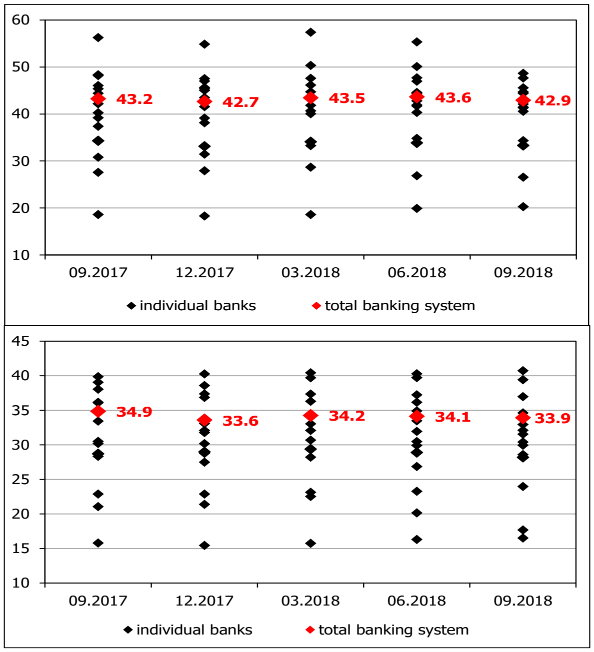
Chart 64
Structure of total deposits, by sector (left), currency (middle) and maturity (right)
in %



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

Analyzing the currency, denar deposits almost entirely determined the quarterly growth of total deposits, increasing by Denar 6,978 million (or 3.6%). Deposits of non-financial corporations contributed significantly (71%) to the growth of denar deposits compared to the contribution of household deposits (21.2%). Total deposit base remained dominated by denar deposits (56.9% as of 30 September 2018, compared to 56.1% as of 30 June 2018), with the largest share (61.6%) of household deposits. Foreign currency deposits saw a quarterly growth

Chart 65
Share of total foreign currency deposits (up) and foreign currency household deposits (below) in total deposits of the banking system
in %



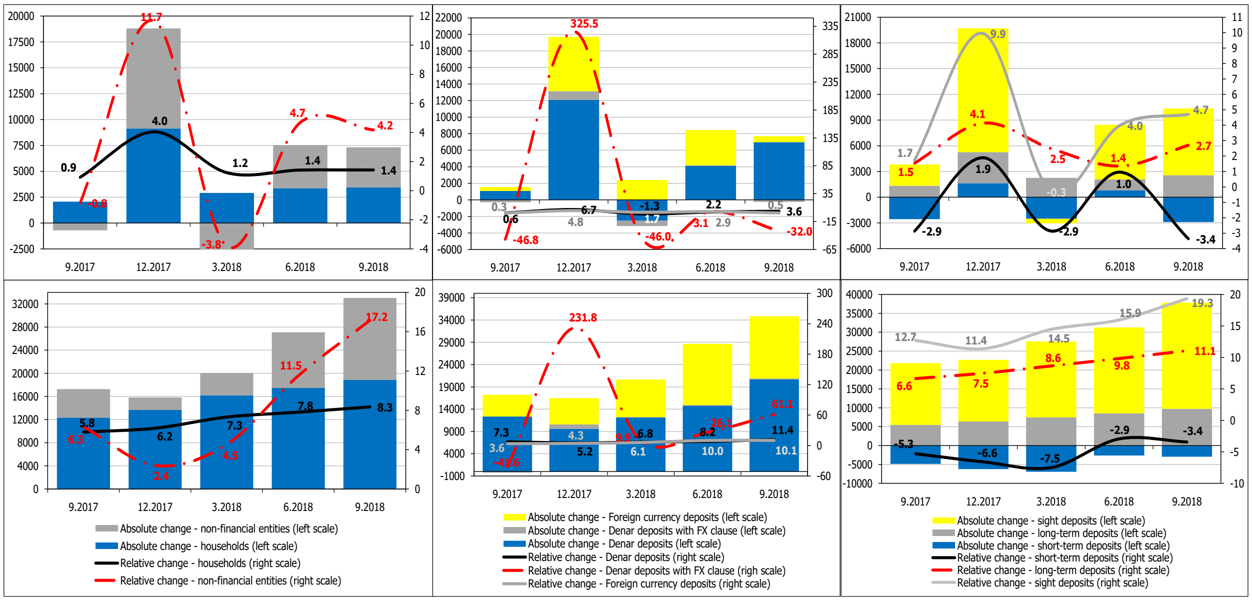
Source: NBRM, based on the data submitted by banks.

of Denar 726 million, or 0.5%, which was entirely due to household deposits.

In the third quarter of 2018, the accelerated growth of demand deposits[62] continued to contribute the most to the increase in total deposits. While the growth of long-term deposit accelerated, the contribution of short-term deposits to the deposit growth was negative. In the third quarter of 2018, **short-term[63] deposits** registered negative growth rate (-3.4% or Denar 2,902 million). **Sight deposits** increased by Denar 7,792 million (or 4.7%), which was largely driven by non-financial corporations' deposits[64], primarily denar deposits. **Long-term deposits** experienced a quarterly growth of Denar 2,566 million (or 2.7%), which was mostly conditioned by household deposits (77.8%)[65].

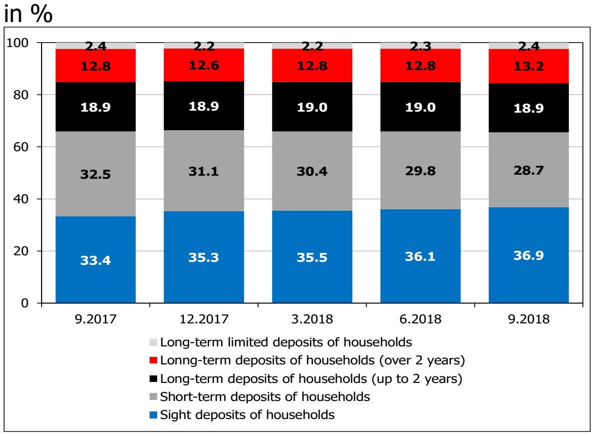
[62] Demand deposits also include transaction accounts.
[63] The contribution of household deposits to the quarterly decline in short-term deposits was 54.2%, while the contribution of non-financial corporations' deposits was 40.4%.
[64] Quarterly growth of demand deposits largely resulted from the growth of non-financial corporations' denar deposits (by Denar 5,121 million, or 10.5%) and less from the growth of household foreign currency deposits (by Denar 1,808 million, or 4.5%).
[65] The quarterly growth of long-term household deposits was Denar 1,997 million (or 2.4%), where the contribution of denar deposits was 44%, while the contribution of foreign currency deposits was slightly higher (56%).

Chart 67 Quarterly (up) and annual (down) deposit growth by sector, currency and maturity
in millions of denars and in %



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

Chart 66
Maturity structure of household deposits
in %



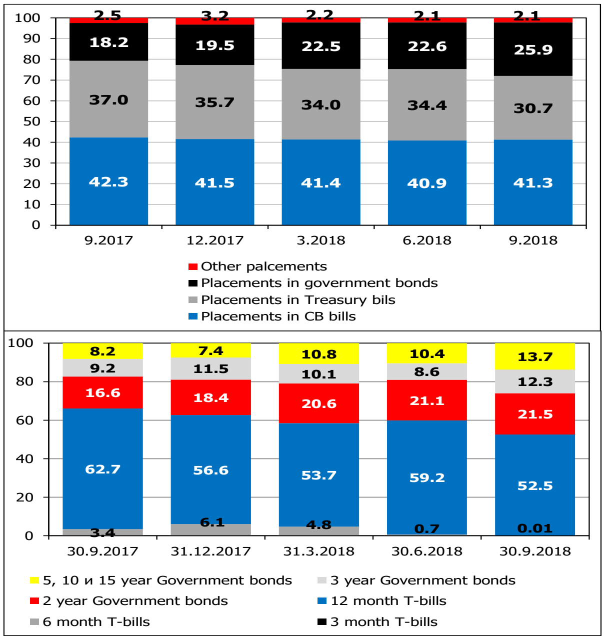
Source: NBRM, based on the data submitted by banks.

The analysis of the **maturity and currency structure of household deposits** points to the demand deposits, both denar and foreign currency, as the fastest growing component in the past period. Additionally, denar demand deposits show higher volatility, probably given the pronounced presence of the transaction motive among individuals for keeping their funds in banks in this form. The transaction motive is less pronounced in the foreign currency demand deposits, which have been growing steadily over the past period. Short-term deposits have a predominantly downward trend, independent of currency, at the expense of the growth of long-term deposits.

2.3. Other activities

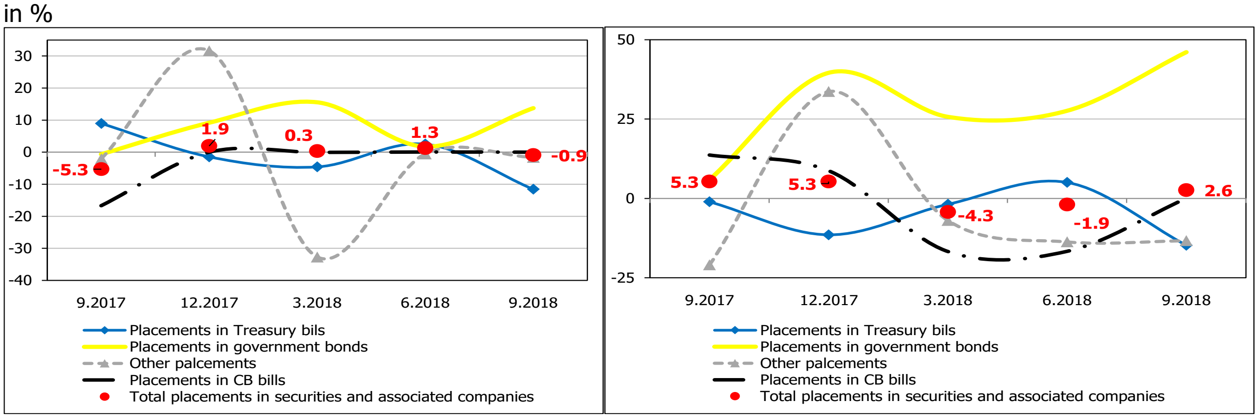
In the third quarter of 2018, banks' investment in securities[66] (by net book value) decreased by Denar 556 million (or 0.9%), while their share in the total assets of the banks amounted to 12.5% and decreased compared to 30 June 2018 (12.9%). The faster quarterly fall of banks' investment in treasury bills (of Denar 2,431 million, or 11.6%) made the largest contribution to the reduction of the total securities portfolio. In contrast, an increase of Denar 1,895 million (or 13.7%) was registered in banks' investment in domestic long-term debt securities (three-year, five-year, ten-year and fifteen-year government bonds). The banks' investments in CB bills are almost unchanged compared to 30 June 2018. Following the reduction of the CB bills interest rate in the first quarter of 2018, the National Bank further reduced the CB bills interest rate[67] in August 2018. Monetary easing is a reflection of the gradual stabilization of the expectations and confidence of the economic entities, amid solid external position and lower risks for the domestic economy.

Chart 68 Structure of securities portfolio (up) and maturity structure of banks' investments in government securities (down)
in %



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

Chart 69
Quarterly (left) and annual (right) growth rate of securities portfolio
in %

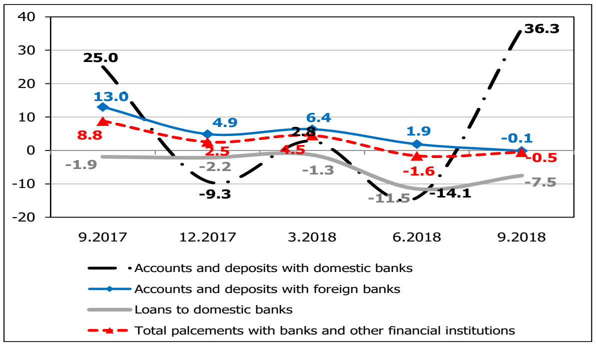


Source: NBRM, based on the data submitted by banks.

In the third quarter of 2018, the volume of interbank operations is still small (the share of placements with domestic

[66] Including investment in associated companies.
[67] In August 2018, the National Bank reduced the interest rate on CB bills from 3.00% to 2.75%, while the amount offered remained unchanged (Denar 25,000 million).

Chart 70
Quarterly growth in placements with financial institutions
in %



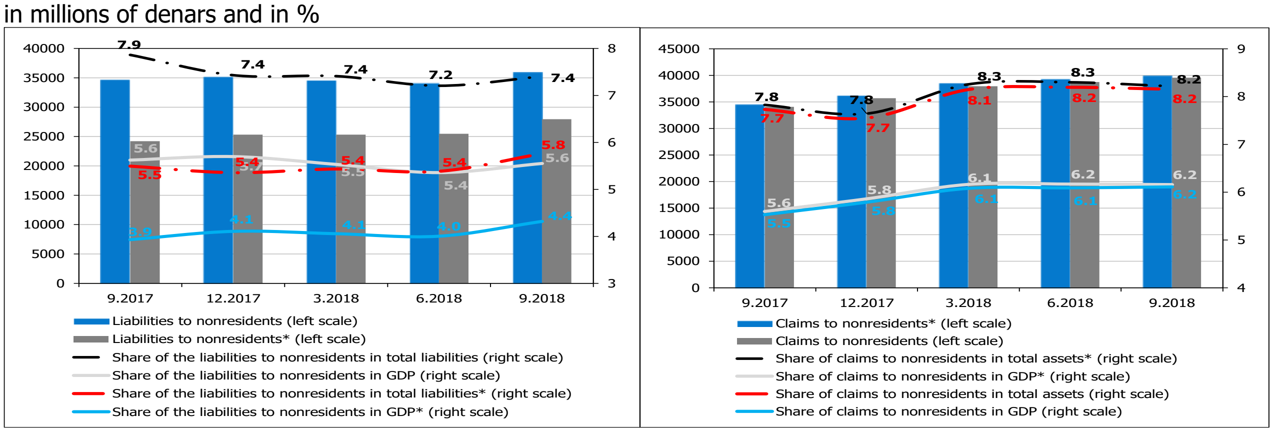
Source: NBRM, based on the data submitted by banks.

banks in the total assets of the banking system is only 2.4%). Total placements with banks and other financial institutions declined (by Denar 261 million, or 0.5%), thus reducing their share in total activities of the banking system to 10.4%. Such decrease is almost entirely due to the reduced loan to domestic banks, mostly long-term loans to domestic banks in foreign currency (placed through MBDP AD Skopje). On the side of liabilities to financial institutions, besides the increase in liabilities to parent entities (discussed below), the quarterly growth of deposits of financial institutions (by Denar 2 billion, or 8.3%) is also notable, mostly from pension funds.

In the third quarter of 2018, the banking system's claims on non-residents exceeded its liabilities to this sector. The volume of domestic banks' activities with non-residents is relatively insignificant. Banks' claims on non-residents increased by Denar 631 million or 1.6%, and their share in total assets of the banking system fell was 8.2%[68]. Such increase stems from the growth of long-term foreign currency loans to non-resident non-financial entities (Denar 628 million). **Banks' liabilities to non-residents** increased by Denar 1,866 million, or 5.5% almost entirely due to the growth of liabilities on short-term foreign currency loans to non-resident financial companies (parent entity) of a large bank. The share of liabilities to non-residents in total liabilities increased to 7.4%[69].

The funding sources by parent entities have little significance for the Macedonian banks. The banking system's claims on parent entities of the banks accounted for insignificant 0.3% in total assets in the third quarter of 2018. Banks' liabilities to their parent entities increased quarterly by Denar 1,218 million (or 10%) largely due to the increase in short-term liabilities on parent entity loans to a large bank. Thus, the share of banks' liabilities to parent entities (including subordinated liabilities and hybrid capital instruments)

Chart 71 Liabilities to (left) and claims on (right) non-residents
in millions of denars and in %



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

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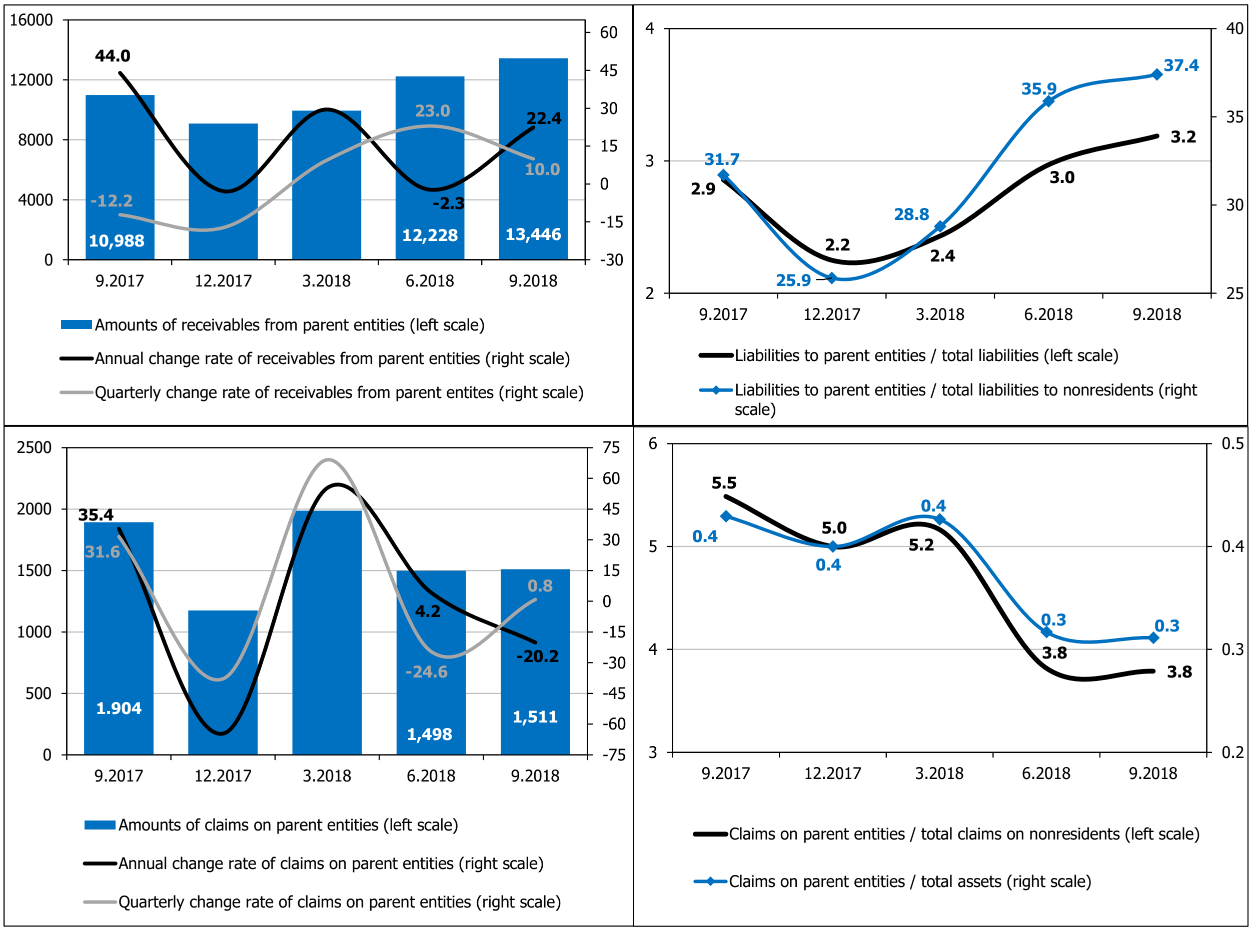
68 Analyzed by bank, the share of banks' claims on non-residents in total assets ranged between 0.6% and 20%.

69 Analyzed by bank, the share of banks' liabilities to non-residents in total liabilities ranged from 0.1% to 19.9%. "MBDP" AD Skopje was excluded from this analysis.

in total liabilities of the domestic banking system, and in liabilities to non-residents increased to 3.2% and 37.4%[70], respectively. Short-term deposits (32%), long-term liabilities on loans (18.1%) and liabilities on subordinated instruments (27.4%) dominate the structure of banks' sources of financing from parent entities.

Chart 72 Liabilities to (up) and claims on banks' parent entities
in millions of denars and in %



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

[70] Analyzed by bank, the share of banks' liabilities to parent entities in total liabilities to non-residents ranged from 8.7% to 89.7%, i.e. from 0.1% to 14% in total liabilities.

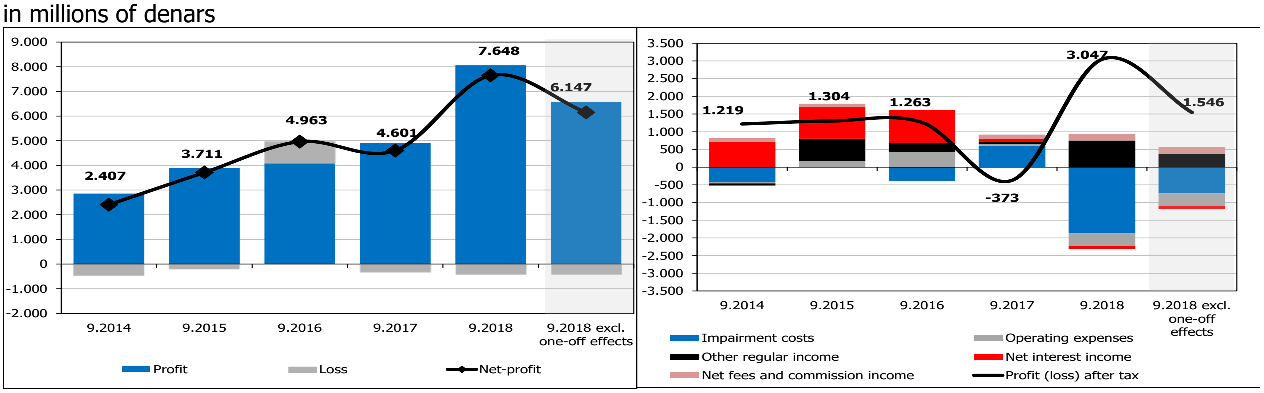
2. Profitability[71]

In the first nine months of 2018, banks achieved a positive financial result from their operations which is nearly 70% higher compared to the same period in the previous year. Profit growth was due to the impact of one-off factors[72], but also to the regular activities of the banks and enabled a significant improvement of the profit margin, as well as the rates of return of capital and assets. The main generator of the improved profitability are the lower costs for impairment that reflected the banks' activities for collection of non-performing loans. The improved operational efficiency also had a positive contribution on the profitability growth, while net interest income moderately decreased and had a negative contribution to the annual growth of the banking sector's profit. Such developments are due to the larger decline of the interest income, compared to the decline of interest expenses, amid growth of total deposits and limited room for further significant reduction of the deposit interest rates. However, the interest income decline slows on an annual basis and the significant narrowing of the decline in the income from loans shall also be noted. This corresponds to the increased lending activity of the banks, which partially offsets the effect of further decline in the lending interest rates. Maintaining stable net interest income is of great importance for ensuring sustainable profitability of the banking sector both in a medium and long-term, given the business model of the domestic banks which is traditionally focused towards lending-deposit activities, with the largest share of net interest income.

2.1. Profitability and efficiency indicators of the banking system

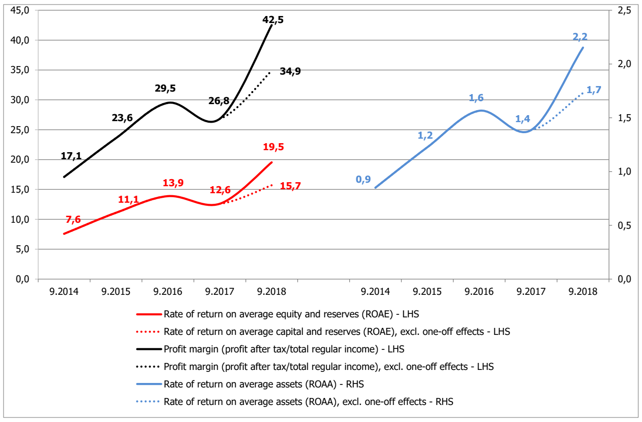
The first nine months of 2018 were marked by a significant improvement of the profitability and efficiency of the banking sector, given that banks achieved a profit that is nearly 70% higher compared to the same period in the previous year. The high profit growth was partially due to the impact of one-off factors in the first quarter of the year, when a larger amount of non-performing receivables was collected, as well as the capital gains from the sales of equity stake. The regular bank activities also had a contribution, as seen from the profit growth (of 33.6% on an annual basis), after excluding the effect of one-off events in the first quarter of the year. During this period, banks' operational efficiency also improved. Net interest income, as the leading income component in the total banks' income, moderately decreased on an annual basis and had a negative contribution to the profitability growth. Analyzed by individual bank groups, all groups showed profit. Most of the profits (more than 90%) was concentrated in the group of large banks, and the group of small banks registered a significant improvement which showed profitable operation compared to the same period in the previous year when loss from operations was registered.

Chart 73 Net profit after taxation (left) and annual change in main income and expenses (right)
in millions of denars



Source: NBRM, based on data submitted by banks.

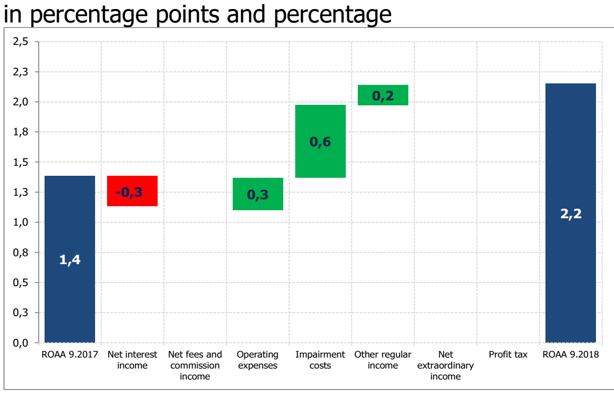
Chart 74 Rates of return on average assets and on average equity and reserves and profit margin
in %

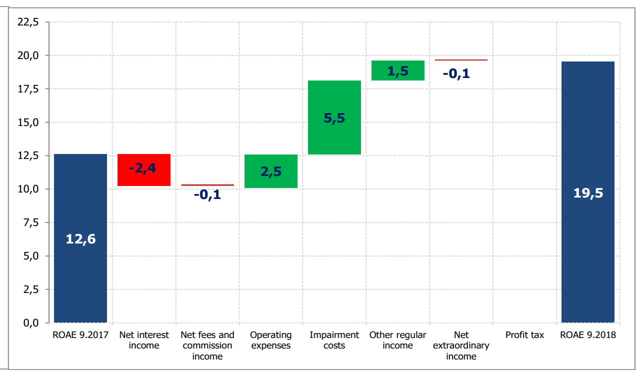


Source: NBRM, based on data submitted by banks.

The increased profit in the first nine months had a positive impact on the main indicators of banks' profitability. The return rates on average assets and average equity and reserves[73], as well as the profit margin of the banking system, in the first nine months of 2018 increased significantly compared to the same period last year. If we exclude the effect of one-off factors, the improvement of the indicators is more moderate, but still solid, pointing to the solid capacity of domestic banks for profitable operation, as an important prerequisite for maintaining stability and increasing the volume of the banking sector activities. Profitability and efficiency indicators of the banking system and individual bank groups are presented in Annexes to this Report.

Chart 75
Breakdown of the return rates on average assets and average equity
in percentage points and percentage



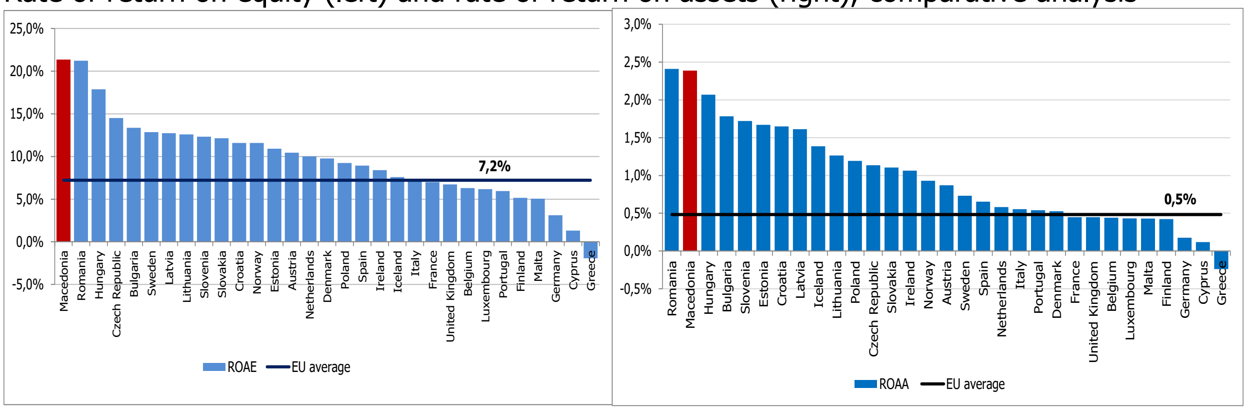


Source: NBRM, based on data submitted by banks.
Note: The chart shows the changes in individual components of profitability expressed as a share in average assets i.e. average equity. The green and white bars indicate a positive and negative contribution to the growth of ROAA/ROAE, respectively, in percentage points. ROAA and ROAE are expressed in percentages.

[73]Average assets and average equity and reserves are calculated as the balance of assets i.e. equity and reserves as of the analyzed date and as of 31 December of the previous year.

The comparative analysis of the profitability indicators with the European Union countries shows that the banking system of the Republic of Macedonia at the end of the second quarter had the highest rate of return on equity, which is almost three-times higher than the EU average. The Macedonian banking system is second after Romania in terms of the rate of return on assets, which once again is significantly higher than the EU average[74].

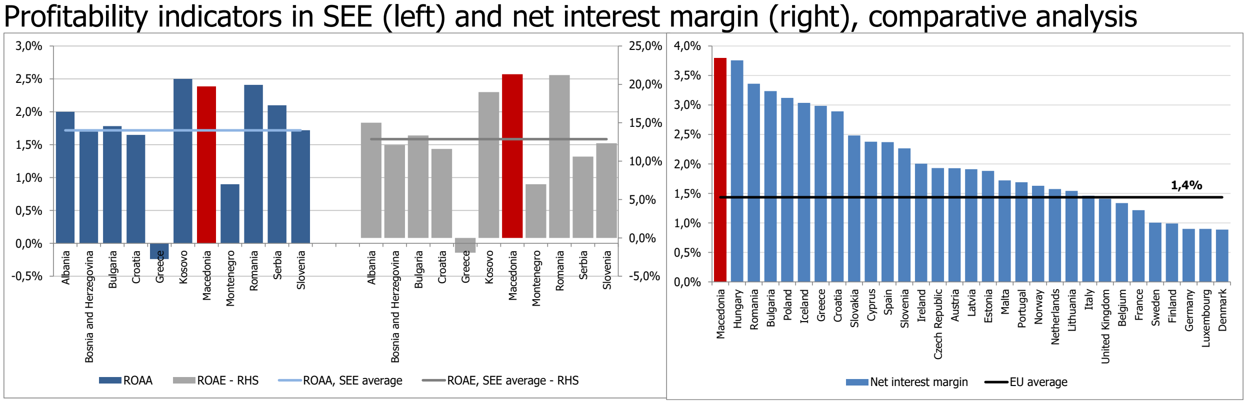
Chart 76
Rate of return on equity (left) and rate of return on assets (right), comparative analysis



Source: EBA
Note: Data are as of 30 June 2018.

Compared to the Southeast Europe countries, the banking system of the Republic of Macedonia has the highest rate of return on equity, along with Romania, while according to the rate of return on assets is the second, after Kosovo.

Chart 77
Profitability indicators in SEE (left) and net interest margin (right), comparative analysis



Source: EBA, IMF, websites of central banks.
Note: Data are as of 30 June 2018, excluding Montenegro for which data are as of December 2017. Net interest margin is calculated as a ratio between net interest income and average interest-bearing assets.

In a low interest rates environment, the net interest margin that banks achieve from the interest-bearing activities registers a reducing trend in the last two years, but still remains relatively high, which is significant (almost three times) higher than

[74] Even by excluding the effects of one-off events, the banking system of the Republic of Macedonia has one of the highest rates of return on equity (excluding Romania and Hungary) and on assets (excluding Romania, Hungary and Bulgaria).

the EU average. Such performances indicate a comparatively solid capacity of the domestic banking sector to generate income from financial intermediation[75]. However, taking the business model of domestic banks into account, whose core is deposit and lending activities, maintaining stable net interest income is of a great importance for providing sustainable profitability in the long run. The performances of the first nine months of 2018 show a moderate decrease of net interest margin (by 0.3 percentage points on an annual basis) to 3.7%, which was realized amid moderate reduction of net interest income (by 0.8%), amid simultaneous increase of average interest-baring assets (by 7.3%). The decrease of net interest income is due to the larger decline of interest income, compared to the decline of the interest expenses, observed in absolute amounts. Such developments reflect the acceleration of the growth of total deposits, compared to the same period last year[76], which amid limited space for further significant reduction of deposit interest rates, contributed further to the slowdown of the downward adjustment of the interest expenses, which is a regular feature of the domestic banking sector in the recent years. Thus, total interest expenses for the period January-September 2018 are lower by Denar 117 million or 3.6%[77], on an annual basis, compared to the same period last year when the decline was 9.4%[78]. In such conditions, when the room for rationalizing the deposits costs narrows further, it should be noted that the decline of total interest income[79] also slowed down (decline of Denar 206 million or by 1.4% compared to the same period last year)[80], which was achieved amid significant narrowing of the decline in credit income. Such developments reflect the growth of total loans[81] which in the first nine months accelerated and partially compensated the effect of further narrowing lending interest rates. **Sector-by-sector analysis mostly shows retention of the trends from the previous period, without significant changes in the structure of forming the total net interest income of the banks.** Thus, the lending and deposit activity with households continues to contribute to the growth of net interest margin, amid growth of interest income and further, but significantly moderate reduction of interest expenses for households. Namely, during the first nine months of 2018, banks continue to provide active credit support to the household sector[82], which contributed to the growth of interest income amid further reduction of interest rates in almost all categories of household loans. The net income from non-financial companies continues to decrease. However, it is important that this decline is

[75]However, when comparing the net interest margin it should be considered that it may be impacted by several factors: selected business model (which means a different representation of the interest-bearing activities in overall banks' activities), structure of sources of financing, the manner of forming the levels of interest rates etc.

[76]In the period January-September 2018, banks' total deposits grew on an annual basis with an average rate of 8.2% (or average absolute change of Denar 26.244 million), compared to the same period last year when the average growth rate was 5.9% (or average absolute change of Denar 17.572 million).

[77]The decrease in interest expenses was mostly due to the lower interest expenses for the household sector which decreased by 5.3% or Denar 90 million, on an annual basis. Decrease was also registered in non-financial corporations (by 9% or Denar 36 million) and other interest expenses (by 0.8% or Denar 4 million), while interest expenses from financial corporations registered a growth (of 2.4% or Denar 14 million).

[78]For comparison, interest expenses in the first nine months of 2016 compared to the same period last year decreased by 16.8%. The decrease in 2015 and 2014 was 19.5% and 10.6%, respectively.

[79]The decrease of interest income mostly reflects the decrease in interest income from non-financial corporations (by 6.6% or Denar 372 million), which is slower compared to the same period last year when income was lower by 7.5% or Denar 463 million. Decrease was also registered in income from financial corporations (by 14.5% or Denar 151 million) and other interest income (by 4.8% or Denar 43 million) while interest income from the household sector continues to register growth which for the first nine months of 2018 was 5.2% or Denar 359 million.

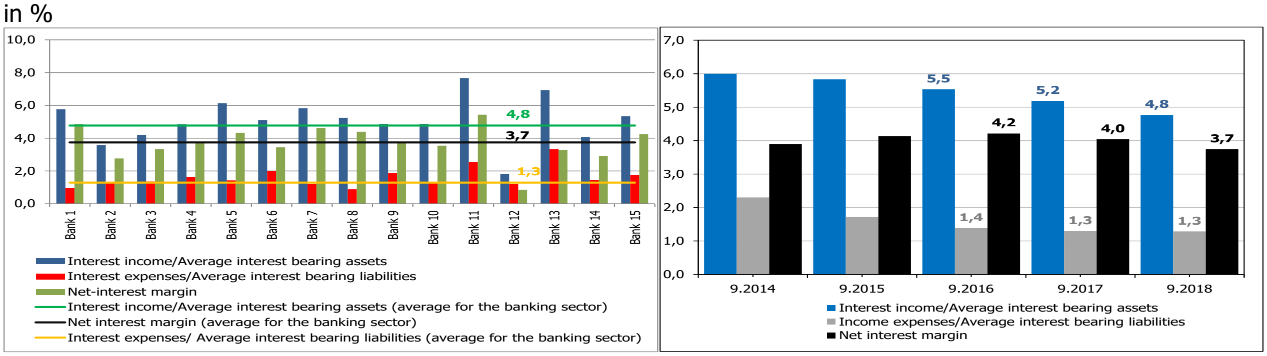
[80]As of 30 September 2017, banks' interest income was lower by 1.7% or by Denar 250 million.

[81]In the period January-September 2018, total banks' loans increased annually at an average rate of 6.6% (or average absolute change of Denar 18.577 million), which is a three-fold increase compared to the same period last year when the annual rate was 2.5% (or average absolute change of Denar 6.928 million).

[82]In the period January-September 2018, total banks' loans granted to the household sector increased on an annual basis with an average rate of 10.2% which is an acceleration compared to the same period last year when the average growth rate was 8.9%. Thus, the household loans are the driving force of the growth of total loans with a contribution of 72%, on an average, to the annual growth of loans to non-financial entities in the period January-September 2018.

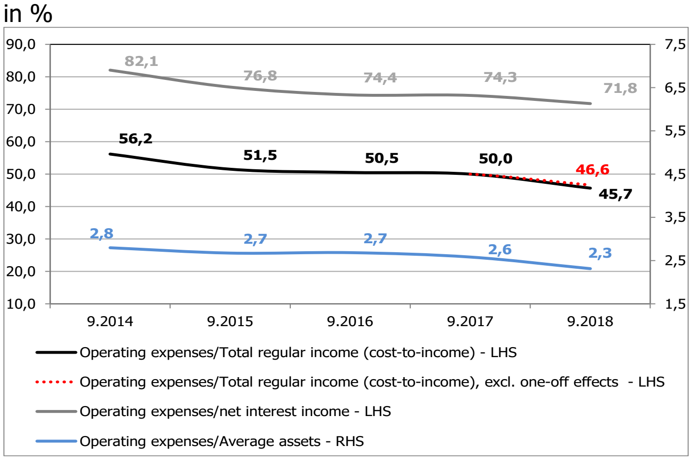
narrowing, compared to the same period last year as a result of the intensification of banks' lending activity to the non-financial corporations sector[83]. This highlights the importance of banks' credit activity for maintaining stable net interest income.

Chart 78
Net interest margin by individual bank (left)* and banking system level (right), as of 30 September 2018
in %



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

Chart 79
Operational efficiency indicators
in %



Source: NBRM, based on data submitted by banks.

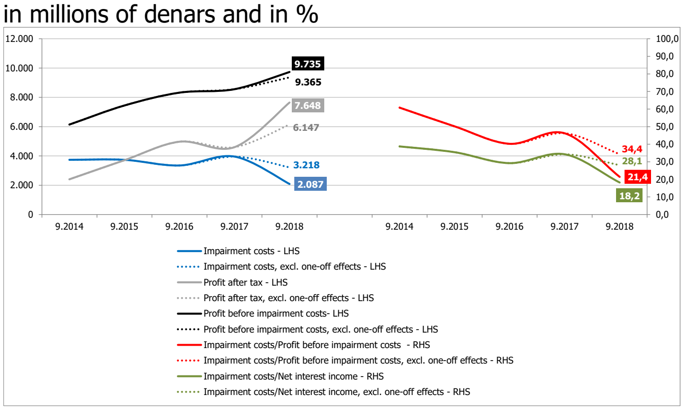
Banks' operational efficiency improved in the first nine months of the year according to all indicators, given the decline in operational costs and growth of banks' income and average assets. The decrease of operational costs (of Denar 354 million or of 4.1% on an annual basis) is mainly due to the regulatory changes i.e. reduction of the deposit insurance premium[84], which halved the cost for this purpose and the exclusion of the special reserve for off-balance sheet exposure to the operating costs structure[85]. On the other hand, employment expenses and general and administrative expenses continued to grow on an annual basis (by 4.1% and 6.3%, respectively).

[83]During the period January-September 2018, total loans of banks granted to non-financial corporations grew with an average annual rate of 3.4%, compared to the same period last year when the average annual growth was negative and amounted to -2.4%. Thus, total loans of non-financial entities in September 2018 had a 19.3% contribution to the growth of total interest-baring assets on an annual basis, while in the same period last year they had a negative contribution (of 4.1%).
[84]As of November 2017, the deposit insurance premium decreased from 0.5% to 0.25%.
[85]Starting in January 1 2018, the special reserve for potential credit loses from off-balance sheet exposure (together with the corresponding exemptions from this reserve) are recorded as part of impairment costs and not as part of the banks operational costs. If we exclude this effect, total operational costs in the first nine months of 2018 compared to the same period last year would be higher by 2.2%. The special reserve for off-balance sheet exposure in the first nine months of the year amounts to Denar 547 million.

During this period, the growth of total regular income[86] also had a contribution to the improvement of banks' cost efficiency (measured through the ratio of operational costs and banks' total regular income) which grew by 4.9% (or Denar 847 million). Within this, other regular income had the largest impact (capital gains)[87], which contributed with 88.9% to the growth of total income from banks' regular operations and had a share of 24.7% in the increase of the profit of the banking system. Net income from commissions also contributed to increasing the regular income and profit of the banking sector (with 21.7% and 6%, respectively), while the contribution of net interest income was negative.

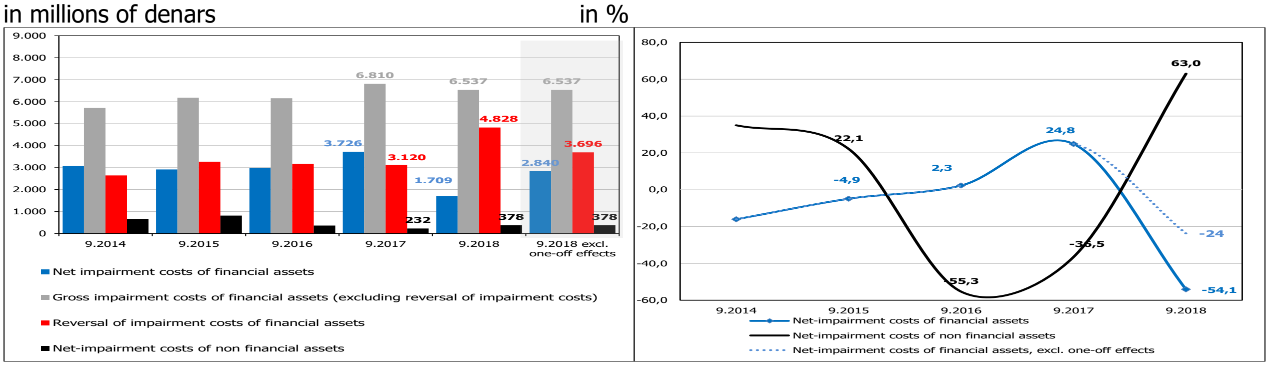
In the first nine months of 2018, impairment costs of financial assets significantly decreased (by 54.1% or Denar 2,017 million), compared to the same period of 2017, thus being the main driver of profit growth of the banking system with a contribution of 66.2%. Such performances reflect the influence of one-off events from the first quarter when several banks collected a significant amount of non-performing loans, which resulted in the release of a significant amount of impairment and reduction of net impairment of financial assets. The trend of net impairment of financial assets is also downward with the exclusion of this effect (decrease by 23.9% or Denar 886 million on an annual basis), which indicates mainly good collection of non-performing loans by banks, as well as collection of regular (functional) claims. During this period, banks also performed several sales of foreclosed property, which contributed to the reversal of impairment from non-financial assets. However, net impairment of non-financial assets registers an increase on an annual basis, which is due to the regulatory obligation to gradually "impair" the foreclosed assets, in a five-year period.

Chart 81
Share indicators of net impairment of financial and non-financial assets in profit and in net interest income
in millions of denars and in %



Source: NBRM, based on data submitted by banks.

Chart 80
Amount of impairment costs of financial and non-financial assets (left) and annual rates of change in impairment costs of financial and non-financial assets (right)
in millions of denars in %

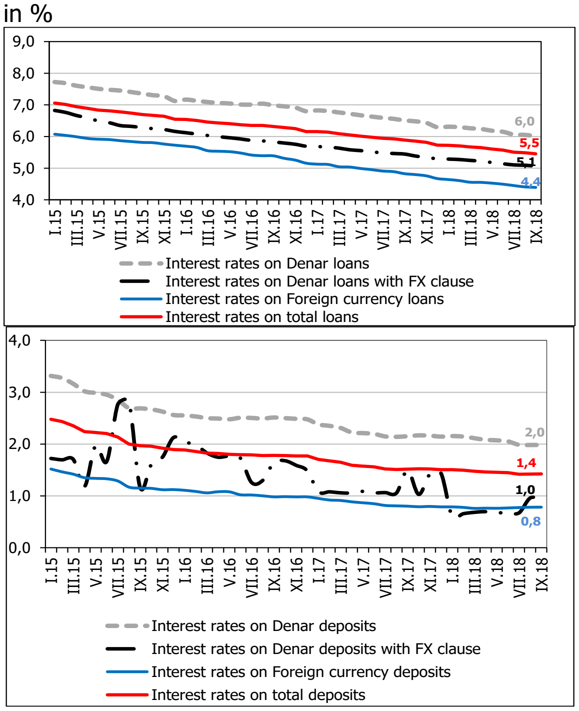


Source: NBRM, based on data submitted by banks.

[86] Total income from regular operations include net interest income, net income from commissions and other regular income.
[87] Capital gain derives from the sale of foreclosed property and capital investment.

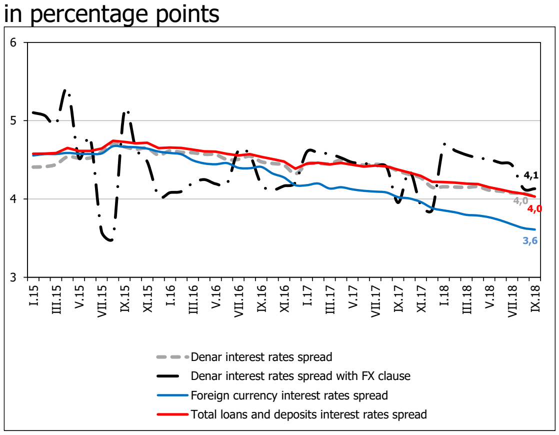
2.2. Movements in interest rates and interest rate spread

Chart 82 Lending (top) and deposit interest rates (bottom)
in %



Source: NBRM, based on data submitted by banks.

Chart 83 Interest rate spread
in percentage points



Source: NBRM, based on data submitted by banks.

During the first nine months of 2018, the decreasing trend of banks' interest rates continued amid monetary policy easing by the National Bank[88]. The adjustment was more pronounced on lending interest rates, which in September 2018 were lower by 0.3 percentage points compared to the previous year. On an average, compared to the same period last year, the interest rate on total loans in the period January-September 2018 was lower by 0.4 percentage points. The reduction of the interest rate on total deposits was 0.1 percentage points, compared to the end of the previous year and the same period in the previous year.

The average lending interest rates for the period January-September 2018 was 5.6% on an average, while the average weighed deposit interest rates for the same period were at the level of 1.5% on an average. Analyzed by currency, the interest rates on Denar and foreign currency loans registered a higher decline (of 0.5 percentage points, on an average, compared to the same period last year). On the deposits side, the reduction on the interest rates on Denar deposits with FX clause by 0.4 percentage points on an average is the most notable compared to the same period in the previous year.

In the period January-September 2018, the interest rate spread[89] registered a moderate downward trend caused by the larger decline in the landing, compared to the deposit interest rates. The interest rate spread between the interest rates on loans and deposits on an annual level narrowed by 0.3 percentage points and amounts to 4.1 percentage points on an average for the period.

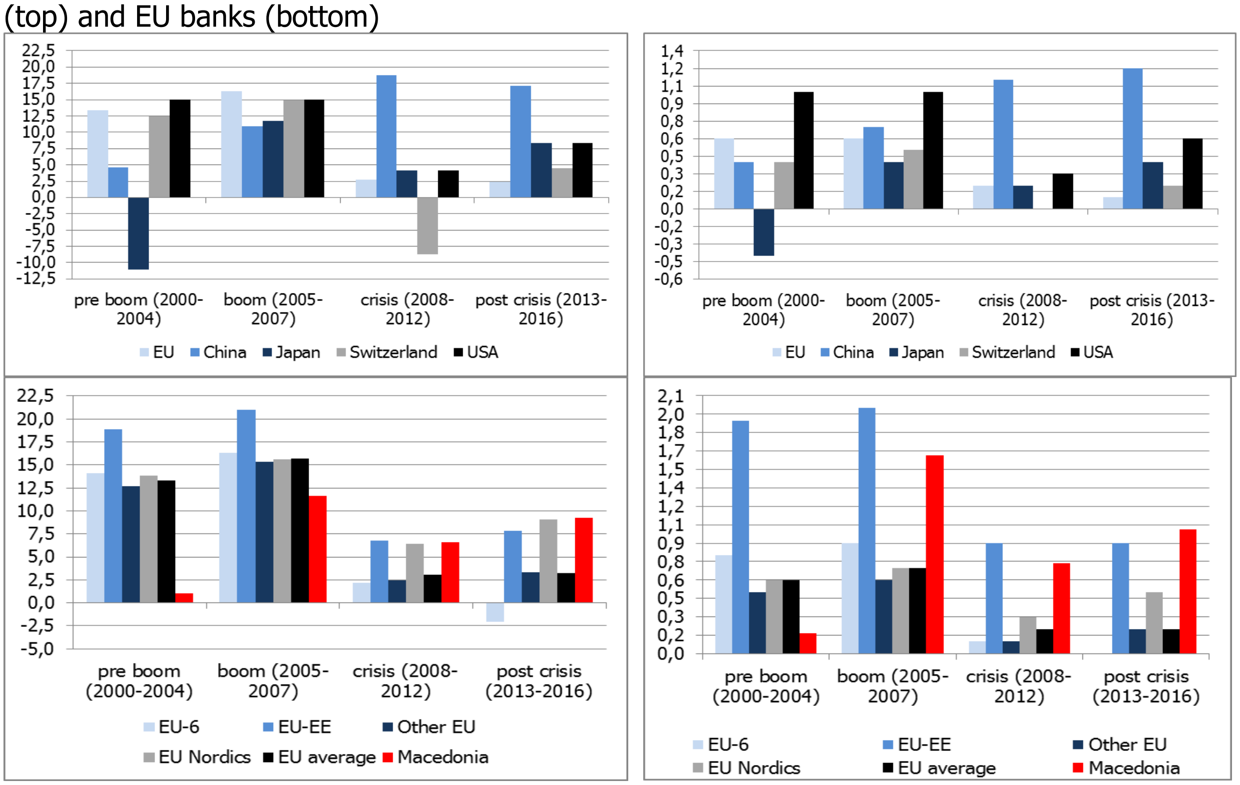
[88] In March 2018, the National Bank reduced the interest rate on CB bills from 3.25% to 3%. In August, the interest rate was reduced for an additional 0.25 percentage points to 2.75%.

[89]The large volatility of the spread in Denars with FX clause is due to the interest rates on Denar deposits with FX clause, due to the very rare presence of this deposit product.

Analytical appendices: Banking sector profitability in the aftermath of global crisis

Profitability is an important indicator of the condition of the banking sector, its stability and long-term sustainability. It reflects the overall banks' performances perceived though the efficiency of managing its assets, liabilities, capital and costs and thus the ability to generate sustainable long-term income. The history of profitable operations is synonymous with financial strength and long-term security of the banks, which is of the interest of all stakeholders - depositors, owners, management structures, potential investors and regulators. Profit is of particular importance for the banking sector, as it is an important internal source for increasing capital, and affects the abilities and conditions for raising capital from external sources. Strengthening the capital position increases the banking sector's resilience to shocks and builds the capacity for adequate credit support for to the economy, as basis for profitable operations in the following period. On the other hand, low and insufficient profitability may motivate excessive risk-taking to generate higher profits, thus increasing the financial vulnerability and the risk for losses. Hence, the importance of profitability for maintaining financial security and long-term stability of the banking sector, and thus the overall financial stability.

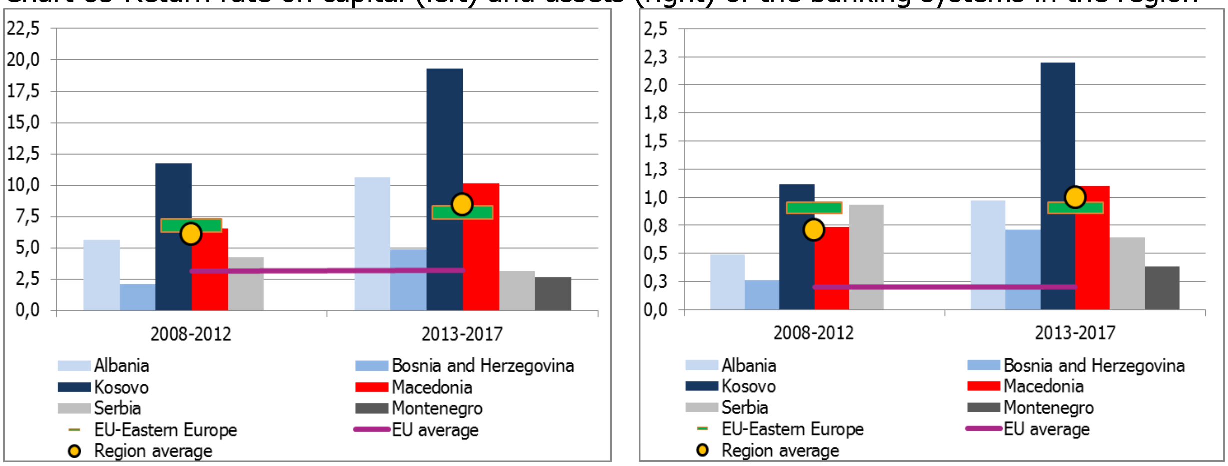
Chart 84 Return rate on capital (left) and return rate on assets (right), of large global banks (top) and EU banks (bottom)



Note: EU-6 includes the six EU countries most affected by the European debt crisis (Cyprus, Greece, Italy, Ireland, Portugal and Spain); EU-EE includes EU member countries from the Eastern Europe (Hungary, Poland, Romania and Slovenia); EU Nordics includes EU member countries (Denmark, Finland and Sweden); Other EU includes the other EU member countries which are not covered in the previous three groups (Austria, Belgium, France, Germany, Luxembourg, Netherlands and United Kingdom); EU average refers to the average in all EU member countries.
Source: Detragiache, Tressel and Turk-Aris (2018), "Where Have All the Profits Gone? European Bank Profitability Over the Financial Cycle", IMF WP/18/99 and NBRM.

The global financial and economic crisis further emphasized the importance of profitability for the sustainable operations and efficient financial intermediation of the banking sector. Influenced by the crisis, profitability indicators have deteriorated in almost all geographic regions. At EU level, the slow recovery of profitability in the post-crisis period is seen as a significant impediment for a stronger banking sector growth and an important risk to financial stability. This especially applies to the countries most affected by the European debt crisis, while the East European and Nordic countries have achieved relatively better results, which are still below pre-crisis levels. In terms of the region, the post-crisis period is characterized by solid performances, but with distinct differences by individual countries. The dynamics of economic recovery and thus, credit growth recovery and credit portfolio recovery were significant factors that influenced the dynamics of banks' profitability in the region.

Chart 85 Return rate on capital (left) and assets (right) of the banking systems in the region

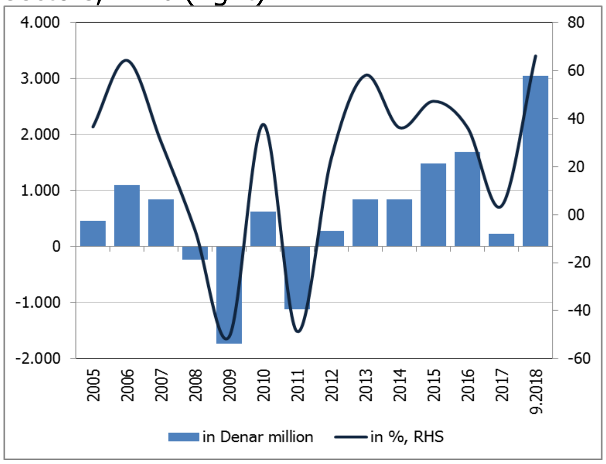


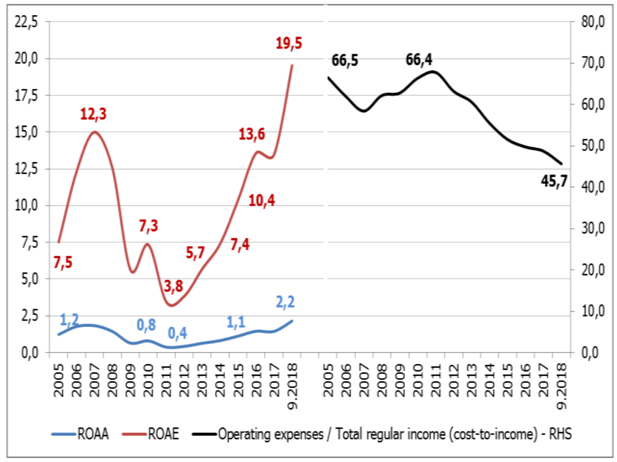
Note: The average of EU and Eastern EU includes data as of 2016. Data for Montenegro are for the period 2013-2017.
Source: Detragiache, Tressel and Turk-Aris (2018), "Where Have All the Profits Gone? European Bank Profitability Over the Financial Cycle", IMF WP/18/99, central bank web pages and NBRM web page.

The banking sector in the Republic of Macedonia showed resilience to the crisis in all segments, including profitability. Namely, after the expansion period and high profitability in the pre-crisis period, the indicators of profitability of the domestic banking sector moderately deteriorated during the crisis, followed by a recovery, which was stronger compared to the European average and the average of the countries in the region. Return rates on capital and assets in the domestic banking sector for the period 2013-2018[90] amounted to 11.7% and 1.3%, on average, respectively and with the recent performances have already surpassed the pre-crisis levels. Thus, the Macedonian banking sector stands out among the most profitable in the region, right after the Kosovo's banking system.

[90] Data for 2018 are as of September.

Chart 86 Annual profit changes (left) and profitability and efficiency indicators of the banking sectors, in % (right)

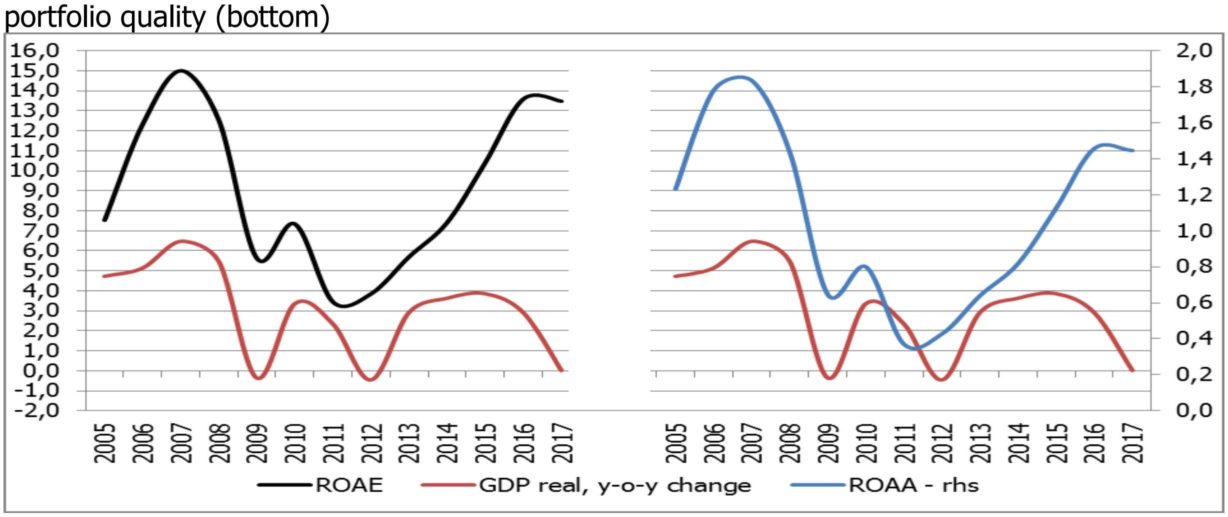


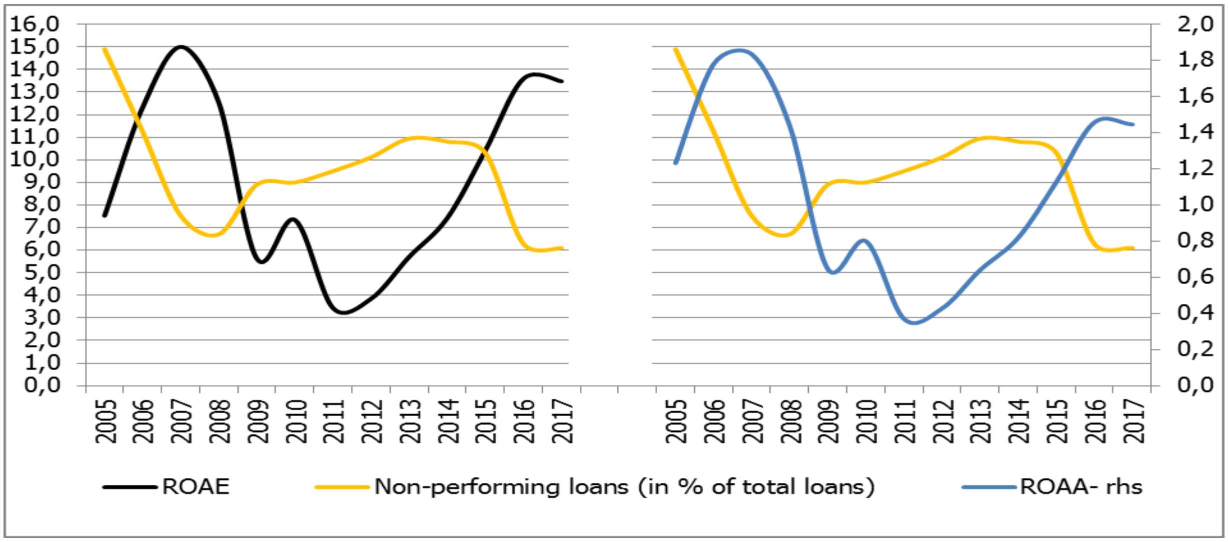


Source: NBRM, based on data submitted by banks.

The positive financial performance of the domestic banking sector corresponds to the characteristics of the domestic banks which basically rely on the traditional business model of operations - collecting deposits, as a more stable source of financing and placing them in loans in the domestic economy - while maintaining high capitalization and basically conservative risk management policy. The weaker growth of non-performing loans also had a contribution, as well as maintaining a positive credit growth rate during the entire period, when the contraction of the economic activity in the domestic economy during the crisis was more moderate compared to most EU countries. Namely, the analysis of the dynamics of the profitability indicators shows high compliance with the economic cycle, with the exception of the last two years when the profitability of the banks has grown amid weak economic growth. The profitability also shows a high opposite relation to the growth of non-performing loans, which emphasizes the importance of credit risk management for the profitable operation of banks.

Chart 87 Profitability of the domestic banking sector in terms of economic cycle (top) and credit portfolio quality (bottom)

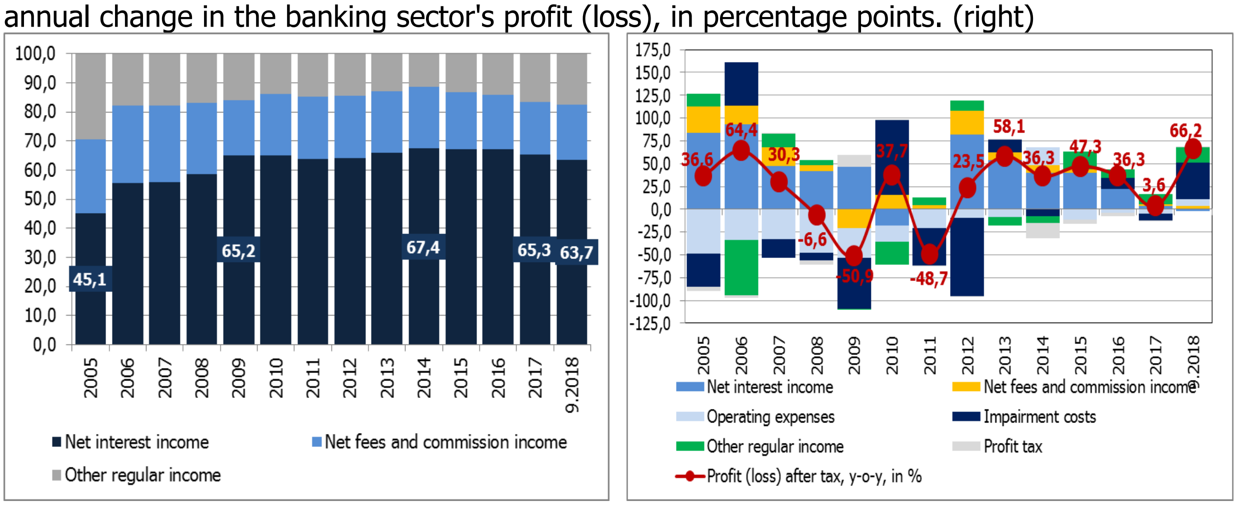




Source: NBRM, based on data submitted by banks.

The profitability growth is undoubtedly a positive indicator of the efficiency of the domestic banking sector. However, for its effective operation and sustaining the business model in the long run, despite the level, the sustainability of bank income is also important as seen from the income structure, their volatility and the evolution the net interest margin over time.

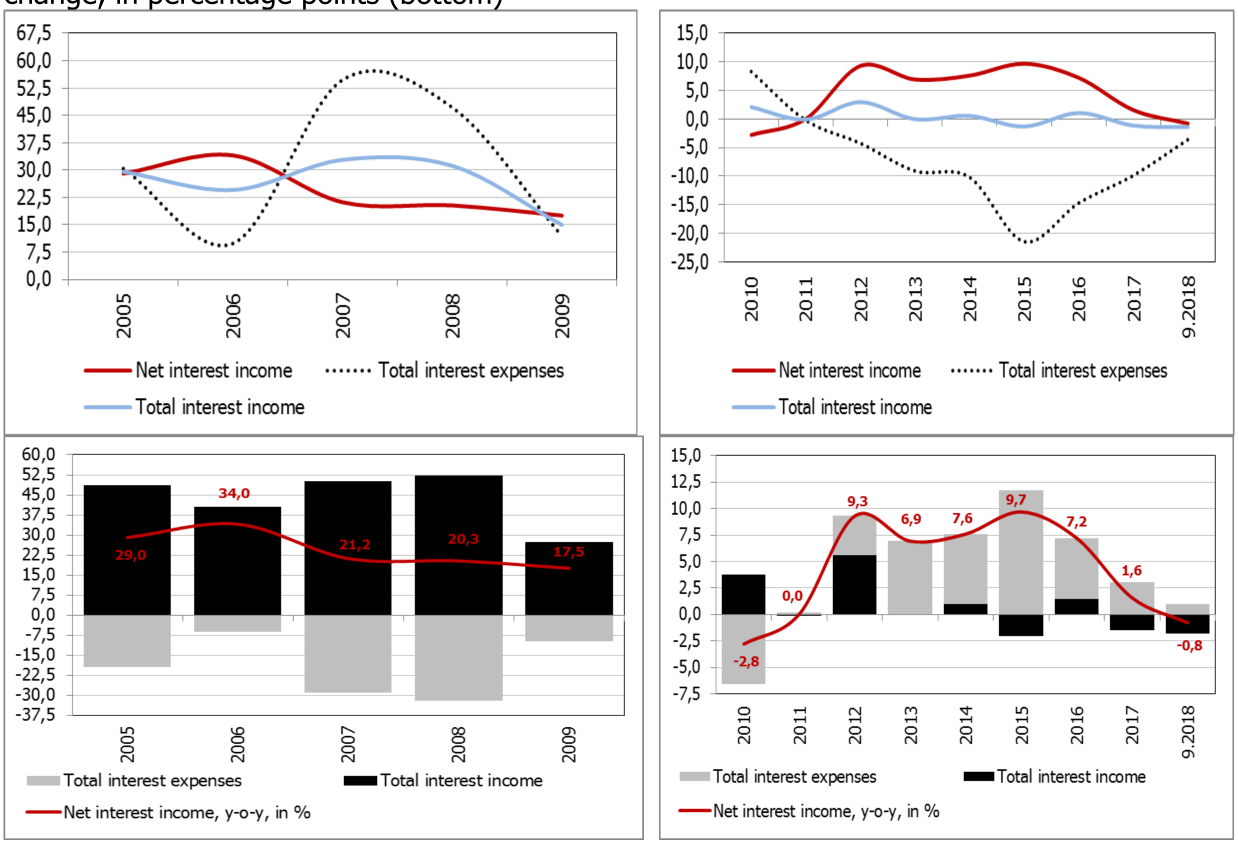
Chart 88 Banks' income structure, share in total income, in% (left) and contribution to the annual change in the banking sector's profit (loss), in percentage points. (right)



Source: NBRM, based on data submitted by banks.

The Macedonian banking sector is characterized by a rather homogeneous income structure with the largest share of net interest income. Net interest income accounts for 66% of total income and is the primary source of the banking sector profitability. This corresponds to the narrow specialization of domestic banks and the concentration of banking activities in the area of credit and deposit operations with the households and the corporate sector. Next in importance is the fees and commission income (with a share of about 20%) which basically follows the dynamics of interest income, but also reflects the banks' investments in developing new products. The dynamics of net fees and commission income shows a slowdown in growth in the post-crisis period, indicating the absence of significant diversification of banking activities, which would open up new opportunities for operating income. On the other hand, the improvement of the operational efficiency is noticeable by controlling operational costs increase, which is also a factor for maintaining solid profitability in the post-crisis period. Thus, for the period January-September 2018, the operational costs account for 45.7% of total banks' regular income, compared to 66.4% in 2010. The dynamics of profitability was also affected by impairment costs, which contributed to lower gains in the years of higher credit risk materialization (2009, 2011 and 2012), but also to the increased profitability in the periods of increased successful collection of non-performing loans (especially in 2010 and January-September 2018[91]).

Chart 89 Annual changes, in % top and contribution of net interest income in the annual change, in percentage points (bottom)



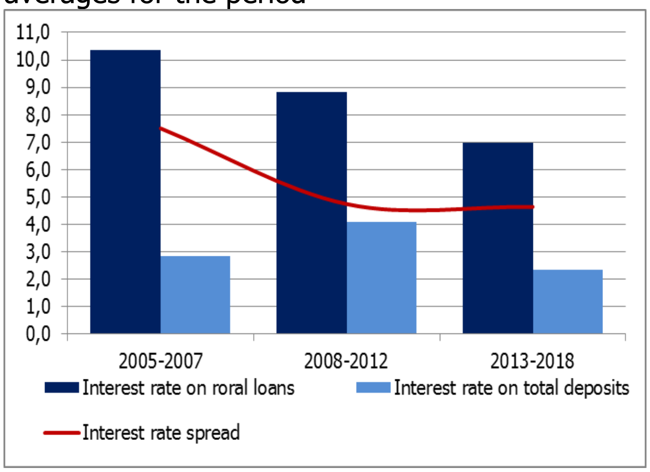
Note: positive contribution means decrease of interest expenses.
Source: NBRM, based on data submitted by banks.

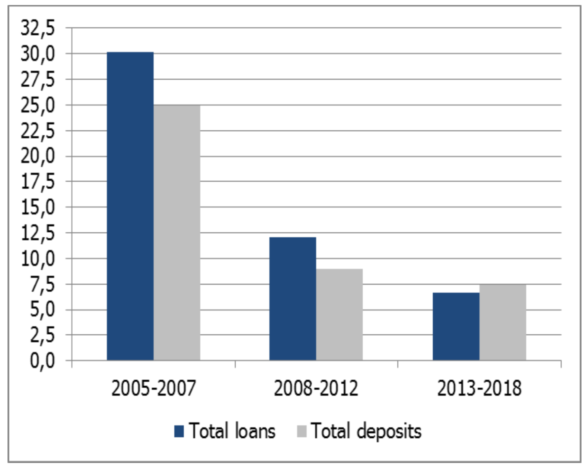
As the main category of total income, maintaining stable net interest income is an important prerequisite for sustainable profitability of the domestic banking sector in the long run. Trends in net interest income show a significant slow-down of the growth in the post-crisis period and with the recent performances as of September 2018, net interest income had a negative contribution to the profit growth of the banking sector. Such developments are explained by the reduced volume of banking activities after the crisis and the slower growth of private sector lending amid historically low interest rates on bank loans and deposits and

[91] The high amount of released impairment during January-September 2018 is mostly due to one-off events i.e. collection of larger amount of non-performing receivables from a larger non-financial corporation by several banks.

narrowing interest spread. Also noticable are changes in the structure of net interest income, which prior the crisis stemmed from the strong growth of interest income, amid simultaneous, but moderate increase in interest expenses. After the crisis, movements are opposite i.e. banks manage to maintain the growth of net interest income through rationalizing the interest expenses, amid more modest mobilization and even lowering interest income in certain years. In the last years, as the room for further reduction of interest rates on deposits has narrowed, so has the growth of net interest income and in the first nine months of 2018 it registered a decrease on an annual basis.

Chart 90 Interest rates (left) and annual growth rates on banks' deposits and loans (right), averages for the period

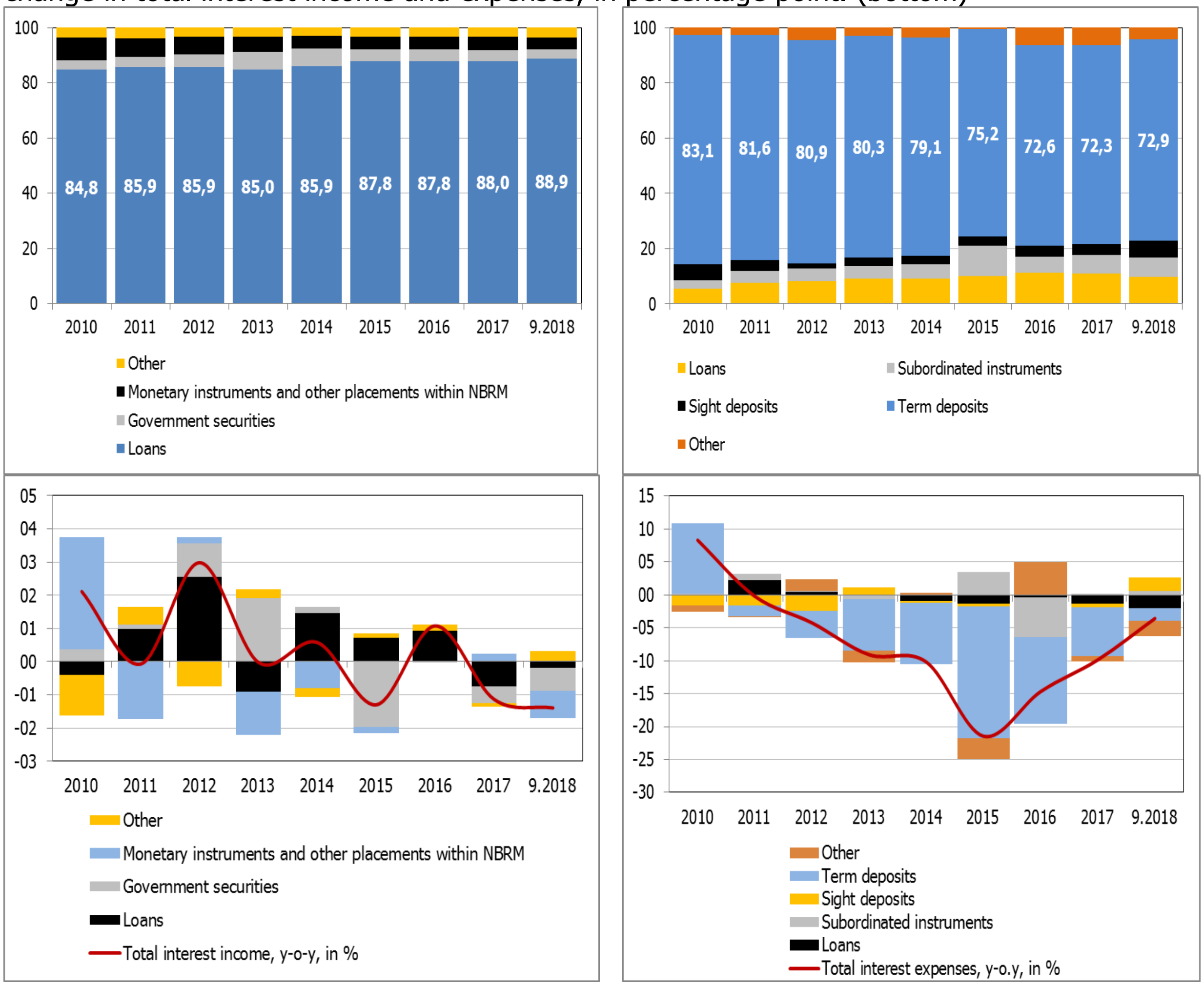




Note: The data for 2018 are as of September.
Source: NBRM, based on data submitted by banks.

Observed by instruments, banks generate most income from lending to the private sector, while on the expenditure side, the main expense category are interest expenses on term deposits. Consequently, changes in total interest income mostly stem from changes in interest income from loans, which for the period 2010-2018, on an average, has a positive contribution to the growth of total interest income, but with oscillations by certain years. In 2017, income from loans had a negative contribution to the growth of total interest income, which is the first such achievement after 2013 when income from loans registered a moderate decrease on an annual basis. The movements in 2018 also show reduction of this income category, but the decline is narrowing, compared to the previous year amid accelerated credit activity growth. Such developments emphasize the importance of dynamic credit activity for sustaining banking sector profitability. The income that the banks generate from placements in government securities and monetary instruments have had varying dynamics over the years, which in the last period indicates a narrowing of the income that banks generate on this basis.

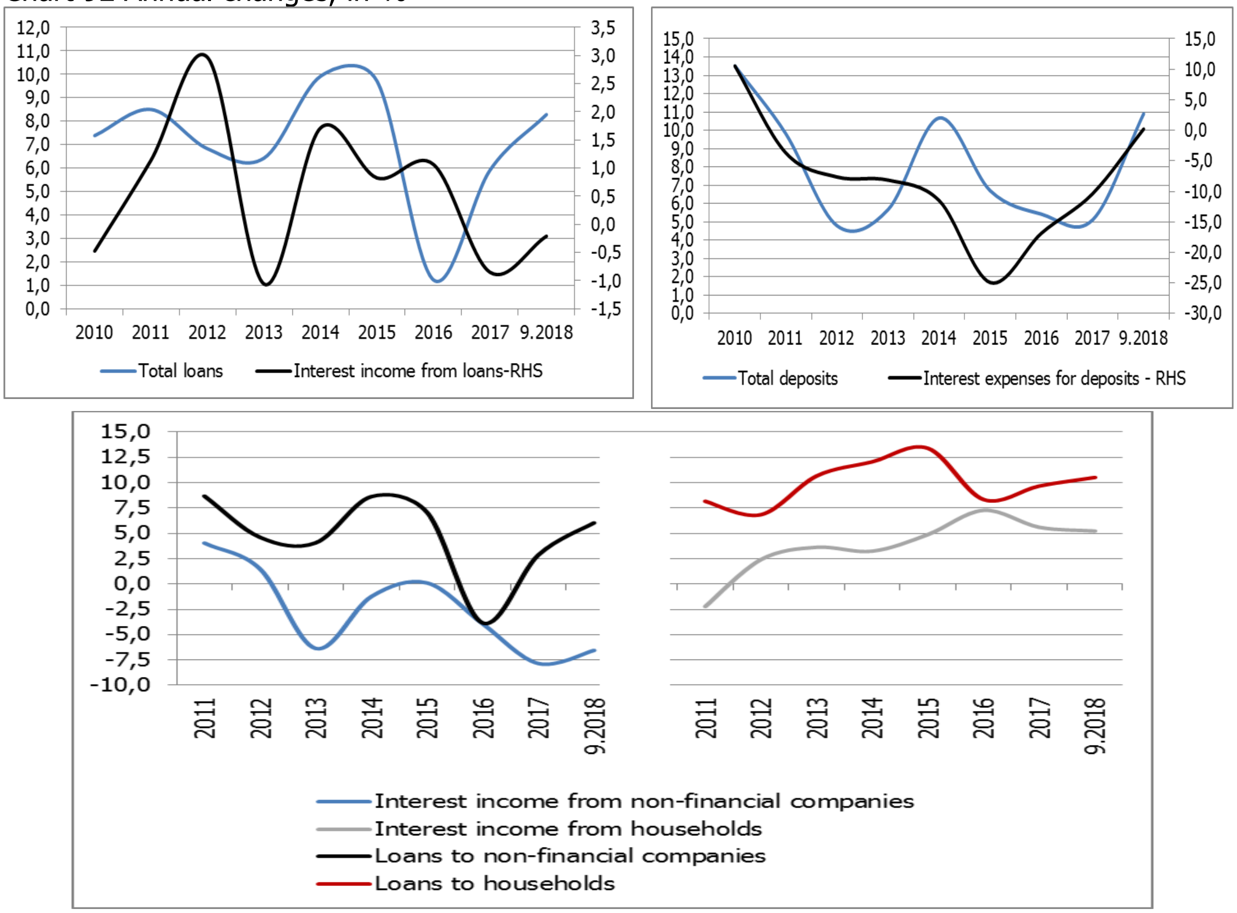
Chart 91 Interest income and expense structure, in% (top) and contribution to the annual change in total interest income and expenses, in percentage point. (bottom)



Source: NBRM, based on data submitted by banks.

Regarding interest expenses, the dynamic analysis shows continuous reduction of term deposit costs, which intensified in the period 2014-2016, but decelerated in the years after, reflected by a lower decline of total interest expenses. Namely, in the pre-crisis period, trying to attract more deposits, banks offered rather attractive interest rates reaching up to 8-9% on households term deposits in denars and around 4% on foreign currency deposits. This provided sufficient room for downward adjustment of the interest rates in the post-crisis period, without jeopardizing the tendency to save in the banking sector. However, the room for further significant reduction of interest expenses is increasingly being exhausted. In 2018, interest rates on households term deposits were reduced down to 2% on denar deposits and 0.8% on foreign currency deposits. This points to limited opportunities for the banks to further adjust the interest expenses, which suggests that the dynamics and sustainability of net interest income in the following period will primarily be determined by banks' capacity to generate interest income.

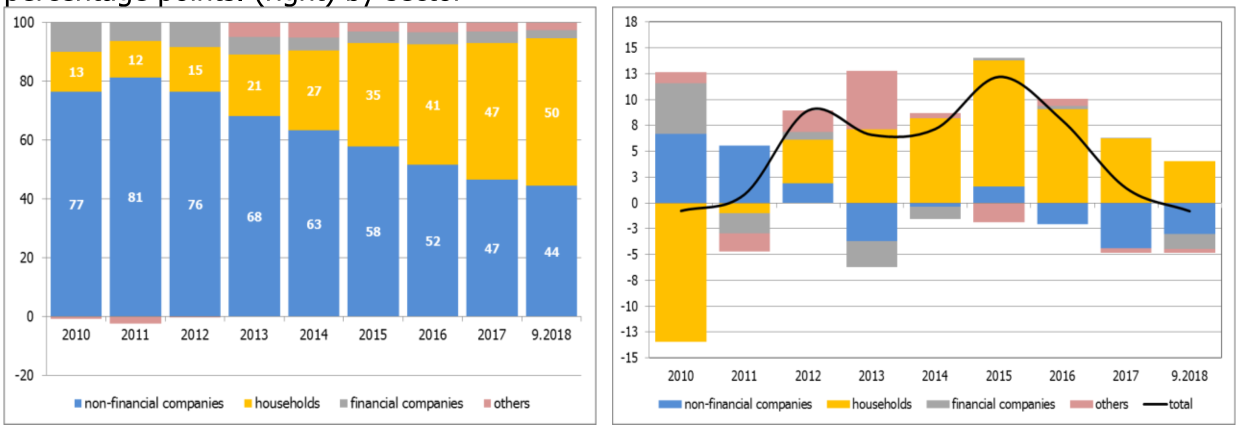
Chart 92 Annual changes, in %



Source: NBRM, based on data submitted by banks.

The sector-by-sector analysis shows room for growth in the financial intermediation of the corporate sector, given that the net interest income that banks generate from corporations has a narrowing trend in the post-crisis period, which is particularly pronounced in the period after 2012. Namely, driven by the search for income and due to the diversification of the credit risk portfolio, banks increasingly focused on lending to households, with the net interest income generated by households being the driving component of the growth of total interest income in the post-crisis period. Since the beginning of 2018, positive shifts by reviving the lending to the corporate sector have also been characteristic, which contributed to the narrowing of the decline of net interest income from the corporate sector. Maintaining such trends in the forthcoming period would contribute to strengthening the income capacity and further maintain the profitable position of the domestic banking sector.

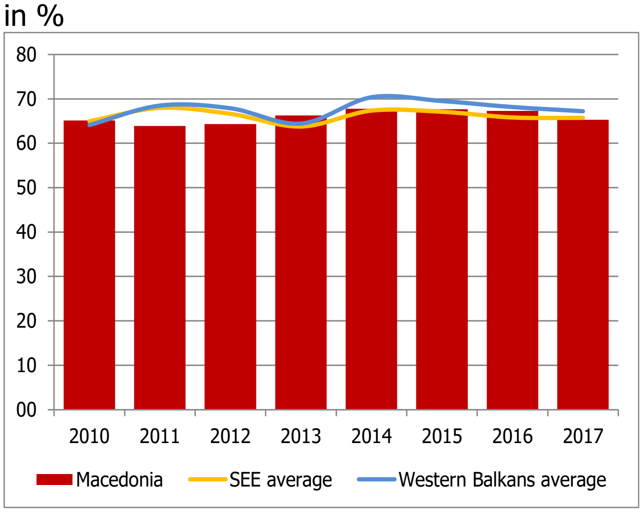
Chart 93 Structure, in % (left) and contribution to the annual growth of net interest income, in percentage points. (right) by sector



Source: NBRM, based on data submitted by banks.

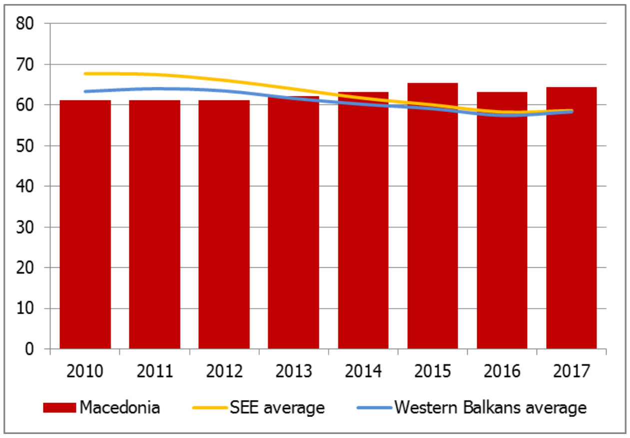
Generally, the analysis shows solid profitability of the domestic banking sector in the post-crisis period, due to banks' retained ability to generate net income from interest-bearing activities, mainly by adjusting interest expenses, while improving operating efficiency and earning through non-performing loans resolution in separate periods. It is precisely the collection of larger amount of non-performing receivables from a larger non-financial corporation by several banks that is the main driver of the high profit growth of banks in the first nine months of 2018, which is a one-off event of a rarely repetitive nature. **On the other hand, the growth of net interest income, as the main regular income of banks, has slowed in recent years** and for the period January-September 2018 has a negative contribution to the growth of the profit of the banking sector. This happens in situations when the room for rationalizing the deposits expenses narrows further, which requires banks' greater engagement for strengthening the income side, thus ensuring sustainable profitability in the forthcoming period. The comparative analysis shows that net interest income of domestic banks (measured as a share in total income) in the last several years has been maintained at levels close to the SEE countries average, but moderately lower compared to the Western Balkan countries average. The structure of the banking activities of the domestic banking sector shows a moderately higher share of loans in total assets in the last few years, compared to the SEE and Western Balkan countries average, when total deposits were also maintained at moderately higher levels during the whole post-crisis period.

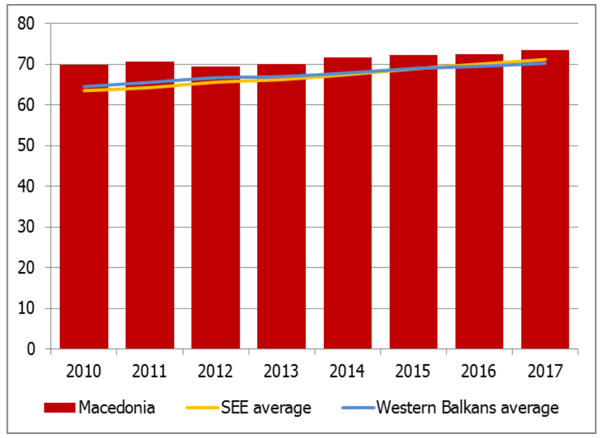
Chart 94 Net interest income, share in total income
in %



Note: SEE countries average includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, Macedonia, Montenegro, Romania and Serbia. Western Balkan countries average includes Albania, Bosnia and Herzegovina, Kosovo, Montenegro and Serbia.
Source: IMF (Financial Soundness Indicators) and the Internet sites of the central banks.

Chart 95 Share of total loans in total assets (left) and total deposits in total liabilities (right), in %





Note: SEE countries average includes Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, Macedonia, Montenegro, Romania and Serbia. Western Balkan countries average includes Albania, Bosnia and Herzegovina, Kosovo, Montenegro and Serbia.
Source: Internet sites of banks.

In such conditions, in order to support interest income growth, it is important to further maintain and strengthen the growth of interest-bearing activities, thus offsetting the effect of low interest margins. Expectations for economic activity growth in the forthcoming period shall provide support for this process and contribute to maintaining the profitability and banking sector stability. The portfolio diversification to non-traditional banking activities is an additional channel, which opens up opportunities for increasing the non-interest income volume. The contemporary trends of increasing digitization of financial services open up many opportunities and challenges for banks, imposing the need for timely adjustment of business models, thus maintaining competitive advantage and profitability. Continuing to improve cost efficiency is also important for sustainable profitability, especially given that, albeit at a slower pace, operating costs are also increasing in the post-crisis period. Prudent risk management is another important factor, as it limits the risk of future portfolio impairment and thus the deterioration of the banking sector's profits.

ANNEXES