### **National Bank of the Republic of Macedonia**

Supervision, Banking Regulation and Financial Stability Sector Financial Stability and Banking Regulation Department



Report on Risks in the Banking System of the Republic of Macedonia in the First Quarter of 2013



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### **SUMMARY**

Amid the still weak economic performance and expectations for deceleration of activity in the euro area, the growth of the overall activities of the banking system of the Republic of Macedonia continued to slowdown in the first quarter of 2013. The growth of deposits of nonfinancial entities considered to have the greatest importance for the dynamics of the sources of funding of the banking system also slowed down, since they make up more than two-thirds of the total funding sources. In 2013, depositors still prefer to save in a long run and in a local currency. Considering the additional changes on the reserve requirement in the first half of 2013, one can expect that this trend will continue in the period ahead.

Given the banks' perceptions of the real sector risks, the conservative lending strategies of parent entities that are undergoing financial deleverage and the caution when approving credits, the quarterly growth of lending to nonfinancial entities is still less than 1%. Loans to households and Denar loans were major generators of the credit growth in the first quarter of the year, which corresponds with the trend of denarization the banks' deposit base. This trend of faster growth of Denar loans continued in the second quarter of 2013. Despite the slowdown of lending activity, the signs of recovery of the domestic economy and the expectations for more stable environment should contribute to increasing financial support to nonfinancial entities. Moreover, the changes in the operational framework of monetary policy of the National Bank made in 2013 aim to support credit growth to nonfinancial sector.

In the first quarter of 2013, the credit risk of banks increased, primarily due to the risks inherent in the corporate sector. The growth of nonperforming loans stepped up, making up 11.9% of total loans as at 31 March, 2013. However, nonperforming loans are still fully covered by the total impairment, which alleviates the effects of the accelerating growth of these loans. Moreover, the high capitalization of the banking system shields the capital adequacy ratio of both the banking system and the individual banks, even at hypothetically full default of nonperforming loans.

Banking sector's liquidity is stable and high, due to the continuous growth of liquid assets. The high coverage of household deposits and short-term liabilities of banks with liquid assets is an important pillar of soundness and stability of the banking system, as confirmed by the stress tests of the resilience of the banking system to liquidity shocks.

Capital adequacy ratio of the banking system is twice the minimum requirement and equals 17.3% (17.1% as at 31 December, 2012), while the core capital to risk weighted assets ratio equals 14.7% (14.6% as at 31 December, 2012). The capital position of the banking system is expected to further strengthen with the completion of reinvestment of 2012 earnings, which began in the first quarter of the year and of the announcements for new investments in subordinated instruments in banks. High capital adequacy, i.e. strong solvency position of the banking system is the foundation of its stability and resilience to simulated shocks, even though the stress tests indicate slightly greater need for recapitalization of some banks relative to the end of 2012.

In the first quarter of 2013, same as the first quarter of last two years, the banks in the Republic of Macedonia reported loss, which is substantially lower than the loss incurred as at 31 March, 2012, while in April 2013, the financial result was positive. Strengthening of the



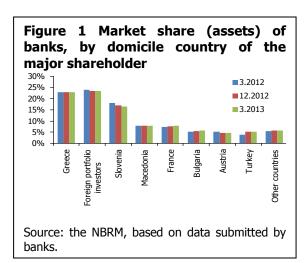
operating incomes, i.e. net interest income and net fee income, coupled with the slower growth of operating costs, tend to mitigate the effects of the deterioration of credit portfolio quality and the insufficient activity of banks for sale of foreclosed assets.



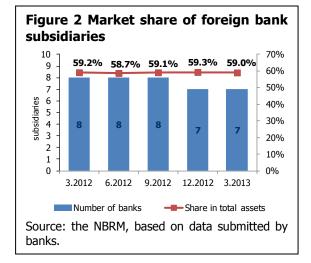
### I. Structure of the banking system

### 1.1 Number of banks and ownership structure of the banking system

In the first quarter of 2013, the number of banks and the main structural features of the banking system remained unchanged. As at 31 March, 2013, the banking system in the Republic of Macedonia consists of sixteen banks, of which twelve are predominantly foreign owned, which is the same compared to 31 December, 2012. Predominantly foreign owned banks retained the lead role in the major balance sheet positions of the banking system.



by shareholders of Greece and Slovenia, as well as banks predominantly owned by foreign portfolio investors<sup>1</sup> have the largest market share in total assets of the banking system. Their shares equal 22.8%, 16.6% and 23.6%, respectively. Market share of banks predominantly owned by domestic shareholders equals 8.0%<sup>2</sup>.



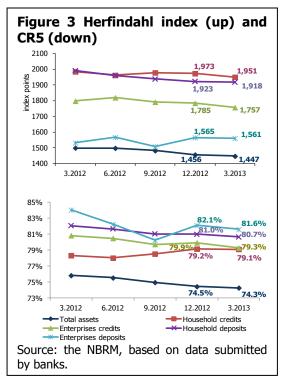
The number of foreign bank subsidiaries remained the same in the first quarter of 2013, whereas their market share decreased marginally, by 0.3 percentage points.

<sup>&</sup>lt;sup>1</sup> Predominantly foreign owned banks that lacks a strategic investor.

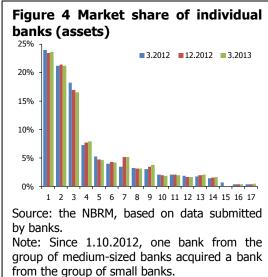
<sup>&</sup>lt;sup>2</sup> In the first quarter of 2013, the assets of the Macedonian Bank for Development Promotion AD Skopje (MBPR), which is owned by the state, had a significant increase primarily as a result of the withdrawal of the third and the fourth tranche of the EIB credit line that is marketed by banks through the MBPR.



#### 1.2 Concentration and market share of banks



**Concentration in the banking system is high, but has shrunk.** All segments of banks operations reported certain reduction of concentration as measured by the Herfindahl index<sup>3</sup> and CR5<sup>4</sup>. Except for household loans and deposits, the concentration under the Herfindahl index in all other categories is within the acceptable level<sup>5</sup>.



The market share of individual banks in the total bank assets confirms the concentration in the banking system. Only three banks jointly occupy two thirds of the total assets, while nine banks have an individual share of less than 4%, jointly constituting 16.9% of the total assets of the banking system.

total amount of the analyzed category (e.g., total assets, total deposits, etc..), where n is the total number of banks in the system.

<sup>&</sup>lt;sup>3</sup> Herfindahl index is calculated according to the formula  $HI = \sum_{j=1}^{n} (S_j)^2$ , where S is the share of each bank in the

<sup>&</sup>lt;sup>4</sup> CR5 represents the share of assets (i.e. the analyzed category, such as corporate loans etc..) of the five banks with the largest assets (i.e. the analyzed category) in total assets (i.e. the analyzed category) of the banking system.

<sup>&</sup>lt;sup>5</sup> When the Herfindahl index ranges from 1,000 to 1,800 units, the concentration ratio in the banking system is considered to be acceptable.



### II. Banks' activities

### 2.1 Balance sheet of the banking system

In the first quarter of 2013, the total activities of the banking system continued to grow at a slower pace compared to the end of 2012. Uncertainty clouding the euro area and the banks' risks perceptions for the trends in the domestic economy, especially in the corporate sector, slowed down the lending activity. The banks' reluctance to take risks is also confirmed by the increased demand for government securities. However, it is expected that the improving economic performance and the increased optimism, as well as the cut of CB bill rate and the changes in the reserve requirement made by the National Bank during January and July 2013<sup>6</sup> tend to revive the banks' activities and accelerate the credit growth.

	Amount in millions of Denars			Structure			Change 31.3.2013/31.12.2012		Change 31.3.2013/31.3.2012	
Balance sheet	31.3.2012	31.12.2012	31.3.2013	31.3.2012	31.12.2012	31.3.2013	Absolute change	In percent	Absolute change	In percent
Cash and balances with NBRM	33,140	41,149	44,104	9.9%	11.7%	12.4%	2,955	7.2%	10,964	33.1%
Securities portfolio	58,716	57,219	57,899	17.5%	16.2%	16.3%	680	1.2%	-817	-1.4%
Placements with banks and other financial institutions	42,199	43,141	43,473	12.6%	12.2%	12.2%	332	0.8%	1,275	3.0%
Loans of nonfinancial entities (net)	183,597	190,867	190,533	54.7%	54.1%	53.6%	-333	-0.17%	6,936	3.8%
Gross loans of nonfinancial entities	206,566	216,225	217,407	61.5%	61.3%	61.1%	1,182	0.5%	10,841	5.2%
Accumulated amortization of loans of nonfinancial entities	-883	-965	-957	-	-	-	8	-0.8%	-74	8.4%
Impairment (provisions) of loans of nonfinancial entities	-22,086	-24,393	-25,917	-	-	-	-1,523	6.2%	-3,831	17.3%
Accrued interest and other assets	10,144	10,518	9,802	3.0%	3.0%	2.8%	-716	-6.8%	-342	-3.4%
Fixed assets	8,038	9,992	9,841	2.4%	2.8%	2.8%	-151	-1.5%	1,803	22.4%
Unallocated loan loss provisions	0	0	0	0.0%	0.0%	0.0%	0	-	0	-
Total assets	335,833	352,886	355,652	100.0%	100.0%	100.0%	2,766	0.8%	19,818	5.9%
Deposits from banks and other financial institutions	13,654	17,362	17,669	4.1%	4.9%	5.0%	307	1.8%	4,016	29.4%
Deposits of nonfinancial entities	237,389	245,373	248,328	70.7%	69.5%	69.8%	2,955	1.2%	10,939	4.6%
Borrowings (short-term and long-term)	31,418	34,637	34,812	9.4%	9.8%	9.8%	174	0.5%	3,393	10.8%
Liability component of hybrid ans subordinated instruments	7,786	7,723	7,739	2.3%	2.2%	2.2%	15	0.2%	-47	-0.6%
Other liabilities	6,480	7,486	6,582	1.9%	2.1%	1.9%	-904	-12.1%	102	1.6%
Provisions for off-balance sheet items	800	911	924	0.2%	0.3%	0.3%	13	1.5%	124	15.4%
Capital and reserves	38,307	39,394	39,598	11.4%	11.2%	11.1%	204	0.5%	1,291	3.4%
Total liabilities	335,833	352,886	355,652	100.0%	100.0%	100.0%	2,766	0.8%	19,818	5.9%

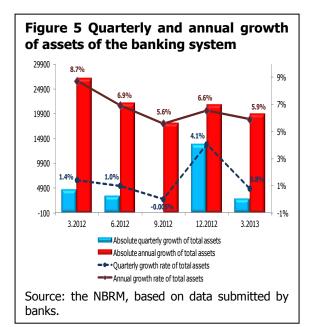
Source: the NBRM, based on data submitted by banks.

Note: The position "placements with the central bank" of Annex 1, is included in the position "Cash and balances with the NBRM" in this table.

<sup>6</sup> For more details on the changes made in January 2013, see the Quarterly Report of the NBRM from January 2013, while for the changes made in July 2013, see the Quarterly Report of the NBRM from July 2013.

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As of 31 March, 2013, the total assets of the banking system reached Denar 355,652 million (Annex 1) and registered a **slowing quarterly growth of 0.8%, or only Denar 3 million.** The annual growth rate of total assets decelerated by 0.7 percentage points.

The most significant asset movements are affiliated with the slowing growth of lending<sup>7</sup> and the rising demand for liquid instruments, particularly in government securities. The quarterly growth of the securities portfolio fully arises from the increased banks' investments in treasury bills (by Denar 2,615 million or 9.3%). In contrast, banks investments in CB bills fell by Denar 1,978 million, or 7.6%.

Figure 6 Quarterly (up) and annual growth of the securities portfolio, in % 60% 40% 20% 0% -1.5% -7.6% 6.2012 9.2012 12.2012 3.2013 3.2012 -20% -40% 120% 102.2% 103.4% 100% 80% 60% 40% 20% 0% -20% -40% -60% -15.7% 3.2012 6.2012 9.2012 12.2012 3.2013 Placements in CB bills Placements in treasury bills Other placements Total invetments in securities Source: the NBRM, based on data submitted by banks.

At the beginning of the first quarter of 2013, the National Bank cut the policy rate from 3.75% to 3.5%. Since changes in monetary policy have a lagging effect, this monetary loosening should have a stimulating effect on economic activity in the period ahead<sup>8</sup>. The annual drop of investments in CB bills reduced the total securities portfolio on an annual basis.

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<sup>&</sup>lt;sup>7</sup> For more details see 1.1. Loans to nonfinancial entities.

<sup>&</sup>lt;sup>8</sup> In addition to these changes, in July 2013, the CB bills auction switched into an auction with a limited amount and a fixed interest rate of 3.25%. Moreover, the reserve requirement instrument was modified again, with a purpose to increase the attractiveness of savings in domestic currency and to boost investment of long-term foreign capital and eventually, to spur credit growth.



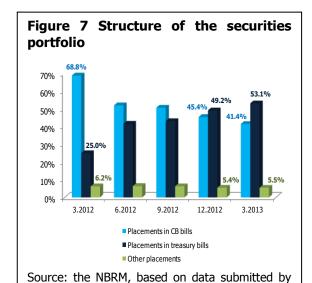
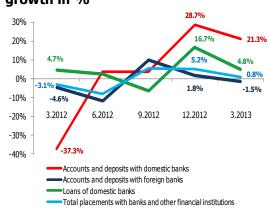


Figure 8 Placements with banks and other financial institutions, quarterly growth in %

banks.



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

Changes in the securities portfolio in the first quarter of 2013 further increased the structural share of investments in treasury bills.

In the first quarter of 2013, the investments in banks and other financial institutions increased, largely due to the increase of loans to domestic banks of Denar 528 million. This growth is largely due to the growth of long-term loans in foreign currency from the credit line of the European Investment Bank launched by the MBPR<sup>9</sup>. Placements on current accounts with foreign banks decreased by Denar 1,196 million, while the time deposits in foreign banks increased by Denar 778 million.

The movement of liabilities in the first quarter of 2013 resulted mainly from the growth of deposits of nonfinancial entities<sup>10</sup>. However, their growth slowed down both quarterly and annually by 1.6 percentage points and by 0.2 percentage points, respectively.

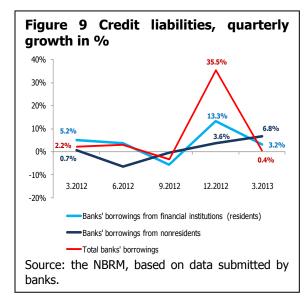
Credit liabilities and deposits of banks and other financial institutions also tend to increase the banks' funding sources. The quarterly movement of banks' liabilities based on borrowings results from the increase of loans from nonresidents (by Denar 1,193 million), which is entirely due to the increase of liabilities under both tranches used from the EIB credit line. As a result of the placement of these funds by the MBPR through banks in the country, loan liabilities to financial companies - residents are also growing.

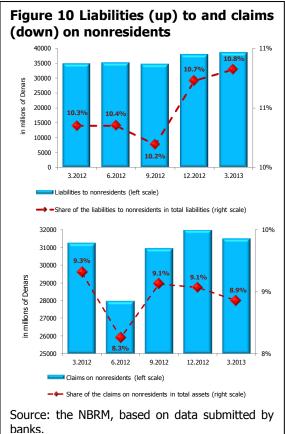
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<sup>&</sup>lt;sup>9</sup> The third and the fourth tranche of the EIB credit line were drawn in January and March 2013 in the amount of nearly Euro 25 million (Denar 1,530 million), marketed by seven banks in the country.

<sup>10</sup> For more details see 1.2. Deposits of nonfinancial entities.







Deposits of banks and other financial institutions registered a quarterly increase of Denar 307 million. This growth was determined by the increase of deposits of pension funds and other financial companies, and the reduction of foreign currency deposits of nonresidents - financial companies.

In the first quarter of 2013, the share of banks' liabilities to nonresidents remained almost unchanged. Liabilities to nonresidents increased by Denar 630 million, or 1.7%, solely due to the increase of liabilities based on long-term loans in foreign currency to nonresidents - financial companies<sup>11</sup>.

**Claims on nonresidents** registered a quarterly decrease of Denar 497 million, or 1.6%, primarily (92.1%) due to the decrease of placements in foreign banks of Denar 457 million, or 1.5%.

### 2.1.1 Loans to nonfinancial entities

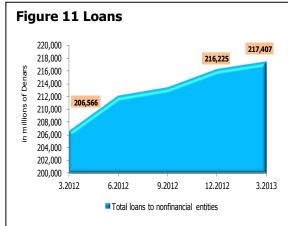
In the first quarter of 2013, lending to nonfinancial sector<sup>12</sup> continues slowly<sup>13</sup>, increase but reflecting the abovementioned factors associated with risk arising from the international developments and the performances of the real sector, in particular Analyzing companies. sector bv households are drivers of the credit growth, contributing with 75.8%. Lending to this segment increased by Denar 870 million (1.1%), with the

<sup>&</sup>lt;sup>11</sup> Again as a result of the used EIB credit line.

<sup>&</sup>lt;sup>12</sup> Loans to nonfinancial entities include all loans to nonfinancial entities - residents and nonresidents, as follows: private and public nonfinancial enterprises (corporate loans), central government, local government, nonprofit institutions serving households (loans to other clients), sole proprietors and natural persons (herein: household loans).

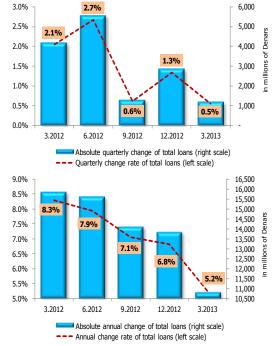
<sup>&</sup>lt;sup>13</sup> Analyzing by individual banks, nine banks reported a quarterly increase of loans (the increasing interval ranged from 0.4% to 17.7%, by bank), whereas other banks reported a quarterly reduction of loans (the reduction ranged from -0.3% to -3.3%, by bank).





Source: the NBRM, based on data submitted by

Figure 12 Quarterly (up) and annual (down) growth of loans to nonfinancial entities



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

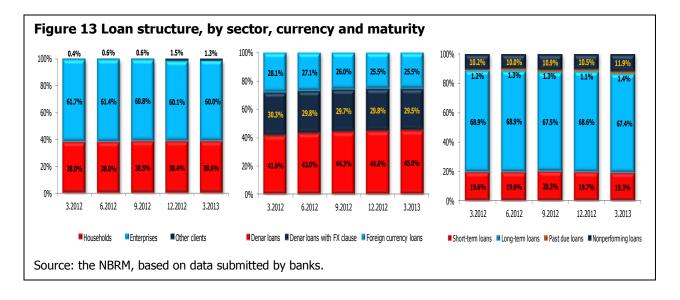
consumer loans still being the most widely used credit product by households (Annex 15).

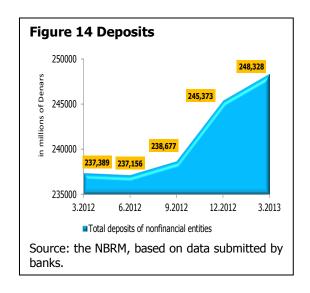
The growth of corporate loans equaled 0.5% (quarterly increase of 0.4 percentage points). Activities "wholesale and retail trade" and "metal manufacturing, machinery, tools and equipment" have the greatest contribution to the quarterly growth of loans to enterprises and other clients (Annex 15).

In the first quarter of 2013, the Denar loans fully determined the overall **credit growth.** They went up by Denar 1,307 million (1.4%), with enterpises and households contributing with 87.5% and 17.9%, respectively. Foreign currency loans also registered a guarterly growth of Denar 305 million, but due to the significant reduction of Denar loans with FX clause of Denar 429 million, the loans with component currency made negative contribution to the overall credit growth. Denar loans with FX clause reduced solely due to the corporate sector, which led to a lower credit growth of this sector compared to the growth of the loans to households (Annexes 5 and 7).

**Observing the maturity, long-term loans continued to dominate** the structure of loans to nonfinancial entities, despite their decrease, which is solely due to the Denar loans with FX clause to enterprises (Annex 5).







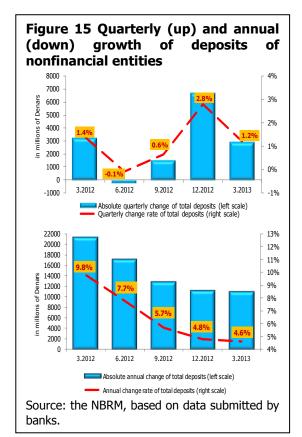
## 2.1.2 Deposits of nonfinancial entities

In the first quarter of 2013, total to Denar 248,328 million and registered a slower growth compared to the previous quarter (Annex 10). The growth of deposit activity is driven by household deposits (Annexes 10 and 12), which increased by Denar 3,668 million, on a quarterly basis. Most of this growth is due to the long-term Denar deposits<sup>14</sup>. The increased propensity to save in local currency and for the long term can be explained by the higher interest rates on multiannual savings. The deposits of enterprises reported a quarterly decrease of Denar 358 million, which for the most part (90.1%) is concentrated in short-term Denar deposits with FX clause. The share of Denar savings in the total deposit base of the banking system and in its growth remains **higher**, although in the first guarter of 2013, foreign currency deposits registered a similar growth rate as the Denar deposits (Annex 10). In terms of maturity, the growing interest for long term saving was the main generator of the growth of the total deposit base in the first quarter of 2013. Long-term deposits increased by Denar 3,711 million (7.2%), which,

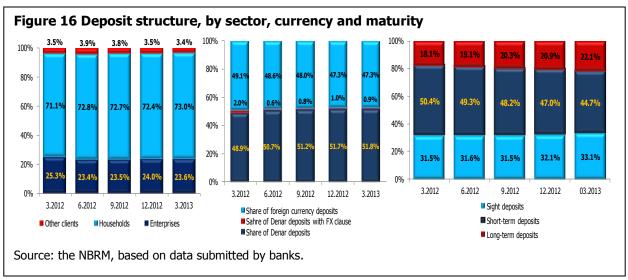
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<sup>&</sup>lt;sup>14</sup> The contribution of long-term Denar deposits and long-term foreign currency deposits in the total deposit growth of households equal 58.7% and 31.1%, respectively.





as already pointed out, for the most part (88.7%) is due to the increase of long-term household savings. **In contrast, short-term deposits** decreased by Denar 4,332 million, due to the reduction of corporate short-term Denar deposits with FX clause and the transformation of a significant portion of short-term foreign currency deposits into sight deposits<sup>15</sup>. As a result, **sight deposits** increased by Denar 3,576 million.



<sup>15</sup> Transformation of a short-term foreign currency deposit of a large foreign capital company due to a payment of dividend (made in April 2013).

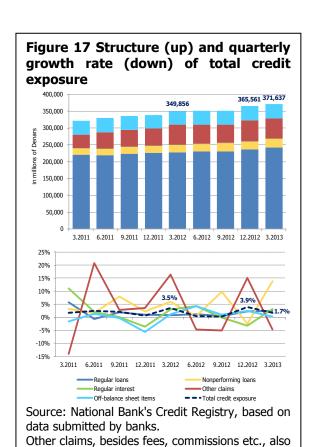
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#### III. Bank risks

### 3.1 Credit risk

The first quarter of 2013 was marked by the slow growth pace of credit exposure and increased level of credit risk in the banking system. The growth of nonperforming loans stepped up, contributing to a higher share of nonperforming loans in the total loans to nonfinancial entities. This growth is primarily due to the deterioration of credit risk in several exposures to the corporate sector, which is still a generator of the growth of nonperforming loans. However, the coverage of nonperforming loans with total impairment remains higher than 100%, and in April and May 2013, the uptrend of nonperforming loans decelerated. Also, it should be expected that the upward trend of the performance of the domestic economy will have a lagging effect on the quality of the banks' loan portfolio.



include banks' investments in CB and treasury

# 3.1.1 Quality of the loan portfolio of the banking system

In the first guarter of 2013, the total credit exposure<sup>16</sup> increased by Denar 6,077 million (1.7%), which is a slowdown compared to the previous quarter. This slowdown stems primarily from the slower growth of exposure to the government (quarterly growth of Denar 2,486 million or 7.7% compared to Denar 7,264 million or 29.1% in the last guarter of 2012). Credit exposures to nonfinancial entities (without institutions<sup>17</sup> financial exposure to government) registered a quarterly growth of Denar 2,712 million, or 1.0% (0.8% as at 31 December, 2012). Most of this growth (67.7%), results from the rise of credit exposure to enterprises and other clients<sup>18</sup> (Denar 1,832 million or 1.1%). Observing by activity, credit exposure to wholesale and retail trade and to metal manufacturing, machinery, tools and equipment increased the most.

The quality of banks' loan portfolio kept on deteriorating in the first quarter of 2013, as perceived through the highest quarterly growth rate of nonperforming loans to nonfinancial

bills.

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<sup>&</sup>lt;sup>16</sup> The total credit exposure includes balance sheet (loans, interest, fees, financial leasing, investment securities available for sale or held to maturity, etc.) and off-balance sheet claims (unused lines of credit, unused overdrafts based on current account and credit cards, letters of credit, guarantees and other similar potential liabilities for the bank) that expose the bank to credit risk.

<sup>&</sup>lt;sup>17</sup> Credit exposure to financial institutions increased by Denar 879 million (1.2%).

<sup>&</sup>lt;sup>18</sup> Hereinafter: enterprises.



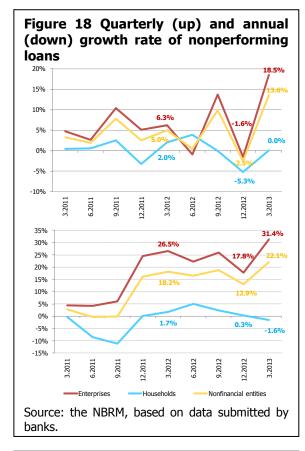


Figure 19 Share of nonperforming loans in total loans of nonfinancial entities and of individual sectors

15%
12%
11.8%
11.9%
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entities in the last four years. Most of this increase is concentrated in one bank of the group of large banks and is attributable to several clients from the corporate sector engaged in metal manufacturing, machinery, tools and equipment, wholesale and retail trade, education and real estate. The annual growth rate of nonperforming loans also accelerated, reaching its peak in the last eleven quarters<sup>19</sup>.

Given the higher growth of nonperforming loans compared to the growth of total loans, the share of nonperforming loans in the total loans to nonfinancial entities increased by 1.4 percentage points and reached 11.9%, which is at the level of 2006. The upward trend of nonperforming loans slowed down after the first quarter, and in May, this rate equaled 12%.

Nonperforming loans to enterprises are the main driver of the increase, where the share of nonperforming loans to total loans rose to 15.2%. Observing the households, this rate steadily decreases.

In the first quarter of 2013, restructured<sup>20</sup> and prolonged<sup>21</sup> claims moved downwards. After a growth of seven consecutive quarters, the insignificant reduction of restructured exposure in the first quarter was triggered by the enterprises. However, they occupy 5.9% of the total credit exposure to enterprises. The prolonged credit

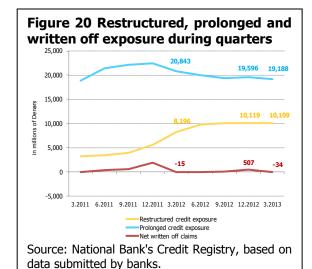
<sup>21</sup> Claim prolongation is an extension of its maturity, which is not a result of the client's worsening financial position.

18

<sup>&</sup>lt;sup>19</sup> In May 2013, the annual growth rate of nonperforming loans reached 22.7%.

<sup>&</sup>lt;sup>20</sup> Claim restructuring implies establishing new credit exposure by the bank to replace the existing one, inducing significant changes in the contractual terms as a result of the deteriorating financial condition of the borrower.





**Figure** 21 Distribution of nonperforming loans as at 31 March, 2013, by period of approval 16% 14% 12% 10% 8% 6% 4.4% 0.4% 0% Q2 Q3 Q1 Q2 Q3 Q1 Q4 2007 2008 2009 2010 Source: National Bank's Credit Registry, based on data submitted by banks.

exposure continued to decline, which is also due to its reduction to enterprises. However, the average risk level of restructured and prolonged exposure continued increasing and climbed to 40.3% at the end of the first quarter (39.5% as at 31 December, 2012) and 18.9%, respectively (15.9% as at 31 December, 2012). This upward trend was triggered by the growth nonperforming restructured and prolonged exposures, in situation of decrease of this type of exposure with a regular status.

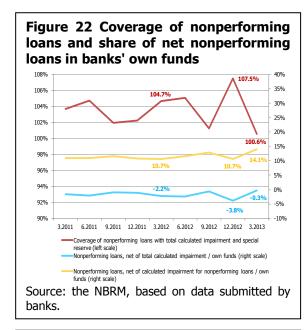
Write-offs made by banks in the first quarter of 2013 are low, but still higher relative to the same quarter last year. The corporate sector has the largest share in the total written off claims (53.8%), while the natural persons are the most represented in the total recovery of already written off claims (52.9%).

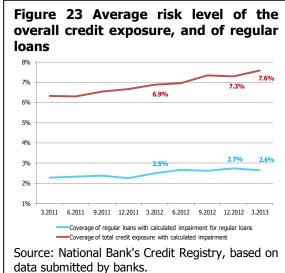
Analyzing by period of approval, as at 31 March, 2013, 14.3% of total nonperforming loans were approved last year, mostly in the first quarter. Moreover, as at 31 March 2013, 93.8% of the nonperforming loans approved in 2012, were made to the corporate sector.

The total impairment of banks increased by Denar 1,540 million (5.8%), along with the growth of nonperforming loans, with 86.0% of this growth resulting from the impairment for credit exposure to the corporate sector. The largest contribution to the growth of impairment and special reserve was made by the activity metal manufacturing, machinery, tools and equipment and wholesale and retail trade, which reported the largest increase of nonperforming loans.

However, the pace of growth of the impairment differed from the growth of nonperforming loans, resulting in lower coverage of nonperforming loans with total impairment, which is still high (100.6%). As at 31 March, 2013, the coverage of nonperforming loans solely with impairment calculated for nonperforming loans reduced to 75.8% (79.0% as at 31







December, 2012). The nonprovisioned portion of nonperforming loans increased its share in the total own funds of the banking system, but it is still low. Thus, assuming hypothetically full default of nonperforming loans, at the end of this quarter, the own funds would decrease by 14.1% compared to 10.7% decline at the end of the last quarter of 2012. Despite the quarterly increase of the share of nonprovisioned nonperforming loans in their own funds, the capital adequacy of the banking system and the individual banks would not be jeopardized (the adequacy ratio would decrease from 17.3% to 14.9%, and the capital adequacy ratio of neither bank would fall below 8%).

In the first quarter of 2013, the average risk level of the loan portfolio of the banking system increased as a result of greater increase of impairment compared to the growth of total credit exposure. In contrast, the average risk level of regular loans decreased, resulting from the growth of regular loans and reduced impairment determined for them. Most of the decrease of impairment for regular loans is due to the 2.3% quarterly reduction of exposure in B risk category<sup>22</sup>.

Credit risk is the highest in the accommodation and catering services (of the corporate sector) and car loans (of the household sector) (Annexes 23 and 24), with significantly increased risk being observed in education and metal manufacturing, machinery, tools and equipment. According to the currency structure, the Denar credit exposure with FX clause is still the riskiest (Annex 22).

In the first quarter of 2013, credit exposure with regular status occupies the majority (92.5%) of the structure of total credit exposure. However, exposures classified in A, B and C-regular risk categories reduced compared to the previous quarter (93.2% as at 31 December, 2012), as a result of the increased credit

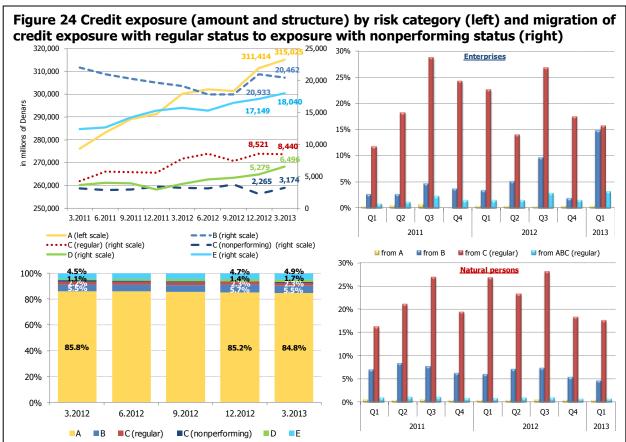
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<sup>&</sup>lt;sup>22</sup> This decrease was almost entirely attributable to the transfer of credit exposures to enterprises classified in the B category to nonperforming exposures.



exposure with nonperforming status (7.5% versus 6.8% as at 31 December, 2012).

The results of the transition matrices (Annex 20) show higher rate of transfer of credit exposure with regular status to nonperforming exposure (2.0% versus 1.1% in the last quarter of 2012)<sup>23</sup>. The first quarter of 2013 witnessed a substantial increase of the portion of credit exposures to enterprises classified in B risk category, which became nonperforming within one quarter (from 2.0% in the last quarter of 2012 to 14.8% in this quarter)<sup>24</sup>. Migration of



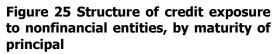
Source: National Bank's Credit Registry, based on data submitted by banks.

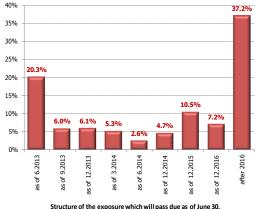
<sup>\*</sup> The percentages in the right figure have been calculated as a ratio between credit exposure that received a nonperforming status at the end of the quarter and credit exposure at the beginning of the analyzed quarter. Credit exposure approved during the quarter has not been included.

<sup>&</sup>lt;sup>23</sup> The number of loans with a regular status that received a nonperforming status by the end of the quarter indicate reduction of the migration compared to at 31 December, 2012, from 2.2% to 1.2%, primarily due to the lower household loan agreements that received nonperforming status at the end of the first quarter of 2013 (from 2.1% to 1.0%). The enterprises registered an increase in loans that turned into nonperforming credit exposures (from 4.2% as at 31 December, 2012 to 6.1% as at 31 March, 2013).

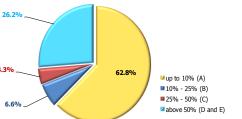
<sup>&</sup>lt;sup>24</sup> The same exposures that are the primary generators of the growth of nonperforming loans.







2013, according to the average risk level



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

Note: The analysis does not include exposures classified on a group basis.

Figure 26 Share of large exposures in banks' own funds

200%
210%
200%
190%
180%
3.2011 6.2011 9.2011 12.2011 3.2012 6.2012 9.2012 12.2012 3.2013

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

corporate and household credit exposures in A and B risk categories with regular status to nonperforming status reduced.

Observing the maturity of loans to nonfinancial entities, as at 31 March, 2013, 20.3% of total credit exposure falls due by the end of the second quarter, while almost half of the exposure falls due after 2014. The exposure with average risk level of up to 25% (A and B risk category) accounts for 69.4% of the structure of credit exposure that falls due by the end of the second quarter this year.

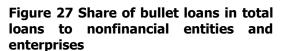
In the first quarter of 2013, there was an increase of the concentration of credit risk, measured by the share of large exposures<sup>25</sup> in the banks' own funds, which is twice as high. Moreover, three banks make up 57.8% of the large exposures of the overall banking system, constituting 35.7% of the total credit exposure. Excluding the banks' exposures to financial institutions and investments in CB bills and government securities, the share of large exposures to nonfinancial entities in the banks' own funds reduces to 85.4%<sup>26</sup>. Analyzing by banks, the share of large exposures to nonfinancial entities in total credit exposure ranges from 2.2% to 30.5%.

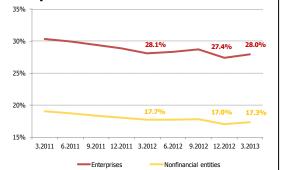
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 $<sup>^{25}</sup>$  As specified by regulations, large exposure to a person and persons connected thereto is an exposure equal to or higher than 10% of the bank's own funds. The total amount of large exposures must not exceed eight times the bank's own funds.

<sup>&</sup>lt;sup>26</sup> The analysis excludes the own funds of five banks that have no large exposures to nonfinancial entities.

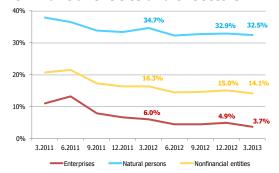






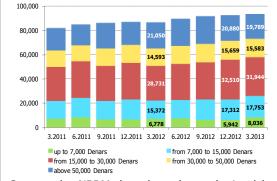
Source: National Bank's Credit Registry, based on data submitted by banks.

Figure 28 Share of uncollateralized exposure in total credit exposure of nonfinancial entities and of sectors



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

Figure 29 Credit exposure by monthly income of borrowers (natural persons)



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

The increased credit risk is also perceived through the larger share of bullet loans in total loans to nonfinancial entities. These loans were approved solely (99.1%) to enterprises<sup>27</sup>, most of which to wholesale and retail trade (40.5%), metal manufacturing, machinery, tools and equipment (13.5%), and construction (10.7%).

According to the collateral of credit exposure, the first quarter of 2013 experienced a lower share of uncollateralized credit exposure in total credit exposure to nonfinancial entities, as well as to individual sectors. The highest share of uncollateralized credit exposure was observed in natural persons (32.5%), but excluding exposure based on overdrafts and credit cards<sup>28</sup>, this share would equal 13.3%.

Observing natural persons, most indebted are those with monthly income of up to Denar 30.000, constituting two thirds of the total banks' exposure to this sector and 72.6% of the total exposure intended for consumption (Annex 25). As at 31 March, 2013, the average debt per person (only debtors) increased and reached Denar 98 thousand. Analyzing by person, natural persons with monthly incomes above Denar 100,000 are the most indebted (average debt of Denar 622 thousand per person). According to the type of credit product, persons with monthly income of over Denar 30,000 contribute 75% to total credit exposure based on housing loans, while persons with monthly income of up to Denar 30,000 constitute most of the credit exposure based on consumer loans and credit cards and overdrafts (73.5% and 74.8%, respectively).

<sup>&</sup>lt;sup>27</sup> The share of bullet loans to households in total loans equals 0.4%.

<sup>&</sup>lt;sup>28</sup> Most recoveries of this type of credit exposure are covered by the monthly income of borrowers.



# 3.1.2 Stress test simulation of the banking system resilience to credit risk

Stress tests comparable on a regular basis tend to investigate the sensitivity of the banking system during deterioration of the quality of certain segments of the loan portfolio. They consist of simulations of hypothetical migration of 10% (first simulation) and 30% (second simulation) of credit exposure to enterprises and households, separately, and to the two sectors, jointly, to the next two higher risk categories.

Description		CAR of the banking system		Number of banks simulation below banking system (number of banks simulation l	the CAR of the after simulation with CAR after	Share of "C", "D" and "E" in total credit exposure		
			31.12.2012 31.03.2013 31.12.2012 31.03.20		31.03.2013	31.12.2012	31.03.2013	
Baseline		17.1%	17.3%			9.1%	9.7%	
Enterprises and	I simulation	15.1%	15.2%	8 (0)	7 (1)	12.5%	13.0%	
households	II simulation	10.5%	10.5%	7 (5)	6 (5)	19.2%	19.7%	
Entorneisos	I simulation	15.8%	16.0%	7 (0)	7 (0)	11.2%	11.8%	
Enterprises	II simulation	13.0%	13.1%	6 (2)	7 (2)	15.4%	15.9%	
Households	I simulation	16.4%	16.6%	7 (0)	6 (0)	10.4%	11.0%	
nousenous	II simulation	15.0%	15.2%	8 (0)	7 (0)	12.9%	13.6%	

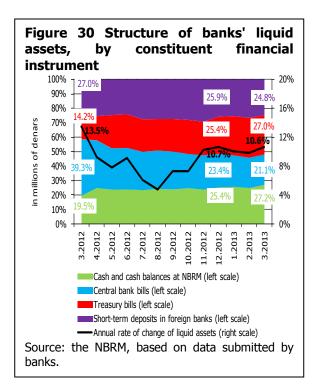
Source: the NBRM calculations, based on data submitted by banks

Results of the simulations show that the banking system continues being resilient to simulated shocks. Compared to the previous quarter, there is a certain pressing need to recapitalize some banks. A more detailed review of the results of the simulations is given in Annex 26.



### 3.2 Liquidity risk

In the first quarter of 2013, the annual growth rate of liquid assets increased to 10.6%, due to which the banks in the Republic of Macedonia continue to hold a high amount of liquid assets. The changing trend in the structure of liquid assets continued, increasing the share of treasury bills and reducing the share of CB bills. Moreover, banks are still more inclined to invest in Denar liquid instruments which are the main generators of the growth of liquid assets. The liquidity ratios of the banking system are stable, increasing the coverage of various categories of liabilities with liquid assets. Moreover, the growth of long-term sources of funding in the first quarter of 2013 further extended the maturity of banks' liabilities, and accordingly, the contractual maturity mismatch between assets and liabilities continued to shrink. Stress test simulations generally show resilience of the banking system to liquidity shocks. According to the latest available data, at the end of May 2013, the growth of liquid assets continued stepping up, and reached 10.9% on an annual basis.

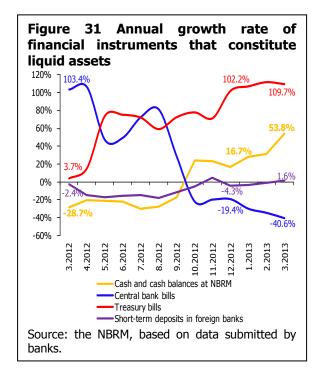


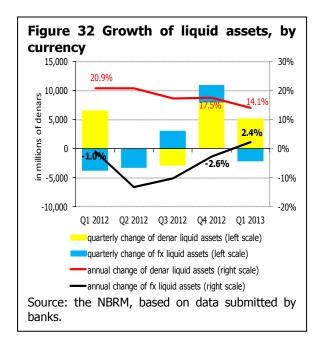
At the end of the first quarter of 2013, the liquid assets<sup>29</sup> of the banking system totaled Denar 113,911 million, registering a quarterly increase of Denar 2,997 million, or 2.7%, and an annual increase of 10.6% (Denar 10,942 million).

Observed by constituent financial instruments, in the first quarter of 2013, the growth of liquid assets was solely attributed to treasury bills, which registered a quarterly increase of Denar 2,615 million, and to cash and deposits with the National Bank which went up quarterly by Denar 2,833 million. On an annual basis, banks' investments in treasury bills

<sup>&</sup>lt;sup>29</sup> Liquid assets include cash and balances on accounts with the National Bank, CB bills, correspondent accounts and short-term deposits with foreign banks and investments in short-term securities issued by the government. For the purposes of liquidity analysis, Denar assets and liabilities with FX clause are regarded as Denar.



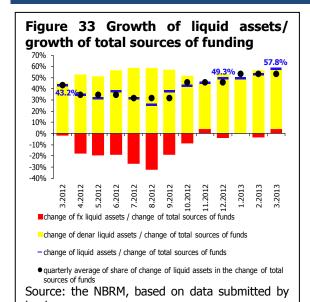


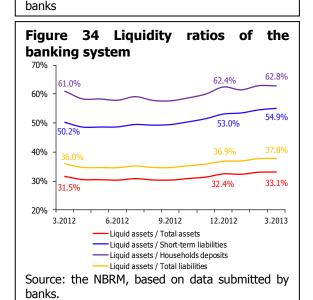


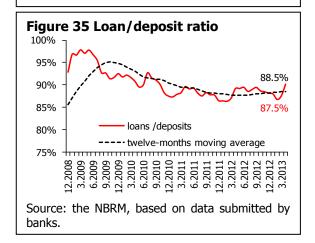
represent the fastest growing component (109.7%), while cash and balances with the National Bank increased by 53.8%. In contrast, CB bills declined on an annual basis by 40.6%. Changes in the operational framework for monetary policy of the National Bank, amid sluggish credit activity of banks, turned the banks from the CB bill market to the primary market of treasury bills, where the issuer increased the supply. In addition, the increase of cash and deposits with the National Bank, is to some extent determined by the need of banks to accumulate funds for payment of dividends to foreign shareholders of domestic companies which usually occur in the second quarter of the year. Because of these developments, at the end of the first quarter of 2013, the treasury bills reached the historically highest share in the structure of liquid assets, unlike the CB bills and short-term deposits in foreign banks whose share kept on decreasing.

Observing the currency structure of liquid assets, in the first quarter of 2013, the Denar liquid assets increased, whereas those in foreign currency dropped. This corresponds to the changes in some financial instruments that comprise liquid assets, in particular the growth of treasury bills and deposits with the National Bank. On the other hand, in the first quarter of 2013, the main component of foreign currency liquid assets - short-term deposits in foreign banks declined by 1.6%, or Denar 473 million. Given the extremely low interest rates on the interbank markets in the euro area, the dynamics of change of the currency structure of liquid assets shows that the difference in yield between foreign currency and Denar liquid financial instruments is still attractive to the Macedonian banks, so they invested most of their funding sources in domestic liquid financial instruments. In addition, banks' reluctance to take credit risk in the first quarter of 2013, is perceived by the gradual increase of the part of new sources of funding that are invested in liquid instruments. Thus, in the first quarter of 2013, banks invested 53.4%, on average, of the new monthly sources









of funds in liquid instruments<sup>30</sup>. As a result, the annual growth rate of liquid assets (10.6% as at 31 March, 2013) exceeds the annual rate of credit growth (5.2% as at 31 March, 2013).

In the first quarter of 2013, the liquidity of the banking system<sup>31</sup> remains satisfactory. The coverage of different categories of liabilities with liquid assets increased, compared with the end of 2012. Particularly evident is the continuation of the trend of increasing the coverage of shortterm liabilities with liquid assets which registered the most pronounced quarterly increase (of 1.9 percentage points). This improvement was a result of both the growth of liquid assets and the reduction of short-term liabilities in the first quarter of 2013 (of 0.9%). As at 31 March, 2013, the share of liquid assets in the total assets of the banking system equaled 33.1% recording an annual increase of 1.6 percentage points, or 0.7 percentage points compared to 31 December, 2012.

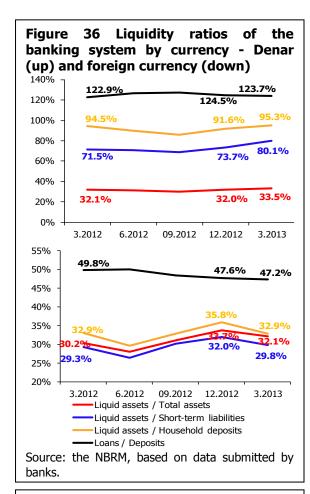
Loan/deposit ratio registered no significant changes.

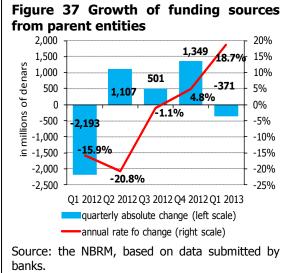
Analyzing individual banks, in the first quarter of 2013, ten banks reported a growth of liquid assets in the range of 0.8% to 74.7%, while six banks reported a quarterly fall in the range of 1.3% to 16.7%. The share of these six banks in the total assets of the banking system equaled 38.9% as at 31 March, 2013. Hence, the

<sup>&</sup>lt;sup>30</sup> The average for the fourth quarter of 2012 equaled 45.8%.

<sup>&</sup>lt;sup>31</sup> The calculation of liquidity ratios of the banking system does not include resident interbank assets and liabilities.





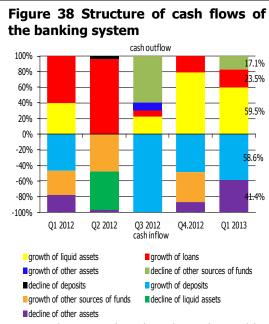


coverage of short-term liabilities with liquid assets of eight banks increased quarterly (from 0.5 to 7.6 percentage points), while the liquid assets to total assets ratio increased in nine banks (from 0.4 to 5.7 percentage points).

In terms of currency structure, in the first quarter of 2013, there was some increase in Denars liquidity ratios and certain reduction in the foreign currency liquidity ratios, as a result of the dynamics of liquid assets, by currency. Loan/deposit ratio dropped, being slightly more pronounced in Denars. Reason behind the decrease of this indicator was the faster quarterly growth of deposits, compared to the growth of loans, which was registered in both Denar and foreign currency components of this indicator.

In the first quarter of 2013, the sources of funding originating from foreign parent entities of banks declined by Denar 371 million, or by 2.2%. This decrease indicates that the banks' deleveraging to their parent entities, which is inherent to the banking systems of other countries in the region, is present in relatively small-scale in the banks of the Republic of Macedonia, mainly through more conservative business strategies of the parent entities. This is confirmed by the fact that the domestic banks' funding sources from parent entities rise by 18.7% annually.





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

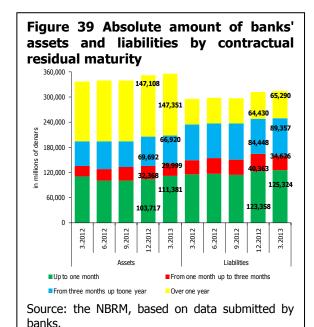
- \* The category of other assets includes assets that are not loans to nonfinancial entities and are not included in the category of liquid assets (long-term loans in foreign and domestic banks, foreign exchange reserve requirement, foreclosures, fixed assets, etc.) and decrease of impairment of financial and nonfinancial assets.
- \*\* The category of other funding sources includes all sources of funding which are not deposits of nonfinancial entities (equity and reserves, deposits of financial institutions, loans, subordinated instruments etc.) and increase of impairment of financial and nonfinancial assets.

Deposits of nonfinancial entities made the largest contribution to the quarterly growth of banks' total sources of funding (45%), while banks' credit liabilities registered a minor quarterly increase (0.2%). In terms of maturity, long-term funding sources kept on increasing, while the short-term funding sources were reducing, due to both the greater preference of depositors to save in a long run, and the increasing maturity of banks' liabilities based on borrowings and loans.

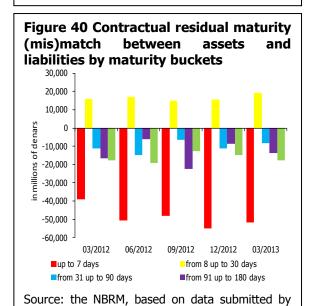
During the first quarter of 2013, the main driver of the cash flows<sup>32</sup> of the banking system was the growth of deposits, while the fall of other assets was notable, primarily due to the growth of impairment of financial assets. In the first quarter of 2013, investments in liquid assets made the greatest input into the cash outflow of banks, which is yet another confirmation of the modest appetite of banks to increase lending. The fall of other sources of funding in the first quarter of 2013 primarily reflects the reducing sources of funding used by Macedonian banks from their parent entities, as well as the reducing liabilities based on repo agreements on the domestic money market.

<sup>&</sup>lt;sup>32</sup> Cash inflows and outflows of banks in 2011 were obtained indirectly, i.e. by changing the balances of some accounts of the banks' balance sheets. The effect on the banks' cash flows arising from the expenses and income that do not represent cash outflow or inflow (e.g., loan write-off, revaluation of securities available for sale or held for trading, depreciation of fixed assets, net exchange differences etc.) is an integral part of the change in the corresponding balance sheet items the corresponding inflow or outflow refer to.





In the first quarter of 2013, the increasing trend of residual contractual maturity of banks' liabilities continued, due to the increasing maturity of deposits. On the other hand, observing the banks' assets, assets with contractual residual maturity of up to one month recorded the largest quarterly growth, primarily resulting from the growth of banks' investments in liquid securities and their structure, by residual maturity (Annex 28). Banks' liabilities still have contractual residual maturity slightly greater than assets.



banks.

In the first quarter of 2013, only the maturity bucket of 8 to 30 days registered a positive difference between the contractual residual maturity of assets and liabilities of banks. The maturity mismatch between assets and liabilities reduced in the maturity buckets with residual maturity of up to 7 days, while the maturity bucket of over three months enhanced.



Figure 41 Cumulative contractual gap between assets and liabilities of banks, as a percentage of the cumulative assets with the same contractual residual maturity

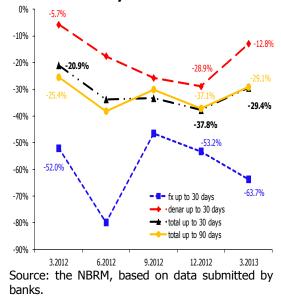
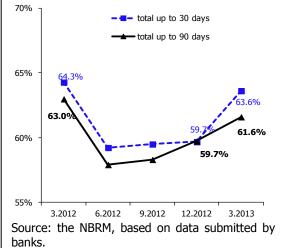


Figure 42 Cumulative expected gap between assets and liabilities of banks, as a percentage of the cumulative assets with the same contractual residual maturity

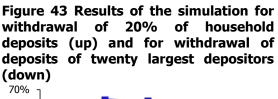


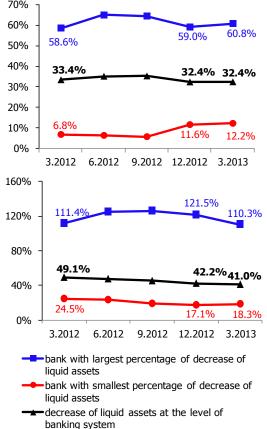
During the first quarter of 2013, the importance of the cumulative gap between assets and liabilities of banks somewhat **reduced.** This phenomenon is also observed in the cumulative gap between assets and liabilities with residual maturity of up to one month and up to three months. Observing the currency of assets and liabilities, the relative importance of the negative gap between assets and liabilities in foreign currency is apparently pronounced. In addition, the cumulative gap between Denar assets and liabilities with contractual residual maturity of up to 30 day decreased on a quarterly basis, compared to the cumulative difference between foreign currency assets and liabilities, which increased.

Banks expect stable deposits to be their main source of funding (Annex 29). This is confirmed by the positive cumulative expected gap between assets and liabilities according to the expected residual maturity, whose relative importance, expressed as a percentage of the cumulative assets of the same contractual maturity, increased in the first quarter of 2013. Namely, according to the expectations of banks, 82.3% of deposits with residual maturity of up to three months should be stable and remain in the banks in the next three months, which is almost identical level as at the end of 2012. The expected stability of time deposits and demand deposits equals 80.7% and 92.5%, respectively.

The Macedonian banking system remained satisfactorily resistant to any liquidity shocks. The level of liquid assets held by the banking system is sufficient to address the shocks associated with any outflow of deposits, as the most important source of funding. The banking system is still vulnerable to any withdrawal of deposits of the twenty largest depositors, compared with the simulation of







Source: the NBRM, based on data submitted by

banks.

withdrawal of 20% of household deposits, due to the high concentration of deposits in some banks. Liquid assets to total assets ratio in these simulations reduced from 33.1% to 24.7% (on withdrawal of household deposits) and to 22.3% (on withdrawal of deposits of the twenty largest The coverage of depositors). short-term liabilities<sup>33</sup> in these simulations reduced by 11.6 and 15.8 percentage points, respectively, while the coverage of total deposits with liquid assets decreased by 11.0 and 14.7 percentage points, respectively. Stability of the banking system is confirmed by the simulation which includes outflow of domestic banks' sources of funding from foreign parent entities (other subordinated and hybrid capital instruments whose payment is specifically regulated by the National Bank). The reduction of liquid assets, by bank, in this case would range from 0.2% to 54.7%, or 8.7% for the banking system. During the simulation, the liquid assets to total assets ratio would drop by 2.8 percentage points.

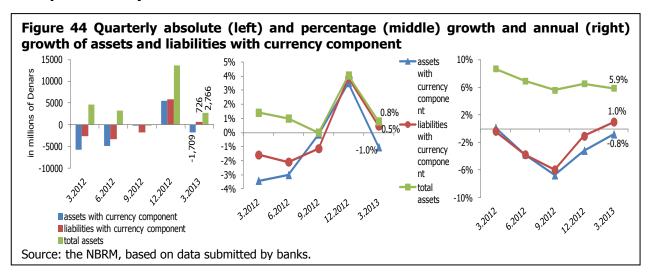
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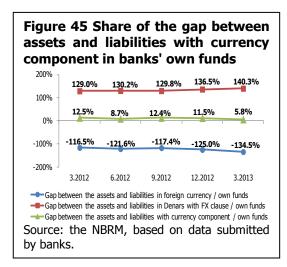
<sup>&</sup>lt;sup>33</sup> The simulations assume that deposits withdrawn from banks are of short-term maturity profile and are considered short-term liabilities.



### 3.3 Currency risk

In the first quarter of 2013, the gap between assets and liabilities with currency component narrowed, whereby banks maintained their low exposure to currency risk. All banks observe the prescribed limit on aggregate currency position. The euro still prevails in the banking activities, being a major generator of the reduction of the gap between assets and liabilities with currency component in the first quarter this year.





The gap between assets and liabilities with currency component<sup>34</sup> fell by Denar 2,435 million, or 49.8%, reducing to Denar 2,456 million at the end of the first quarter of 2013. Such gap reduction decreased its share in the banks' own funds, thus diminishing the banks' exposure to currency risk. The decrease stems primarily from assets with a currency component which declined by Denar 1,709 million, or 1.0%<sup>35</sup>.

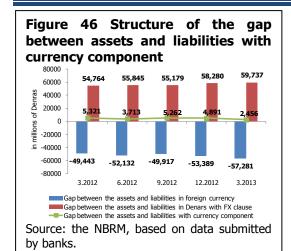
On the other hand, liabilities with currency component increased by Denar 726 million, mainly due to the growth of liabilities based on current accounts and other short-term obligations in foreign currency.

33

<sup>&</sup>lt;sup>34</sup> The gap between assets and liabilities with currency component is the difference between assets and liabilities with currency component as determined by the methodology for managing currency risk, where the assets with currency component are presented on a net basis, i.e. less the impairment of assets with currency component classified in C, D and E risk categories.

<sup>&</sup>lt;sup>35</sup> The largest contribution was made by the reduction of short-term foreign currency deposits with the National Bank in the amount of Denar 1,661 million.





As at 31 March, 2013, the negative gap between assets and liabilities in foreign currency and the positive gap between assets and liabilities with FX clause increased by Denar 3,892 million<sup>36</sup> and Denar 1,457 million<sup>37</sup>, respectively.

Items	Amount (in millions of	Amount (in millions of	Amount (in millions of	Share in total assets			
	Denars) 31.3.2012	Denars) 31.12.2012	Denars) 31.3.2013	3.2012	12.2012	3.2013	
Assets in Denars with FX clause	62,434	63,516	64,495	18.6%	18.0%	18.1%	
Assets in foreign currency	100,864	100,186	97,497	30.0%	28.4%	27.4%	
Assets with currency component	163,298	163,701	161,992	48.6%	46.4%	45.5%	
Total assets	335,833	352,886	355,652	100.0%	100.0%	100.0%	
Liabilities in Denars with FX clause	7,670	5,236	4,758	2.3%	1.5%	1.3%	
Liabilities in foreign currency	150,307	153,575	154,778	44.8%	43.5%	43.5%	
Liabilities with currency component	157,977	158,811	159,536	47.0%	45.0%	44.9%	

Dynamics of the gap Figure 47 between assets and liabilities with currency component, by currency 7,500 5,361 5,500 4,919 millions of Denars 3.855 3,500 3,071 1,500 504 96 149 72 -500 -159 -477 -675 -737 -861 -2,042 -2,500 3.2012 6.2012 9.2012 12.2012 3.2013 ■ Euro ■US dollar Swiss franc ■ Other

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

In this quarter, the share of assets and liabilities with currency component in the total assets of the banking system slightly decreased. This reduction is more noticeable on an annual basis.

Compared to 31 December, 2012, the gap between assets and liabilities in all currencies narrows, with the most significant narrowing being registered in the gap between assets and liabilities in euros. Considering the importance of this currency to the structure of assets and liabilities with currency component, the contribution of the gap in euro to the total gap between assets and liabilities with currency component is also the greatest.

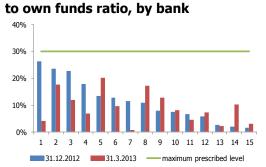
<sup>&</sup>lt;sup>36</sup> The increase of the negative gap between assets and liabilities in foreign currency arises from both the reducing foreign currency assets (Denar 2,689 million) and the growing foreign currency liabilities (Denar 1,203 million).

<sup>&</sup>lt;sup>37</sup> The increase of positive gap between Denar assets and liabilities with FX clause results primarily from the growth of Denar assets with FX clause of Denar 979 million (growth of government securities and Denar loans with FX clause), and the reduction of Denar liabilities with FX clause of Denar 478 million (a decrease of deposits of nonfinancial entities and liabilities on Denar loans with FX clause).



Currency	31.3	.2012	31.12	2.2012	31.3.2013		
Currency	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	
Euro	88.4%	88.3%	89.9%	88.1%	88.6%	88.1%	
US dollar	7.4%	7.7%	6.1%	7.6%	6.9%	7.6%	
Swiss franc	2.0%	2.0%	1.6%	2.1%	2.0%	2.0%	
Other	2.2%	2.0%	2.4%	2.2%	2.4%	2.3%	
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Figure 48 Aggregate currency position



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

As at 31 March, 2013, the aggregate currency position of all banks was within the prescribed limit on aggregate currency position (30% of own funds). Of the fifteen banks that report on the aggregate currency position, nine banks reported long aggregate currency position, while six banks reported short aggregate currency position.<sup>38</sup> All banks remained within the prescribed limit on aggregate currency position, including the first two months of the second quarter of 2013.

Open currency -	Number of banks									
	Euro		US Dollar		Swiss franc		Other			
/own funds	Long	Short	Long	Short	Long	Short	Long	Short		
under 5%	2	3	7	6	8	2	10	2		
from 5% to 10%	4	2								
from 10% to 20%	3	1								
from 20% to 30%										
over 30%										

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

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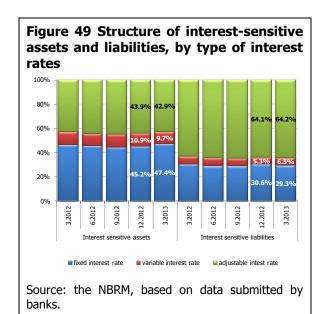
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<sup>&</sup>lt;sup>38</sup> If we consider the average monthly aggregate currency position of banks in the first quarter of 2013, eight banks have sustained aggregate long currency position and three banks have sustained aggregate short currency position.



### 3.4 Interest rate risk in the banking book

Interest rate risk in the banking book remains marginal compared to other bank risks in the Republic of Macedonia. The high share of adjustable interest rates<sup>39</sup>, i.e. the banks' practice to adjust the level of interest rates according to their purposes and needs, cause this risk to maintain its modest and limited role in the first quarter of 2013. Avoiding the potential adverse effects of the changes in interest rates, banks continue to transfer the interest rate risk to customers of banking products (loans), turning it into credit risk.



# 3.4.1 Structure of interest-sensitive assets and liabilities

In the first quarter of 2013, positions with fixed interest rates have boosted their share in the structure of interest sensitive assets (47.4%), primarily due to the increase of positions with fixed interest rates on sight assets and investments in time deposits, as well as on loans (primarily foreign currency loans to domestic banks and loans to households). Moreover, positions with adjustable interest rates (42.9%) have a significant share in the structure of interest sensitive assets, and still dominate the structure of interest sensitive liabilities (64.2%).

Adjustable interest rates are fully included in demand deposits (99.9%), with a high share in loans (70.5%) and time deposits (65.5%), as the most prevalent financial instruments in the structure of interest sensitive assets and liabilities of banks, respectively. Most of the other financial instruments, which form the rest of the interest sensitive assets and liabilities, have fixed interest rates.

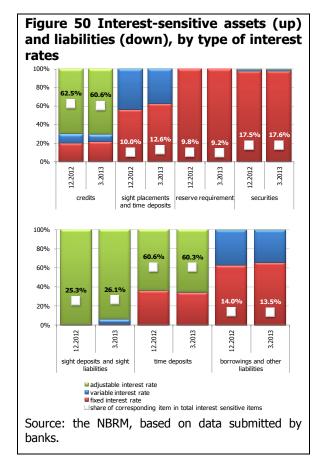
The gap between interest sensitive assets and liabilities is positive in positions with fixed and variable interest rate<sup>40</sup>, and negative in positions with adjustable

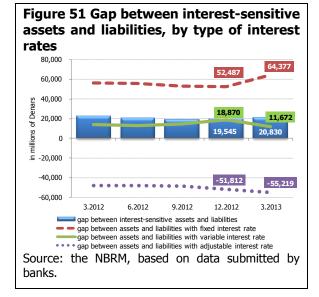
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<sup>&</sup>lt;sup>39</sup> Adjustment of interest rates is done unilaterally because of the changes in interest rate policy of the bank, rather than due to a particular interest rate. The use of adjustable interest rates ensures better management, avoidance or risk transfer and could serve as an instrument for managing liquidity and profitability.

<sup>&</sup>lt;sup>40</sup> The positive gap of fixed interest rate positions arises from the fact that this type of interest rate prevails in most items of interest-sensitive assets, namely in allocated reserve requirement (100%), securities (97.5%) and banks' investments in deposits (87.2%). The positive gap in the positions with variable rates results from the fact that a large portion (76.9%) of sight assets (primarily in foreign banks) have variable interest rates.







**interest rate**<sup>41</sup>. The gap in positions with fixed interest rates widened due to the faster increase of time deposits (primarily short-term Denar deposits with the central bank) and loans with fixed interest rates (primarily foreign currency loans to domestic banks and loans to households), despite the increase of banks' liabilities on loans with fixed interest rates, and the reduction of short-term corporate deposits in foreign currency.

Expanding the negative gap in the positions with adjustable interest rates results from the reduction of long-term Denar loans with FX clause to companies on the assets side, and the more substantial increase of time deposits (primarily long-term household deposits in denars and foreign currency) on the liabilities side. However, this expansion does not imply greater exposure of the banking system to interest rate risk because of the nature of this kind of interest rates, i.e. the possibility for banks to change interest rates in accordance with their needs.

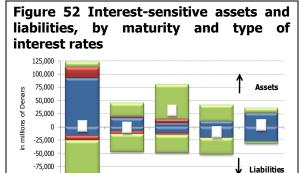
Due to the reduction of loans with variable interest rates on the assets side and the rising sight liabilities (primarily on current accounts and corporate demand deposits in foreign currency) on the liabilities side, the gap in the positions with variable interest rates narrowed.

The gap (positive) between total interest sensitive assets and liabilities is the largest in the maturity bucket from three to six months and arises from the unequal share of positions with adjustable interest rates. These interest rates are most common in almost all maturity buckets in both assets and liabilities (excluding interest sensitive assets in the maturity bucket to one month and interest sensitive assets and liabilities in the maturity bucket of over a year, where positions with fixed interest rates are paramount). The maturity structure of positions with adjustable interest rates indirectly reflects the expectations

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<sup>&</sup>lt;sup>41</sup> The negative gap in positions with adjustable interest rates stems from the fact that a significant portion of time deposits (65.5%) and almost all sight liabilities (94.2%) have adjustable interest rates.





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

☐gap between interest-sensitive assets and liabilities

■ adjustable interest rate
■ variable interest rate
■ fixed interest rate

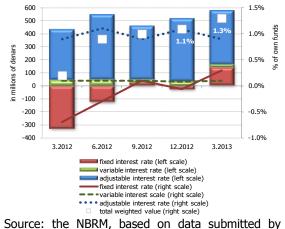
up to 1 month 1-3 months 3-6 months 6-12 months over one year

-100,000

-125,000

banks.

Figure 53 Net weighted value (left scale) and total weighted value of banking book to own funds ratio (right scale), by type of interest rates



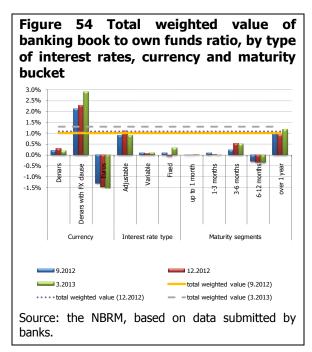
of banks for the period until the next interest rate "adjustment", which is expected in three to six months for assets with adjustable interest rates, and in a month for liabilities with adjustable interest rates.

In the remaining maturity buckets (especially in the maturity buckets of up to one month, one to three months and over a year) there is a high degree of equilibrium between total interest sensitive assets and liabilities.

### 3.4.2 Weighted value of banking book

Though the total weighted value of the banking book increased (by Denar 91 million) as at 31 March, 2013, it remains an irrelevant indicator of banks' exposure to interest rate risk, because most of the positive weighted value of the banking book arises from the weighted position with adjustable interest rate.

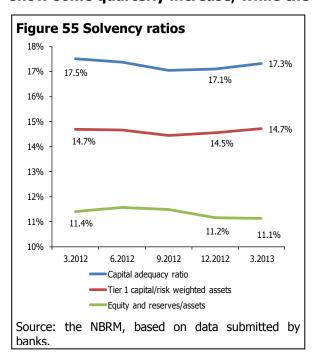




The total weighted value of the banking book<sup>42</sup> covers only 1.3% of own funds of the banking system, while analyzing by bank, the ratio between the total weighted value and own funds ranges from 0.1% to 10.1%, with median of 2.2%. This ratio will remain low until no restrictions (e.g., regulatory)<sup>43</sup> are imposed on the application of adjustable interest rates on credits and deposits.

#### 3.5 Insolvency risk

The capital adequacy ratio and the core capital to risk-weighted assets ratio show some quarterly increase, while the rate of capitalization of the banking system



reduced marginally. Banks' own funds decreased, as a result of the negative financial result in the first quarter of 2013. Capital requirements for covering risks also registered a quarterly decline attributable to the contraction of net currency position in euros and quarterly decrease of total receivables from companies and off-balance sheet claims on banks. The banking system remained resilient, although the stresstest results as at 31 March, 2013 are slightly weaker compared with the end of 2012 and with 31 March, 2012.

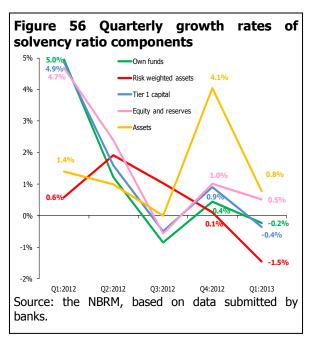
<sup>&</sup>lt;sup>42</sup> The total weighted value of the banking book is obtained by aggregating the net weighted value of each bank. Analyzing by bank, the net-weighted value of the banking book to bank's own funds ratio may equal 20%.

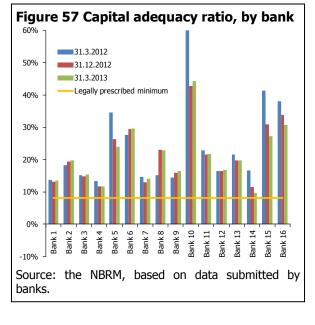
<sup>&</sup>lt;sup>43</sup> The current legislation regulating this area is inconsistent regarding the use of clauses for unilateral adjustment of interest rates, i.e. it does not contain provisions for determining and changing interest rates or a definition of variable interest rates.



## 3.5.1 Solvency and capitalization ratios of the banking system

In the first quarter of 2013, the capital adequacy ratio and the core capital to risk-weighted assets ratio increased by 0.2 percentage points, each. At the same time, the capital and reserves to total assets ratio decreased by 0.1 percentage points. All solvency ratio components show slower quarterly growth rates compared to the last quarter of 2012, with own funds, core capital and risk-weighted assets registering a certain quarterly decline<sup>44</sup>.





In the first quarter of 2013, the capital adequacy ratio of nine banks that account for 79% of the total assets of the banking system, increased.

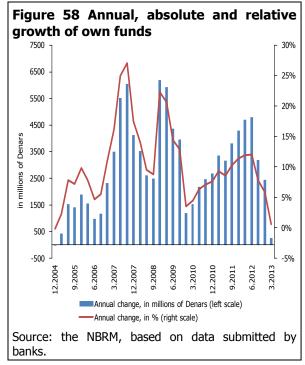
## 3.5.2 Developments and quality of own funds of the banking system

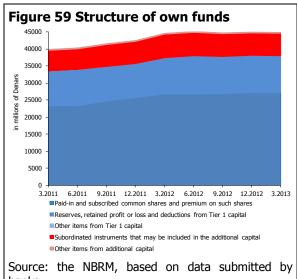
In the first quarter of 2013, the own funds of the banking system declined by Denar 106 million, or 0.2%. Annually, 31 March, 2012 - 31 March, 2013, own assets increased by Denar 245 million, or 0.6%, representing the lowest annual growth in the last eight years. The quarterly reduction of own funds results from the negative financial result in the first quarter of 2013, which caused an increase of the item "loss at the end of the year or current loss" of Denar 430 million. Significant, but absolutely slower increase of Denar 282 million, was noted in the item

<sup>&</sup>lt;sup>44</sup> Opposite signs of the quarterly growth of capital and reserves, compared to the banks' core capital are most influenced by changes in a bank of the group of large banks, which decided to retain the earnings from 2012 on the capital and reserves positions, but as available for distribution to shareholders, which prevented its inclusion in the core capital and own funds.

<sup>&</sup>lt;sup>45</sup> Item "loss at the end of the year or current loss" is deductible from the banks' core capital.







Note: The figure does not show deductions from the core and supplementary capital.

"reserves and retained profit or loss", resulting from the reinvestment of a portion of the profits in 2012, reported by three banks<sup>46</sup>. With the annual meetings of banks, one could expect that in the coming months of 2013, other banks will also reinvest their profits earned during 2012, making positive effect on the amount and quality of own funds.

The allowed amount of subordinated instruments in the structure of additional capital of the banking system recorded a quarterly growth of Denar 54 million<sup>47</sup>.

More details about the level of own funds of individual groups of banks are presented in Annex 33.

#### 3.5.3 **Developments and structure** of capital requirements and available capital of the banking system

In the first quarter of 2013, the capital requirements<sup>48</sup> of the banking system declined by Denar 305 million, or 1.5%. On an annual basis, the capital requirements increased by Denar 314 million, or 1.6%, representing the lowest annual growth recorded in the last ten The quarterly decline of requirements is a result of the reduction of capital requirements for credit risk (of Denar 173 million or 1%) and currency risk (of Denar 186 million, or 28.2%). Despite such developments, capital requirements for operational risk increased by Denar 53 million (or 2.4%).

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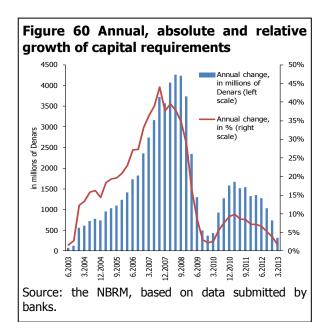
<sup>&</sup>lt;sup>46</sup> Simultaneously, two banks allocated the loss incurred in 2012, increasing the accumulated loss from previous

years.

47 A bank of the group of medium banks began to include one of the existing subordinated instruments (invested in October 2009) in the determination of own funds, since, in the first quarter of 2013, the features of this instrument were adjusted to the regulatory requirements for its inclusion in the calculation of the supplementary capital (subordinated instrument was included in the calculation of the bank's own funds in the amount of Denar 99 million). Moreover, the parent entity of a bank of the group of small banks invested a subordinated instrument of Denar 9 million. On the other hand, the eligible amount of subordinated instruments in two banks declined by Denar 57 million quarterly. There were minor changes in the amount of subordinated instruments in other banks, due to exchange rate differences.

<sup>&</sup>lt;sup>48</sup> Capital requirements are determined at the level of 8% of risk weighted assets.





The quarterly decline of capital requirements for credit risk arises mostly from the declining claims on other companies and from the off-balance sheet claims on banks. On the other hand, the overall balance sheet and off-balance sheet exposure of the banking system recorded a quarterly growth which is mostly a result of the rising claims on central governments and central banks (primarily based on investments in domestic treasury bills and deposits with the National Bank), which are not included in the calculation of the capital requirements for credit risk. These changes indicate increased caution of banks in the first guarter of 2013, when investing and taking new risks.

Categories of exposure	Quarterly change (31.12.2012- 31.3.2013) of the total balance and off balance sheet exposure (net of impairment losses)					
	In millions of Denars	In %	31.12.2012	31.03.2013	Quarterly change (31.12.2012-31.3.2013)	
					In millions of Denars	In %
Claims on central banks and central	4,240	5.7%	0	0	0	0.0%
governments	.,2 .0	517 70	Ů	ŭ	Ů	0.070
Claims on local self-government and regional	114	12.8%	36	37	1	2.8%
government Claims on public institutions	848	26.5%	97	105	8	8.2%
Claims on multilateral development banks and international organizations	0	/	0	0	0	/
Claims on banks	-109	-0.3%	1,063	1,011	-51	-4.8%
Claims on other companies	-1,357	-1.2%	7,571	7,404	-167	-2.2%
Retail credit portfolio	-16	0.0%	5,079	5,103	24	0.5%
Claims secured by residential property	552	6.4%	386	420	34	8.8%
Claims secured by commercial real estate	1,381	5.0%	2,029	2,090	61	3.0%
Holdings in investment funds	0	0.0%	1	1	0	0.0%
Other positions	-1,354	-3.0%	1,622	1,540	-81	-5.0%
Total	4,299	1.0%	17,883	17,710	<i>-173</i>	-1.0%

Quarterly reduction of capital requirements for currency risk arises from the narrowing of the net long currency position in euros, which is mostly due to the decline of assets in euros (by Denar 2,470 million), with simultaneous increase in liabilities in euros (by Denar 1,825 million)<sup>49</sup>.

<sup>&</sup>lt;sup>49</sup> Determined in accordance with the applicable Decision and Instructions for the implementation of the Decision on the methodology for determining capital adequacy.

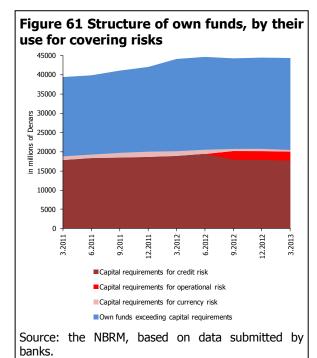


Table 7 Capital requirements for covering currency risk, by net currency positions by currency

in millions of Denars

Capital requirements for currency	31.12.2012		Quarterly change (31.12.2012-31.3.2013)		
risk arising from the following net- positions:			In millions of denars	In %	
Net positions in foreign currency	658	472	-186	-28.2%	
- EUR	621	417	-204	-32.9%	
- USD	1	23	22	1504.1%	
- CHF	5	11	6	134.3%	
- Other	31	22	-9	-29.5%	
Net positions in gold	0.003	0.003	0	0.0%	
Total amount of capital requirements for currency risk	658	472	-186	-28.2%	

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



The increase of capital requirements for operational risk in the first three months of 2013 solely results from banks that calculate this capital using the basic indicator approach, mostly resulting from lower fee costs. Since the regulations require the basic indicator to be calculated on an annual basis for the period ending at the end of the financial year (31 December), changes in the level of capital requirement for operational risk arise from the audit of annual financial statements of banks.

The faster quarterly decline of capital requirements compared with the reduction of own funds contributed to the quarterly growth of available capital above the minimum level required to cover risks (of Denar 199 million or 0.8%), thus boosting its share in total own funds from 53.3% to 53.8%.

More details about the level of capital required to cover risk and capital adequacy ratio, by groups of banks are presented in Annex 34.



# 3.5.4 Stress testing of the resilience of the banking system to hypothetical shocks

Simulations to test the resilience of the banking system and individual banks in the Republic of Macedonia to simulated shocks indicate poorer results compared to the end of 2012 and to 31 March, 2012. However, the capital adequacy ratio of the banking system does not fall below 8% in any of the simulations, but in case any of the simulated shocks come true, some banks need to recapitalize. Most frequently, the shocks on the side of credit risk have the greatest impact on the stability of the banking system.



Table 8 Results of the stress-test simulations of the resilience of the banking system and individual banks to hypothetical shocks as at 31 March, 2013

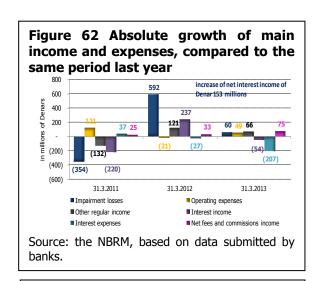
individual banks to hypothetical shocks, as at 31 March, 2013					
Simulations	Capital adequacy ratio (CAR) at the banking system level, after simulation	Number of banks with CAR after simulation below the CAR of the overall banking system after simulation (number of banks with CAR after simulation below 8%)			
Credit shock		I.			
Increase in the credit risk exposure classified in the		2 (2)			
risk categories C, D and E by 30%	14.4%	8 (2)			
Increase in the credit risk exposure classified in the	12.4%	7 (4)			
risk categories C, D and E by 50%	12.170	, (1)			
Increase in the credit risk exposure classified in the	9.1%	7 (6)			
risk categories C, D and E by 80%  Transfer of 10% of the credit exposure classified in					
the risk categories A and B to the risk categories C,	0.504	7.5			
D and E, where the transferred credit exposure is	8.6%	7 (5)			
distributed equally					
Simultaneous reclassification in the risk category C					
of the five largest credit exposures to nonfinancial	14.4%	6 (1)			
entities (including the connected persons)					
Combination of credit and foreign exchange sho Increase in the credit risk exposure in the risk	CK				
categories C, D and E by 50% and depreciation of					
the foreign exchange rate of the Denar relative to	12.4%	7 (4)			
the Euro by 20%					
Increase in the credit risk exposure in the risk					
categories C, D and E by 80% and depreciation of	9.1%	7 (6)			
the foreign exchange rate of the Denar relative to	51-15				
the Euro by 30%  Transfer of 10% of the credit exposure classified in					
the risk categories A and B to the risk categories C,					
D and E, where the transferred credit exposure is	0.70/	6 (5)			
distributed equally and depreciation of the foreign	8.7%	6 (5)			
exchange rate of the Denar relative to the Euro by					
30%					
Appreciation of the Denar exchange rate relative to	17.3%	7 (0)			
the Euro and the US Dollar by 20%,		` '			
Combination of credit and interest rate shock		Г			
Increase in the credit risk exposure in the risk categories C, D and E by 80% and increase in the					
interest rates of individual asset and liabilities, on-	9.2%	7 (6)			
balance sheet and off-balance sheet positions by 1 -					
5 percentage points					
Combination of credit, foreign exchange and int	erest rate shock				
Increase in the credit risk exposure in the risk					
categories C, D and E by 50%, depreciation of the					
foreign exchange rate of the Denar relative to the Euro by 20% and increase in the interest rates of	12 50/	7 (2)			
individual asset and liabilities, on-balance sheet and	12.5%	7 (2)			
off-balance sheet positions by 1 - 5 percentage					
points					
Increase in the credit risk exposure in the risk					
categories C, D and E by 80%, depreciation of the					
foreign exchange rate of the Denar relative to the					
Euro by 30% and increase in the interest rates of	9.2%	7 (6)			
individual asset and liabilities, on-balance sheet and off-balance sheet positions by 1 - 5 percentage					
points					
Capital adequacy ratio (CAR), before simulation: 17.3%		ı			

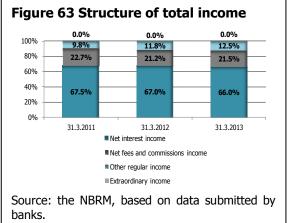
Number of banks with CAR before simulation below the CAR of the overall banking system before simulation: 7 Source: the NBRM, based on data submitted by banks.



#### 3.6 Profitability

In the first three months of 2013, the Macedonian banking system reported an overall negative financial result of Denar 42 million. However, compared with the same period last year, the loss is lower by Denar 187.9 million. The number of banks that reported a negative financial result decreased from nine to seven<sup>50</sup> with their share in total assets decreasing from 34.3% as at 31 March, 2012 to 31.7% as at 31 March, 2013. Major triggers of the loss reduction are the increase of total regular income and slower growth of net impairment and operating costs. Despite the positive trends, the impairment and operating costs exceeded the total income, which is a reason behind the banks' insignificant loss. In April 2013, the banking system in the Republic of Macedonia reported an overall positive financial result, which as at June 2013 reached Denar 351.4 million.





# 3.6.1 Developments and structure of income and expenses of the banking system

In the first quarter of 2013, the total income of banks (total regular income<sup>51</sup> and extraordinary income) rose by Denar 294.5 million, i.e. 7.3%. The increase of total income of banks reflects the increase of almost all income components, with the exception of the fall of extraordinary income that have negligible share in the total revenues (Annex 3). Net interest income increased by Denar 152.9 million or 5.7% due to the reduction of interest expense which surpasses the decrease of interest income, on an annual basis. Growth of net income from fees and compensations of Denar 75.4 million (or 8.8%) contributed 25.6% to total income growth. The increase of other regular income<sup>52</sup> (of Denar 66.2 million, or 14.0%) is attributable to the increase of net income from exchange rate differences, the release of special reserve for offbalance sheet exposure and the increased income from other sources.

The **structure of total income** registered no significant changes during the first

<sup>&</sup>lt;sup>50</sup> One bank earned profits, while the bank that reported losses was acquired by another bank.

<sup>&</sup>lt;sup>51</sup> Total regular income includes: net interest income, net fee income and other regular income (net trading income, net income from financial instruments carried at fair value, net income from exchange rate differentials, income based on dividends and capital investments, net gains from sale of financial assets available for sale, capital gains from asset sales, release of provisions for off-balance sheet items, release of the remaining provisions, income from other sources and income based on collected receivables previously written off).

<sup>&</sup>lt;sup>52</sup> Other regular income contributed 22.5% to the increase of total banks' income.



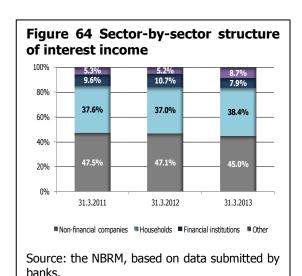


Figure 65 Sector-by-sector structure of total expenses 100% 12.8% 14.9% 13.3% 10.0% 10.3% 9.3% 65.4% 63.4% 65.4% 40% 20% 11.8% 12.3% 11.0% 0% 31.3.2011 31.3.2012 31.3.2013 Households ■ Non-financial companies

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

■ Other

■ Financial institutions

three months of the year. The share of net interest income is still the largest (66%), making the most significant contribution of 51.9% to total income growth.

In the first quarter of the year, **interest income** decreased by Denar 53.6 million, or 1.1%, primarily due to the faster decrease of interest income from nonfinancial and financial companies. Interest income from **nonfinancial companies** fell by Denar 134.7 million or 5.9% due to the slower credit growth of banks to the corporate sector along with the increase of nonperforming loans on which no interest income is recognized, as well as because of the downward trend of lending rates. Interest income from **financial companies** dropped by Denar 137.3 million (or 26.6%), which is primarily attributed to lower banks' investments in CB bills and reduced interest rate on this instrument<sup>53</sup>.

contrast, interest income households increased by Denar 39.7 million, or 2.2%, which corresponds with the moderately increased credit activity to this sector. However, the most significant contribution to the growth of interest income was made by the interest income from other entities, which mostly derives from investments in treasury bills. These income registered an annual growth of Denar 164.3 million, i.e. 65.5%, due to the increased interest in subscribing treasury bills<sup>54</sup>. These developments increased the share of interest income from other entities and households in the sector structure of interest income.

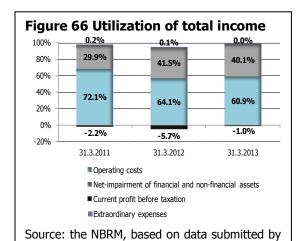
The increase of net interest income resulted from the reduction of **interest expenses** of Denar 206.5 million, or 9.2% of all sectors. The largest contribution of 43.8% was made by the interest expenses of the household

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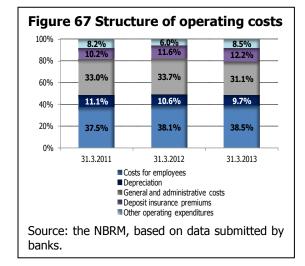
<sup>&</sup>lt;sup>53</sup> As at 31 March, 2012, banks' investments in CB bills amounted to Denar 40,416 million at an interest rate of 4.0%. As at 31 March, 2013, banks' investments in this instrument reduced to Denar 23,998 million at an interest rate of 3.42%.

<sup>&</sup>lt;sup>54</sup> Interest income from investments in treasury bills is included in the "interest income from other entities" which increased by 133.5 million, i.e. 79.0% in the first three months of 2013. As at 31 March, 2012, the amount of treasury bills totaled Denar 14,658 million, and as at 31 March, 2013 it was doubled, climbing to Denar 30,740 million.





banks.



sector, which decreased by Denar 90.4 million, or 6.3%, annually, due to the lower deposit interest rates, compared to March 2012, despite the growth of household deposits<sup>55</sup>. An additional contribution to the reduction of interest expenses of banks was made by the interest expenses to other entities, which decreased by Denar 63.5 million (or 18.9%)<sup>56</sup> and nonfinancial companies (by Denar 52.5 million or 18.9%). The decrease of interest expenses from nonfinancial companies results from the decreasing corporate deposits and lower interest rates.

The largest portion of total income of banks was spent to cover operating costs<sup>57</sup> and impairment. Compared with the first three months of 2012, their share in the total income of banks decreased by 3.2 and 1.4 percentage points, respectively.

Banks' operating expenses increased by Denar 49.2 million (1.9%), with the steepest increase of Denar 68.1 million, or 44.1%, being reported by the group of other operating expenses<sup>58</sup>. A pronounced annual increase of Denar 28.3 million (2.9%) was registered in the staff costs and in the deposit insurance premiums (of Denar 22.0 million or 7.4%), corresponding to the annual growth of banks' deposits. Within the banks' operating costs, the general and administrative expenses decreased rapidly by Denar 50.9 million (5.8%).

Impairment is a relevant factor for the negative financial result of the banks. The growth of net impairment of the overall banking system slowed down (by Denar 60 million, or 3.6%), solely due to the increase of

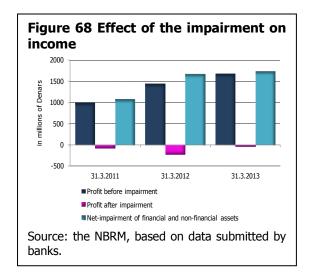
<sup>&</sup>lt;sup>55</sup> Of these, the reduction of interest expense on short-term and long- term Denar deposits was the most significant, which experienced the largest decline of interest rates of 1.2 and 1.0 percentage points, respectively.

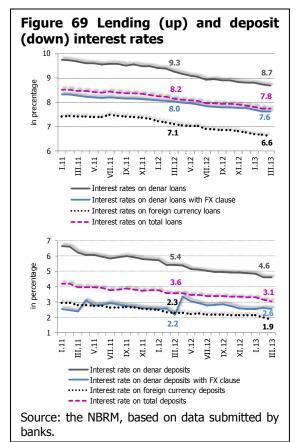
<sup>&</sup>lt;sup>56</sup> Largely attributable to the decrease of interest expense to nonresidents, primarily nonresidents - financial companies.

<sup>&</sup>lt;sup>57</sup> Operating costs include: staff costs, depreciation, general and administrative expenses, deposit insurance premiums and other expenses, except extraordinary expenses.

<sup>&</sup>lt;sup>58</sup> Other operating costs include: special reserve for off-balance sheet exposure, other provisioning and expenses on other grounds (expenses from previous years, income taxes and contributions, expenses for fines, fees and court decisions and other costs). The growth of these costs is mostly due to the additional provisions for contingent liabilities arising from litigation of a bank and increased expenditures on other grounds of two banks.







impairment of nonfinancial assets<sup>59</sup>. For comparative purposes, the same period last year, net impairment for financial and nonfinancial assets increased by Denar 592.2 million (or 54.8%). Net impairment for financial assets decreased by Denar 48.3 million (3.0%) annually. Analyzing the profit before impairment for financial and nonfinancial assets, it would amount to Denar 1,692 million, or by Denar 247.9 million (17.2%) more than the profit before impairment in the same period last year.

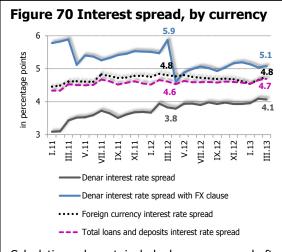
### 3.6.2 Interest rate and interest spread

The trend of gradual reduction of lending and deposit interest rates continued during the first quarter of 2013, given the cut of the National Bank's policy rate and the EURIBOR. The largest interest rate cut was made in Denar loans and deposits.

Faster reduction of passive Denar interest rates compared to lending ones, broadened the interest rate spread between interest rates on loans and deposits in Denars, while the interest rate spread between interest rates on loans and deposits in Denar with FX clause decrease. Interest rate spread between foreign exchange interest rates remained unchanged. Given such changes in interest rate spreads, in March 2013 the interest rate spreads became closer, especially those in foreign currency and in denars with FX clause.

<sup>&</sup>lt;sup>59</sup> At the end of the first quarter of 2013, impairment of nonfinancial assets reached Denar 158 million, which is an annual increase of Denar 108.4 million, or 2.2 times. The increase of this type of impairment mainly results from the Decision amending the Decision on the accounting and regulatory treatment of foreclosed assets ("Official Gazette of the Republic of Macedonia" no. 74/2012) in June 2012 according to which banks are required to recognize impairment losses on assets foreclosed until 1 January, 2010 in the income statement, in the amount of at least 20% of their value (according to precise rules in the above decision) not later than 1 January 2013.





Calculations do not include loans on overdrafts and credit cards.

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

## 3.6.3 Banks' profitability and efficiently ratios

Reduced loss of banks in the first quarter of 2013 narrowed down the negative values of the **rates of return on assets (ROAA) and equity (ROAE).** Although still negative, the profit margin<sup>60</sup> of the banking sector also improved.

The coverage of impairment of financial and nonfinancial assets accounts for 60.7% of the net interest income, which is slightly less than the previous year. This indicator showed an improvement in the group of large banks and deterioration in the medium-sized banks.

Indicators	Banking system		
Indicators	31.3.2012	31.3.2013	
Rate of return of average assets (ROAA)	-0.3%	-0.05%	
Rate of return of average equity (ROAE)	-2.5%	-0.49	
Cost-to-income ratio	64.1%	60.9%	
Non-interest expenses/Total regular income	70.6%	66.49	
Labour costs /Total regular income	24.4%	23.49	
Labour costs /Operating expenses	38.1%	38.59	
Impairment losses of financial and non-financial assets /Net interest income	62.0%	60.79	
Net interest income /Average assets	3.2%	3.29	
Net interest income /Total regular income	67.0%	66.09	
Net interest income /Non-interest expenses	94.9%	99.49	
Non-interest income/Total regular income	33.0%	39.5%	
Financial result/Total regular income	-5.7%	-1.09	

Operational efficiency also improved, except for the group of medium-sized banks (Annex 35). Other costs to total regular income ratios also improved compared with the same period last year, while the interest margin remained unchanged.

<sup>&</sup>lt;sup>60</sup> Profit margin is operational profit (loss) to total regular income ratio.



### **ANNEX**