## NATIONAL BANK OF THE REPUBLIC OF MACEDONIA



Report on Banking System of the Republic of Macedonia in the third quarter of 2011



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#### **Summary**

In the third quarter of 2011, the banking system *maintained its safety and soundness,* despite the slight intensification of the credit risk while further strengthening the liquidity and solvency.

The activities of banks continued to increase, but at a slower pace compared to the previous quarter. Compared with June 2011, assets and loans registered slower quarterly and annual growth. On the other hand, growth of deposits accelerated, and they had two times faster quarterly growth than that of assets and loans. Banks have been cautious, and despite for support of the credit activity, they directed part of this growth toward short-term placements with foreign banks, which contributes to further strengthen their liquidity. In conditions of stable sources of funding, future lending activity continues to depend on the quality of credit demand.

In the third quarter of 2011, the dominant risk in the banks' operations, credit risk, increased. In the previous quarter, the fast growth of regular credit exposure in the risk category "C", referred to possible deterioration of the quality of loan portfolio in the near future. It is exactly this risk that materialized during the third quarter of 2011, through the accelerated growth of nonperforming loans, the growth of exposure in the category bearing the highest risk - "D" and consequently deterioration of the indicators of the loan portfolio quality. One should have in mind the full coverage of non-performing loans with impairment and special reserve. The deterioration in the credit risk indicators, mostly arises from the sector "enterprises and other customers," whose exposure has the highest risk. According to currency, the risk is highest in Denar credit exposure, while the fastest is the increase in the exposure in Denars with FX clause. The importance of credit risk in the overall risk profile of banks is confirmed by the absorption of a significant portion (about 45%) of banks' own funds for its coverage. The deterioration in the credit risk indicators corresponds with the estimates for slowing down of the economic activity in the second half of the year. The simulation for deterioration in the loan portfolio quality (transfer of 30% of the exposures of each risk category in the next two worse categories) leads to an increase in the average risk of the exposure to non-financial entities, but the capital adequacy ratio in the banking system remains over 8%.

Banks' exposures to *currency risk and interest rate risk* in the banking book are relatively low. However, they are an important risk factor for the quality of banks loan portfolio in the future, given the fact that they are accompanied by the potential danger of their transformation into credit risk. The widespread application of safeguard clauses, gives banks the opportunity to avoid possible direct effects of adverse changes in the exchange rate and interest rates, but emphasizes the impact of these changes on the future ability of borrowers to service their debts, and hence the performance of the banks. The exposure of banks to currency risk expressed through the gap between assets and liabilities with currency component, and its ratio to banks' own funds, increased in the third quarter of 2011. Despite this growth, banks use only 3.2% of their own assets for covering the currency risk. Simultaneously, this growth largely stems from the growth of liquid assets with foreign banks.



The *liquidity* of the banking system is stable and is relatively high. In the third quarter of 2011, it further strengthened, especially in conditions of rapid growth of the deposit base and preferences of banks to invest a substantial part of their growth in foreign currency liquid assets. In the structure of the sources of funding there was a decrease in the deposits from financial institutions and liabilities based on credits due to the return of the used sources of funding from foreign parent entities. However, in the same quarter the support of parent entities increased by more stable sources of funds (in the form of recapitalization with one bank and investment in subordinated instruments with two other banks), which positively affected the capital position of banks. In October, the new regulations on liquidity risk came into force, which is aimed at more efficient liquidity management on the part of banks, by maintaining a single liquidity ratio. Stress-test analyses show satisfactory resilience of the banking system to liquidity shocks, but they confirm the sensitivity of part of the banks to the high concentration of the deposit base. The simulations of liquidity shocks show greater sensitivity of banks to the outflow of the deposits of the twenty largest depositors, than to the withdrawal of 20% of households deposits.

Solvency of banks is more than twice over the prescribed minimum level and provides sufficient capacity to absorb any adverse shocks from further increase in the risks. In the third quarter of 2011, due to the growth in the own assets by 3.1%, as opposed to the lower growth in risk weighted assets, capital adequacy ratio increased, amounting to 16.7%. Also, different stress-test scenarios through which the resilience of the banking system to various negative shocks (impacts) is analyzed, show that even in case of simultaneous materialization of credit, currency and interest rate risks of an extreme nature, capital adequacy at the level of the banking system is not reduced below the statutory minimum of 8%.

Despite the profit shown at the end of September 2011, one of the main risks for the banking system is the continuous deterioration of *profitability*. Profit shown at the end of the previous few quarters is significantly lower compared with that achieved in the corresponding periods of the preceding year. This unfavorable trend was particularly pronounced at the end of September 2011, when the profit was only one quarter of the profit earned during the same period of 2010, which adversely reflected on indicators of return on assets and equity. Additionally, the trend of decreasing revenues, primarily revenues from ordinary activities (present since late 2010), as opposed to the further uptrend in operating costs, led to a reduction of the operational efficiency of banks, i.e. their ability to raise revenues to cover costs of operations.

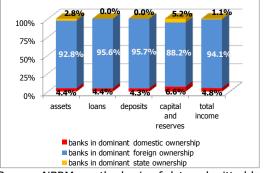


### I. Structure of the banking system

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

As of September 30, 2011, the banking system in the Republic of Macedonia consisted of seventeen banks and eight savings hoses, which is unchanged compared to June 30, 2011.

Figure 1 Structure of the majot balance sheet items, according to the dominant ownership of banks

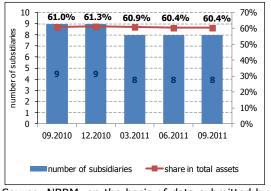


Source: NBRM, on the basis of data submitted by banks.

Given the insignificant share of the savings houses<sup>1</sup> in all segments of banking system operations, the further analysis in this report focuses exclusively on the banks.

In the third quarter of 2011, no significant changes in the ownership structure of the banking system were noticed. Most numerous are the banks in dominant ownership of foreign shareholders, who have the biggest share in the structure of all major balance sheet categories.

Figure 2 Number and share of foreign bank subsidiaries' assets in total assets



Source: NBRM, on the basis of data submitted by banks.

Thirteen banks are in dominant foreign ownership, eight of which are subsidiaries of foreign banks, which is unchanged compared to June 30, 2011.

Compared to June 30, 2011, the market share of the subsidiaries of foreign banks in the total assets of the banking system also remained unchanged.

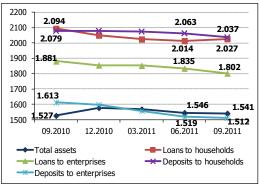
<sup>&</sup>lt;sup>1</sup> The share of savings houses in the total activities of deposit institutions (banks and savings houses) remained insignificant (0.9% share in total assets, 1.4% in total loans and 0.3% in total deposits of non-financial entities).



#### 2. Concentration and market share of banks

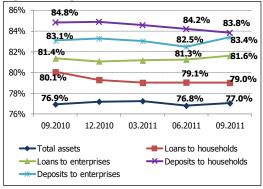
# Concentration in the banking system is high, but generally it shows a tendency of decreasing.

Figure 3 Dynamics of the Herfindahlindex



Source: NBRM, on the basis of data submitted by banks.

Figure 4 Dynamics of the CR5 ratio



Source: NBRM, on the basis of data submitted by banks.

Measured bv the Herfindahl-index<sup>2</sup>. concentration with banks is within the acceptable interval only for deposits of enterprises and total assets. The concentration of loans to enterprises is moving downwards and in this quarter it is slightly above the acceptable upper limit. Continuous reduction is observed also in the concentration of household deposits, although in this segment it is still the highest. On the other hand, concentration in the loans to households is not only above acceptable limits, but as of September 30, 2011 it is the only segment of the banks' operations where it registered an increase.

Concentration, as measured by the CR5 indicator<sup>3</sup>, has not registered significant changes (excluding deposits of enterprises) and is still high in all segments of banking activities. The five largest banks account for over 75% of all segments of the banks' operations. According to this indicator, the highest concentration is still registered in the household deposits, while the concentration is lowest in the total assets of the banking system.

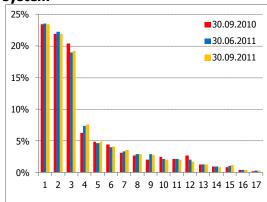
bank's share in the total amount of analyzed category (for example: total assets, total deposits etc.), while n denotes the total number of banks in the system. When the index ranges between 1,000 and 1,800 units the level of concentration in the banking system is generally considered acceptable.

<sup>&</sup>lt;sup>2</sup> The Herfindahl index is calculated according to the equation  $HI = \sum_{j=1}^{n} (S_j)^2$  where S denotes each

<sup>&</sup>lt;sup>3</sup> CR5 index denotes assets share (i.e. analyzed category, for example, corporate loans, etc.) of the five banks with largest assets (i.e. analyzed category) in the total assets (i.e. analyzed category) of the banking system.



Figure 5 Market share of individual banks in the total assets of the banking system



Source: NBRM, on the basis of data submitted by banks.

The high concentration is confirmed by the participation of the assets of an individual bank in total assets, with ten banks having individual participation of up to 3% or 15.3% all together.



#### II. Bank activities

In the third quarter of 2011, overall activities of the banking system kept on enhancing, yet at a slower pace compared to the preceding quarter and to the same quarter of the preceding year. Total assets growth was mostly driven by the faster deposit growth. The growth of bank lending slowed down, which is in line with the perceptions for slower economic growth and lowered expectations for the situation in the Euro area. This quarter experienced higher short-term bank placements with foreign banks, indicating that the banks are prudent concerning the enhancement of lending activity.

Figure 6 Level of financial intermediation in the banking system

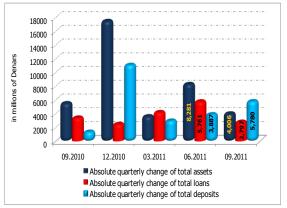


Source: National Bank, based on data submitted by banks.

### 1. Level of financial intermediation

At the end of the third quarter of 2011 compared to June 2011, financial intermediation measured through the ratio of total assets-, loans- and deposits - to - GDP<sup>4</sup> went up by 0.9 percentage points, 0.6 percentage points and 1.3 percentage points, respectively.

# Figure 7 Quarterly growth of total assets, credits and deposits of nonfinancial entities



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

#### 2. Bank balance sheet

As of September 30, 2011, total assets of the banking system were valued at Denar 321,168 million. They kept on increasing, but the growth in absolute amount was halved compared to the preceding quarter.

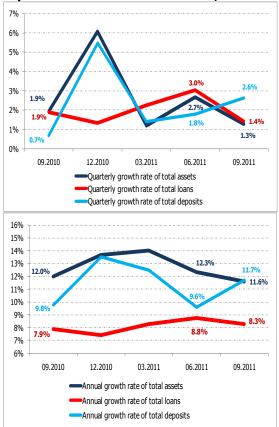
Percentage growth of assets shows lower deceleration of the growth compared to the previous quarter and to September 2010.

Same as the previous quarter, gross credits to nonfinancial entities were one of the major generators of the enhancement of total bank activities, towards which banks addressed approximately 70.0% of the growth of sources of

<sup>&</sup>lt;sup>4</sup> Financial intermediation indicators for the third quarter of 2011 are calculated using quarterly GDP data, on annual basis.



Figure 8 Quarterly (up) and annual (down) growth of total assets, credits and deposits of nonfinancial entities, in %



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

funding. Yet, the quarterly and annual credit growth rates show growth deceleration of 1.6 percentage points and 0.5 percentage points, respectively. The enhancement of banking activities was primarily facilitated by the deposit growth, which was twice as fast relative to credit growth.

Apart from gross credits<sup>5</sup>, in the third quarter of 2011, outstanding contribution to the growth of assets of the banking system was also made by placements with banks and other financial institutions. Their growth was almost solely determined by the higher placements on foreign bank accounts (primarily with two banks of the group of large banks).

<sup>&</sup>lt;sup>5</sup>Analysis of structure and developments of credits extended to nonfinancial entities is presented in more details in section 3. Lending activity.



Table 1 Assets and liabilities structure of the banking system

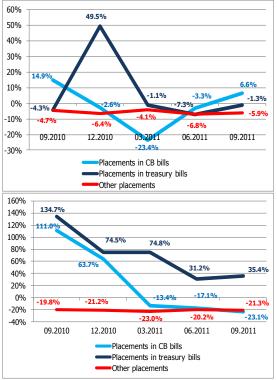
	Amoun	t in millions of	Denars		Structure			Change 30.0	9.2011/30.09.2010	)	Change 30.09.2011/30.06.2011			
Balance sheet	30.09.2010	30.06.2011	30.09.2011	30.09.2010	30.06.2011	30.09.2011	Absolute change	In percent	In the structure (in percentage points)	Share in the change	Absolute change	In percent	In the structure (in percentage points)	Share in the change
Cash and balances with NBRM	32.131	44.348	43.010	11,2%	14,0%	13,4%	10.879	33,9%	2,2	32,6%	-1.338	-3,0%	-0,6	-33,4%
Securities portfolio	41.749	36.975	37.804	14,5%	11,7%	11,8%	-3.945	-9,5%	-2,7	-11,8%	829	2,2%	0,1	20,7%
Placements with banks and other financial institutions	33.560	41.836	44.142	11,7%	13,2%	13,7%	10.582	31,5%	2,1	31,7%	2.306	5,5%	0,6	57,6%
Loans to non-financial entities (net)	165.126	176.679	178.516	57,4%	55,7%	55,6%	13.390	8,1%	-1,8	40,2%	1.837	1,0%	-0,1	45,8%
Gross loans to non-financial entities	184.077	196.504	199.301	64,0%	62,0%	62,1%	15.224	8,3%	-1,9	45,7%	2.797	1,4%	0,1	69,8%
Accumulated amortization of loans to non- financial entities	(648)	(775)	(808)	-	-	-	-160	24,7%	-	-	-33	4,3%	-	-
Impairment (provisions) of loans to non-financial entities	(18.304)	(19.050)	(19.977)	-	-	-	-1.673	9,1%	-	-	-928	4,9%	-	-
Accrued interest and other assets	7.021	9.247	9.539	2,4%	2,9%	3,0%	2.518	35,9%	0,5	7,6%	292	3,2%	0,1	7,3%
Fixed assets	8.442	8.076	8.288	2,9%	2,5%	2,6%	-154	-1,8%	-0,4	-0,5%	212	2,6%	0,0	5,3%
Unallocated loan loss provisions	-196	-0,01	-130,35	-0,1%	0,0%	0,0%	66	0,0%	0,0	0,2%	-130	0,0%	0,0	-3,3%
Total assets	287.832	317.162	321.168	100,0%	100,0%	100,0%	33.336	11,6%	0,0	100,0%	4.006	1,3%	0,0	100,0%
Deposits from banks and other financial institutions	15.908	17.204	15.773	5,5%	5,4%	4,9%	-135	-0,8%	-0,6	-0,4%	-1.431	-8,3%	-0,5	-35,7%
Deposits of non-financial entities	202.202	220.114	225.895	70,3%	69,4%	70,3%	23.692	11,7%	0,1	71,1%	5.780	2,6%	0,9	144,3%
Borrowings (short-term and long-term)	30.040	37.706	35.905	10,4%	11,9%	11,2%	5.864	19,5%	0,7	17,6%	-1.801	-4,8%	-0,7	-45,0%
Other liabilities	7.137	6.576	7.104	2,5%	2,1%	2,2%	-33	-0,5%	-0,3	-0,1%	528	8,0%	0,1	13,2%
Provisions for off-balance sheet items	683	706	809	0,2%	0,2%	0,3%	126	18,4%	0,0	0,4%	103	14,6%	0,0	2,6%
Capital and reserves	31.862	34.856	35.683	11,1%	11,0%	11,1%	3.821	12,0%	0,0	11,5%	827	2,4%	0,1	20,6%
Total liabilities	287.832	317.162	321.168	100,0%	100,0%	100,0%	33.336	11,6%	0,0	100,0%	4.006	1,3%	0,0	100,0%

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

Note: The item of placements with central bank of Annex 1 is included in this table in the item of cash and balances with the NBRM.

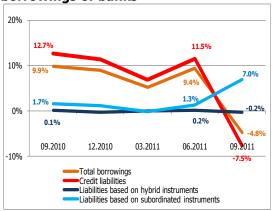


Figure 9 Quarterly (up) and annual (down) pace of securities portfolio



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

Figure 10 Quarterly dynamics of total borrowings of banks



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

In the third quarter, compared to the two previous quarters, investments in securities shifted upwardly solely due to the banks' demand for CB bills. Placements in these low-risk instruments went up quarterly by Denar 1,272 million and dominate (54.2%) the overall securities portfolio. Note that the growth was mainly registered at the end of the guarter, pending the amendments to liquidity regulation<sup>6</sup> that became effective early in October and were expected to increase the demand for CB bills. Yet, the annual growth rate of demand for CB bills was negative and equaled 23.1% (a decrease of Denar 6,139 million). The demand for treasury bills went down quarterly by Denar 167 million, whereas the annual growth was positive and equaled Denar 3.380 million.

In the third quarter of 2011, accelerated growth of deposits of nonfinancial entities<sup>7</sup> almost fully determined the growth of total assets of the banking system. In the third quarter of 2011, the share of deposits in the total liability structure further increased.

The quarterly fall of deposits of banks and other financial institutions is caused by the decrease of deposits of nonresidents - financial companies in the amount of Denar 1,532 million or 29.8%, almost fully concentrated in three banks of the group of medium-size banks.

After the permanent increase in the previous quarters, in the third quarter of 2011 banks reported lower drawdown<sup>8</sup> of loans. Credit liabilities dominate (78.5%) the structure of total loans and fully (127.4%) determined their quarterly decrease. Compared to June 30, 2011, credit liabilities dropped by Denar 2,296 million, almost fully (90.4%) resulting from the decrease of credit liabilities to nonresidents (a short-term

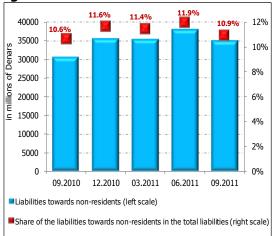
<sup>&</sup>lt;sup>6</sup> Fulfillment of single liquidity ratio, rather than Denar and foreign currency liquidity ratios, separately.

<sup>&</sup>lt;sup>7</sup> Analysis of the structure and developments of deposits of nonfinancial entities is presented in more details in section 4. Deposit activity.

<sup>&</sup>lt;sup>8</sup> Total banks' borrowings include credit liabilities and liabilities based on hybrid and subordinated instruments. Analysis of sources of funding from parent entities is given in more details in III/2. Liquidity risk.

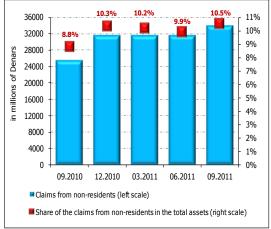


Figure 11 Liabilities to nonresidents



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

Figure 12 Claims on nonresidents



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

borrowing of a large bank from a parent entity<sup>9</sup>, in the amount of Denar 1,238 million, fell due). Besides the decrease of this borrowing, the total debt to nonresidents reduced also due to the decrease of long-term credit liabilities to other nonresidents (nonparent entities) of two mediumsize banks (Denar 740 million in total). At the end of September 2011, liabilities based on subordinated instruments accounted for 21.0% of the structure of total borrowings. Quarterly observed, they increased by Denar 495 million.

In the third quarter of 2011, the share liabilities structural of nonresidents in the total liabilities went down (by Denar 2,904 million, or by 7.7% compared to the preceding quarter). Such development results from the abovementioned decline of credits to nonresidents, and to deposits nonresidents financial institutions, constituting 52.8% of the decrease of total liabilities to nonresidents. Liabilities to parent entities were marginal, constituting 4.9% of total assets.

Conversely, in this quarter, claims on nonresidents went up by Denar 2,413 million, or by 7.7%. Such development almost entirely (96,4%) results from the quarterly growth of placements on foreign bank accounts of Denar 2,325 million, or 7.5%. Exposure to parent entities<sup>10</sup> amounted to Denar 4,765 million, which is a quarterly increase of 11.6%. The increase of placements on foreign bank accounts resulted from the quarterly increase of this item in two large banks. Placements on foreign bank accounts dominate (98.6%) the total claims on nonresidents. Such developments and slower growth of total assets in this guarter increased the share of claims nonresidents in the total assets. The exposure to parent entities is insignificant, accounting for 1.3% of total assets.

<sup>&</sup>lt;sup>9</sup> In the same quarter, the parent entity of this bank invested funds based on subordinated instrument.

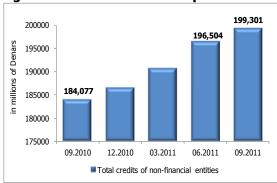
<sup>&</sup>lt;sup>10</sup> Exposure to parent entities made up a marginal 1.3% of the total on-balance sheet and off-balance sheet assets.



### 3. Bank lending activity

In the third quarter of 2011, the lending activity accelerated at a slower pace, evident through both quarterly and annual credit growth rates. The contraction of credit market activities confirmed banks' expectations presented in the Lending Activity Survey conducted in July this year. The actualization of problems in the Euro area and the increasing global uncertainty is one of the main reasons behind the contraction of lending activity. The Lending Activity Survey of banks conducted in October indicates that the banks still refrain from lending. Yet, amid stable sources of funding, the future lending activity still depends on the credit demand quality. Risks surrounding the lending activity persist and are attributed to the perceptions for slower economic growth and lowered expectations for the situation in the euro area.

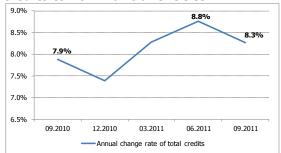
**Figure 13 Total credit developments** 



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

The lending activity of banks kept on intensifying in the third quarter of 2011, but at a slower pace compared to the preceding quarter, according to both annual and quarterly growth rates.

Figure 14 Annual growth rates of total credits to nonfinancial entities

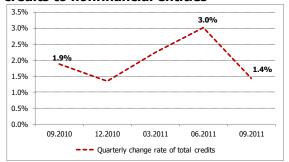


Source: National Bank, based on data submitted by banks.

As of September 30, 2011 compared to September 30, 2010, in spite of the lower annual growth rate compared to the previous quarter, the annual growth rate went up by 0.4 percentage points.



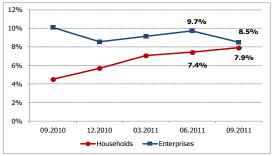
Figure 15 Quarterly growth rates of total credits to nonfinancial entities



Source: National Bank, based on data submitted by

banks.

Figure 16 Annual credit growth, by sector

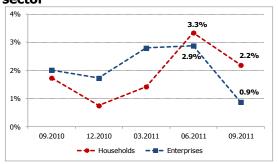


Source: National Bank, based on data submitted by banks.

Growth deceleration is also evident through the quarterly growth rates. The quarterly credit growth was concentrated in two large banks and one medium-size bank, making 99.3% contribution to the quarterly growth of total credits.

As of September 30, 2011, corporate credits still dominate the structure of total credits with 61.2%<sup>11</sup>. In spite of the deceleration of the growth in the third quarter, corporate credits kept on increasing at a faster pace compared to the growth of household credits, thus making the greatest contribution to the total credit growth in the third quarter of 2011. Household credit growth, although slower compared to the corporate credit growth, registered permanent annual uptrend in the period under observation.

Figure 17 Quarterly credit growth, by sector



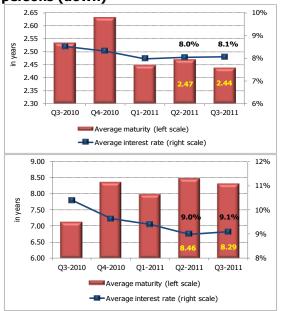
Source: National Bank, based on data submitted by banks.

Ouarterly, household borrowings registered higher growth rates compared to corporations. Both sectors registered deceleration of their borrowing in this quarter compared to the previous one, with the corporate borrowing being faster.

<sup>&</sup>lt;sup>11</sup> Annex 5



Figure 18 Average interest rate and maturity of newly approved corporate credits (up) and credits to natural persons (down)



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

In the third quarter of 2011, the average interest rates on newly extended credits rose insignificantly. The average interest rate on newly extended credits to both sectors went up by 0.1 percentage point, and somewhat confirms the perceptions for higher risks and explains the slower trend of lending to both sectors in this quarter.

The average maturity of newly extended credits to nonfinancial entities of both sectors reduced marginally in the third quarter of 2011.

Table 2 Credit exposure in the third quarter of 2011, by activity/credit products

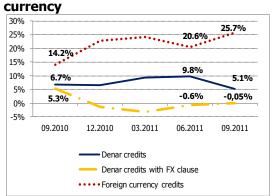
Sectors	Credit products / activities	Exposure to credit risk in millions of Denars as of 30.09.2011	Absolute quarterly change of exposure to credit risk in millions of Denars	Quarterly change rate	Share in the total growth of the exposure to credit risk	Average interest rate of the principal as of 30.09.2011	Average interest rate of the principal as of 30.06.2011
	Residential and commercial real estate loans	18,765	469	2.6%	24.5%	7.5%	7.5%
	Consumer loans	32,529	1,592	5.1%	83.2%	10.0%	10.1%
NATURAL PERSONS	Overdrafts	9,661	119	1.3%	6.2%	11.6%	11.6%
	Credit cards	21,717	-145	-0.7%	-7.6%	11.5%	11.5%
	Car loans	3,569	-217	-5.7%	-11.3%	8.2%	8.2%
Other loans		1,131	95	9.2%	5.0%	8.8%	8.6%
TOTAL NATURAL PERS	SONS	87,372	1,914	2.2%	28.6%		
	Agriculture, forestry and fishing	4,354	-36	-0.8%	-3.6%	7.7%	7.8%
	Industry	51,991	-112	-0.2%	-11.2%	7.8%	7.8%
	Construction	17,266	74	0.4%	7.4%	8.4%	8.4%
ENTERPRISES AND	Wholesale and retail trade	48,291	1,220	2.6%	122.1%	8.0%	8.1%
OTHER CLIENTS	Transport and storage	8,758	65	0.7%	6.5%	8.9%	8.9%
OTTER CELETIO	Accommodation facilities and catering services	3,732	-27	-0.7%	-2.7%	8.7%	8.8%
	Real estate	4,037	-168	-4.0%	-16.8%	8.3%	8.2%
	Other services	11,876	-16	-0.1%	-1.6%	8.3%	7.2%
TOTAL ENTERPRISES A	AND OTHER CLIENTS	150,304	999	0.7%	14.9%		
TOTAL EXPOSURE TO	CREDIT RISK	336,112	6,692	2.0%	100.0%		

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

Note: Developments of all activities and credit products are presented in more details in Annex 14 - Credit exposure and impairment of the overall banking system, by risk category and by sector.

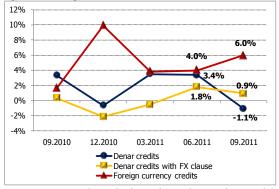


Figure 19 Annual credit growth rates, by



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

Figure 20 Quarterly credit growth rates, by currency



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

As of September 30, 2011, observing nonfinancial entities, the banks' credit support was mostly directed towards clients from the industry and wholesale and retail trade. Natural persons still consider the consumer credits to be the most attractive credit product.

Credits with FX clause (foreign currency credits and Denar credits with FX clause) constitute roughly 60%, and remain dominant in the structure of total credits<sup>12</sup>. Foreign currency credits reported the highest absolute annual growth of Denar 11,283 million<sup>13</sup>, making the greatest contribution (74.1%) to the total credit growth. On the other hand, the annual growth rates of Denar credits indicate that their annual growth slowed down in this quarter. Denar credits with FX clause carried on reporting negative annual growths in this quarter, same as the previous three quarters, but at a markedly slower pace.

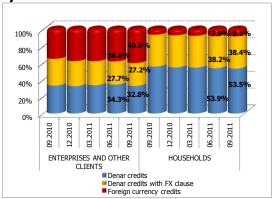
Foreign currency credit growth accelerated on quarterly basis as well, whereas Denar credits reported negative quarterly growth in this quarter. Major part (around 85.8%) of the quarterly growth of foreign currency credits is due to the higher foreign currency lending by four banks, one of which makes up roughly 30% of the total quarterly growth of foreign currency credits. The decrease of Denar lending fully arises from the lower Denar lending by four banks, with the quarterly growth of each of them ranging from 1% to 40.5%.

<sup>&</sup>lt;sup>12</sup> Annex 5

<sup>&</sup>lt;sup>13</sup> Substantial part of this growth is attributed to the growth of foreign currency credits for domestic payments to the category of other residents (residents with mismatched currency position, i.e. whose foreign currency outflows exceed foreign currency inflows). Main reasons behind the accelerated growth of foreign currency credits are the liquidity requirements for separate fulfillment of both Denar and foreign currency liquidity ratios (since October, a single liquidity ratio has to be fulfilled) and the lower interest rates.

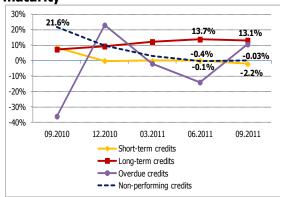


Figure 21 Currency structure of credits, by sector



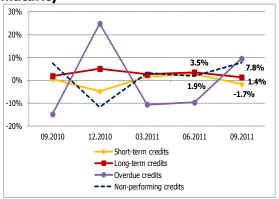
Source: National Bank, based on data submitted by banks.

Figure 22 Annual credit growth, by maturity



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

Figure 23 Quarterly credit growth, by maturity



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

The share of **lending with FX component** remained higher in the corporate credit structure. The share of Denar credits in the household credit structure was higher. The total annual and quarterly growth of corporate credits was solely determined by the growth of foreign currency credits. Denar credits with FX clause made larger contribution (exceeding 45%) to the annual and quarterly growth of household credits.

Analyzing the maturity structure of total credits, long-term credits still dominate, with a share of roughly 69%<sup>14</sup>. They reported the highest absolute and relative annual growth (of Denar 15,880 million or 13.1%), fully contributing to the growth of total credits. Higher long-term lending to corporations and other clients constituted over 61% of the total annual growth of long-term credits. Short-term credits kept on decreasing. Overdue credits of this quarter started increasing on annual basis. On the other hand, as of September 30, 2011, nonperforming loans reported slower annual decrease relative to June 30, 2011. The decrease of nonperforming loans is due to the fall of nonperforming household loans, mostly in Denars<sup>15</sup>.

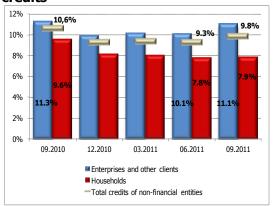
Analyzed quarterly, the trend of credit maturities follows their annual trend, except for nonperforming loans. In spite of their annual fall, they kept on increasing even faster on guarterly basis. The quarterly growth rate of 1.9% (Denar 331 million) as of June 30, 2011 rose to 7.8% (by Denar 1,412 million) as of September 30, 2011. The faster growth of nonperforming loans and the growth of overdue loans confirm the expectations that the risks are still high, that have future could also impact on nonperforming loans and the credit growth rate.

<sup>&</sup>lt;sup>14</sup> Annex 5

<sup>&</sup>lt;sup>15</sup> As of September 30, 2011, the annual growth rate of nonperforming household and corporate loans equaled minus 11.3% and 6%, respectively. In the preceding quarter, these rates equaled minus 8.5% and 4.1%, respectively.







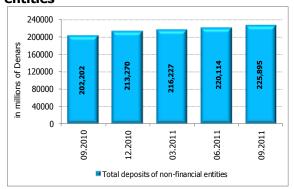
Source: National Bank, based on data submitted by banks.

Annual and quarterly developments of nonperforming loans also mirror their share in the total credits and the sector structure. Compared to the preceding quarter, the faster growth of nonperforming loans in the third quarter of 2011 tended to increase their share in the total credits<sup>16</sup> and the sector structure. Compared to September 30, 2010, the annual decrease of nonperforming loans tended to decrease their share in total credits and the sector structure.

### 4. Bank deposit activity

As of September 30, 2011, the deposit core of banks was increasing faster compared to June 2011 and September 2010.

Figure 25 Deposits of non-financial entities



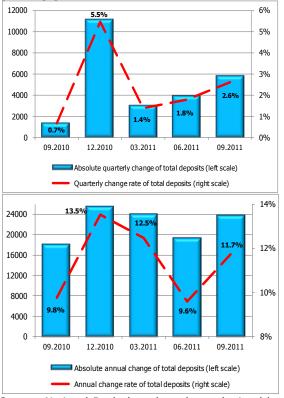
Source: National Bank, based on data submitted by banks.

As of September 30, 2011, total deposits of non-financial entities were valued at Denar 225,895 million, which is by Denar 5,780 million or 2.6% more compared to the second quarter of 2011.

<sup>&</sup>lt;sup>16</sup> Had credits to financial entities been included, this indicator would have equaled 9.5%.



Figure 26 Deposits of non-financial entities, quarterly (up) and annual (down) growth

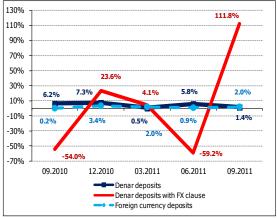


Source: National Bank, based on data submitted by banks.

In the last three quarters, the quarterly growth rate of deposits indicates continuous upward trend. In the third quarter of 2011, almost all banks reported deposit growth most of which (roughly 80.0%)<sup>17</sup> concentrated in three banks.

The annual growth rate of total deposits also accelerated compared to the growth rates in June 2011 and in September 2010.

Figure 27 Quarterly dynamics of deposits of non-financial entities, by currency



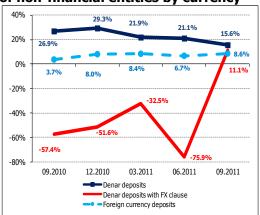
Source: National Bank, based on data submitted by banks.

In the third quarter of 2011, foreign currency deposits determined the largest portion of the growth of banks' deposit core. They registered a supreme absolute quarterly growth of Denar 2,321 million, and their share in the quarterly growth of total deposits equaled 40.1%. Most of the quarterly growth of foreign currency deposits (73.3%) is due to the growth of short-term foreign currency household deposits with three banks.

 $<sup>^{17}</sup>$  The structure of deposits by sector, maturity and currency by group of banks is presented in annexes 9 and 10.

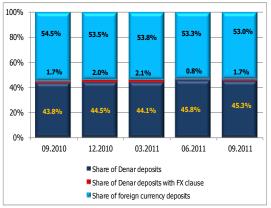


Figure 28 Annual dynamics of deposits of non-financial entities by currency



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

Figure 29 Currency structure of deposits to non-financial entities



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

Denar deposits went up quarterly by Denar 1,419 million, contributing with 24.6% to the quarterly growth of total deposits. Denar deposits with FX clause reported the highest percentage growth in this quarter as a result of the increase of short-term Denar corporate deposits with FX clause, primarily in one bank. The contribution of these deposits in the total deposit growth equaled 35.3%. However, larger portion of the growth of these deposits is actually a conversion of short-term Denar corporate deposits into Denar deposits with FX clause. Had the conversion effect been exempted, Denar deposits would have registered the fastest quarterly growth (of Denar 2,385 million or 2.4%), and would have made paramount contribution (41.3%) to the quarterly growth of deposit base. Denar deposits with FX clause would have registered quarterly growth of 58.9% and would have determined 18.6% of the quarterly growth of total deposits.

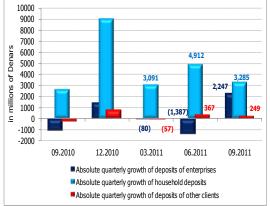
Annually observed, Denar deposits experienced a supreme absolute growth of Denar 13,824 million, thus making the greatest contribution (of 58.3%) to the annual growth of total deposits. Foreign currency deposits also went up annually by Denar 9,481 million, determining 40.0% of the annual growth of total deposits. Denar deposits with FX clause recorded faster annual growth rate compared to the negative annual growth rates of previous quarters.

Deposits with FX component dominate the structure of bank total deposits<sup>18</sup>, and in the third quarter of 2011, their share further increased by 0.5 percentage points compared to the preceding quarter.

<sup>&</sup>lt;sup>18</sup> Annex 8

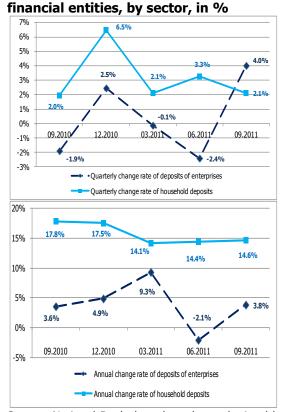


Figure 30 Quarterly dynamics of deposits of non-financial entities, by sector



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

Figure 31 Quarterly (up) and annual (down) dynamics of deposits of non-



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

Household deposits experienced the fastest absolute quarterly growth, yet slower compared to June 2011. Household Denar and foreign currency deposits contributed with 46.9% and 53.1%, respectively, to the growth. In spite of the fall in June 2011 and September 2010, corporate deposits went up in the third quarter of 2011<sup>19</sup>.

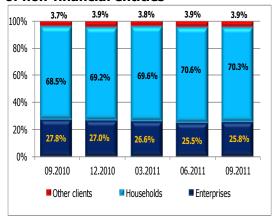
Same as the preceding quarter, household deposits determined most (56.8%) of the quarterly growth of total deposits. Compared to negative quarterly growth rates in the previous two quarters, corporate deposits registered faster quarterly growth rate compared to household deposits, contributing with 38.9% in the quarterly growth of total deposits.

On annual basis, household deposits went up by Denar 20,254 million, determining 85.5% of the annual growth of total deposits. Corporate deposits rose annually by Denar 2,156 million, contributing with 9.1% to the annual growth of total deposits.

 $<sup>^{19}</sup>$  The growth of corporate deposits was primarily determined by the growth of Denar deposits with FX clause (contribution of 86.7%) and the contribution of foreign currency corporate deposits equaled 21.9%. Denar deposits with FX clause in total corporate deposits equaled merely 6.1%.



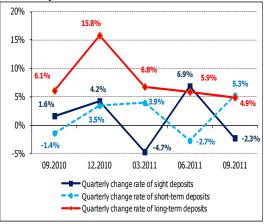
Figure 32 Sector structure of deposits of non-financial entities



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

Household deposits remained dominant in the structure of total deposits in spite the decrease of their structural share compared to the preceding quarter. The share of corporate deposits in total deposits increased<sup>20</sup>.

Quarterly dynamics deposits of non-financial entities, by maturity



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

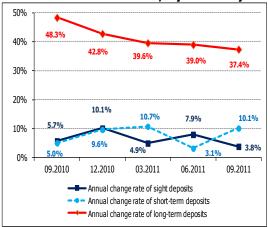
The growth of total deposits of nonfinancial entities was almost solely determined by the higher savings in a short run in the third quarter of 2011. Short-term deposits<sup>21</sup> registered the highest absolute quarterly growth of Denar 5,653 determining 97.8% of the quarterly growth of total deposits. The growth of long-term savings further slowed down on quarterly basis (by Denar 1,824 million). These deposits<sup>22</sup> contributed with 31.6% to the quarterly growth of total deposits. On the other hand, sight deposits registered a negative growth rate in this guarter and decreased by Denar 1,696 million. Nearly 74.0% of the decrease of sight deposit was caused by the quarterly fall of corporate sight deposits in one bank of the group of large banks.

<sup>&</sup>lt;sup>21</sup> The quarterly growth of short-term deposits resulted from the growth of short-term foreign currency deposits (contribution of 56.8%) and from the growth of short-term Denar deposits with FX clause (contribution of 36.4%). Short-term foreign currency household deposits contributed with 52.9%, and short-term foreign currency corporate deposits made a 46.4% contribution to the quarterly growth of short-term foreign currency deposits. The quarterly growth of short-term Denar deposits with FX clause was almost fully (95.5%) determined by the growth of shortterm Denar corporate deposits with FX clause.

<sup>&</sup>lt;sup>22</sup> The quarterly growth of long-term deposits was determined by the growth of long-term Denar deposits of households (contribution of 69.5%).



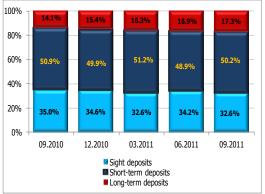
Figure 34 Annual dynamics of deposits of non-financial entities, by maturity



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

As of September 30, 2011, short-term deposits registered faster annual growth of Denar 10,384 million. These deposits contributed with 43.8% to the annual growth of total deposits of nonfinancial entities. In spite of the slower growth (of Denar 10,623 million) on annual basis, long-term deposits generated the most (44.8%) of the annual growth of total deposits. On annual basis, sight deposits went up by Denar 2,685 million.

## Figure 35 Maturity structure of deposits of non-financial entities



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

In the third quarter of 2011, short-term deposits remained dominant in the structure of total deposits of nonfinancial entities<sup>23</sup>. Their share in the maturity structure of total deposits went up, whereas the share of sight deposits went down.

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<sup>&</sup>lt;sup>23</sup> Annex 8

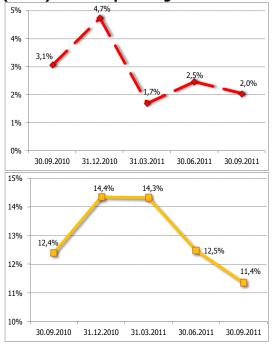


#### III. Bank risks

#### 1. Credit risk

The outstanding growth of regular credit exposure in C risk category in the second quarter of 2011 sounded an alert for potential deterioration of the quality of credit portfolio in near future. Such expectations were confirmed in the third quarter of 2011. Credit risk level increased noticeably due to the faster growth of nonperforming loans and the deterioration of credit portfolio quality indicators. One should take into account the full coverage of nonperforming loans with impairment and special reserve. The deterioration of credit risk indicators is mostly attributed to the corporations and other clients sector. Risk was the highest in Denar credit exposure, and was increasing at the fastest pace in the exposure in Denars with FX clause. Credit risk indicator deterioration corresponds with the perceptions for contraction of economic activity in the second half of the year. Perceptions for further contraction of economic activity in the period ahead indicate an environment with unfavorable effects on the credit risk indicators, which was counterbalanced through the banks' restraint concerning the pace of lending activity. The simulation for deterioration of credit portfolio quality (migration of 30% of exposures from each risk category to the next two riskier categories) brings about higher average risk to the exposure to nonfinancial entities, yet, the capital adequacy ratio of the banking system still exceeds 8%.

Figure 36 Quarterly (up) and annual (down) credit exposure growth rates



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

# 1.1 Quality of credit portfolio of the banking system

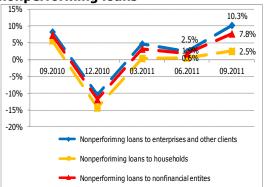
As of September 30, 2011, total credit exposure was valued at Denar 336,112 million, and registered a quarterly growth of Denar 6,692 million, which is by 18.3% less compared to the growth of the preceding quarter. Also, the growth of credit exposure slowed down on annual basis.

The slowdown of credit exposure growth in the third quarter of 2011 is primarily due to the slower growth of nonfinancial entities<sup>24</sup>, primarily the enterprises and other clients sector. The quarterly growth was dominated by the exposure to financial institutions (growth of Denar 3,673 million or 4.8%), within which, the growth of balances on foreign bank accounts. Furthermore, 94.9% of the quarterly growth of these assets was concentrated with three large banks.

<sup>&</sup>lt;sup>24</sup> Exposure to nonfinancial entities equals the total credit exposure less exposure to financial and insurance activities and public administration and defense, mandatory social insurance.

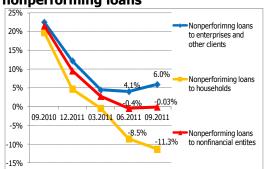


Figure 37 Quarterly growth rates of nonperforming loans



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

Figure 38 Annual growth rates of nonperforming loans



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

In the third quarter of 2011, the growth of nonperforming loans primarily resulted from their growth in enterprises and other clients sector, and mostly (72.6%) in one bank of the group of large banks.

The upward trend of nonperforming loans also increased their share in total loans to 9.8% (0.5 percentage points more compared to June 2011). Although their coverage with impairment and special reserve decreased, it still persists above 100%.

On annual basis, nonperforming loans went down marginally (by 0.03%), due to the decrease of household nonperforming loans<sup>25</sup> (by 769 million), and the increase of corporate nonperforming loans (by 763 million). Yet, the decrease of nonperforming loans tended to decrease their share in total loans by 0.8 percentage points relative to September 2010.

Table 3 Credit portfolio quality indicators of the overall banking system

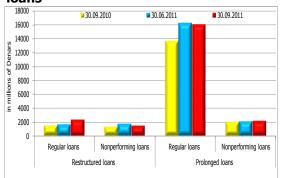
Indicator   30.09.2010   30.06.2011   30.09.2011										
Indicator	30.09.2010	30.06.2011	30.09.2011							
Average level of risk	6,8%	6,3%	6,6%							
% of "C", "D" and "E" in total credit risk exposure	8,3%	7,7%	8,0%							
% of "C", "D" and "E" in total credit risk exposure, without exposure to financial institutions and state	10,9%	10,4%	10,9%							
% of "E" in total credit risk exposure	3,9%	3,8%	4,2%							
Coverage of "C", "D" and "E" with calculated impairment and special reserves	81,8%	82,9%	82,0%							
Coverage of nonperforming credits with calculated impairment and special reserves	103,1%	113,9%	111,4%							
Coverage of nonperforming credits with calculated impairment and special reserves for nonperforming credits	69,9%	76,2%	76,1%							
% of "C", "D" and "E" in own funds	66,9%	63,2%	65,0%							
% of "E" in own funds	31,4%	31,8%	34,6%							
% of nonperforming loans, net of calculated impairment for nonperforming loans in own funds	16,0%	10,9%	11,5%							
% of "C", "D" and "E" net of calculated impairment in own funds	23,6%	21,6%	21,7%							
Nonperforming loans / Total loans	10,4%	8,9%	9,5%							
Nonperforming loans / Total loans for nonfinancial entites	10,6%	9,3%	9,8%							
Restructured and prolonged loans / Total loans	10,0%	11,0%	11,1%							
Coverage of restructured and prolonged loans with calculated impairment and special reserves	15,3%	18,4%	19,9%							

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

 $^{\rm 25}\mbox{Household}$  sector includes natural persons and sole proprietors.

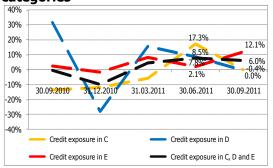


Figure 39 Restructured and prolonged loans



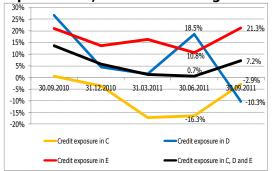
Source: National Bank, based on data submitted by banks.

Figure 40 Quarterly growth rates of credit exposure in C, D and E risk categories



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

Figure 41 Annual growth rates of credit exposure in C, D and E risk categories



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

The faster growth of restructured loans in the third quarter of  $2011^{26}$ , tended to increase their share in total loans and as of September 2011 it equaled 1.9% (1.7% as of June 30, 2011). On the other hand, the prolonged loans reduced (by 76 million), in spite of the growth in the second quarter of the year (of Denar 2,259 million).

In spite of the slower growth of credit exposure with highest credit risk (C, D and E risk categories) in the third quarter of 2011, banks' credit risk indicators deteriorated. This growth was solely caused by the growth of credit exposure within E risk category<sup>27</sup> (in one large and one medium-size bank, in particular), whereas the exposure in C and D risk categories went down marginally<sup>28</sup>. Most of the growth of E risk category exposure (90.5%) was caused by the corporations and other clients sector.

The annual growth rates show similar developments. Compared to September 30, 2010, exposure in C, D and E risk categories increased by Denar 1,785 million, given the growth of exposure in E risk category of Denar 2,496 million, and the decrease of exposures in C and D risk categories of 260 and 451 million, respectively.

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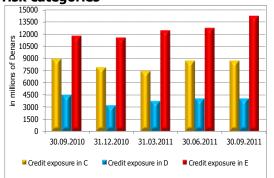
<sup>&</sup>lt;sup>26</sup> Restructured loans went up by Denar 441 million, compared to the growth Denar 205 million in the preceding quarter.

<sup>&</sup>lt;sup>27</sup> Exposure in C, D and E risk categories went up by Denar 1,508 million quarterly, while the exposure in E risk category increased by Denar 1,529 million.

<sup>&</sup>lt;sup>28</sup> Decrease of Denar 3 and 18 million, respectively.

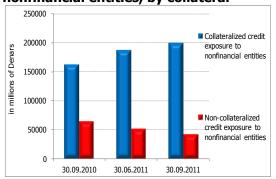


Figure 42 Credit exposure in C, D and E risk categories



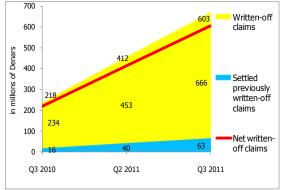
Source: National Bank, based on data submitted by banks.

Figure 43 Credit exposure to nonfinancial entities, by collateral



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

Figure 44 Net written off claims on nonfinancial entities



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

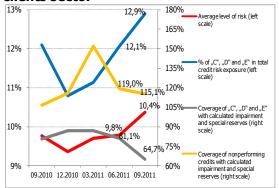
The growth of exposure classified in the three riskier categories increased their share in the total credit exposure and in the banks' own funds. Additionally, the coverage of exposure in C, D and E with impairment fell by 0.9 percentage points on quarterly basis.

2011 witnessed a permanent increase of collateralized credit exposure of banks to nonfinancial entities. The collateralized exposure to corporations and other clients sector was almost full (with 92.1%), and the credit exposure to natural persons was 66.2% collateralized. Compared to the second quarter, the collateralized credit exposure to both natural persons and corporations and other clients sector increased (by Denar 3,600 million or 6.6% and by Denar 8,889 million or 6.9%, respectively).

Claims written off by banks registered upward trend, compared to both the previous quarter (an increase of 47.1%), and the same quarter of the preceding year (growth of 185%). The growth in the third quarter of 2011 is due to the growth of written off claims based on interest from nonfinancial legal entities in the amount of Denar 261 million, in one bank of the group of large banks. On the other hand, banks reported by Denar 74 million less written off claims on natural persons.



# Figure 45 Credit portfolio quality indicators of the corporations and other clients sector



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

# 1.2 Credit portfolio quality by sector and currency structure of credit exposure

The deterioration of indicators for the quality of banks' credit portfolio in this quarter (same as the previous one) is due to the higher exposure risk to corporations and other clients sector that has the highest share in the total credit exposure (44.7%)<sup>29</sup>. Credit risk indicators in the corporations and other clients sector still indicate higher credit risk relative to natural persons.

The deterioration of credit risk indicators of the corporations and other clients sector particularly resulted from the growth of exposure in E risk category that fully caused the growth of exposure in C, D and E risk category. This guarter witnessed by Denar 1,370 million<sup>30</sup> higher exposure in these three riskier categories in the corporations and other clients sector. Given the slower growth of total exposure to this sector (Denar 999 million or 0.7%) the share of exposure in C, D and E risk categories increased. Alongside, nonperforming loans of corporations and other clients increased by Denar 1,262 million, bringing about higher growth rate of nonperforming loans (from 10.1% as of June 30, 2011 to 11.1% as of September 30, 2011). The slower growth of total impairment and special reserve (Denar 974 million or 6.7%), made the nonperforming loans coverage, and the exposure in C, D and E risk categories with impairment and special reserves<sup>31</sup> decrease. Residential entities and catering sector reported the highest level, and simultaneously, the largest deterioration, of credit risk indicators in the third quarter. According to the credit risk indicators, the exposure to construction industry registered the lowest risk level.

31 Annex 12

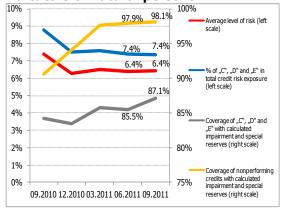
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<sup>&</sup>lt;sup>29</sup> The structure of total bank credit exposure consists of natural persons (26%), financial institutions (23.8%), government (4.6%) and sole proprietors (0.9%).

<sup>&</sup>lt;sup>30</sup> A growth of exposure in the riskiest category (E) of Denar 1,384 million, a decrease of exposure in C risk category of Denar 35 million and an increase in exposure in D risk category of Denar 22 million.



Figure 46 Credit portfolio quality indicators of natural persons



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

Risk level of exposure to natural persons registered no significant changes. Exposure in E risk category went up by Denar 137 million, and the exposure classified in C, D and E risk categories to this sector increased by Denar 105 million quarterly. On the other hand, impairment and special reserve the total increased quarterly by Denar 168 million. Such development of impairment increased coverage of exposure in C, D and E risk categories and of the nonperforming loans by 1.6 and 0.2 percentage points, respectively. In spite of the quarterly decrease, according to the credit risk indicators, consumer credits are still the riskiest. Conversely, residential and commercial real estate credits showed the lowest level of credit risk that additionally dropped this quarter. Car credits experienced the most significant deterioration in the third quarter<sup>32</sup>.

In the third quarter of the year, the share of credit exposure to natural persons with higher income increased in the total exposure to natural persons, compared to the preceding quarter, indicating stricter terms of lending. Unlike the preceding quarter, when 29.6% of the exposure to natural persons was constituted of persons with income up to Denar 15,000, in this quarter, the share of exposure to these persons reduced to 25.3%. Most of the exposure (33.5%) to natural persons is to persons who reported an income from 15,000 to 30,000, whose borrowing is mostly in the form of consumer credits<sup>33</sup>.

As of September 30, 2011, same as the end of the preceding quarter, Denar credit exposure was the riskiest, whereas credit risk indicators for the exposure in Denar with FX clause reported the fastest deterioration<sup>34</sup>. The share of C, D and E exposure in the total credit exposure in Denars with FX clause registered the most significant deterioration (growth of 0.8 percentage points compared to June 30, 2011). Such increase

<sup>32</sup> Annex 13

<sup>33</sup> Annex 16

<sup>&</sup>lt;sup>34</sup> Annex 15



results from the growth of exposure in D risk category of Denar 511 million, primarily in mining and quarrying sector.

The analysis of portfolio quality of the enterprises and other clients sector indicates the highest risk level and fastest quarterly increase of accommodation facilities and catering services. The analysis of credit products of the natural persons sector indicates the highest average risk level of consumer loans, with the car credit risk registering the fastest quarterly growth<sup>35</sup>.

# 1.3 Stress-test of the resilience of banking system to an increase of credit risk

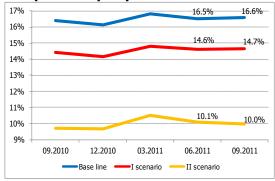
The stress-test of the resilience of the banking system to potential deterioration of the risk level of credit exposure to nonfinancial entities assumes migration of a specific percentage of exposure from each risk category to the next two riskier categories, distributed equally. The purpose of simulation is to determine the effect of credit portfolio quality deterioration on the capital adequacy and the exposure risk, for both total exposure and the exposure by sector and activity<sup>36</sup>.

The simulation of simultaneous redistribution of 10% (scenario I) and 30% (scenario II) of credit exposure to the sectors of enterprises and other clients and of natural persons, showed the fastest quality deterioration from categories with lower risk level to categories with higher risk level in the exposure:

- to real estate activities within the sector of enterprises and other clients, where the average risk level would have increased by 2.3 percentage points in case of scenario I and by 6.8 percentage points in case of scenario II and

- based on credit cards of natural persons where the average risk level would have increased by 2.2 percentage points in case of scenario I and by 6.5 percentage points in case of scenario II.

Figure 47 Pre- and post-simulation rate of capital adequacy



Source: NBRM, based on data submitted by banks.

**Table 4 Outcome of simulations** 

	Indicator	Enterprises, other clients and natural persons	Credit exposure of banking system	
ō	Capital adequacy ratio	16.	6%	
Base line	% of "C", "D" and "E" in total credit risk exposure	10.9%	8.0%	
	Average level of risk	8.9%	6.6%	
. <u></u>	Capital adequacy ratio	14.7%		
I scenario	% of "C", "D" and "E" in total credit risk exposure	15.7%	11.2%	
s	Average level of risk	10.9%	7.8%	
<u>.</u>	Capital adequacy ratio	10.0%		
II scenario	% of "C", "D" and "E" in total credit risk exposure	25.5%	18.3%	
8	Average level of risk	14.8%	10.8%	

Source: NBRM, based on data submitted by banks.

<sup>35</sup> Annex 14

<sup>36</sup> Annex 17

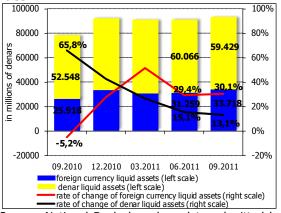


Note that in case of both scenarios, capital adequacy ratio of the banking system would not fall below the capital requirement of 8%. Analyzing by banks, in case of scenario I, the capital adequacy ratio of only one bank would fall below 8%, and in case of scenario II four banks would experience such fall.

### 2. Liquidity risk

In the third quarter of 2011, the liquidity of the banks in the Republic of Macedonia remained stable and relatively high. On a quarterly basis, the liquid assets registered an increase, which was based on the banks' larger preferences to invest in foreign currency liquid assets. The liquidity indicators at the level of the banking system remained stable, although high dispersion can be noticed if analyzed by bank. In the third quarter of 2011, the share of the financial institutions' deposits and borrowings in the structure of the sources of financing reduced, because of the repayment of the used sources of financing from the foreign parent entities. The stress-test analyses show satisfactory resilience of the banking system to liquidity shocks, but they also proved the sensitiveness of part of the bank because of the deposit base concentration. In October, new regulation pertaining to the liquidity risk was enforced, which is in function of more efficient liquidity management by the banks through maintenance of single liquidity ratio, with the liquidity being expected to remain on adequate level.

Figure 48 Liquid assets of banks – currency structure and annual growth rate



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

# 2.1. Liquid assets and liquidity indicators of the banking system

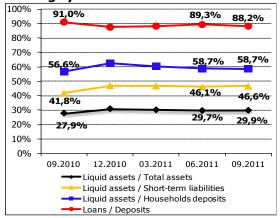
At the end of the third quarter of 2011, the liquid assets<sup>37</sup> at the level of the banking system equaled Denar 93,146 million, and registered annual increase of Denar 14,681 million, or 18.7%. The annual rise in the liquid assets is equally due to the increase in the short-term placements in foreign banks (of 38.8%), as well as to the assets growth placed in NBRM (of 8.1%). The quarterly increase in the liquid assets (of 2.0%) is entirely due to the increase in the foreign currency liquid assets, and especially to the short-term deposits placed in foreign banks. In the third quarter of the year, the Denar liquid assets<sup>38</sup> fell by 1.1%, as a result of the reduced Denar funds. Despite that, the

<sup>&</sup>lt;sup>37</sup> The liquid assets encompass the funds and balances with the NBRM, the NBRM bills, the correspondent accounts and the short-term placements with foreign banks and placements in Treausury bills.

<sup>&</sup>lt;sup>38</sup> For the needs of the banks liquidity analysis, the assets and liabilities in Denars with FX clause are included in the Denar assets and liabilities.



Figure 49 Liquidity indicators of the banking system



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

Table 5 Liquidity indicators of the banking system for Denar and foreign currency positions

Indicators		Denars		Foreign currency			
Illuicators	09.2010	06.2011	09.2011	09.2010	06.2011	09.2011	
Liquid assets / Total assets	26,3%	28,3%	28,3%	31,5%	32,7%	33,1%	
Liquid assets / Short-term liabilities	59,8%	65,3%	64,3%	25,9%	29,5%	31,4%	
Liquid assets / Households deposits	99,2%	95,9%	92,6%	30,3%	33,7%	35,6%	
Loans/Deposits	152,5%	140,7%	135,8%	39,7%	44,3%	46,0%	

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

Denar assets remain dominant in the currency structure of the banks' liquid assets (63.8%).

During the third quarter of 2011, the banks' liquidity indicators<sup>39</sup> preserved the stability and remained on a relatively high level. The liquid assets at the level of the banking system showed more dynamical increase, which enabled to enlarge both their share in the total assets and the coverage of the short-term liabilities, the household deposits and the total deposits with liquid assets (on annual and on quarterly basis).

From the currency structure viewpoint, in the third quarter of 2011 downward movement of the Denar liquidity indicators has been registered, as opposed to the increase in the indicators for the foreign currency liquidity. The reason for these divergent movements is the larger preference of the banks to place assets in foreign banks, amid decrease in the Denar liquid assets, with the intensified crediting in foreign currency in the third quarter, given simultaneous diminishing of the Denar credits and faster growth of the Denar deposits also having an influence.

# 2.2. Sources of financing of the banking system

2011 The third quarter of characterizes with decrease in the deposits of the financial institutions and the bank borrowings primarily as a result of the withdrawal of the financial assets by the foreign parent entities from the domestic banks, which was fully compensated with the increase in the deposits of the non**financial entities.** The maturity structure of the sources of funds is dominated by the short-term sources of funds, which decreased in the third quarter of 2011. The deposits of the non-financial entities remain to be the basic source of banks funding also in the following period.

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<sup>&</sup>lt;sup>39</sup> The calculation of the liquidity indicators at the level of the banking system does not take into consideration the resident interbank assets and liabilities.

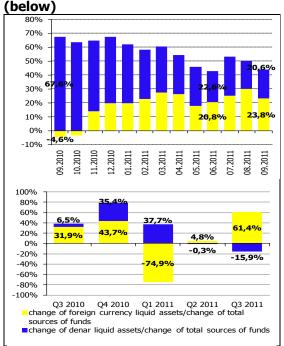


**Table 6 Sources of financing of the banks** 

	30.06	.2011	30.09	.2011	Quarterly change		
Types of sources of funds	Amount (in millions of denars)	Structure	Amount (in millions of denars)	Strucutre	Absolute	Relative	
Deposits of non-financial entities	184.304	67,2%	196.153	68,5%	11.849	6,4%	
-o.w. parent entities	99	0,0%	410	0,1%	312	316,0%	
Deposits of financial institutions	15.861	5,8%	14.640	5,1%	-1.221	-7,7%	
-o.w. parent entities	6.537	2,4%	4.803	1,7%	-1.734	-26,5%	
Borrowings, issued long-term securities, subordinated debt and hybrid capital instruments	38.222	13,9%	35.876	12,5%	-2.345	-6,1%	
-o.w. parent entities	11.438	4,2%	10.448	3,7%	-990	-8,7%	
Equity, reserves and other sources of funding	36.047	13,1%	39.519	13,8%	3.472	9,6%	
Total	274.434	100,0%	286.188	100,0%	11.754	4,3%	
Long-term	93.785	34,2%	92.940	32,5%	-845	-0,9%	
-o.w. parent entities	9.165	3,3%	8.657	3,0%	-508	-5,5%	
Short-term	144.602	52,7%	153.729	53,7%	9.127	6,3%	
-o.w. parent entities	8.908	3,2%	7.004	2,4%	-1.904	-21,4%	
Equity, reserves and other sources of funding	36.047	13,1%	39.519	13,8%	3.472	9,6%	
Total	274.434	100,0%	286.188	100,0%	11.755	4,3%	

Source: The data are submitted by the banks upon special National Bank request because of which there may be differences in the on-balance sheet data that the banks regularly submit pursuant to the Decision on submitting data on the balance and the turnover on the accounts of the banks' accounting plan and the financial statements ("Official Gazette of the Republic of Macedonia", no.126/2011).

Figure 50 Change in the liquid assets by currency / change in the total sources of funds, annually (above) and quarterly



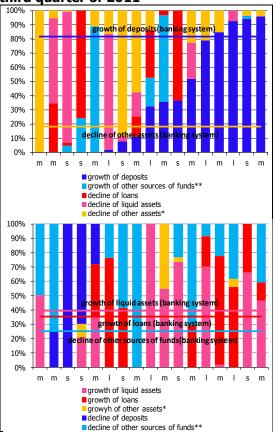
Source: National Bank, based on data submitted by banks.

The used sources of funding (except equity and reserves) from parent entities reduced quarterly by Denar 2,412 million, or 13.3%, thus lowering their share in the structure of the total sources of financing to 5.5%. The decrease in these sources is mainly due to the withdrawal of the short-term deposits and the repayment of the used short-term borrowings of the domestic banks to their foreign parent entities. Almost three quarters of the decrease in the sources of financing provided by the parent entities result from the decrease in the sources of financing of the parent entities situated in the Euro area, which can be a reflection of the problems in the fiscal and financial systems in the Euro area member states on the Macedonian banking system. The quarterly decline in the used sources of funding from the parent entities was most evident with the banks from the group of medium-size banks, of Denar 1,697 million, or 22.5%, and in smaller volume with the group of large banks<sup>40</sup>, where the quarterly decrease equaled 7.3%, i.e. Denar 764 million.

 $<sup>^{40}</sup>$  This decrease is due to one bank from the group of large banks, the parent entity of which in the third quarter of 2011 invested assets based on subordinated instrument of lower amount than the previously used short-tem borrowing by one domestic bank.



Figure 51 Cash inflows (above) and cash outflows (below) of the banks during the third quarter of 2011



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

\*Other assets category encompass the assets that are not credits of nonfinancial entities and that are not included in the liquid assets category (long-term placements in foreign and domestic banks, reserve requirement in foreign exchange, assumed assets for uncollected claims, fixed assets etc.).

\*\* Other sources of funds category encompass all sources of funds that are not deposits of nonfinancial entities (equity and reserves, deposits of the nonfinancial institutions, borrowings, subordinated instruments etc.).

Note: The horizontal axis of the figure presents the banks by the group they belong to: L – large bank, M – medium-size bank and S – small-size bank. The order of the banks on both axes is identical.

In 2011, the banks' preference to place new sources of funds in liquid diminish instruments continued to **gradually.** Namely, the ratio between the annual change of the liquid assets and the total sources of funds fell by 18.5 percentage points, and from the beginning of 2011, they reduced by 23.5 percentage points. On the other hand, the ratio between the quarterly changes of both the liquid assets and the sources of funds (45.7%) registered substantial increase compared to the first two quarters of 2011. In the third quarter of 2011, substantial change in the banks' currency preferences regarding the liquidity has been evidenced, reflected through the growth in the foreign currency liquid assets (61.6% of the new sources of financing were allocated in foreign currency liquid assets), which corresponds to the repayment of the used funds to the foreign parent entities.

The main source of cash inflows<sup>41</sup> for the banking system during the third quarter of 2011 was the deposits growth, and less, the decrease in the assets which are not included in the liquid assets and are not credits. On the other hand, during the third quarter, the cash outflows at the level of the banking system were equally divided between the placement in liquid assets and the credit growth, but with considerable contribution to the decrease in the non-deposit sources **of funds.** The decrease in the non-deposit sources of funds in the third quarter of 2011 covered about one fourth of the cash outflows at the level of the banking system, which mirrors the banks preference to payback part of the borrowings and the deposits to its parent entities.

By bank, the deposit growth has the largest participation in the structure of the cash flows with six banks, while with other two banks, the

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<sup>&</sup>lt;sup>41</sup> The cash inflows and outflows of banks in the third quarter of 2011 are obtained indirectly, i.e. through the quarterly change in the balances on individual accounts of the banks' balance sheet. The effect on the banks' cash flow, which is due to the expenditures and the income that are not cash outflow or inflow (for example: credits write-offs, revaluation of securities available for sale, or kept for trading, fixed assets depreciation, net exchange rate differentials) is an integral part of the change in the adequate on-balance sheet items the adequate income or expenditure refers to.



dominant part of the cash inflows originated from the increase in other non-deposit sources of funds. The cash inflows with the remaining nine banks were mostly provided through the bigger collection of credits or decrease in the other asset categories.

In the third quarter of 2011, most of the cash outflows of seven banks were concentrated in placement of liquid assets, while with four banks, in credit growth. The largest portion of the cash outflows with the other six banks results from the decrease in the liabilities, in two of which it originates from the deposits drop, and in the remaining four, it came from the reduction of the other non-deposit sources of funds.

#### Sources of financing of the banking system

As of September 30,2011, the liquid assets of seven banks (comprising 36.4% of the assets of the banking system) registered quarterly drop in the total amount of Denar 2,029 million. The decrease with the individual banks ranged within 1.1% - 25.0% interval. With the remaining 10 banks, the liquid assets registered quarterly increase in the total amount of Denar 4,533 million (the increase by individual banks ranged within 0.7% - 47.5%).

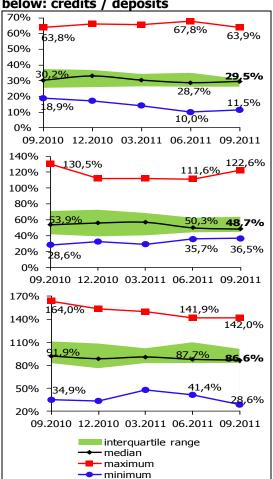
Observed on annual basis, increase in the liquid assets, within 1.7% - 78.2% interval was registered by eleven banks, comprising 85.9% of the total assets of the banking system, while six banks (14.1% of the total assets of the banking system) registered decrease in the liquid assets within 1.5% - 28.5% interval.

The liquid assets growth in the third quarter of 2011 contributed for improvement of the liquidity indicators with most banks. The share of the liquid assets in the total assets registers quarterly increase with eleven banks, while annually with eight banks. Compared to June 30, 2011, twelve banks register larger coverage of the short-term liabilities with liquid assets. The largest dispersion is evidenced with the credit/deposit indicator. The differences

Figure 52 Selected liquidity indicators for individual banks

above: liquid assets / total assets middle: liquid assets/short-term liabilities

below: credits / deposits



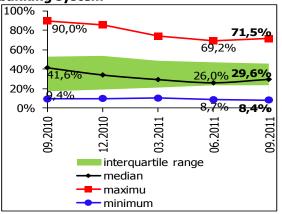
Source: National Bank, based on data submitted by banks.

Inter-quartile range is a measure of statistical dispersion composed of half of the sample with middle values. The data with the highest and the lowest values are excluded, thus eliminating the influence of the extreme values.



bank strategies for financing and acquiring sources of funds and the different degree of aggressiveness in ceasing certain part of the credit market.

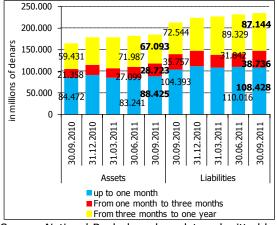
Figure 53 Deposits concentration in the banking system



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

Participation of the twenty largest depositors in the average deposit base for the last expired month is presented.

Figure 54 Structure of the banks' assets and liabilities according to the contractual residual maturity



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

The banking system of the Republic of Macedonia characterizes with relatively high deposits concentration<sup>42</sup>, which from its part, is also important source of liquidity risk for the banking system. As of September 30, 2010, the share of the deposits of the 20 largest depositors in the total deposits by bank ranges within 8.4% - 71.5% interval, with median of 29.6%. In comparison with the previous quarter, the median of this participation increased by 3.6 percentage points, but on annual basis, there is evident decrease not only in the median, but in the maximal concentration level, as well. The high deposits concentration with part of the banks shows their potential vulnerability from possible deposit outflow of the largest depositors.

between the individual banks regarding this indicator, is actually a reflection of the different

At the end of September 2011, all banks fulfilled the minimal level of liquidity ratios (in value of 1) to 30 days, as well as the prescribed dynamics for realization of the liquidity ratios to 180 days, in both **Denar and foreign exchange.** Also, this was the last date on which the regulation envisaging separate liquidity ratios for the Denar and foreign currency deposits was effective. Starting from January 1, 2011 the implementation of the new Decision on managing banks' liquidity risk ("Official Gazette of the Republic of Macedonia" no. 126/2011) was enforced, which envisages integrated monitoring of the liquidity ratios by currency, i.e. existence of single liquidity ratio instead of separate liquidity ratios for Denars and foreign exchange. Beside that, in the calculation of the new liquidity ratios, instead of in the entire amount, the term deposits are included as outflow in the amount of 80%. Also the dynamics for complying to the minimal level of the liquidity

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 $<sup>^{42}</sup>$  The deposits concentration is measured according to the share of the deposits of the 20 largest depositors in the total deposits.



ratios was revoked. In October 2011, all banks met the liquidity ratios also for 30 and 180 days.

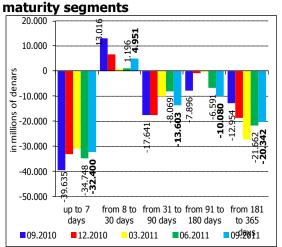
### 2.3. Maturity match of the assets and liabilities of the banks

At the end of the third quarter of 2011, largest movements in the maturity profile of the assets and liabilities of the banking system were registered. The banks' liabilities retained the longer contractual residual maturity in comparison with the assets<sup>43</sup>. The largest quarterly increase was registered by liabilities with residual contractual maturity from one to three months and the assets with residual maturity to one month, which can signalize intensification of the liquid position and liquidity risk reduction.

The movements of the assets and liabilities according to the residual contractual maturity caused certain movements in the maturity equilibrium between assets and liabilities of the banks. Thus in the third quarter of 2011 certain reduction of the assets and liabilities within the mismatch short-term maturity segments (to one month) was registered, while the mismatch within the maturity segment from one to three months deepened. Only within the residual maturity block from 8 to 30 days, positive gap between the contractual maturity of the assets and liabilities has been registered.

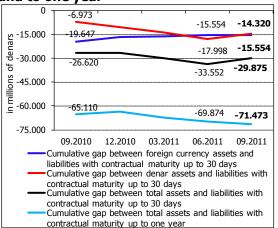
In the third quarter of 2011, deepening of the cumulative negative gap between assets and liabilities with residual contractual maturity to one year was registered, as well as shrinking of the cumulative difference between assets and liabilities to one month. This occurrence was caused by the quarterly rise in the liabilities with contractual maturity from one to three months, given simultaneous quarterly increase in the assets with contractual residual maturity to one month.

Figure 55 Contractual residual maturity match of the assets and liabilities by



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

Figure 56 Cumulative differences between assets and liabilities with contractual residual maturity to 30 days and to one year



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

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<sup>&</sup>lt;sup>43</sup> Annex19.

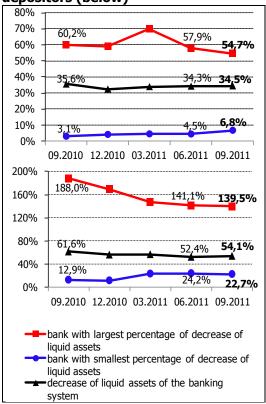


On the other hand, according to the banks expectations, the gap between the assets and liabilities in all maturity segments is positive primarily because of the banks expectations for relatively better steadiness of the deposits. Namely, the banks' expectations are that 90% of the sight deposits and 85% of the term deposits with residual contractual maturity to three months will show steadiness and stay in the banks also in the following there months<sup>44</sup>.

# 2.4. Stress test simulation for the resilience of the banking system to the liquidity shock

The simulations of the resilience of the liquidity banking system to shocks show satisfactory degree of resilience Macedonian banking system. Namely, banking system manages with enough liquid assets to deal with shocks related to the possible instability of the deposits as the most important source of financing. Having in mind the relatively high concentration of deposits with some banks, larger vulnerability in case of possible withdrawal of the deposits of the 20 largest depositors outside the banking system is registered, in comparison with the withdrawal of 20% of the household deposits. Thus in case of withdrawal of the depositors of the twenty largest depositors, the liquid assets at the level of the banking system would reduce by 54.1%, while 34.4% of the liquid assets would be sufficient to absorb the possible withdrawal of 20% of the household deposits. In comparison with the preceding quarter, lower end values from the simulations, i.e. of the possible reduction of the liquid assets in case of liquidity shocks for the bank with largest reduction percentage i.e. poorest result, was registered. However, the intensification of the debt crisis in the Euro area and the possible consequences on the banking systems of the Euro area member states poses potential new liquidity shock for the domestic banking system. The reason for this is that one part of the liquid assets of the banks is short-term placements in

Figure 57 Results of the simulation of withdrawing 20% of the household deposits (above) and deposits withdrawal of the twenty largest depositors (below)



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

<sup>44</sup> Annex 20.



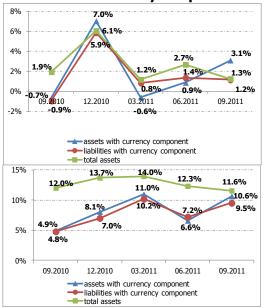
the Euro area banks (correspondent accounts and Hence, any materialization of the deposits). credits risk in the banking systems of the Euro area member states would cause, apart from the direct losses, i.e. impairment of those assets, also a decrease in the amount of the liquid assets for the domestic banks. The performed simulations show that if all parent entities withdraw their deposits (credits) from the banks (except the subordinated and hybrid capital instruments the payment of which should be in consent with the National Bank) the liquid asset by bank would reduce within 0.3% - 66.3% interval, or 9.9% at the level of the banking system. Its share in the total assets would be reduced by 2.3 percentage points.

#### 3. Currency risk

After the decrease in the two preceding months, at the end of the third quarter of 2011 the banks exposure to currency risk augmented. The gap between the assets and liabilities with currency component widened, as a result of the widening of assets and liabilities in Euro (as dominant foreign currency in the banks' balance sheet). With most of the banks, the ratio between the aggregate foreign currency position and own funds increased, as an indicator for prudent monitoring of the currency risk exposure. However, the exposure to the current risk is low.

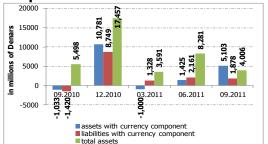


Figure 58 Quarterly (above) and annual (below) change in the assets and liabilities with currency component



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

Figure 59 Absolute quarterly change of the assets and liabilities with currency component and of the total assets



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

In the third quarter of 2011, the gap between the assets and liabilities with currency component incremented by 84.9% (Denar 3,225 million). Such a gap widening arises from the faster quarterly growth of the assets with currency component as opposed to the slower the liabilities with in currency component. The increase in the assets with currency component is due to the rise in the onemonth deposits in foreign banks (Denar 4,427 million, or 33.5%)<sup>45</sup>, as well as the increase in the foreign currency credits of 6.0% or Denar 3.115 million<sup>46</sup> (most of this growth is due to the corporate credits<sup>47</sup>). lona-term The arowth slowdown of the liabilities with currency component arises from the reduced bank liabilities based on foreign currency credits<sup>48</sup>. As a contrast, the deposits in foreign currency and the deposits in Denars with FX clause<sup>49</sup> augmented (by 3.6% or by Denar 4,360 million).

At the end of the third quarter of 2011, the share of the assets and liabilities with currency component in the total assets equaled 52.8% (increase of 0.9 percentage points compared to June 30,2011) and 50.6% (almost unchanged compared to June 30,2011), adequately.

<sup>&</sup>lt;sup>45</sup> This change is mostly due to the one bank from the group of large banks, which participates with 71.2% in the growth of the deposits in foreign currency abroad with one-month maturity.

Most of the foreign currency credits, i.e. 58.4% are intended for inland payment, while 41.6% is intended for payment abroad.

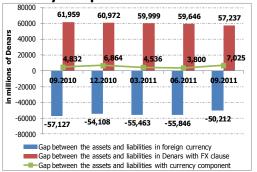
<sup>&</sup>lt;sup>47</sup> Three large banks and one medium-size bank increased the long-term credits in foreign currency of the non-financial institutions by Denar 2,011 million.

<sup>&</sup>lt;sup>48</sup> In the third quarter of 2011, the liabilities based on foreign currency credits fell by Denar 2,258 million, or 11.3%, while in the second quarter of 2011, they went up by 2,321 million, or 13.1%. Namely, in the second quarter of 2011, one bank from the group of large banks borrowed short-term credits from the parent entity, which it repaid in the following quarter, thus mostly contributing to the decrease in the liabilities in foreign currency at the level of the entire banking system (55.2%).

<sup>&</sup>lt;sup>49</sup> The increase in the Denar deposits with FX clause is mostly due to the increase in the term deposits (from three-months to one year) and sight deposits in Denars with FX clause (Denar 1,746 million). One bank from the group of large banks has the largest influence on this change (74.6%).

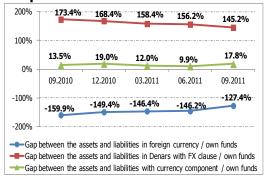


Figure 60 Structure of the gap between assets and liabilities with currency component



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

Figure 61 Share of the gap between assets and liabilities with currency component in own funds



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

Such movements resulted in widening of the gap between assets and liabilities with currency component by Denar 7,025 million, or by 84.9%. Also, after two consecutive quarters of increase, in the third quarter of 2011 the negative gap between the assets and liabilities in foreign currency and the positive gap between assets and liabilities in Denars with FX clause reduced.

The gap deepening between the assets and liabilities with currency component, followed by smaller increase in the banks' own funds, caused their ratio to enlarge by 7.9 percentage points compared to June 2011, i.e. 4.3 percentage points compared to September 2010.

The Euro is the most dominant currency in the structure of the assets and liabilities with currency component, as well as in the structure of their gap.

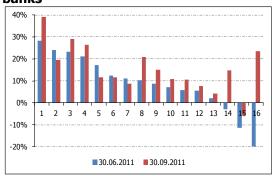
Table 7 Structure of the assets and liabilities with currency component and their gap, by currency

		30.06.2011			30.09.2011		
Currency	of the assets with of the liabilities with		Currency structure of the gap between assets and liabilities with currency component	•	Currency structure of the liabilities with currency component	Currency structure of the gap between assets and liabilities with currency component	
Euro	89.6%	89.4%	95.8%	89.8%	89.3%	101.5%	
US dollar	7.1%	7.4%	-5.5%	6.8%	7.3%	-5.7%	
Swiss franc	1.6%	1.6%	3.0%	1.6%	1.6%	1.1%	
Australian dollar	0.4%	0.3%	1.5%	0.4%	0.3%	0.6%	
Other	1.4%	1.3%	5.3%	1.4%	1.4%	2.5%	
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

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



Figure 62 Ratio of aggregate foreign currency position and own funds, by banks



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

Note: sixteen out of total seventeen banks are required to report on the open currency position.

The widening of the gap between assets and liabilities in Euros has the largest impact on the widening of the total gap between the assets and liabilities with currency component. The Euro gap substantially enlarges, on both, quarterly (by 95.9%), and annual (81.3%) basis. On the other hand, the matching between the claims and liabilities in Swiss Franks increases.

Table 8 O	pen	currenc	y posit	ion by	currency	relativ	e to t	he ow	n funds
					Number o	f banks			
Open currency position by currency / own funds	Eu	Euro US Dollar		Swiss franc		Other			
	Long	Short	Long	Short	Long	Short	Long	Short	
under 5%		2		8	8	10	6	13	1
from 5% to 10%	<b>%</b>	3	1					1	
from 10% to 20	)%	5							1
from 20% to 30	)%	4							
over 30%		1							

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

The ratio between the open currency position by individual currency<sup>50</sup> and the own funds does not exceed 5% with most of the banks, except with the open currency position in Euros, which reaches to 50.2% with one medium-size bank.

In the third quarter of 2011, eleven out of sixteen banks reporting on the aggregate foreign currency position registered increased ratio between aggregate foreign currency position and the banks' own funds. As of September 30,2011, one medium-size bank exceeded the prescribed limit for the aggregate foreign currency position<sup>51</sup> (30% of the own funds).

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<sup>&</sup>lt;sup>50</sup> The open currency position by currency, besides the gap between the on-balance sheet claims and liabilities, encompass also the gap between the off-balance sheet positions.

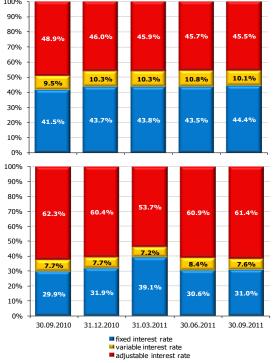
<sup>&</sup>lt;sup>51</sup> The exceeding of the prescribed limit of 30% with this bank is result of the decrease in its own funds in the third quarter of 2011. After the capitalization of this bank, in November 2011, the aggregate foreign currency position is within the prescribed limit.



#### 4. Interest rate risk in the banking book

The bank exposure to interest rate risk in the banking book remains to be marginal compared to the other risks. The large share of the adjustable interest rates<sup>52</sup> in most of the key products - credits and deposits, enables the banks to avoid the interest rate risk in the banking book. With the current practice of "absolution" of this risk, the banks transfer it on the bank products users, transforming it into indirect credit risk. Hence, the change in the interest rates is nontransparent, bringing the credit users and deponents in unequal position in the relations with the banks. In case of possible changes in the regulations (for example, in the domain of obligatory relations<sup>53</sup>, the consumer protection<sup>54</sup> etc.), with which a framework for the use of clauses for unilateral adjustment of the level of the interest rates will be established, the scope, size and the structure of the interest rate risk in the banking book would change.

Figure 63 Structure of the interest sensitive assets (above) and interest sensitive liabilities (below) by the interest rate type



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

### 4.1. Structure of the interest sensitive assets and liabilities

As of September 30, 2011, the positions with adjustable interest rates retained the dominance in the structure of the interest sensitive assets with 45.5%, and interest sensitive liabilities with 61.4%. The reason for the bigger application of the adjustable interest rates can primarily be found in the possibility for easy realization of the banks set objectives regarding the amount of the gain, which is due to the possibility for unilateral change in the level of the interest rates. The use of the adjustable interest rates enables easier liquidity management and dealing with competitiveness pressure. positions with fixed interest rates show tendency of equalization with the positions with adjustable interest rates, primarily with the interest sensitive assets.

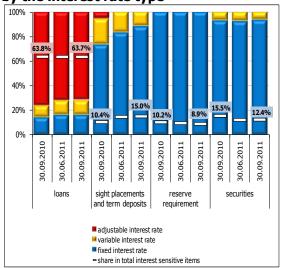
<sup>&</sup>lt;sup>52</sup> The adjustment of the amount of the interest rates is usually performed unilaterally by referring to the changes in the banks' interest rate policy.

<sup>&</sup>lt;sup>53</sup> In the Law on Obligations ("Official Gazette of RM" no. 18/2001, 78/2001, 04/2002, 59/2002, 05/2003, 84/2008, 81/2009 and 161/2009) there are no provisions for the manner of possible change in the interest rates in already concluded credit and deposit agreements, but it allows change in the level of the interest rate to the maximum allowed in instances when the debtor fails to settle the due liabilities on time (Article 389).

<sup>&</sup>lt;sup>54</sup> The Law on Consumer Protection in Case of Consumer Loans Agreements ("Official Gazette of RM" no. 51/2011) defines the terms "interest rate" and "fixed interest rate", but not the terms "variable and adjustable interest rate". Additionally, this Law has limited scope and does not refer to the deposits and mortgage loans.

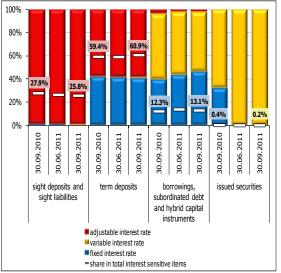


Figure 64 Structure of the interest sensitive assets by individual categories by the interest rate type



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

Figure 65 Structure of the interest sensitive liabilities by categories, by the interest rate type



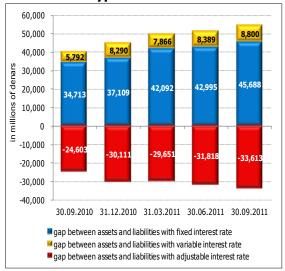
Source: National Bank, based on data submitted by banks.

In the structure of the interest sensitive assets, the adjustable interest rates are present only with the credits, as dominant type of interest rate (71.5% of the total credits are with adjustable interest rate). Regarding the other financial instruments (sight deposits, term deposits, reserve requirement, Treasury bills, CB bills), which create 36.3% of the interest sensitive assets, the fixed interest rate, prevail.

Regarding the interest sensitive liabilities, larger variability in individual interest rate types can be evidenced. Almost all of the sight deposits and liabilities are with adjustable interest rates (98.8%), with these interest rates having the largest share also in the term deposits (58.5%), which are also the most common financial instrument in the interest sensitive liabilities. These two categories of financial instruments almost fully create the liabilities with adjustable interest rates (99.6%). The borrowings and subordinated debt mainly have variable interest rates (51.7%), followed by the positions with fixed interest rate with a share of 46.2%. All issued securities have variable interest rate, but the presence of these positions in the interest sensitive liabilities is minor.

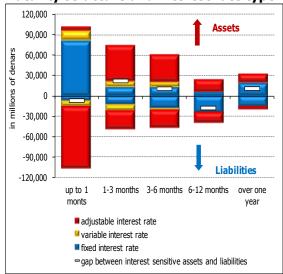


Figure 66 Gap between the interest sensitive assets and liabilities, by the interest rate type



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

Figure 67 Absolute amount of interest sensitive assets and liabilities by the maturity structure and interest rate type



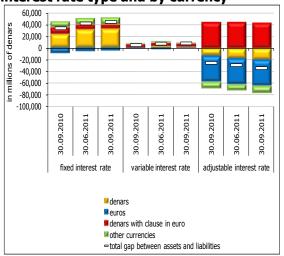
Source: National Bank, based on data submitted by banks.

The gap between the interest sensitive assets and liabilities by the interest rate type is positive with the positions with fixed and variable interest rates, but negative with the positions with adjustable **interest rates.** The positive gap with the positions with fixed interest rates is due to the fact that the Treasury bills and the CB bills are almost fully with fixed interest rate, while the positive gap with the positions with adjustable interest rates is a result of the sight deposits which are dominantly with variable interest rates. The negative gap with the positions with adjustable interest rates arises from the fact that substantial part of the term deposits and sight liabilities are with adjustable interest rates.

The bank exposure to interest rate risk is the largest in the one-to-three-months **maturity segment.** Such a situation is indicator for abandoning the common practice when there was bigger imbalance between the positions with longer maturity. Exception regarding the main role of the adjustable interest rates is the maturity segment to one month with the interest sensitive assets, where the positions with fixed interest rates dominate. This is due to the maturity characteristics of the main instruments of the monetary policy (the reserve requirement and CB bills have contractual maturity to one month) and the instruments on the domestic money market, along with the clear bank preferences to place their foreign currency assets on a short run in foreign banks. On the side of the interest sensitive liabilities, the positions with fixed interest rates dominate the segments with longer maturities, mainly because of the presence of the term deposits with residual maturity over six months. The analysis of the maturity structure of the positions with adjustable interest rates indirectly mirrors the banks' expectations for the period to the next "adjustment" of the interest rates level (from 1 to 3 months for the assets with adjustable interest rates and to 1 month for the liabilities with adjustable interest rates).

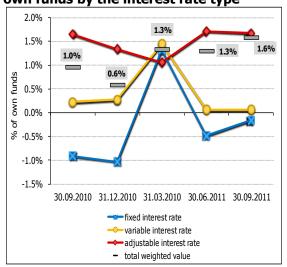


Figure 68 Gap between the interest sensitive assets and liabilities by the interest rate type and by currency



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

Figure 69 Ratio between the total weighted value of the banking book and own funds by the interest rate type



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

The gap between the sensitive assets and liabilities is positive with the positions in Denars and in Denars with FX clause, while negative with the interest sensitive assets and liabilities in **Euros.** In the positive gap between the fixed interest rate the Denar position prevails, as a result of the dominant role of the Treasury bills and CB bills in Denars with fixed interest rate, the share of which in the gap creation registers upward movements in comparison September 30, 2010. On the other hand, the negative gap with the adjustable interest rates arises from the positions in Euro and it is a result of the fact that larger portion of the term deposits in Euros are with adjustable interest rates.

## 4.2. Exposure to interest rate risk (weighted value) of the banking book

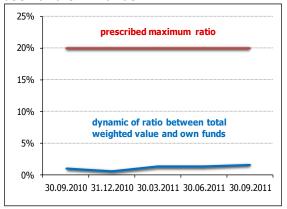
The use of the adjustable interest rates in the credit and deposit banking products is the key reason for the low bank exposure to the interest rate risk in the banking book. As of September 30, 2011 the total weighted value of the banking book at the level of the banking system<sup>55</sup> equals Denar 653 million and it registers an increase of Denar 294 million, compared to the end of the third quarter of 2010. Analyzed by bank, the ratio between the total weighted value of the banking book and own funds<sup>56</sup> is low and it ranges within 0.08% -8.5% interval, with median of 1.1%. This ratio is the highest with two banks from the group of medium-size banks where the differences among individual banks are also the largest, while the

<sup>&</sup>lt;sup>55</sup> The total weighted value of the banking book activities at the level of the banking system, which is obtained by aggregating the weighted values of the banking book activities of individual banks, is presented in the absolute amount and shows the change of the economic value of this portfolio as a result of the assessment of the change in the interest rates by using the standard interest rate shock (parallel positive or negative change of the interest rates by 200 basic points). The weighted value of the banking book of individual bank is a sum of the weighted net long or short positions by individual significant currencies (each currency with a share in the total on-balance sheet and off-balance sheet assets, i.e. liabilities equaling at least 5%), or cumulatively for all other currencies.

<sup>&</sup>lt;sup>56</sup> Pursuant to the Decision on managing interest rate risk in the banking book ("Official Gazette of the Republic of Macedonia" no. 163/2008 and 144/2009), the ratio of the total weighted value of the banking book to the banks' own funds can equal maximum 20%.



Figure 70 Movement of the ratio between the total weighted value of the banking book and own funds



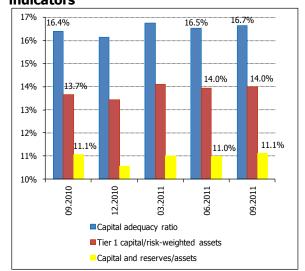
Source: National Bank, based on data submitted by banks.

smallest ratio is registered with one bank from the group of small banks. However, the fact that these ratios are obtained by using the method the banks have chosen for determining the probability and frequency of the interest rate changes with the positions with adjustable interest rates, which is based on unilateral adjustment of the level of the interest rates by the banks, should be taken into consideration.

#### 5. Insolvency risk

The indicators for the solvency and capitalization of the banking system register improvement, which results from the higher growth rates of the indicator components which pertain to the capital positions of banks, compared to the growth rates of the components related with the banking system activities. In the third quarter of 2011 the intensification in the annual growth rates of banking system capital positions results from the capitalization of one bank and issuing of subordinated instruments by other two banks. Simultaneously, the credit risk realization with individual banks resulted in higher current loss and unrecognized impairment, as deductible items of the capital positions and assets of banks.

Figure 71 Solvency and capitalization indicators



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

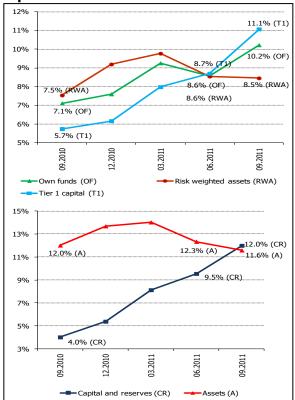
## 5.1. Indicators for the solvency and capitalization of the banking system

The indicators for the solvency and capitalization of the banking system maintained the high level and they register certain improvement. On annual basis (30.09.2010-30.09.2011), the capital adequacy ratio and the core capital<sup>57</sup> to risk weighted asset ratio rose by 0.3 percentage points. Simultaneously, the participation of the capital and reserves in the total assets remained at the same level.

<sup>&</sup>lt;sup>57</sup> It pertains to the core capital after deductible items of the sum of the core and supplementary capital.



Figure 72 Annual change rates of the components of the solvency and capitalization indicators



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

In the third quarter of 2011, the annual growth rates of the own funds, the core capital and the capital and reserves register intensification, whereas the annual increase in the total assets and the risk weighted assets registered slowing down. The largest growth intensification is registered with the capital and reserves of the banking system, the annual growth rate of which is higher by 2.5 percentage points compared to the growth period rate realized in the 30.06.2010-30.06.2011. Otherwise, the total assets of banks registered the largest slowing down in the annual growth rate (compared to the other components of the indicators for solvency and capitalization of the banking system), which is lower by 0.7 percents compared to the realized growth in the period 30.06.2010-30.06.2011.

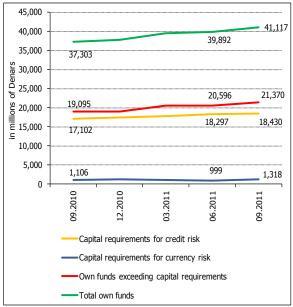
In the third quarter of 2011, in the structure of the own funds of the banking system several significant changes occurred<sup>58</sup>: capitalization was performed with one mediumsize bank (by its parent entity), in total amount of Denar 1,465 million; (2) the current loss, as deductible item of the core capital of the banking system rose by Denar 476.5 million, or by 58.5% (approximately 70% of the increase in the current loss was concentrated with two mediumsize banks); (3) the unrecognized impairment, as deductible item of the core capital of the banking system increased by Denar 130 million (which was concentrated almost solely with one medium-size bank); (4) two banks (one large and one small-size bank) issued new subordinated instruments, the total nominal amount of which is Euro 8.5 million (the parent entity is the investor with the two banks). Simultaneously, more considerable fall in the amount of subordinated instruments is registered with one medium-size bank (by Denar 119.6 million) and it is not recognized as Supplementary capital 1, which results directly from the fall in the core capital with this bank<sup>59</sup>.

<sup>&</sup>lt;sup>58</sup> More details on the developments in the own funds of the banking system and individual groups of banks are given in Annex 24.

<sup>&</sup>lt;sup>59</sup> Pursuant to item 9 indent 3 of the Decision on the methodology for determining the capital adequacy ("Official Gazette of the Republic of Macedonia" No. 159/2007, 32/2008, 31/2009, 96/2009, 157/2009 и 91/2011): the amount

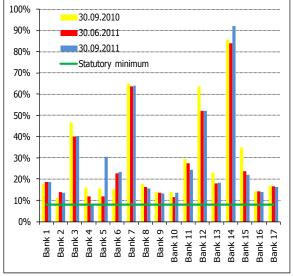


Figure 73 Use of own funds for covering individual risks



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

Figure 74 Capital adequacy ratio by individual bank



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

With respect to the use of the own funds of the banking system for covering individual risks<sup>60</sup>, in the third quarter of 2011 the following more considerable changes were registered: (1) the capital requirement for covering the credit risk increased by Denar 133 million, which was almost solely concentrated with two banks (one large and one medium-size bank), which intensified the crediting to enterprises in the third quarter of 2011; (2) the capital requirement for covering the currency risk registered increase of Denar 319 million (75% of this increment is concentrated with three banks - two large and one medium-size bank), which resulted from the increase in the net foreign currency position in Euros; (3) the free capital above the minimal requirement for covering the risks increased by Denar 774 million, which was almost solely concentrated with two banks (the previously mentioned medium-size bank which performed capitalization in the third quarter of 2011 and the large bank which issued subordinated instrument).

The analysis by individual indicated slightly larger fall in the adequacy ratio with one medium-size bank and simultaneous drastic increase (by almost three times) in the capital adequacy with other medium-size bank (which was capitalized in the third quarter of 2011). The larger credit risk materialization with one medium-size bank caused increment in the current loss and the unrecognized impairment, which as deductible items of the core capital resulted in fall in the own funds and subsequent fall in the capital adequacy ratio (as of October 30, 2011, the capital adequacy ratio with this bank reduced the level of 8.1%). Also, due to the relatively small volume of the core capital with this bank, compared to amount of the subordinated instruments, any decline in the core capital practically represents fall in the amount of the subordinated instruments which can be part

of the subordinated instruments which are part of the Supplementary capital 1 shall not exceed 50% of the amount of the core capital.

<sup>&</sup>lt;sup>60</sup> More details on the development of the capital requirement for covering the risks and capital adequacy rate, by individual groups of banks are given in Annex 25.



of Supplementary capital 1, which actually contributed to even larger fall in the own funds (namely, each exhaustion unit of core capital with this bank resulted in fall in the own funds by 1.5 units). In November 2011 the bank was capitalized by its parent entity, thus the own funds increased by approximately 150% (subsequently, the capital adequacy ratio increased as well).

## 5.2. Stress test simulations of the resilience of the banking system to hypothetical shocks

Table 9 Results from the stress test simulations for the resilience of the banking system and individual banks to hypothetical shocks as of September 30, 2011

No. of simulation	CAR at the level of banking system, before simulation	Number of banks with CAR before simulation below the CAR of the overall banking system before simulation	CAR at the level of banking system, after simulation	Bank with lowest CAR, after simulation	Number of banks with CAR after simulation below the CAR of the overall banking system after simulation (number of banks with CAR after simulation below 8%)		
1	16.7%	7	15.9%	7.1%	7 (1)		
2	16.7%	7	14.4%	5.1%	7 (1)		
3	16.7%	7	12.8%	3.0%	8 (1)		
4	16.7%	7	14.5%	5.7%	6(1)		
5	16.7%	7	12.7%	4.2%	8 (1)		
6	16.7%	7	12.8%	4.9%	8 (1)		
7	16.7%	7	16.6%	6.9%	7 (1)		
8	16.7%	7	14.1%	5.5%	6(1)		

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

This stress test analysis is based on the implementation of eight hypothetical simulations, of which:

- three simulations for isolated credit shock (increase in the credit risk exposure classified in the risk categories C, D and E of 10%, 30% and 50%),
- fourth simulation as a combination of the credit and interest rate shock (increase in the credit exposure in the risk categories C, D and E of 30% and increase in the interest rates of individual active and passive, on-balance and off-balance sheet positions, by 1 to 5 percentage points),
- fifth simulation as a combination of credit and foreign exchange shock (increase in the credit exposure in the risk categories C, D and E of 50% and depreciation in the Denar exchange rate compared to the Euro and the US Dollar of 20%),
- sixth simulation as a combination of shocks on the side of the credit risk, the foreign exchange risk and the interest rate risk (increase in the credit exposure in the risk categories C, D and E of 50%, depreciation of the Denar exchange rate against the Euro and the US Dollar of 20% and increase in the interest rates of individual active and passive, on-balance and off-balance sheet positions, by 1 to 5 percentage points),
- seventh simulation, appreciation of the Denar exchange rate relative to the Euro and the US Dollar in the amount of 20%,
- eighth simulation, simultaneous reclassification in the risk category C of the five largest credit exposures to non-financial entities (including also the connected entities).

As of September 30, 2011, the conducted stress test simulations for the resilience of the banking system and certain banks in the Republic of Macedonia to possible shocks, showed that the banking system and certain banks are relatively resistant to the influence of these



**shocks**<sup>61</sup>. When performing the simulations, one bank registered a decrease in the capital adequacy below 8%, which resulted from the relatively low (initial) capital adequacy with this bank (which was compensated by the realized capitalization, in November 2011).

Besides the regular stress test simulations, as of September 30, 2011 additional simulations were conducted to bank credit risk materialization, in order to test some of the possible transmission channels of the negative effects from the Greek crisis, and generally the Euro area, on the domestic banking system. The results from these simulations are given below:

Table 10 Results from the stress test simulations for the resilience of the banking system and individual banks to hypothetical shocks as of September 30, 2011

No. of simulation	CAR at the level of banking system, before simulation	Number of banks with CAR before simulation below the CAR of the overall banking system before simulation	CAR at the level of banking system, after simulation	Bank with lowest CAR, after simulation	Number of banks with CAR after simulation below the CAR of the overall banking system after simulation (number of banks with CAR after simulation below 8%)
1	16.7%	7	15.7%	7.6%	6 (1)
2	16.7%	7	15.1%	7.3%	5 (1)
3	16.7%	7	13.6%	6.4%	6 (1)
4	16.7%	7	11.3%	4.3%	5 (3)
5	16.7%	7	7.8%	-1.8%	5 (5)

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

This stress test analysis is based on the implementation of five hypothetical simulations, out of which:

- two simulations for envisaged non-collectability (of 30% and 50%) of the credit exposure of the domestic banks to: 1) Euro area non-residents; 2) 150 largest net exporters to Euro area (determination of the 150 largest net exporters is made on the basis of the realized net exports in the period from September 30, 2010 to September 30, 2011), and these 150 net exporters create above 80% of the total exports to the Euro area; 3) domestic persons with liabilities based on credit operations to the Euro area in the period September 30, 2011 to September 30, 2012 and 4) domestic persons with claims based on credit operations to the Euro are for the period September 30, 2011 to September 30, 2012.

<sup>-</sup> three simulations for envisaged non-collectability (of 30%, 50% and 100%) of the credit exposure of the domestic banks to: 1) Greek non-residents; 2) 100 largest net exporters to Greece (determination of the largest net exporters is made on the basis of the realized net exports in the period from September 30, 2010 to September 30, 2011). These 100 net exporters create above 80% of the total exports to Greece; 3) domestic persons with liabilities based on credit operations to Greece, in the period from September 30, 2011 to September 30, 2012; and 4) domestic persons with claims based on credit operations to Greece for the period from September 30, 2011 to September 30, 2012; and 4) domestic persons with claims based on credit operations to Greece for the period from September 30, 2011 to September 30, 2012;

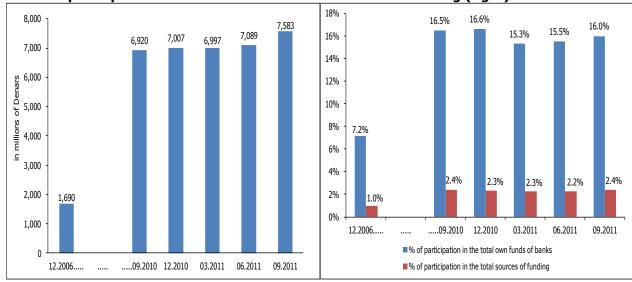
<sup>&</sup>lt;sup>61</sup> When conducting the stress test simulations on September 30, 2011 change was made in the performing of the hypothetical shocks in the interest rates. The changes are in direction of broadening of the scope of interest rates to which the hypothetical shocks can be performed, improved connecting of the influence from the changes in the amount of the interest rates with the financial result of banks and the subsequent improvement of the preciseness of the stress test simulations.



### Subordinated instruments and hybrid capital instruments in the banking system of the Republic of Macedonia

In the previous five-year period, the amount of the subordinated instruments registers constant growth (since the third quarter of 2008 for the first time a bank becomes an issuer of hybrid capital instrument, whereas the subordinated instruments were used for the first time as sources of funding at the end of 2002 also by a bank). Despite the relatively high growth of the subordinated instruments, their participation in the total sources of funding of the banking system is at relatively low level. The participation of the subordinated instruments and the hybrid capital instruments in the total own funds of the banking system, is slightly higher.

Figure 75 Development of the amount of subordinated and hybrid capital instruments (left) and their participation in the total own funds and sources of funding (right)



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

Note: When calculating "% of participation in the total own funds of banks" the amount of the subordinated instruments and hybrid capital instruments which meet the terms and conditions for inclusion in the calculation of the own funds are used.

As of September 30, 2011, nine banks have liabilities based on twenty one subordinated instrument and one hybrid capital instrument, the amounts of which are ranging between Denar 24 million and Denar 1,538 million.



Table 11 Features of individual subordinated and hybrid capital instruments									
Number of banks- issuers	Number of instruments (of which, the investor is parent entity)	Maturity (in years)	Residual maturity (in years)	Nominal amount	Amount as of 30.09.2011 (in millions of Denars)	Annual interest rate	Annual interest rate as of 30.09.2011		
9 banks	22 (20)	9.79	6.87	105.5 millions of Euros, 21.2 millions of Swiss Francs and 24 millions of Denars	7,583	15 instruments, out of 22, have fixed interest rate (at 6 banks, out of 9)	5.79%		

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

Note: The total maturity and the total residual maturity are determined as average weighted maturity, thus using the participation of the amount of each individual instrument in the total amount of all instruments for the nine banks as a weight. The total annual interest rate as of September 30, 2011 is determined as a sum of the product of the annual interest rate and the amount of each instrument, separately. For the instruments with variable interest rate, the annual interest rate is calculated as of September 30, 2011.

Considering the general regulatory requirements regarding the features<sup>62</sup> that shall characterize the subordinated instruments and hybrid capital instruments issued by the banks in order to be included in the calculation of the own funds, investing in them represents higher risk for the investors. Therefore, the required yield rate (i.e., the expenditure rate which shall be paid by the banks as instrument issuers) is usually higher compared to the other sources of funding of banks.

Table 12 Annualized rate of the interest expenditures which result from certain types of banks' liabilities and structure of the interest expenditures as of September 30, 2011

Type of liabilities	Annualized ı	rate of intere	Structure of interest expenses, as of	
	30.09.2009	30.09.2010	30.09.2011	30.09.2011
Subordinated instruments and hybrid capital instruments	5.4%	4.5%	5.2%	6.1%
Time deposits			5.1%	84.8%
Borrowings			3.0%	5.3%
Sight deposits and transaction accounts			0.5%	3.4%
Other interest rate sensitive liabilities			3.4%	0.4%

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

Note: 1) The analysis includes only the banks which are issuers of subordinated and hybrid instruments. As of September 30, 2011 one bank the single subordinated instrument of which was issued at the end of September 2011 is not included.

2) The interest expenditure rate is calculated as a ratio between the interest expenditures from individual types of liabilities (for the first nine months) and the average amount of the respective liabilities. This ratio is multiplied by 4/3 in order to annualize the rate.

The analysis of the amount of the annual interest rate of certain instruments indicates lower annual interest rate for the instruments issued in the pre-crises period, compared to the instruments issued after August 31, 2008. On the other side, the instruments with fixed interest rate are more expensive at the moment compared to the instruments with variable interest rate.

<sup>&</sup>lt;sup>62</sup> More details on the regulatory requirements for the features of the subordinated and hybrid capital instruments can be found in a textual framework with the same heading (as the upper stated) in the Report on banking system and banking supervision of the Republic of Macedonia for 2010 or in the Decision on the methodology for determining the capital adequacy ("Official Gazette of RM" 159/2007, 32/2008, 31/2009, 96/2009, 157/2009 and 91/2011).



Table 13 Annual interest rate of individual subordinated instruments and hybrid capital instruments, grouped by the time of issuing and by interest rate

Instrument issued until 31.08.2008	Instruments issed after 31.08.2008	Instruments with fixed interest rate	Instruments with variable interest rate	
4.16%	6.32%	7.61%	4.78%	5.79%

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

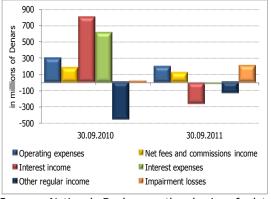
Note: 1) The annual interest rate of individual groups is determined as a sum of the product between the annual interest rate and the amount of each instrument individually for the respective groups of instruments.

2) The annual interest rate for the instruments with variable interest rate is calculated as of September 30, 2011.

#### 6. Profitability

At the end of September 2011, the profitability of the banking system is lower relative to the same period of the previous year. The profit in amount of Denar 257 million is lower by Denar 691 million, or by 72.9% of the profit realized in the same period of the last year. The total number of banks that operate with loss remained unchanged<sup>63</sup>. However, due to the change in the structure of banks that showed loss, the participation of the assets of these banks in the total assets of the banking system increased by 5.4 percentage points, and at the end of September 2011 it amounts to 15.5%. Such developments resulted in further fall in the key profitability indicators, the return on assets and equity. The capability of banks for creating income for covering the operating expenses decreased considerably (the amount of the profit before impairment reduced again).

Figure 76 Growth/fall in the key income and expenditures, relative to the same period of the previous year



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

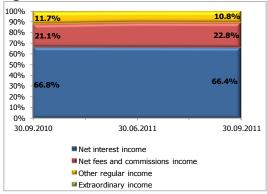
The key generators of the lower profitability of the banking system in the first nine months of 2011 are as follows: (1) the higher impairment (mainly with two banks of the group of medium-size banks) which uses more than 1/3 of the net interest income; (2) the further increase in the operating expenses<sup>64</sup> evident in the last few years; and (3) the further fall in the income from operating (mainly the net interest income and other regular income).

<sup>&</sup>lt;sup>63</sup> In the third quarter of 2010 and 2011 eight banks showed loss.

<sup>&</sup>lt;sup>64</sup> Operating expenses encompass: costs for employees, depreciation, general and administrative costs, deposits insurance premiums and other expenditures of the activity, except extraordinary expenditure.

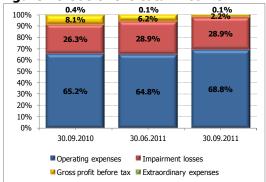


Figure 77 Structure of total income



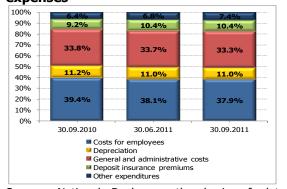
Source: National Bank, on the basis of data submitted by banks.

Figure 78 Use of the total income



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

Figure 79 Structure of operating expenses



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

## 6.1 Income and expenditure structure of the banking system

Compared to third quarter of 2010, **the total income** (total regular income<sup>65</sup> and extraordinary income) of the banking system reduced by Denar 309 million, or by 2.6%. The reduction was due to the decrease in all their components<sup>66</sup>, excluding the net fees and commissions income (which register increment by Denar 125 million, or by 5.0%).

The net interest income dominates in the structure of the total income of banks. It is still the main component in the forming of the total income of banks despite the fall of 3.2% relative to the same period of 2010.

Most of the total income of banks is used for covering the **operating expenses**, which showed upward movements. One bank of the group of large banks and two banks of the group of medium-size banks are the generators of growth in the operating expenses (which amounts to Denar 206 million or 2.7% relative to the same period of the previous year).

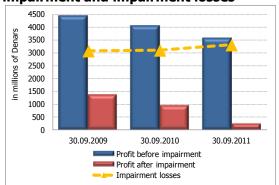
The costs for employees and general and administrative costs are still dominant in the structure of the operating expenses. However, the deposit insurance premiums and the special reserve for the off-balance sheet exposure participate mostly in the increase in the total operating expenses. The increase in the deposit insurance premiums (by Denar 110 million, or by 15.4%) was fully determined by three banks of the group of large banks. This occurs in conditions of household deposit growth by Denar 20.254 million, or by 14.6%, relative to September 2010, out of which the largest part

<sup>&</sup>lt;sup>65</sup> The total regular income includes: net interest income, net income from commissions and other regular income (net income from trading, net income from financial instruments recorded at fair value, net income from exchange rate differentials, income based on dividends and capital investments, gain from sale of financial instruments available for sale, capital gain realized from sale of assets, release of provisioning for off-balance sheet items, release of other provisioning, income on other basis, income on the basis of collected previously written-off claims and the losses from sale of financial assets available for sale).

<sup>&</sup>lt;sup>66</sup> In the third quarter of 2011, the net interest income reduced by Denar 250 million, or by 3.2%, the other regular income by Denar 140 million, or by 10.2%, and the extraordinary income by Denar 44 million.

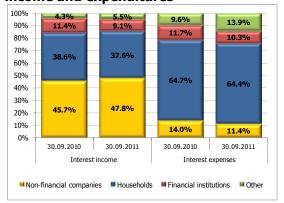


Figure 80 Profit before and after impairment and impairment losses



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

Figure 81 Sector structure of interest income and expenditures



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

(71.6%) is concentrated with the three banks of the group of large banks. The increase in the special reserve for the off-balance sheet exposure (by Denar 108 million, or by 36.2%) is concentrated with two banks of the group of large banks and one bank of the group of medium-size banks.

The impairment of claims, as one of the more significant components which influenced on the profitability, relative to the last year in September increased by Denar 207 million, or by 6.7%. The increment in the impairment is concentrated with two banks of the group of medium-size banks<sup>67</sup>. But, the larger impairment is not the only factor for the lower profitability of banks in the first nine months of 2011. This is confirmed by the decrease in the profit before impairment (by Denar 484 million or by 12.0%).

In the first nine months of 2011, the interest income from households and financial companies reduced. The reduction of the interest income of the households (by Denar 197 million, or by 3.6%) results from the more intensive downward trend in the lending Denar interest rates of this sector, whereas the fall in the interest income from financial companies (by Denar 338 million, or by 20.9%) was solely due to the lower interest income from the central bank.

Adequately to the domination of the household deposits, the interest expenditures for the household sector dominate in the structure of interest expenditures despite the moderate fall in the interest expenditures for this sector. The interest expenditures for the non-financial and financial companies reduced, which resulted in their smaller participation in the structure of the total interest expenditures.

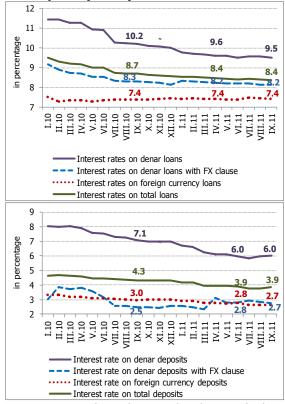
 $<sup>^{67}</sup>$  The increase in the impairment with these two banks amounted to Denar 998 million. As opposed to this, the impairment with one bank of the group of large banks and one bank of the group of medium-size banks reduced by total of Denar 808 million.



# 6.2 Movement of the interest rates and the interest rate spread of the banking system

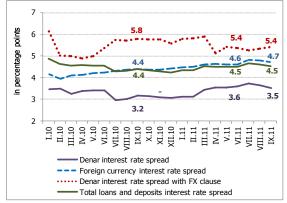
The fall in the interest rates of banks continued in 2011 as well. Relative to last year in September, the decrease is most evident with the Denar lending and deposit interest rates. The interest rates on denar loans with FX clause dropped by 0.1 percentage point, but the interest rates on denar deposits with FX clause increased by 0.2 percentage points. The interest rate on the foreign currency loans is unchanged, whereas with the foreign currency deposits it went down by 0.3 percentage points.

Figure 82 Developments of lending (up) and deposit (down) interest rates



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

Figure 83 Interest rate spread



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

As a result to these developments of the interest rates, the interest rate spread between the lending interest rates and deposit interest rates decreased. The interest rate spread in denars and in foreign currency increased, whereas the interest rate spread in denars with FX clause decreased (September 2011 relative to September 2010).



### 6.3 Profitability and efficiency indicators of banks

The lower income and the decreased profit from bank operating determined considerable fall in the profit margin of banks and deterioration in the basic indicators for profitability and operational efficiency of banks. The worsening in the operational efficiency is evident through the increase in the part of the total regular income used for covering the operating expenses, but also through all other indicators for the ratio between certain types of costs and total regular income. The profit margin<sup>68</sup> reduced by almost 6 percentage points. Additionally, the larger impairment, as opposed to the lower net interest income, contributed to increase in the part of these regular income used for absorption of the determined losses from the credit portfolio of banks, which is especially evident with the banks of the group of medium-size banks.

Table 14 Indicators on the profitability and efficiency of bank operating

To disabase	Banking	system	Large	banks	Medium-s	ize banks	Small-size banks	
Indicators	30.09.2010	30.09.2011	30.09.2010	30.09.2011	30.09.2010	30.09.2011	30.09.2010	30.09.2011
Rate of return of average assets (ROAA)	0.5%	0.1%	1.0%	0.9%	-0.5%	-1.7%	-2.4%	-2.8%
Rate of return of average equity (ROAE)	4.0%	1.0%	11.1%	9.3%	-4.2%	-14.5%	-6.1%	-8.7%
Cost-to-income ratio	65.5%	68.8%	54.0%	57.8%	83.4%	89.0%	126.9%	155.9%
Non-interest expenses/Total regular income	71.1%	75.2%	58.0%	62.5%	91.5%	98.3%	139.8%	175.1%
Labour costs /Total regular income	25.8%	26.1%	20.7%	21.3%	33.3%	34.8%	54.8%	63.7%
Labour costs /Operating expenses	39.4%	37.9%	38.4%	36.9%	40.0%	39.1%	43.2%	40.9%
Impairment losses of financial and non-financial assets /Net interest income	39.4%	43.4%	42.1%	37.2%	38.4%	64.3%	5.0%	10.4%
Net interest income /Average assets	3.8%	3.2%	3.7%	3.2%	4.0%	3.6%	3.8%	2.8%
Net interest income /Total regular income	67.1%	66.5%	65.5%	65.0%	70.0%	71.4%	71.8%	62.7%
Net interest income /Non-interest expenses	94.4%	88.4%	112.9%	103.9%	76.4%	72.6%	51.4%	35.8%
Financial result/Total regular income	8.1%	2.2%	18.4%	18.0%	-9.2%	-34.9%	-38.1%	-62.4%

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

The net interest rate spread<sup>69</sup> is unchanged relative to the previous quarter, in conditions of increase in the average interest bearing assets<sup>70</sup> by 0.8% and interest bearing liabilities by 0.7%. Relative to June 2010, the interest bearing assets and interest bearing liabilities increase by 13.8% each. However,

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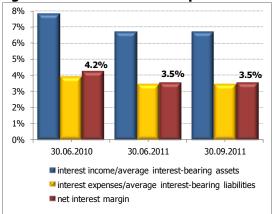
<sup>&</sup>lt;sup>68</sup> The profit margin represents the ratio of the operating gain (loss) to the total regular income.

<sup>&</sup>lt;sup>69</sup> The net interest rate spread is calculated as a ratio between the net interest income and the average interest bearing assets. For comparability, the interest income and expenditures are given on annual basis.

<sup>&</sup>lt;sup>70</sup> The average interest bearing assets is calculated as an arithmetical mean of the amounts of the interest bearing assets at the end of the respective quarter of the current year and at the end of the previous year.



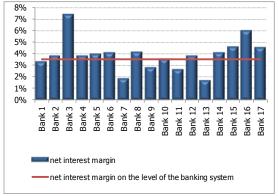
Figure 84 Net interest rate spread



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

Note: The National Bank has no data on the interest bearing assets and interest bearing liabilities of banks for September 2010 on its disposal.

Figure 85 Net interest rate spread by individual banks



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

despite such equal percentage increment in the interest bearing assets and liabilities, the interest bearing assets are larger than the interest bearing liabilities by Denar 26,312 million, which enables creating an adequate amount of interest rate spread for covering the non interest bearing expenditures of banks.

Five out of total of seventeen banks<sup>71</sup> realized lower net interest rate spread than the net interest rate spread at the level of the banking system.

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<sup>&</sup>lt;sup>71</sup> The participation of these five banks in the total assets of the banking system amount to 47.2%.



#### **ANNEX**