NATIONAL BANK OF THE REPUBLIC OF MACEDONIA

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

May, 2012

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Summary

The banking sector and the Macedonian economy, as a small and open economy, are inevitably sensitive to developments in the international environment. In 2011, amid the turbulent external environment and the high degree of uncertainty regarding the future development of the debt crisis in the Euro area, banks in the Republic of Macedonia proved extremely prudent and managed to maintain their security and stability.

The activities of banks, though slower than in the previous year, continued to grow, which reflected positively on further increasing the level of financial intermediation in the country. Growth of bank activities was mainly supported by banks' core deposit growth, primarily from households. Growth of deposits slowed down to a certain extent, which generally corresponded with the slower economic growth in this period. But given the relatively favorable domestic environment, during 2011, economic entities continued to increase their saving in domestic currency, which as a trend, begun in late 2009.

Banks directed a significant part of the sources of funds growth toward credit support of the real sector. However, despite certain acceleration, at the end of 2011, banks' credit activity registered a single-digit growth rate. The still present restraint of banks from lending is closely associated with the uncertainty caused by the debt crisis in the Euro area, especially the uncertainty regarding the future trend of domestic economic activity. In conditions of stable domestic sources of banks' financing, beside the intensity of the movements related to the debt crisis and the stability of macroeconomic environment, the quality of the projects that require credit support will play a significant role for the future lending activity.

Also in 2011, banks proved to be extremely cautious and they used part of the expansion of the deposit potential for further strengthening of their liquidity position through investments in low-risk domestic securities and on accounts in foreign banks. The relatively higher yield on Denar in comparison with foreign exchange liquid financial instruments caused a slightly more pronounced tendency of banks to invest in Denar liquid instruments. A positive trend in 2011 was the increased share of long-term in the total sources of financing of banks, and the banks' reduced dependence on non-resident sources of funding.

Macedonian banking system has a stable and high solvency and capitalization, which were further improved during 2011. Banks' capital adequacy ratio was more than twice over the prescribed minimum level and provides sufficient capacity to absorb any adverse shocks of further increasing the risks. It is supplemented by the high quality of banks' own funds, which mostly consist of positions that are part of the core capital. Also, different stress-test simulations, through which the resistance of the banking system to hypothetical adverse shocks (impacts) is analyzed, showed satisfactory resilience of the banking system and individual banks even in case of simultaneous materialization of credit, currency and interest rate risks of extreme character. Macedonian banks had no need of government financial support or recapitalization in the past few years and thus there was neither formal nor informal government capital intervention in the domestic banking sector.

In 2011, the level of risks in the banking sector remained in a controlled framework. However, the dominant risk in the banks' operations, the credit risk, registered some increase, which was evident from the growth of nonperforming loans and the subsequent deterioration of

the loan portfolio quality indicators. However, the risks of deteriorating quality of the loan portfolio are mitigated, having in mind the full coverage of nonperforming loans with allocated impairment and special reserve. On the other hand, banks' activities toward improving the systems for managing credit risk at the time of the approval of the credit exposure have been reinforced, which is an inevitable factor for the loan portfolio quality. An important factor for the future banks' loan portfolio quality is also the so-called indirect credit risk. This risk arises from the practice of banks to use protective clauses in the loan agreements (through the wide use of foreign exchange clauses and the so-called adjustable interest rates) whereby they avoid the direct effects of the possible changes in exchange rates and interest rates but not the impact of their change on the future ability of borrowers to settle their debts.

Maintaining a stable and high liquidity position, and the increased credit risk during 2011, led to reduced profitability of the banking system. Profit shown at the end of the year is only half of that achieved in the previous year. Lower profitability of the banking system is mainly due to the higher impairment as well as the growth of operating costs, despite the higher levels of total operating income. Reduced profitability of banks in 2011, adversely reflected on the indicators of return on assets and equity. Also, further upward trend in operating costs led to reduced operating efficiency of banks, i.e. their ability to raise revenues to cover costs of operation.

Whatever the reliability and stability, the National Bank continues to monitor the situation in the banking system, regularly and closely. The necessity for this is only confirmed in conditions of still present uncertainty regarding future developments in the global and domestic macroeconomic environment. The National Bank, as before, will take all necessary measures to maintain the security and stability of the banking sector.

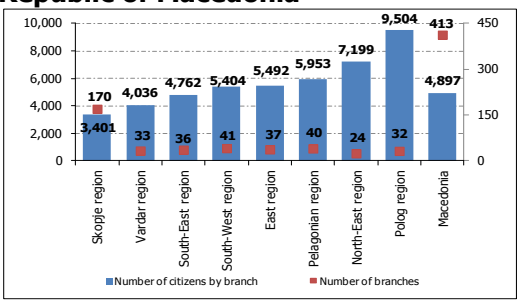
I. Structure of the banking system

As of December 31, 2011, the banking system in the Republic of Macedonia consisted of seventeen banks and eight savings houses. In comparison with December 31, 2010, the number of banks decreased by one bank (as a result of the acquisition of one bank by another)[1], while the number of savings houses remained unchanged[2].

For analytical purposes, the National Bank classifies the banks into three groups according to the size of their assets. The limits between different groups of banks are corrected for the average annual growth rate of total assets of the banking system for the previous four quarters. Correction of limits is done once a year (end of year). As of December 31, 2011, the limits between individual groups of banks equaled: Denar 6.2 billion (between the groups of small and medium banks) and Denar 25.1 billion (between the groups of medium and large banks).

1. Access to banking services

Figure 1 Bank network by region in the Republic of Macedonia



Note: The counters of the banks (except the counters of the Public Company "Macedonian Post") are also included.
Source: NBRM on the basis of data obtained from the banks, State Statistical Office of the Republic of Macedonia according to the official data from the Census carried out in 2002.

The banking network is spread across almost all cities in the country and consists of 413 business units (including banks' headquarters). Compared with the previous year, the number of business units of banks fell by twenty-three (twenty-six closed and three newly opened business units). The largest reduction was registered in the Pelagonia region (by 11 business units[3]), then in the region of Skopje and in the eastern region (by 5 business units), while the reduction in the northeast and Polog region is smaller (3 and 2 business units, respectively). On the other hand, in the southwestern region, the number of business units increased by three. **The geographic distribution of banking network did not register any changes and the concentration is still highest in the Skopje region** (41.2% of the banking network). Despite the reduced number of business units in this region, the changes were minor and on average, one business unit renders services to the smallest number of inhabitants, compared with the other

[1] Based on the Decision of the Governor of the National Bank of the Republic of Macedonia no. 5082 of December 07, 2010 a license was issued for status change - acquisition of "Stater Banka" AD Kumanovo by "Centralna Kooperativna Banka" AD Skopje. On January 03, 2011, the acquisition was recorded in the Central Registry of the Republic of Macedonia, and "Stater Banka" AD Kumanovo was deleted from the Registry.
[2] This Report focuses exclusively on banks because of their dominant share in the activities of deposit institutions. The share of savings houses remained insignificant and it is only 1.0% of the total assets of the banking system, 1.4% of the total loans and 0.3% of the total deposits of natural persons in Denars and in Denars with FX clause.
[3] The reduced number of business units in Pelagonia was mostly a result of the developments in two medium banks. These changes led to an increase in the number of persons using the services of one business unit in the Pelagonia region by 1,284 people.

regions. On the other hand, in the Polog region one business unit renders services to the largest number of inhabitants, on average, and in 2011, that number further increased by 599 people per business unit.

Credit institutions and their business units in the Republic of Macedonia, on average, render services to more residents compared with the countries of the European Union or even twice the average for one business unit in the EU[4]. According to the number of inhabitants per credit institution, Macedonia is in the middle of the list of analyzed countries, while according to the number of inhabitants obtaining services by one business unit, it holds a significantly lower position. Compared with the countries of the region, in the Republic of Macedonia (except Montenegro), the average number of inhabitants obtaining services by one credit institution is the lowest. On the other hand, according to the number of inhabitants obtaining services by one business unit, only Albania holds lower position than Macedonia.

Table 1 Comparative indicators for the nubmer of citizens per credit institution and for operasting units per credit institution

Country	Number of citizens by credit institution	Country	Number of inhabitants per business unit by credit institution
Austria	10,934	Spain	1,065
Malta	15,937	Bulgaria	1,269
Germany	43,099	France	1,661
Hungary	52,986	Italy	1,794
Sweden	53,375	Austria	2,008
Poland	54,525	Germany	2,071
Montenegro	56,037	Belgum	2,652
Netherlands	57,753	Greece	2,823
Estonia	78,831	Poland	2,823
Italy	80,027	Hungary	2,867
Slovenia	81,879	Serbia	2,928
Macedonia	**82,291**	Slovenia	2,950
France	98,022	Montenegro	3,237
Belgum	100,369	Croatia	3,458
Croatia	133,701	Romania	3,478
Spain	137,281	Malta	3,667
United Kingdom	166,292	Slovakia	4,432
Slovakia	174,998	**Macedonia**	**4,613**
Czech Republic	181,152	Sweden	4,822
Greece	194,916	Czech Republic	5,280
Albania	199,688	Netherlands	5,787
Serbia	215,778	Albania	6,040
Bulgaria	243,991	Estonia	6,634
Romania	523,468	United Kingdom	н.п.
ЕУ 27	н.п.	ЕУ 27	2,168

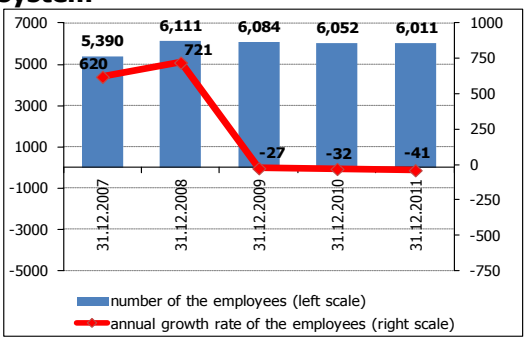
Note: The data for Macedonia and Montenegro refers to 31.12.2011, for Serbia and Croatia refers to 30.09.2011 and 30.06.2011, respectively while the data for all other countries refers to 31.12.2010.

Source: NBRM, State Statistical Office of the Republic of Macedonia, www.dbresearch.com, Bank of Albania (Supervision Annual Report 2010), Croation National bank (Pokazatelji poslovanja kreditnih institucija), www.epp.eurostat.ec.europa.eu, National bank of Serbia (Извештај за III тромесечје 2011 године), State Statistical Office of Serbia.

[4] Data on the number of inhabitants in Macedonia is the last data in 2010, obtained by monitoring and analysis of demographic changes by the State Statistical Office of the Republic of Macedonia.

2. Employment in the banking system

Figure 2 Employment in the banking system



Source: NBRM on the basis of data obtained from the banks.

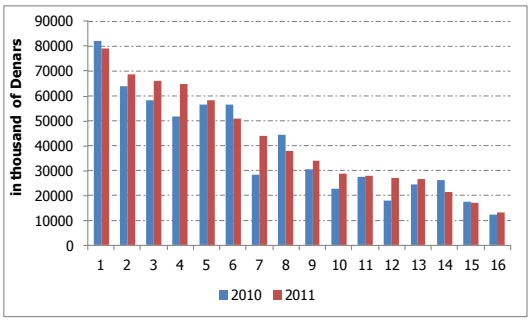
The downtrend in the number of employees in the banking sector continued. In 2011, the number of employees in banks fell by 41 people (163 people stopped working, as opposed to 122 new jobs). The reduced number of employees was mostly a result of the change in this number in one medium bank (80 employees), one large bank (46 employees) and one small bank (36 employees)[5]. On the other hand, the largest increase in the number of employees was recorded in one medium bank (34 employees).

Table 2 Qualification structure of people employed in the banking system

	whole banking system				
Education degree	**31.12.2007**	**31.12.2008**	**31.12.2009**	**31.12.2010**	**31.12.2011**
PhD and MSc	1.6%	1.9%	2.4%	2.8%	4.0%
University ed.	47.0%	53.5%	57.1%	60.0%	61.6%
College ed.	5.7%	5.0%	4.9%	4.7%	4.3%
High school ed	44.0%	38.6%	34.7%	31.6%	29.4%
Other	1.8%	1.1%	0.9%	0.8%	0.7%

Source: NBRM on the basis of data obtained from the banks

Figure 3 Assets per employee



Note: MBDP is not included in the analyses due to the specific character of the activities carried by this bank.
Source: NBRM on the basis of data obtained from the banks.

The reduction in the number of employees has led to increased efficiency, expressed by the increased amount of assets per employee by Denar 4.6 million. However, in five banks movements are opposite and suggest deteriorating efficiency[6] as measured by this indicator.

In 2011, the trend of qualitative improvement of the qualification structure of employees in the banking system continued. The number of employees with higher education levels increased by 140 people, which contributed to their increased participation in the qualification structure by 2.8 percentage points at the expense of the employees with

[5] The reduced number of employees in these banks is a result of rationalization of activities and / or the number of employees.
[6] These results were registered in one large, one medium and three small banks. In these banks activities were reduced in conditions of almost unchanged number of employees, except for one bank in which the number of employees increased by 18.

lower levels of education, whose number fell by 181 persons.

Corporate governance in banks

Pursuant to the Banking Law, corporate governance of banks consists of the following bodies: Assembly, Supervisory Board, Audit Committee, Risk Management Committee, Management Board, Internal Audit Department and compliance office(r)[7]. Moreover, according to the Decision on risk management, banks are obliged to appoint one or more persons or organize a separate organizational unit (one or more) responsible for risk management. Based on these legal provisions, each bank in the Republic of Macedonia has established its own system of corporate governance that suits the nature and scope of activities it performs.

The four most important bodies of the banks[8] have a total of 304 members, representing 5.1% of the total number of employees in banks at the end of 2011. The majority of these individuals are members of the Supervisory Board (102 members), which comprises approximately six persons[9]. Other bodies show greater diversity in terms of the number of members. As for the Risk Management Committee, seven banks have five members, four banks have seven members and two banks have four members.

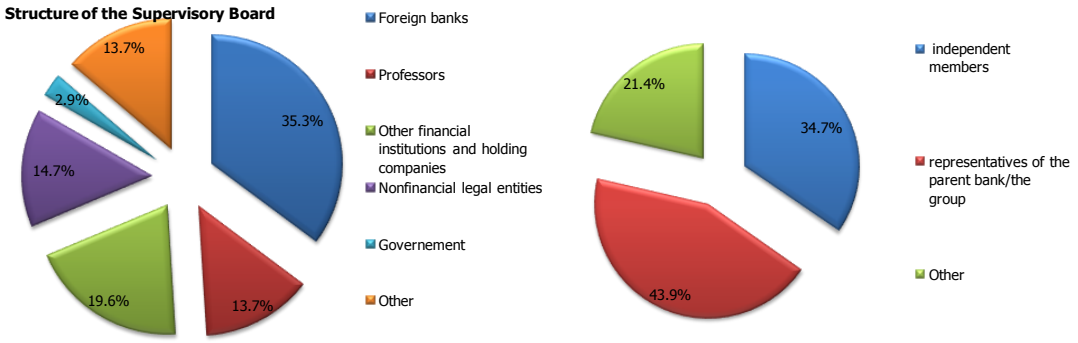
Average number of members	Large banks	Medium-sized banks	Small-sized banks	Banking system
Average nubmer of the Supervisory Board members	7	6	6	6
Average number of the Audit Committee members	5	5	5	5
Average numbers of the Risk Management Committee	6	4	4	4
Average numbers of the Management Board members	3	3	2	3
Members of the MB/members of the SB	0.50	0.48	0.35	0.44

Average number of the members with regard to the number of the emloyees	Large banks	Medium-sized banks	Small-sized banks	Banking system
Employees in the Internal Audit Department/Total number of employees	0.8%	1.7%	1.9%	1.2%
Comliance officers/Total nubmer of emloyees	0.8%	1.4%	2.7%	1.2%
Risk management officers/Total number of emloyees	1.3%	3.9%	2.6%	2.2%

Most members of the Supervisory Board are representatives of the parent entity or group to which the bank belongs (43 members or 43.9%). For these reasons, over half of the members of banks' Supervisory Boards, are employees or representatives of foreign banks and other

[7] The Law defines the minimum and maximum number of members of the Supervisory Board (five to nine members), the Risk Management Committee (three to nine members), the Audit Committee (five to nine members) and the Management Board (two to seven members).
[8] Supervisory Board (SB), Risk Management Committee (RMC), Audit Committee (AC) and Management Board (MB).
[9] All banks in the country have from five to seven members of the Supervisory Board.

financial institutions. Given the statutory requirement of at least one third of the members of the Supervisory Board to be independent members, these persons account for 34.7% of the total number of members of this Board (or a total of 34 persons).

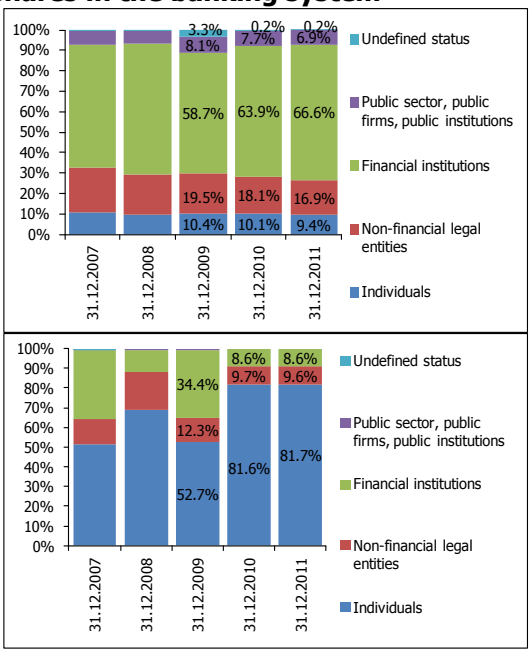


In view of the manner of functioning of the banks' Management Board, ten banks have two members of this Board as is the statutory minimum, and the remaining seven banks have from three to five members. Twelve banks envisaged division of responsibilities of individual members of the Board in their statutes, all banks have a separate organizational unit for risk management, while fourteen banks have a separate organizational unit for compliance control.

	Large banks	Medium-sized banks	Small-sized banks	Banking system
Delegations of the tasks among the members of the Management Board	3	6	3	12
Separate organizational unit for risk management	3	8	6	17
Compliance office	3	5	6	14
Total number of banks	**3**	**8**	**6**	**17**

3. Ownership structure of the banking system

Figure 4 Ownership structure of ordinary (up) and preference (down) shares in the banking system

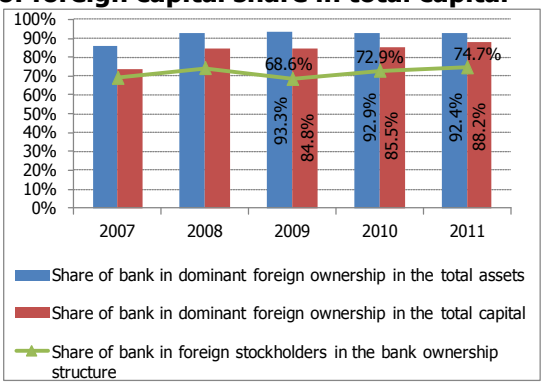


Source: NBRM on the basis of data obtained from the banks.

Note: "undefined status" refers to shares owned by entities that cannot be identified, which are under bankruptcy procedure, liquidation procedure or the bankruptcy/ liquidation procedure has been closed.

As of December 31, 2011, financial institutions have a dominant share in the ownership structure of the banking system. In 2011, their participation in the common shares rose by 2.7 percentage points as a result of the recapitalization of three banks. Contrary to the increased participation of financial institutions, the participation of non-financial legal entities and natural persons in the ownership structure of common shares decreased by 1.1 and 0.8 percentage points, respectively. The structure of the preferred shares did not register any changes and natural persons continue to have the greatest participation.

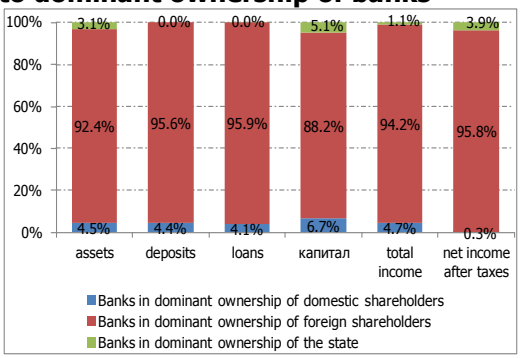
Figure 5 Banks' market share in dominant foreign ownership and trend of foreign capital share in total capital



Source: NBRM on the basis of data obtained from the banks.

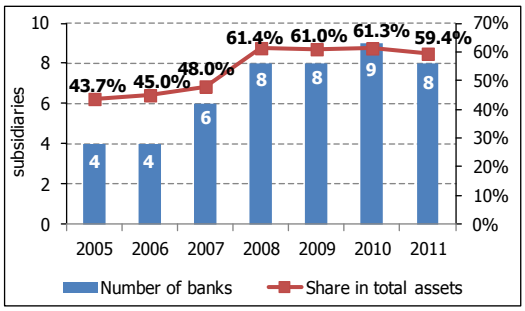
During 2011, foreign investments in the banking sector increased by Denar 2,037 million and amounted to Denar 4,765 million. Investments based on the recapitalization of three banks by their foreign shareholders (54.7%) had the largest share in the structure of foreign investments in 2011. Investments in subordinated deposit and purchase of existing shares (previously owned by domestic shareholders) accounted for 12.3% and 11.3%, respectively, of the total investments by foreign shareholders.

Figure 6 Structure of more important positions in banks' balances according to dominant ownership of banks



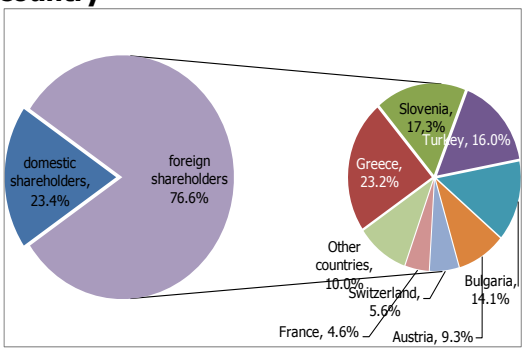
Source: NBRM on the basis of data obtained from the banks.

Figure 7 Dynamics of share of banks' subsidiaries assets in total assets



Source: NBRM on the basis of data obtained from the banks.

Figure 8 Banks' capital structure by country



Source: NBRM on the basis of data obtained from the banks.

As of December 31, 2011, thirteen out of seventeen banks in the Republic of Macedonia are predominantly owned by foreign shareholders. Compared with December 31, 2010, the number of banks in dominant ownership of foreign shareholders is reduced by one, due to the acquisition of "Stater Banka" AD Kumanovo by "Centralna Kooperativna Banka" AD Skopje (both in dominant foreign ownership).

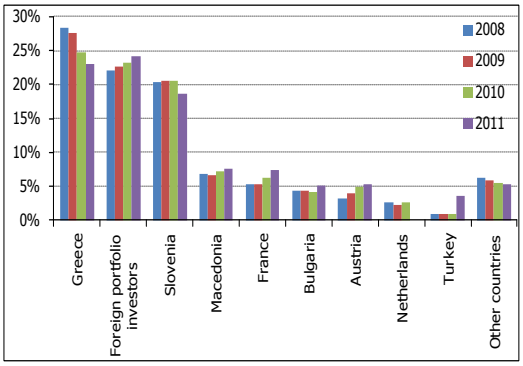
As a result of these changes, the number of branches of foreign banks reduced from nine to eight banks. At the end of 2011, market share (share in the total assets of the banking system) of subsidiaries of foreign banks declined by 1.9 percentage points and accounted for 59.4%.

Foreign capital originating from European Union Member States, dominates the foreign capital in the banking system of the Republic of Macedonia. However, at the end of 2011, its share dropped to 70.8% (from 76.6% in 2010) as a result of the increased participation of capital from Turkey[10]. According to the country of origin, shareholders from seven countries have individual share in the total foreign capital greater than 5%, five of which originate from the European Union. Shareholders from other

[10] In the last six months of 2011, the share of Turkish foreign capital in the total foreign capital increased by 8.2 percentage points.

countries have an individual share of less than 3.5%.

Figure 9 Market share (assets) of banks by country of origin of dominant shareholder



Source: NBRM on the basis of data obtained from the banks.

Banks which are predominantly owned by shareholders from Greece and Slovenia, as well as the banks owned by foreign portfolio investors[11] have a dominant role in the assets of the banking sector (accounting for 23.0%, 18.6% and 24.2 %, respectively). The share of assets of banks in dominant ownership of shareholders from the Republic of Macedonia is 7.6%, which is a slight increase of 0.5 percentage points compared with the previous year.

4. Market share and concentration of the banking system

The concentration of the banking system, measured by the Herfindahl index[12] and by the CR5 and CR3 indicators[13] is relatively high in all segments of banking operations. Despite the declining Herfindahl index, at the end of 2011 there were still segments where the concentration was above the acceptable upper limit. The highest concentration was registered in household loans and deposits, while in the loans to enterprises it was slightly above the acceptable level. Only in total assets and deposits of enterprises, the concentration was within the acceptable level.

[11] Banks which are predominantly foreign-owned, but which lack a strategic investor.

[12] The Herfindahl index is calculated according to the equation $HI = \sum_{j=1}^{n} (S_j)^2$ where S denotes each bank's share in the total amount of analyzed category (for example: total assets, total deposits etc.), while *n* denotes the total number of banks in the system. When the index ranges between 1,000 and 1,800 units the level of concentration in the banking system is generally considered acceptable.

[13] CR5 (i.e. CR3) indicator denotes assets share (i.e. analyzed category, for example, corporate loans, etc.) of the five banks with largest assets (i.e. analyzed category) in the total assets (i.e. analyzed category) of the banking system.

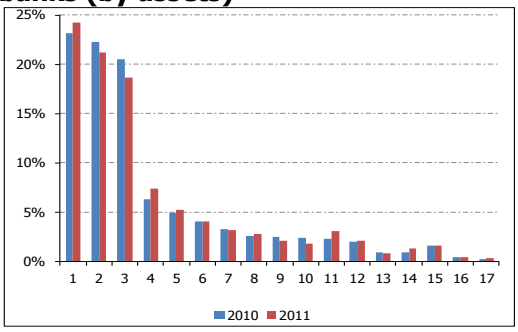
The CR5 indicator shows a reduction of the concentration in total assets (by 0.6 percentage points) and in both household deposits and loans (by 2.0 and 0.5 percentage points, respectively). Corporate deposits and loans registered slight increase in the concentration (by 0.2 and 0.6 percentage points, respectively). On the other hand, the CR3 indicator decreased in all segments of banking operations.

Table 3 Dynamics of the Herfindahl index and CR5 index in the banking system in the Republic of Macedonia

Year		Total assets	Household credits	Enterprises credits	Household deposits	Enterprises deposits
Херфиндал	31.12.2009	1,637	2,064	1,937	2,098	1,312
	31.12.2010	1,578	2,050	1,855	2,079	1,598
	31.12.2011	1,524	2,011	1,821	2,012	1,532
CR5	31.12.2009	77.4%	81.2%	81.3%	85.7%	81.5%
	31.12.2010	77.2%	79.3%	81.1%	84.9%	83.3%
	31.12.2011	76.6%	78.8%	81.7%	82.9%	83.5%
CR3	31.12.2009	67.5%	68.3%	71.4%	76.4%	71.1%
	31.12.2010	66.0%	68.6%	69.2%	76.7%	62.5%
	31.12.2011	64.0%	67.7%	67.4%	75.0%	57.5%

Source: NBRM on the basis of data obtained from the banks.

Figure 10 Market share of individual banks (by assets)



Source: NBRM on the basis of data obtained from the banks.

Nine out of seventeen banks, individually account for less than 3% of the total assets of the banking system (in 2010, ten banks had an individual share of less than 3%). More noticeable changes in the market share were registered in five banks. The market share (in assets) in two large banks declined by 1.9 and 1.1 percentage points[14], while in one large and one medium bank it rose by 1.0 percentage point[15]. Also, in one medium bank (MBDP AD Skopje), the market share rose by 0.8 percentage points as a result of placing a credit line from the EIB (European Investment Bank) through this bank.

[14] In one of the banks, the reduced market share was due to the slower growth of its assets relative to the assets of the whole banking system, while in the other bank it was a result of reducing the assets of the bank.
[15] In both banks, the increase in market share resulted from the larger growth rates of their relative to the growth rate of the assets of the whole banking system.

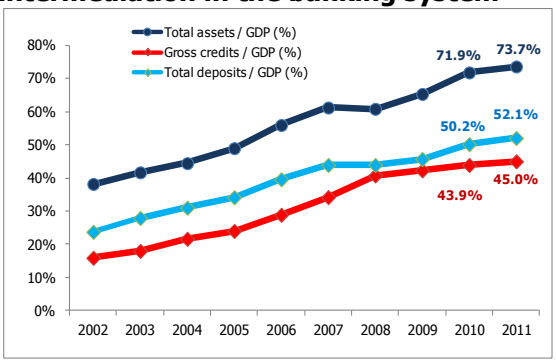
Only in three countries, the concentration in the banking system is higher compared with the banking system in the Republic of Macedonia, both according to the Herfindahl index, and according to the CR5 indicator (Annex 4). Higher concentration is common for the banking systems of the Netherlands, Estonia and Bosnia and Herzegovina according to the Herfindahl index, and in the Netherlands, Estonia and Montenegro according to the CR5 indicator.

II. Bank activities

In 2011, the overall activities of the banking system kept on enhancing at a slower pace compared to the previous year. The growth mainly resulted from the enhanced credit activity that moderately accelerated on annual basis. On the other hand, the annual increase of nonfinancial entities' deposits slowed down mainly in the second half of the year in line with the deceleration of the overall economic growth and uncertainty about the euro area debt crisis. In spite of the deceleration, in 2011, the annual deposit growth was higher than the credit growth. The increase of bank investments in low risk securities and the higher placements with foreign banks indicate that the banks are prudent when undertaking risks.

1. Level of financial intermediation

Figure 11 Level of financial intermediation in the banking system



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

Unlike most of the EU countries that recently passed through so-called financial disintermediation, the level of financial intermediation in the banking system of the Republic of Macedonia accelerates. Compared to the end of 2010, the assets-, credits- and deposits-to-GDP[16] ratios increased by 1.8 percentage points, 1.1 percentage points and 1.9 percentage points, respectively.

The comparative analysis with the EU member states shows that the banking system of the Republic of Macedonia belongs to the group of banking systems with lower level of financial intermediation.

[16] The financial intermediation indicators for 2011 are calculated using annual, estimated GDP data.

Table 4 Level of financial intermediation in the Republic of Macedonia and in the EU member states

	Assets/GDP			Loans/GDP			Deposits/GDP		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
Old EU member-states									
Ireland	809.3%	940.6%	657.7%	269.8%	549.8%	-	177.6%	-	-
Spain	326.6%	326.4%	332.0%	187.4%	218.3%	218.0%	169.6%	167.3%	171.8%
Denmark	495.5%	467.7%	429.6%	246.7%	227.9%	221.5%	85.6%	69.8%	66.8%
Luxembourg	2118.4%	1818.0%	1743.2%	495.0%	547.9%	539.1%	670.4%	719.9%	701.4%
Sweden	319.3%	-	-	156.8%	-	-	66.5%	-	-
Portugal	310.3%	307.7%	303.9%	173.6%	218.1%	215.2%	133.7%	131.6%	139.3%
Italy	242.8%	178.5%	178.9%	121.5%	124.3%	113.4%	83.3%	72.8%	70.7%
France	375.2%	331.1%	325.9%	121.6%	164.9%	164.6%	92.7%	126.6%	126.8%
Greece	206.4%	217.1%	216.3%	90.3%	126.5%	127.2%	117.4%	121.8%	113.8%
Finland	226.3%	232.0%	270.7%	96.8%	101.8%	111.5%	67.2%	66.1%	66.5%
The Netherlands	388.8%	414.6%	-	202.8%	249.5%	-	169.3%	-	-
Belgium	342.6%	326.5%	-	110.3%	145.6%	-	159.6%	145.1%	-
Austria	377.9%	302.0%	295.1%	151.1%	255.0%	256.0%	116.1%	113.7%	116.0%
Germany	308.2%	324.9%	332.2%	131.3%	209.6%	266.8%	127.8%	96.5%	96.5%
New EU member-states									
Estonia	155.4%	212.4%	117.2%	114.0%	164.7%	93.6%	73.4%	110.3%	67.1%
Latvia	161.4%	156.3%	149.0%	114.2%	134.2%	96.2%	69.9%	84.1%	79.9%
Lithuania	98.2%	77.3%	70.7%	72.4%	54.6%	48.4%	45.6%	44.2%	39.7%
Malta	721.0%	242.2%	229.3%	373.2%	135.4%	129.8%	293.2%	169.9%	158.5%
Slovenia	153.0%	154.7%	146.7%	101.5%	121.8%	119.2%	69.4%	-	-
Slovak Republic	86.0%	83.0%	81.8%	49.1%	51.4%	52.2%	34.7%	59.9%	58.2%
The Czech Republic	116.7%	110.7%	113.3%	58.1%	60.9%	61.9%	77.3%	78.9%	78.6%
Hungary	135.5%	116.0%	108.0%	78.5%	70.4%	67.6%	60.5%	-	-
Poland	88.4%	81.9%	86.8%	56.6%	55.5%	61.0%	55.3%	44.0%	50.9%
Bulgaria	10.4%	43.8%	39.7%	7.7%	30.9%	26.5%	6.4%	0.2%	1.9%
Romania	79.8%	73.8%	79.4%	42.1%	40.7%	41.5%	37.3%	34.5%	34.0%
Republic of Macedonia	65.4%	71.9%	73.7%	42.3%	43.9%	45.0%	45.7%	50.2%	52.1%

Source: NBRM, EU Banking Structures, ECB, September 2010 and IMF website.
Note: EU member-states data for 2011 refer to the third quarter of the year.

Most of the EU member-states have passed through so-called financial disintermediation over the last three years. On the other hand, the banking system of the Republic of Macedonia, analyzed through its credit activity, kept on increasing its relevance to the economic activity of the country, due to the fact that the Macedonian banking system was not immediately and severely hit by global financial crisis, and the banks held capital and liquidity capacity to continue their credit activity.

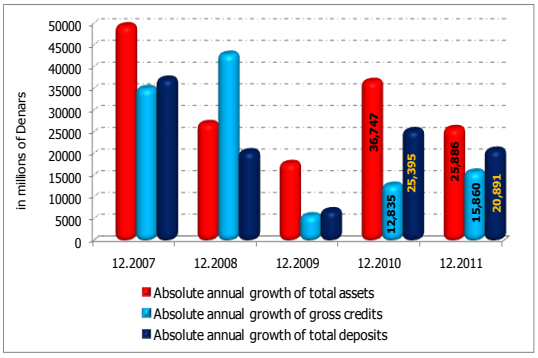
Table 5 Comparison of the annual credit growth relative to GDP, in the Republic of Macedonia and EU member-states

	Annual growth of loans/GDP							Annual growth rate of loans						
	2005	2006	2007	2008	2009	2010	2011	2005	2006	2007	2008	2009	2010	2011
Old EU member-states														
Ireland	29.1%	32.4%	40.4%	-0.1%	-24.2%	2.2%	-	26.1%	27.2%	19.0%	-0.03%	-8.2%	0.4%	-
Spain	29.1%	31.7%	24.5%	11.5%	-1.6%	2.2%	4.7%	28.1%	25.8%	16.1%	6.7%	-0.8%	1.0%	2.2%
Denmark	18.9%	20.1%	25.0%	21.7%	-2.0%	4.7%	-3.0%	13.8%	13.6%	12.7%	10.1%	-0.8%	2.1%	-1.4%
Luxembourg	16.7%	16.5%	86.5%	28.0%	-43.9%	9.7%	45.2%	8.6%	8.8%	20.3%	5.8%	-8.1%	1.8%	9.1%
Sweden	7.4%	14.2%	11.6%	-5.6%	11.6%	-	-	7.6%	14.4%	9.7%	-4.2%	8.0%	-	-
Portugal	8.8%	13.7%	15.9%	14.0%	5.6%	6.4%	-3.8%	7.5%	10.8%	11.6%	9.3%	3.3%	3.0%	-1.7%
Italy	5.2%	8.1%	19.4%	5.4%	2.5%	12.2%	-10.3%	7.6%	11.5%	21.1%	4.9%	2.1%	10.9%	-8.8%
France	6.7%	7.9%	14.2%	6.8%	1.5%	7.7%	2.2%	9.5%	10.6%	14.3%	6.1%	1.3%	4.9%	1.3%
Greece	8.8%	7.8%	14.1%	8.9%	-2.5%	29.7%	-6.5%	17.6%	14.4%	19.1%	10.7%	-2.7%	30.7%	-4.9%
Finland	7.9%	7.5%	9.2%	9.5%	0.2%	8.0%	15.6%	12.8%	11.4%	12.6%	11.9%	0.2%	8.5%	16.3%
The Netherlands	11.6%	6.7%	10.8%	5.8%	9.5%	0.7%	-	9.8%	5.4%	6.1%	3.3%	4.9%	0.3%	-
Belgium	6.7%	6.4%	8.5%	-4.4%	-8.9%	-12.0%	-	10.4%	9.5%	7.3%	-3.6%	-7.4%	-7.6%	-
Austria	9.5%	4.8%	10.2%	15.1%	-2.0%	-15.5%	13.8%	11.2%	5.3%	7.9%	11.4%	-1.3%	-5.7%	5.7%
Germany	-0.4%	1.1%	3.7%	3.5%	-2.7%	1.4%	57.3%	-0.5%	1.2%	2.9%	2.8%	-2.0%	0.7%	27.3%
New EU member-states														
Estonia	22.6%	30.0%	25.3%	8.2%	-7.2%	-12.0%	-56.1%	64.7%	61.6%	34.7%	8.6%	-5.9%	-6.8%	-37.5%
Latvia	23.4%	27.9%	25.3%	9.4%	-9.6%	-4.9%	-29.1%	62.3%	57.8%	34.6%	10.4%	-7.8%	-3.5%	-23.2%
Lithuania	12.8%	15.9%	18.7%	10.7%	-6.7%	-5.0%	-0.5%	56.5%	51.6%	43.4%	19.5%	-8.5%	-8.4%	-1.1%
Malta	8.1%	15.0%	112.3%	83.3%	-63.3%	53.2%	23.9%	8.1%	14.9%	43.5%	23.4%	-14.5%	5.3%	2.4%
Slovenia	9.8%	11.8%	22.7%	14.3%	2.5%	2.1%	1.2%	22.7%	23.4%	36.6%	18.2%	2.5%	1.7%	1.0%
Slovak Republic	7.4%	10.1%	9.2%	6.5%	0.6%	2.5%	3.6%	31.0%	37.3%	23.4%	15.8%	1.2%	5.3%	7.3%
The Czech Republic	7.1%	9.1%	12.3%	6.9%	1.7%	1.1%	3.0%	27.9%	31.6%	30.3%	15.2%	3.0%	1.9%	5.1%
Hungary	5.7%	8.0%	9.2%	10.3%	-3.6%	0.8%	0.2%	15.5%	19.0%	16.5%	16.6%	-4.4%	1.1%	0.4%
Poland	3.9%	6.4%	11.9%	6.8%	5.6%	6.0%	8.3%	16.2%	25.3%	38.5%	18.4%	10.9%	12.2%	15.7%
Bulgaria	-	9.1%	26.6%	18.0%	2.8%	0.02%	-2.5%	-	24.3%	65.7%	31.6%	3.7%	0.1%	-8.6%
Romania	-	11.6%	11.3%	6.3%	-0.9%	0.5%	2.3%	-	68.4%	50.6%	20.8%	-2.0%	1.2%	5.8%
Republic of Macedonia	4.0%	6.9%	9.6%	10.4%	1.4%	3.0%	3.5%	19.9%	30.5%	39.1%	34.4%	3.5%	7.4%	8.5%

Source: NBRM, EU Banking Structures, ECB, September 2010 and IMF website.
Note: EU member-states data for 2011 refer to the third quarter of the year.

2. Banks' balance sheet

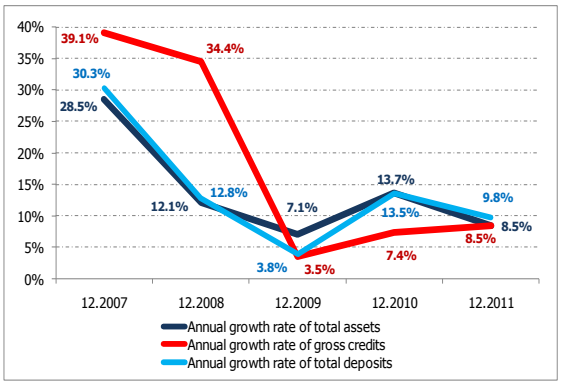
Figure 12 Absolute annual growth of assets, credits and deposits of nonfinancial entities



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

In 2011, the total assets of the banking system increased slowly compared to 2010. As of December 31, 2011, the assets totaled Denar 331,176 million, and its annual growth (of 8.5%) was lower by 5.2 percentage points compared to the preceding year. The annual deposit growth decelerated (to 9.8%), while the annual credit growth accelerated moderately (to 8.5%).

Figure 13 Annual growth rate of assets, credits and deposits of nonfinancial entities



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

In 2011, total activities accelerated due to the increase of gross credits approved to the nonfinancial sector in the amount of 61.3% of the annual growth of sources of funding. The increase of gross credits[17] to nonfinancial entities moderately accelerated (by 1.1 percentage point) compared to 2010. They also reached the highest absolute annual growth in the total assets. Securities investments contributed substantially (of 17.0%) to the growth of the banks' total assets in 2011.

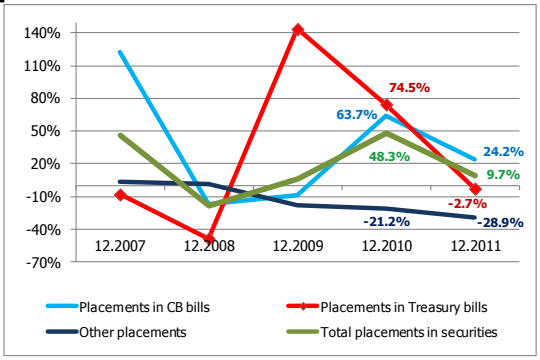
Table 6 Structure of assets and liabilities of the overall banking system

Balance sheet	Amounts in millions of Denars		Structure		Change 31.12.2011/31.12.2010			
	31.12.2010	31.12.2011	31.12.2010	31.12.2011	Absolute change	In percent	In the structure (in percentage points)	Share in the change
Cash and balances with NBRM	34,674	38,227	11.4%	11.5%	3,553	10.2%	0.2	13.7%
Securities portfolio	45,439	49,831	14.9%	15.0%	4,391	9.7%	0.2	17.0%
of which in parent entities	н.п.	0	-	-	-	-	-	-
Placements with banks and other financial institutions	40,609	43,528	13.3%	13.1%	2,919	7.2%	-0.2	11.3%
of which in parent entities	н.п.	2,272	-	-	-	-	-	-
Loans to non-financial entities (net)	168,346	181,017	55.1%	54.7%	12,670	7.5%	-0.5	48.9%
Gross loans to non-financial entities	186,545	202,405	61.1%	61.1%	15,860	8.5%	0.01	61.3%
of which in parent entities	н.п.	0	-	-	-	-	-	-
Accumulated amortization of loans to non-financial entities	(708)	(855)	-	-	-146	20.7%	-	-
Impairment (provisions) of loans to non-financial entities	(17,491)	(20,534)	-	-	-3,043	17.4%	-	-
Accrued interest and other assets	7,887	10,382	2.6%	3.1%	2,495	31.6%	0.6	9.6%
of which in parent entities	н.п.	0.02						
Fixed assets	8,334	8,192	2.7%	2.5%	-142	-1.7%	-0.3	-0.5%
Unallocated loan loss provisions	0	0	0.0%	0.0%	0	0.0%	0.0	0.0%
Total assets	**305,290**	**331,176**	**100.0%**	**100.0%**	**25,886**	**8.5%**	**0.0**	**100.0%**
Deposits from banks and other financial institutions	18,372	13,861	6.0%	4.2%	-4,511	-24.6%	-1.8	-17.4%
Deposits of non-financial entities	213,270	234,161	69.9%	70.7%	20,892	9.8%	0.8	80.7%
Borrowings (short-term and long-term)	32,729	38,500	10.7%	11.6%	5,771	17.6%	0.9	22.3%
Other liabilities	8,002	7,246	2.6%	2.2%	-757	-9.5%	-0.4	-2.9%
Provisions for off-balance sheet items	661	819	0.2%	0.2%	158	23.8%	0.0	0.6%
Capital and reserves	32,256	36,590	10.6%	11.0%	4,334	13.4%	0.5	16.7%
Total liabilities	**305,290**	**331,176**	**100.0%**	**100.0%**	**25,886**	**8.5%**	**0.0**	**100.0%**

Source: National Bank, based on data submitted by banks.
Note: The position of placements with the central bank of Annex 1 is included in this table in the position of cash and balances on account with the NBRM.

[17] For more detailed analysis of the structure and developments of credits endorsed to nonfinancial entities see 3. Bank credit activity.

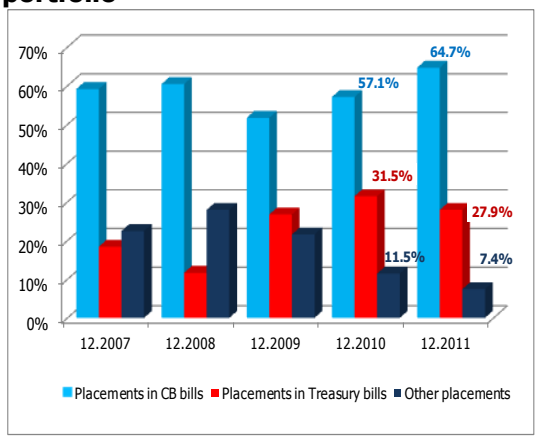
Figure 14 Annual dynamics of securities portfolio



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

Banks' investments in CB bills solely (143.1%) determined the annual growth of total investments in securities. In 2011, the placements in these low-risk instruments went up by Denar 6,285 million compared to the previous year. While the securities investments considerably decreased in the first half of 2011, in the second half the banks preferred to invest in CB bills[18]. Banks' demand for treasury bills declined by Denar 387 million annually.

Figure 15 Structure of securities portfolio



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

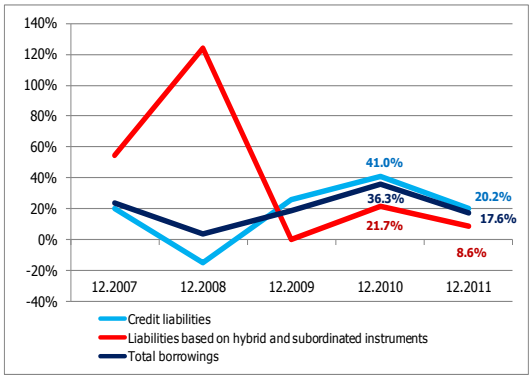
CB bills dominate the structure of total banks' securities portfolio.

Placements with banks and other financial institutions rose by 7.2% annually. Most of their growth (68.9%) resulted from the placements with domestic banks (annual increase of Denar 2,012 million or 24.9%[19]), while placements in foreign banks contributed with nearly 1/3.

[18] Since March 2011, the banks are allowed to use only the placements in bills of six-month deposit, which is a newly launched National Bank instrument (instead of the placements in all monetary policy instruments), for fulfilling both Denar and foreign currency liquidity ratios. The new Decision on managing banks' liquidity risks since September 2011 introduced a single liquidity ratio, readdressing the banks' investments from six-month deposit with the National Bank to CB bills.

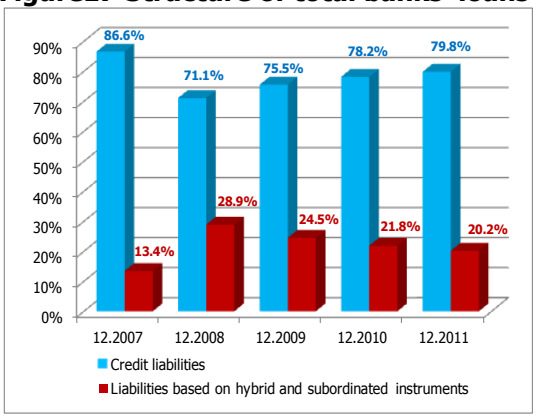
[19] Domestic banks' placements went up as a result of the growth of credits approved to domestic banks (primarily placements of MBDP AD Skopje from the EIB credit line to domestic banks) by Denar 3,494 million or by 59.5% and the decrease of accounts with domestic banks by Denar 1,482 million or by 66.6%. Excluding MBDP's placements from the analysis, the placements with domestic banks would decline by Denar 215 million or 3.7%.

Figure 16 Annual dynamics of total banks' loans



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

Figure17 Structure of total banks' loans



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

The annual increase of nonfinancial entities' deposits[20] contributed the most (80.7%) to the growth of banks' activities. Notwithstanding the deceleration of the annual growth rate of total nonfinancial entities' deposits, they increased their dominant share in the total liabilities structure.

In 2011, most of the growth of total liabilities was attributable to the intensive borrowing[21] by the banks compared to the previous year (primarily by two medium-size banks). Credit liabilities remained dominant in the structure of total banks' loans.

Credit liabilities climbed by Denar 5,159 million (or by 20.2%) on annual basis, making up 89.4% of the total growth of banks' loans. 57.7% of the rise of credit liabilities resulted from the increase of credits from residents[22], primarily reported by one large bank and one medium-size bank.

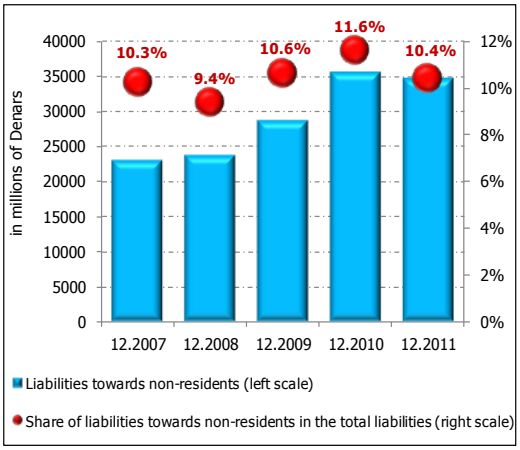
The residue (42.3%) of the annual increase of total credit liabilities is attributable to the credit liabilities to nonresidents that increased by Denar 2,184 million (the growth is solely due to the EIB credit line).

Liabilities based on subordinated and hybrid instruments increased by Denar 612 million or 8.6% annually. Nevertheless, their share in the structure of total loans declined moderately.

The faster annual decrease of deposits of banks and other financial institutions results from the decrease of deposits of nonresidents – financial companies of Denar 3,764 million, or

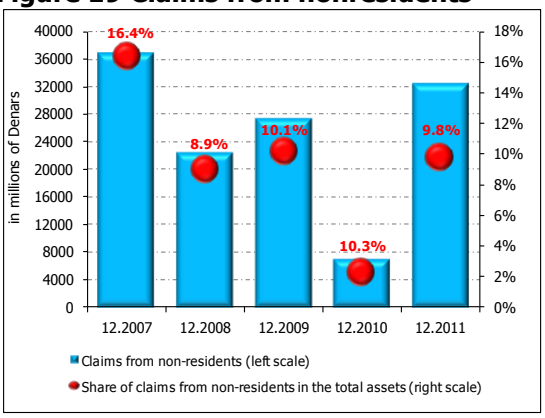
[20] For more detailed analysis of the structure and developments of nonfinancial entities' deposits see 4. Bank deposit activity.
[21] Total banks' loans include credit liabilities and liabilities based on hybrid and subordinated instruments. For more detailed analysis of the sources of funding (including sources of parent entities) see III.2. Liquidity risk.
[22] Credit liabilities to residents increased due to the higher borrowing of domestic financial institutions from MBDP. Excluding the credits from EIB used through MBDP from the analysis, credit liabilities to residents decrease by Denar 97 million or by 1%.

Figure 18 Liabilities towards nonresidents



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

Figure 19 Claims from nonresidents



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

49.3%, most of which concentrated in one large and one medium-size banks.

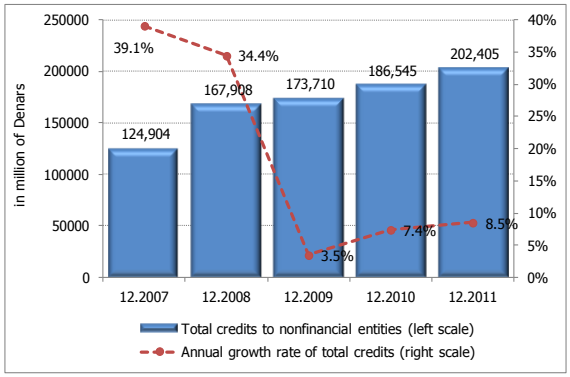
In 2011, liabilities to nonresidents decreased by Denar 946 million (or 2.7%), together with their share in the total liabilities of the banking system. Such decrease is solely due to the abovementioned annual decline of deposits of nonresidents – financial institutions (primarily in one large bank and one medium-size bank). As of December 31, 2011, liabilities to parent entities totaled Denar 16,043 million, making up 4.8% of the total banks' liabilities.

Claims from nonresidents rose annually by Denar 808 million or by 2.6%. Yet, their share in the structure of total banks' assets marginally decreased. Placements on accounts with foreign banks, which dominate (99.1%) the claims on nonresidents, increased annually by Denar 916 million, or by 2.9%. They solely determined the annual increase of total claims on nonresidents. The growth of placements on accounts with foreign banks results from the increase of this item in one medium-size bank. Claims on parent entities were valued at Denar 2,272 million, constituting merely 0.7% of the total banks' assets in 2011.

3. Bank credit activity (credits to nonfinancial entities)

In 2011, the bank lending activity accelerated moderately. Such pace of lending activity is expected to remain, taking into account the results of the Lending Survey of January 2012, according to which banks expect the lending terms for the corporate and household sectors to remain the same, and the demand for credits to increase slightly. Banks' restraint from lending primarily in the second half of 2011 is closely related to the euro area debt crisis and the uncertainty surrounding the recovery of domestic economic activity. Relevant determinant for the future lending activity, amid stable banks' domestic sources of funding, is the quality of projects that apply for credit support. The increase of nonperforming loans demonstrates further presence of risks mainly attributable to the uncertainty about the pace of domestic economic activity and external demand. On the other hand, banks have sought to improve the credit risk management system at the very approval of credit exposure, which is an inevitable factor for the credit portfolio quality.

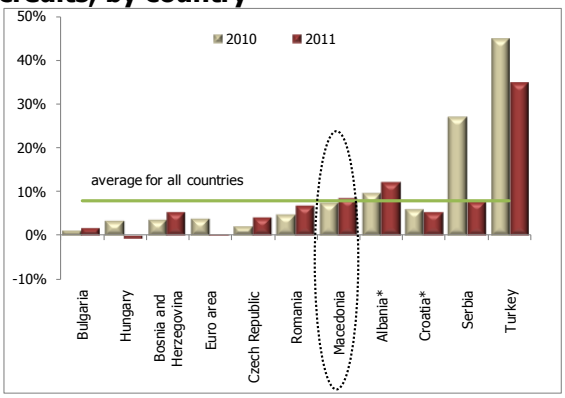
Figure 20 Annual growth of credits to nonfinancial entities



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

The moderate acceleration of credit growth was mainly (87.6%) determined by the three large banks and two medium-size banks. Twelve banks reported annual increase of credit activity, ranging from 4.3% to 59.9%, with a median of 11.2%.

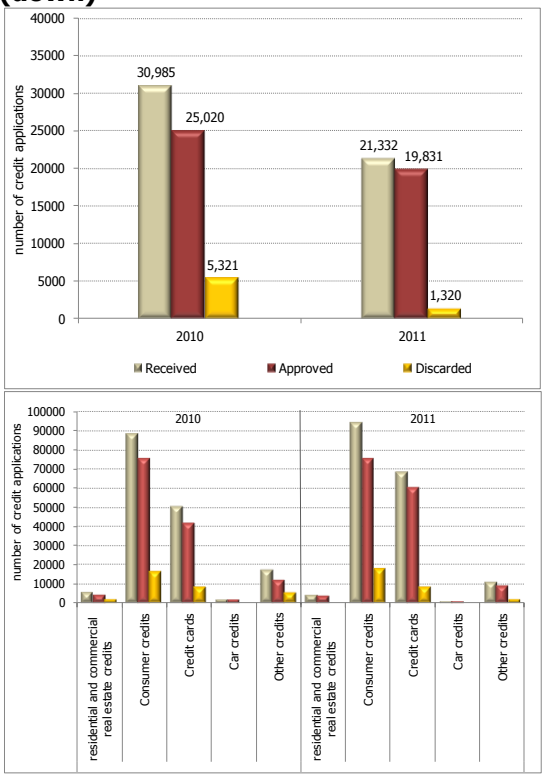
Figure 21 Annual growth rates of total credits, by country



Source: National Bank, EUROSTAT and central bank website.
*Credit data for Albania and Croatia are as of November, 2011.

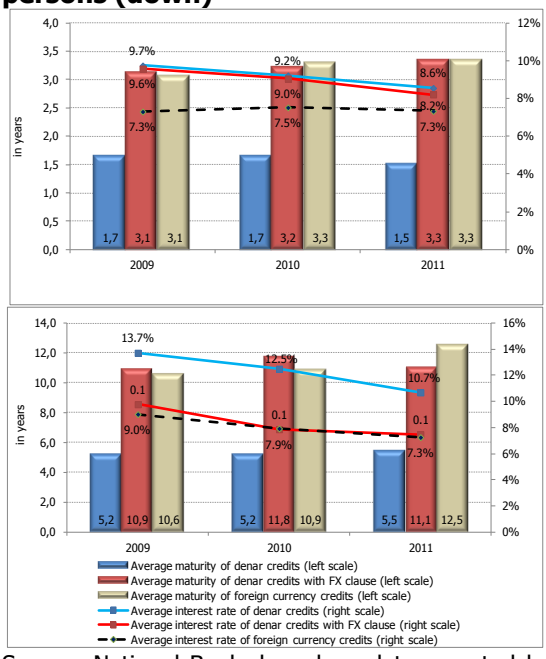
In 2011, the annual credit growth in the Republic of Macedonia is above the regional average, i.e. above the annual credit growth rate in other countries from the sample (except for Albania and Turkey that in 2011 reported two-digit growth rates of 12%, i.e. 10.4%, respectively).

Figure 22 Received, approved and discarded credit applications by corporations (up) and natural persons (down)



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

Figure 23 Average weighted interest rate and maturity of newly approved credits to corporations (up) and natural persons (down)



Source: National Bank, based on data reported by banks at the Credit Registry.

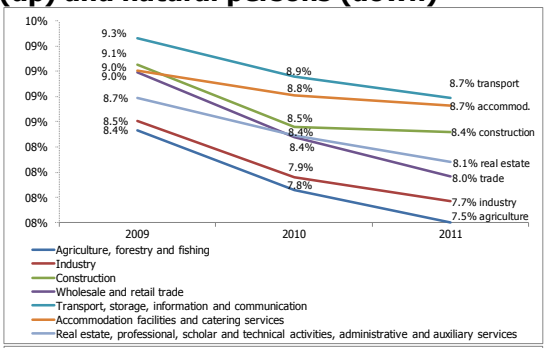
The number of received credit applications by corporations reduced annually by 31.2%. On the other hand, **the household demand for credits increased** (the number of credit applications was by 9.4% higher). The share of approved corporate credit applications in the received applications increased by 12.3 percentage points, annually.

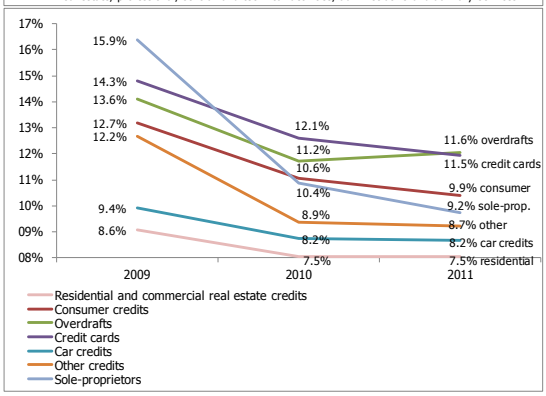
The number of received credit applications for products intended for natural persons illustrates that **the consumer credits are the most attractive, followed by credit cards**. In 2011, natural persons applied mostly for credit cards, which also determine the increase of approved credit applications by natural persons.

In 2011, the average interest rates on newly approved credits to both sectors **continued decreasing**. The average interest rates on newly approved corporate credits in Denars with FX clause and in Denars were cut by 0.8 percentage points and by 0.7 percentage points, respectively, thus reducing the difference between these interest rates and the average interest rate on foreign currency credits, which is the lowest, and the same as in 2009. The average interest rate on newly approved household Denar credits decreased at a faster pace (1.8 percentage points), compared to 2010, when the Denar credits with FX clause registered fastest reduction.

In 2011, the average maturity of newly approved credits changed marginally in both sectors, except for the average maturity of foreign currency credits to natural persons which increased by 1.6 years.

Figure 24 Average interest rate on credits to corporations and other clients (up) and natural persons (down)





Source: National Bank, based on data reported by banks at the Credit Registry.

Figure 25 Credit structure by sector

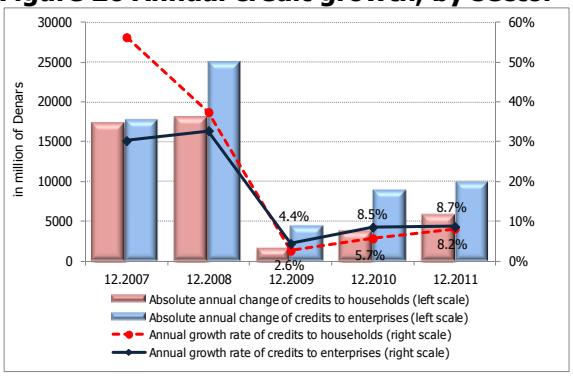
Source: National Bank, based on data submitted by banks.

Observing the activities, i.e. credit products, the trend of reducing the average interest rate continued in 2011, but at slower pace compared to 2010 (particularly household credits). The interest rate on some activities and products remained unchanged. Only the interest rate on overdrafts insignificantly increased by 0.4 percentage points on annual basis.

In 2011, the credit structure by sector remained unchanged compared to the preceding years. Corporate credits still dominate the total credit structure, constituting 61.4%[23].

[23] Annex 6

Figure 26 Annual credit growth, by sector



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

In 2011, the growth of household credits accelerated, while the growth pace of corporate credits was almost the same as in 2010. Yet, corporate credits still increase at a faster pace compared to household credits, and make greater contribution (62.6%) to the total credit growth.

As of December 31, 2011, clients from the industry and wholesale and retail trade sector dominate the banks' credit support to corporations and other clients[24]. Households still use consumer credits and credit cards the most. In 2011, the total annual credit exposure growth was mostly determined by the growth of exposure to clients from the wholesale and retail trade sector (20.1%), and the consumer credits growth (22.1%).

Table 7 Credit exposure by activity / credit product

Sector	Credit products / individual sectors	Credit risk exposure in million of Denars as of December 31, 2011	Absolute annual growth of credit risk exposure in million of Denars	Annual growth rate	Share in the total growth of the credit risk exposure
HOUSEHOLDS	Residential and commercial real estate credits	19,353	2,286	13.4%	10.4%
	Consumer credits	33,318	4,857	17.1%	22.1%
	Overdrafts	9,450	198	2.1%	0.9%
	Credit cards	21,273	-1,874	-8.1%	-8.5%
	Car credits	3,331	-888	-21.1%	-4.0%
	Other credits	1,222	98	8.7%	0.4%
	Sole-proprietors	3,028	-231	-7.1%	-1.1%
TOTAL HOUSEHOLDS		**90,974**	**4,446**	**5.1%**	**20.3%**
ENTERPRISES AND OTHER CLIENTS	Agriculture, forestry and fishing	4,474	146	3.4%	0.7%
	Industry	51,304	1,356	2.7%	6.2%
	Construction	16,619	1,196	7.8%	5.4%
	Wholesale and retail trade	49,161	4,410	9.9%	20.1%
	Transport, storage, information and communication	11,181	321	3.0%	1.5%
	Accomodation facilities and catering services	3,518	-180	-4.9%	-0.8%
	Real estate, professional, scholar and technical activities, administrative and auxiliary services	10,088	1,872	22.8%	8.5%
	Other sectors	4,203	154	3.8%	0.7%
TOTAL ENTERPRISES AND OTHER CLIENTS		**150,549**	**9,275**	**6.6%**	**42.3%**
TOTAL CREDIT EXPOSURE		**338,062**	**21,939**	**6.9%**	**100.0%**

Source: National Bank, based on data submitted by banks.
Note: For more detailed developments of credit exposure to all activities and credit products see Annex 13.

[24] Exposure to corporations and other clients includes total exposure to nonfinancial legal entities, government, nonprofit institutions serving households and nonresidents.

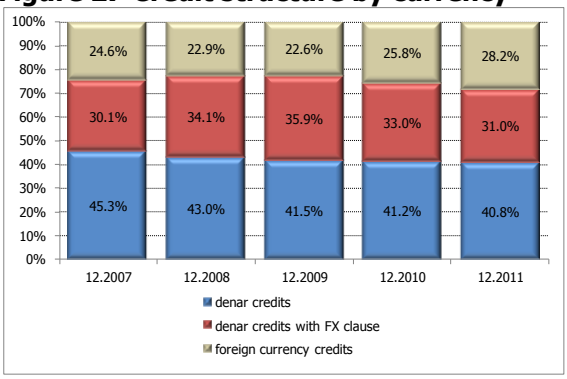
As of December 31, 2011, the weighted average residual maturity (average period to maturity in years) of residential and commercial real estate credits was the longest (14.4 years). Compared to December 31, 2010, the changes in the average maturity period of credits to nonfinancial entities are not significant, but mainly show an increase of the average maturity.

Table 8 Weighted average residual maturity of credits to nonfinancial entities (by activity and credit product)

Sectors for legal entities / Credit products for natural persons	Average period till maturity (in years) as of December 31, 2010	Average period till maturity (in years) as of December 31, 2011
Agriculture, forestry and fishing	3.4	3.2
Industry	3.1	3.0
Construction	2.8	2.8
Wholesale and retail trade	2.9	2.6
Transport, storage, information and communication	3.2	3.0
Accomodation facilities and catering services	4.2	3.4
Real estate, professional, scholar and technical activities, administrative and auxiliary services	3.0	3.7
Other sectors	3.7	3.7
Residential and commercial real estate credits	14.6	14.4
Consumer credits	5.0	5.3
Overdrafts	0.6	0.5
Credit cards	1.4	1.1
Car credits	3.8	3.4
Other credits	10.3	10.1
Sole-proprietors	2.6	3.0

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

Figure 27 Credit structure by currency

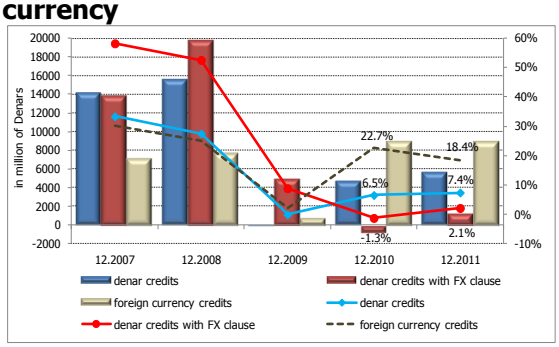


Source: National Bank, based on data submitted by banks.

Credit structure by currency remained unchanged relative to the previous year. Credits with currency component (foreign currency credits and Denar credits with FX clause) remains dominant making up 59.2% of total credits[25]. Compared to 2010, the share of foreign currency credits went up by 2.4 percentage points, while the share of Denar credits with FX clause decreased.

[25] Annex 6

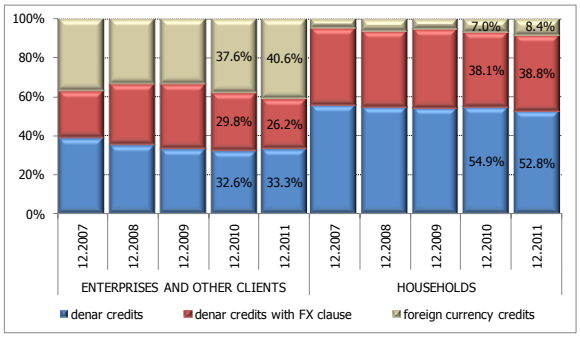
Figure 28 Annual credit growth, by currency



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

The higher share of foreign currency credits results from their annual growth of Denar 8,886 million or 18.4%, which is the fastest annual growth with respect to the credit currency structure. Thus these credits remained major generator (with share of 56%) of the total credit growth. The growth of Denar credits was slower compared to foreign currency credits, yet contributing with 35.8% to the total credit growth. Unlike the previous year, Denar credits with FX clause increased by 2.1%, annually.

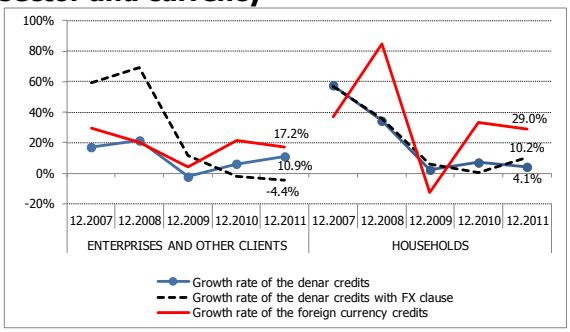
Figure 29 Credit currency structure, by sector



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

Lending with FX clause remains dominant in the corporate credit structure, with the Denar credits reporting the highest share in the household credits.

Figure 30 Annual credit growth rates, by sector and currency



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

Foreign currency credits to corporations and other clients accounted for 74.3% of the total annual growth of credits to corporations and other clients. They registered an annual growth of 17.2%, which is a slowdown compared to the preceding year. The growth rate of household foreign currency credits was even steeper (29%). Yet, the annual household credit growth was mainly generated (47.7%) by Denar credits with FX clause.

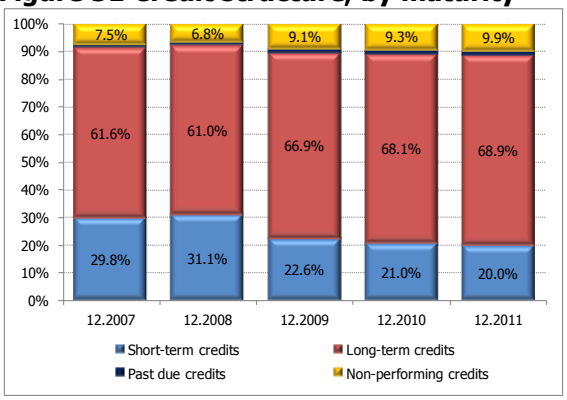
The total exposure to residents that use foreign currency credits and Denar credits with FX clause is dominated by residents with mismatched currency position[26] (natural persons and other corporations) of 90.4%. The greatest contribution to the total annual growth of credits with FX clause was made by foreign currency credits intended for domestic payments (69.8%). Credits for international payments constitute only 16.9% of the total annual growth, owing to the increase of credits to corporations whose dominant product price depends on movements of the price of the same product on the international markets. Credits to net exporting companies went down by 21.1%, annually.

Table 9 Foreign currency credits and Denar credits with FX clause to residents

Category of residents	31.12.2011			Total as od December 31, 2011	Absolute annual change			Annual rate of change			Sh
	Credits for repaying due liability to a non-resident	Credits for domestic payments	Denar credits with FX clause		Credits for repaying due liability to a non-resident	Credits for domestic payments	Denar credits with FX clause	Credits for repaying due liability to a non-resident	Credits for domestic payments	Denar credits with FX clause	Credits for repaying due liability to a non-resident
Enterprises net exporters	2,935	1,919	2,719	7,572	-786	642	-1,382	-21.1%	50.2%	-33.7%	-45.4%
Residents whose prise of prevailing product depends on the price movement of such product on the international market	3,612	286	106	4,004	1,784	-136	-147	97.6%	-32.2%	-58.1%	103.0%
Natural persons	2	6,468	30,062	36,532	-3	1,478	2,843	-61.2%	29.6%	10.4%	-0.2%
Other enterprises	17,313	24,502	30,602	72,417	737	5,189	59	4.4%	26.9%	0.2%	42.5%
TOTAL	23,861	33,175	63,489	120,525	1,732	7,174	1,373	7.8%	27.6%	2.2%	16.9%

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

Figure 31 Credit structure, by maturity



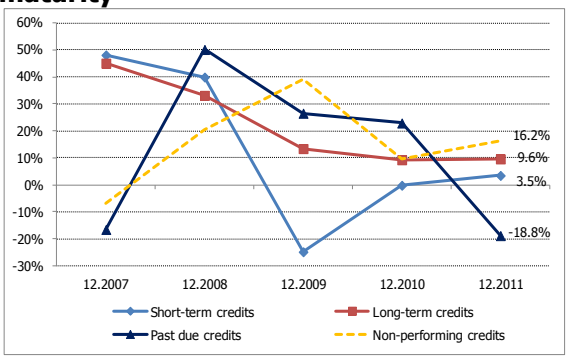
Source: National Bank, based on data submitted by banks.

Long-term credits remained dominant and strengthened their position in the maturity structure of total credits, while the share of short-term credits decreased[27]. The share of nonperforming loans in the total credits increased by 0.6 percentage points, compared to December 31, 2010 and equaled 9.9%.

[26] A client with mismatched currency position is any client whose expected foreign currency inflows, foreign currency claims and Denar claims with FX clause cover at least 80% of their total expected foreign currency outflows, foreign currency liabilities and Denar liabilities with FX clause, and a client whose dominant product price depends on price movements of such product on the international markets.

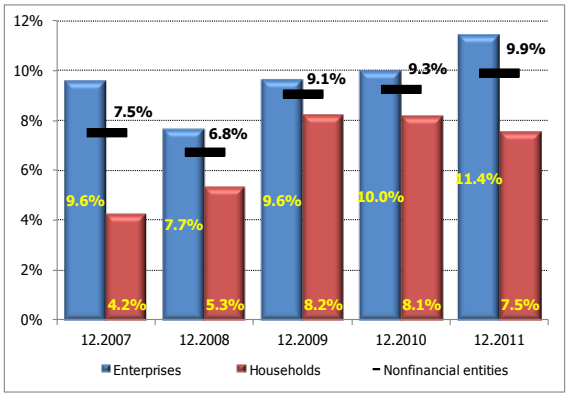
[27] Annex 6

Figure 32 Annual credit growth rate, by maturity



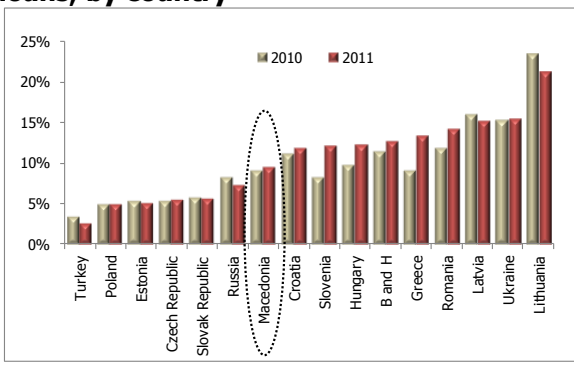
Source: National Bank, based on data submitted by banks.

Figure 33 Nonperforming loans in total loans



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

Figure 34 Nonperforming loans in total loans, by country



Source: IMF's set of financial stability indicators.

Long-term credits made a 77.2% contribution to the total credit growth, reporting an annual growth rate of 9.6% (almost unchanged compared to the preceding year). Second most important credits that contributed to the total credit growth with 17.7% were the nonperforming loans, which after the slowdown in 2010, went up annually by Denar 2,800 million or 16.2%. In 2011, overdue credits declined by 18.8%, on annual basis.

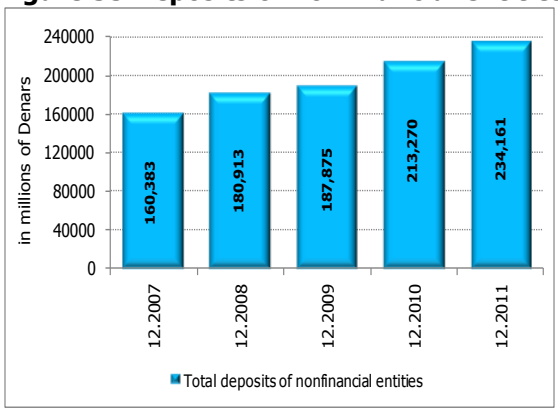
In 2011, the increase of nonperforming loans changed their share in total credits, and observed by sector. The growth is almost solely attributable to corporate credits with FX component. The sector-by-sector analysis shows annual growth rate of nonperforming corporate and household loans of 24.6% and 0.1%, respectively, compared to 12.3% and 4.7%, respectively, in the previous year. While the share of nonperforming loans in total corporate credits has been permanently increasing since 2008, the nonperforming household loans have steadily reduced their share in the total credits of this sector over the last two years.

The share of nonperforming loans in total credits places the banking system of the Republic of Macedonia among the second half of the group of countries under observation.

4. Bank deposit activity (deposits of nonfinancial entities)

In 2011, banks' deposit base kept on enhancing, although at a slower pace, which is particularly important taking into account the uncertainty about the euro area debt crisis and the slowdown of the domestic economic activity in the second half of the year. In 2011, key feature of the deposit base of the Macedonian banking system is the switch in the depositors' preference to save in domestic currency, making Denar deposits increase faster compared to deposits with FX component. Hence, households were major drivers of the annual growth of banks' deposit base.

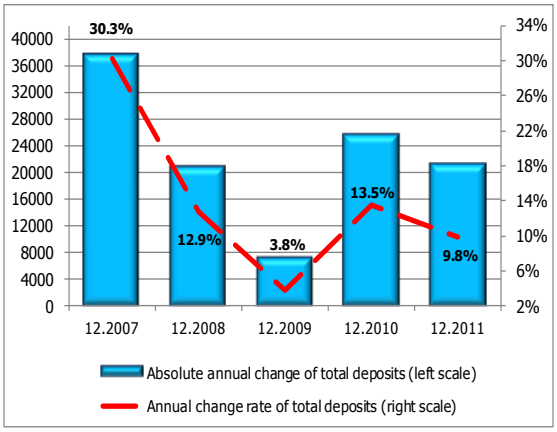
Figure 35 Deposits of nonfinancial entities



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

As of December 31, 2011, the deposits of nonfinancial entities totaled Denar 234,161 million. They kept on increasing, and compared to December 31, 2010, they rose by Denar 20,892 million or 9.8%. The growth of banks' deposit base slowed down by 3.7 percentage points compared to 2010 (Annexes 9, 10, 11 and 12).

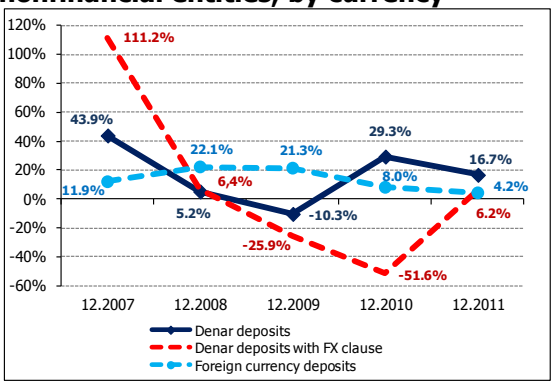
Figure 36 Annual growth of deposits of nonfinancial entities



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

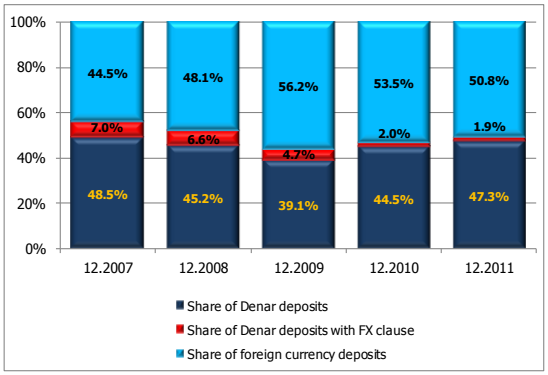
Annually observed, nonfinancial entities' deposits with almost all banks surged, with most of the growth (72.6%) being determined by the increase of deposit with two large banks and one medium-size bank.

Figure 37 Annual growth of deposits of nonfinancial entities, by currency



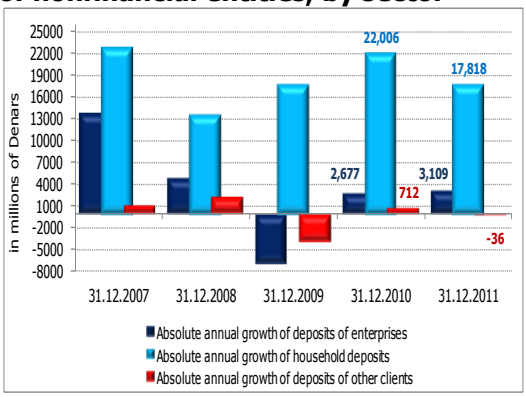
Source: National Bank, based on data submitted by banks.

Figure 38 Currency structure of deposits of nonfinancial entities



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

Figure 39 Annual dynamics of deposits of nonfinancial entities, by sector



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

2011 reported preference to save in domestic currency, evident through the faster growth of Denar deposits that registered the highest absolute annual growth (of Denar 15,848 million or 16.7%), making the highest contribution (75.9%) to the annual growth of total bank deposits[28]. The growth pace of Denar deposits of nonfinancial entities in 2011 and 2010 was faster compared to foreign currency deposits. Most of the growth (80.1%) of Denar deposits is attributable to the increase of household Denar deposits, with three banks.

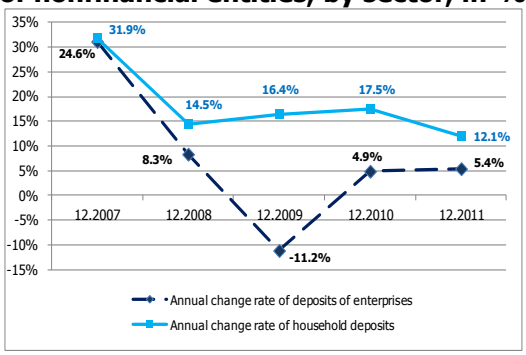
Foreign currency deposits rose by Denar 4.778 million on annual basis, and their contribution to the total banks' deposit growth equaled 22.9%. In 2011, the increase of foreign currency deposits was solely (107.1%) determined by the growth of foreign currency household deposits, most of which (48.4%) with one large bank. Denar deposits with FX clause went up, discontinuing the downward trend present over the last four years. Nevertheless, their share in total deposits was minimal.

At the end of 2011, deposits with FX component remained dominant in the currency structure of total nonfinancial entities' deposits, notwithstanding the annual growth of structural share of Denar deposits of 2.8 percentage points.

In 2011, household deposits remained major producers of the deposit growth. These deposits registered the highest absolute growth, which is lower compared to 2010. Household deposits contributed with 85.3% to the growth of total deposit base. Most of the annual growth of household deposits (71.3%) resulted from the growth of household Denar deposits, the growth of which was driven

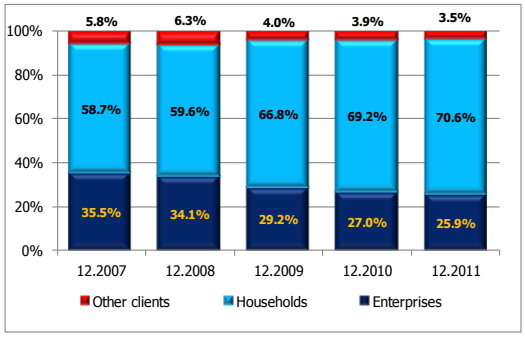
[28] Denar deposit growth was particularly pronounced in December 2011, when Denar deposits climbed by Denar 6,873 million or by 6.6%, only in a month.

Figure 40 Annual dynamics of deposits of nonfinancial entities, by sector, in %



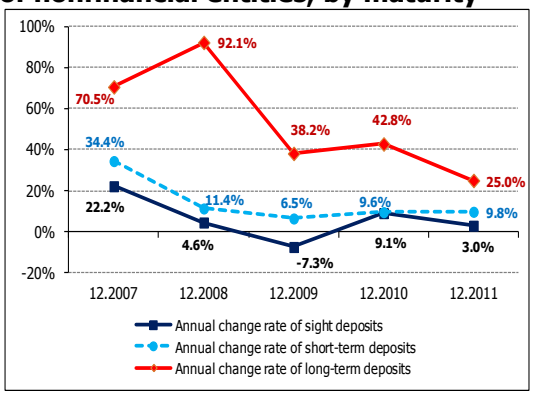
Source: National Bank, based on data submitted by banks.

Figure 41 Sector structure of deposits of nonfinancial entities



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

Figure 42 Annual dynamics of deposits of nonfinancial entities, by maturity



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

by the growth of long-term Denar deposits (49.3%).

Corporate deposits registered higher growth rate (by 0.5 percentage points) compared to 2010, contributing with 14.9% to the annual growth of total deposits. Corporate deposit growth was almost solely (98.9%) determined by the growth of Denar deposits, mostly with one large bank.

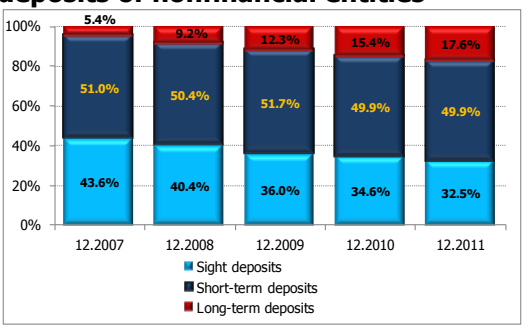
Household deposits additionally underpinned their dominant share in the total deposits of nonfinancial entities.

Analyzing the maturity, short-term deposits prevail. Half (49.9%) of the annual growth of deposits is due to the increase of short-term savings. In 2011, short-term deposits registered the highest absolute growth of Denar 10,425 million. Most of the growth results from the increase of short-term deposits with one large bank.

The contribution of household deposits (78.8%) in both Denars and foreign currency to the growth of short-term deposits is greater than the contribution of corporate deposits (23.5%), the growth of which was primarily in foreign currency.

Long-term deposits registered the fastest growth, but in 2011, their growth (of Denar 8,243 million) slowed down. Long-term deposits contributed with 39.5% to the growth of total

Figure 43 Maturity structure of deposits of nonfinancial entities



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

bank deposits. The largest contribution to the growth of long-term bank deposits (83.2%) was made by household deposits, primarily in denars, while the corporate long-term deposits contributed with 14.4%.

Sight deposits went up by Denar 2,224 million, contributing with 10.6% to the growth of total deposit base. Their growth was solely determined by the increase of household sight deposits, 69.2% of which was due to the growth of these deposits with one large bank.

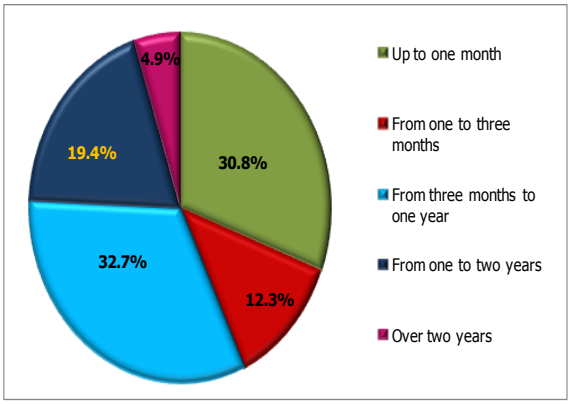
Same as the recent years, **short-term deposits dominate the structure of total deposits of nonfinancial entities.** The share of long-term deposits to the total deposit base increase, while the share of sight deposits decreased.

Savings of the household sector - Denar vis-a-vis foreign currency saving and short-term vis a vis long-term saving

Households' preference to save in a short run does not change with the currency of savings. The analysis of maturity structure of Denar and foreign currency deposits of households demonstrates the depositors' preference to save in a short run. At the end of 2011, deposits with maturity of up to one month and from three months to one year dominate the structure of Denar savings. Long-term Denar deposits (with maturity of over one year) account for 24.3% of the structure of total Denar household savings.

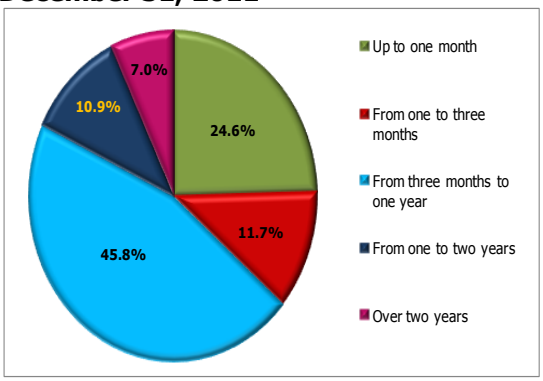
Short-term deposits also dominate (with 82.1%) the structure of household foreign currency savings. Most of the deposits are in foreign currency with maturity from three months to one year. Long-term deposits make up 17.9% of the structure of total household foreign currency savings.

Figure 44 Maturity structure of Denar household savings as of December 31, 2011



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

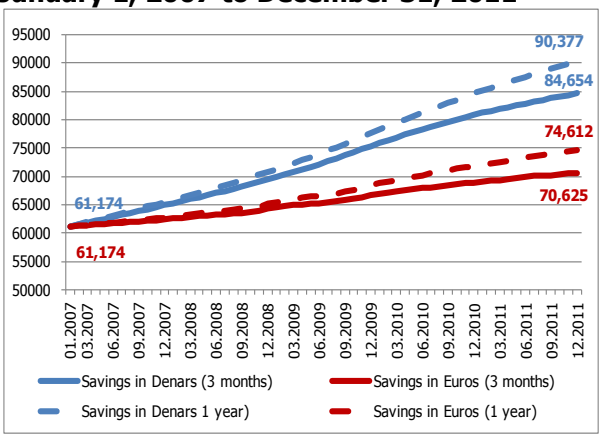
Figure 45 Maturity structure of foreign currency household savings as of December 31, 2011



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

A simulation was conducted to determine the difference between the interest yield on savings in Denars and savings in foreign currency in the household sector, which assumes three-month and one-year maturity of Denar equivalent of Euro 1,000 and in Euro. The maturity period starts on January 1, 2007. When the maturity period ends (in three months or one year), the savings deposit will be re-tied, repeatedly until December 2011. In addition, the amount of term deposit in both maturities increases monthly for the accrued interest, using valid interest rate on three-month and one-year deposits in Denars and in Euro. The stimulation shows that it is more worthwhile to save in Denars rather than in foreign currency, as well as in a long run.

Figure 46 Simulation of effects of Denar or foreign currency savings in the period from January 1, 2007 to December 31, 2011



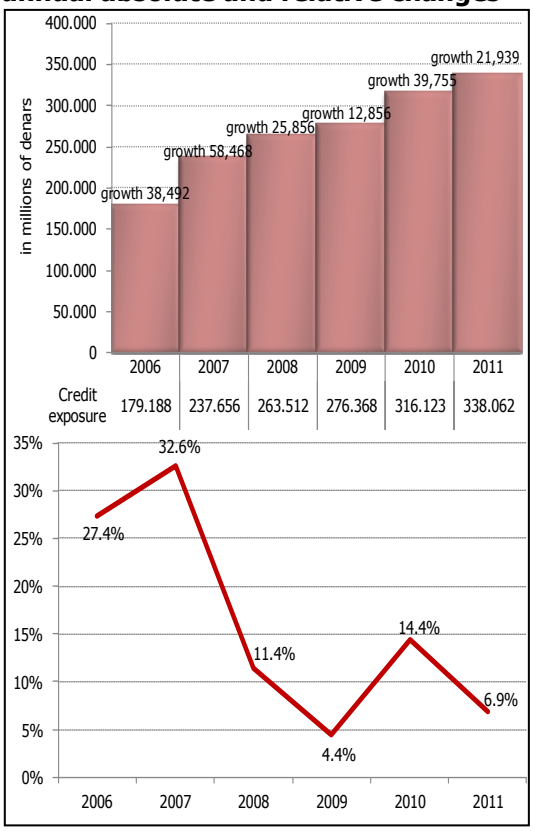
Source: National Bank, based on data submitted by banks.

III. Bank risks

1. Credit risk

Given the slower growth of total credit exposure, and faster growth of higher risk exposure (classified in C, D and E risk categories), in 2011, the bank credit risk exacerbated. This trend was also evident through the faster growth of nonperforming loans and deterioration of credit portfolio quality indicators. However, the negative trend of credit portfolio quality abated through the full coverage of nonperforming loans with impairment and special reserve. Most of the higher credit risk arises from the exposure to corporations and other clients. The risk of Denar exposure with FX clause is the greatest and increase at the fastest pace. The results from the simulations for banking system resilience to higher credit risk showed higher resilience of the banks in 2011 compared to 2010.

Figure 47 Total credit exposure and its annual absolute and relative changes



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

1.1. Quality of credit portfolio of the banking system

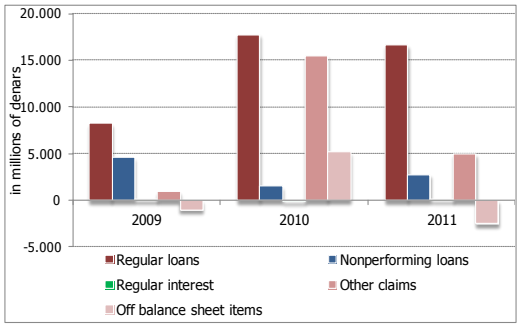
In 2011, the credit exposure of the banking system continuously increased, but at a slower pace compared to the previous year. On annual basis, the total credit exposure surged by Denar 21,939 million, 62.5% of which attributable to the growth of credit exposure to nonfinancial entities[29]. The growth of total credit exposure slowed down due to the nearly three times slower rise of exposure to financial activities (this exposure increased by Denar 8,977 million[30], or by 12.7%, compared to 2010 when the growth equaled Denar 23,816 million or 36.9%).

The sector-by-sector analysis shows deceleration of the growth of exposure to corporations and other clients, and equaled 6.6% (8.5% at the end of 2010). The growth of exposure to households sector registered a slower decrease and equaled 5.1% (5.9% at the end of 2010).

[29] Exposure to nonfinancial entities equals the total credit exposure less the exposure to financial activities and insurance activities, and public administration and defense, compulsory social insurance. In 2011, the exposure to nonfinancial entities increased by Denar 13,721 million, or by 6.0% (in 2010, the growth amounted to Denar 15,897 million or 7.5%).

[30] Where banks' demand for CB bills increased by Denar 6,285 million.

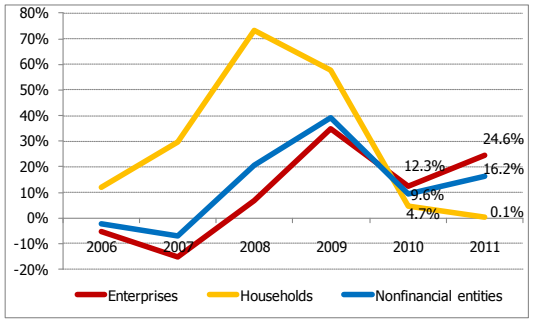
Figure 48 Annual absolute growth of credit exposure components



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

The structure of annual growth of total credit exposure was again dominated by regular loans that constituted 66.8% of the credit exposure, contributing with 75.7% to its annual growth (Annex 13). On the other hand, off balance sheet exposure decelerated the credit exposure growth, decreasing by Denar 2,535 million (or by 6.1%), 47% of which is credit card exposure[31].

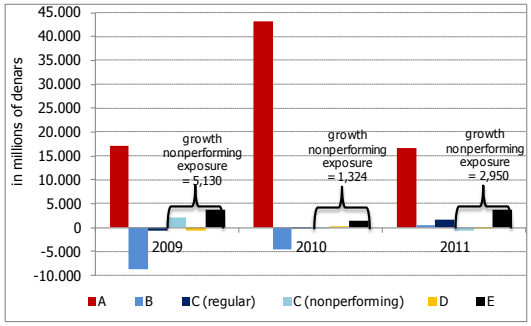
Figure 49 Annual growth rates of nonperforming loans



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

On the other hand, nonperforming loans to nonfinancial entities registered the fastest annual increase (16.2%), raising their share in total credits by 0.6 percentage points (9.9%[32] as of December 31, 2011). The annual growth of nonperforming loans is almost solely (99.7%) attributable to the increase of these loans to the corporate sector.

Figure 50 Annual absolute growth of credit exposure, by risk category

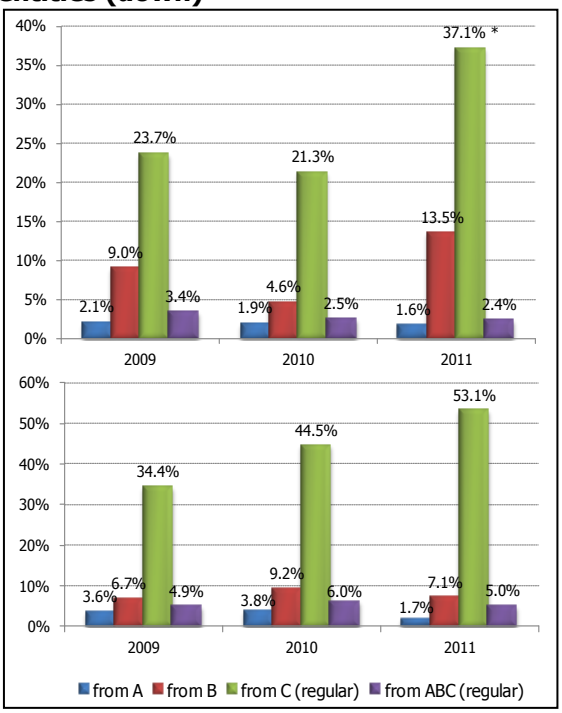


Source: National Bank, based on data submitted by banks.

The faster growth of nonperforming loans exposure is solely due to the growth of exposure in E risk category. The credit exposure in E risk category went up by Denar 3,759 million (32.7%)[33] and determined 127.4% of the growth of nonperforming loan exposure with status. Other two risk categories, (nonperforming exposure components) D and nonperforming part of C, went down annually by 6.8% and 15.1%, respectively[34].

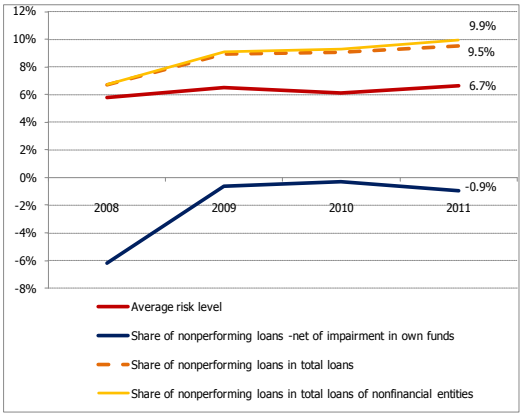
[31] The decrease of off-balance sheet exposure is the reason behind the decrease of total exposure based on credit cards (by Denar 1,874 million or 8.1%).
[32] If the financial entities are included, the nonperforming loan rate would equal 9.5% (9.0% as of December 31, 2010).
[33] The three largest banks have the largest share in the growth of exposure in the E risk category with 63.5%.
[34] Annual decrease of the D risk category exposure is solely due to one large bank, and the decrease of exposure in risk category C - nonperforming is due to one medium-size bank.

Figure 51 Migration of credits from regular to nonperforming status during the year – natural persons (up) and legal entities (down)



Source: National Bank, based on data submitted by banks.
*The percent is the ratio between the number of credits that received a nonperforming status during the year and the total number of credits at the beginning of the period under observation.

Figure 52 Indicators for the credit portfolio quality of the banking system



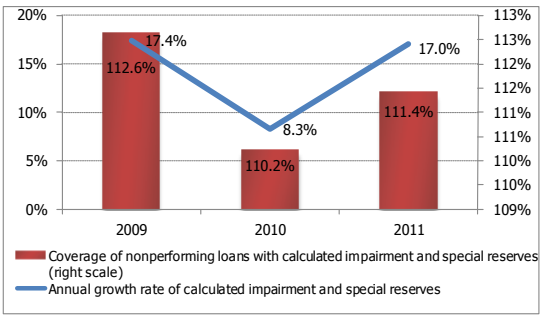
Source: National Bank, based on data submitted by banks.

The transition matrix of some credits (individual credit agreements) from regular to nonperforming, for the period from December 31, 2010 to December 31, 2011 (Annex 21), shows deterioration of the quality of "old" credit portfolio of both households and nonfinancial legal entities (the transition matrix follows the migration to nonperforming status of those credit agreements as of December 31, 2010, ignoring the newly approved credits in 2011). Credits to legal entities deteriorated more significantly, and 53.1% of credits classified in C (regular) as of December 31, 2010, as of December 31, 2011 were given a nonperforming status (37.1% with natural persons).

On the other hand, as of December 31, 2010, 6.3% of nonperforming credits to natural persons and 1.4% to legal entities were no longer nonperforming and migrated to regular claims.

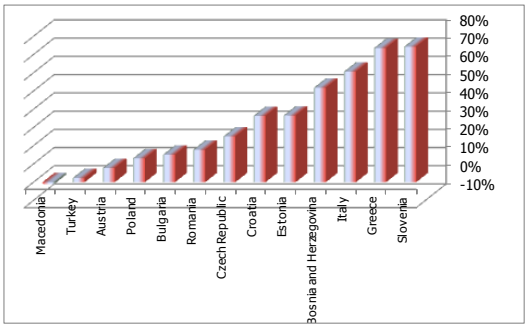
Such credit exposure components tended to deteriorate the credit portfolio quality indicators (Annex 16). Compared to the end of 2010, the average risk level and the share of credit exposure in C, D and E in total credit exposure increased by 0.6 и 0.9 percentage points, respectively. The full coverage of nonperforming loans with impairment is also regarded as positive performance. Credit exposure to enterprises and other clients contributed the most to the deterioration of credit risk indicators, constituting 44.5% of total credit exposure. The reason behind the increased credit risk in this sector is the annual growth of credit exposure in the riskiest category E (Denar 3,012 million), which also contributed to the increase of nonperforming exposure of the overall banking system. In addition, food industry accounts for 27.1% of the annual growth of credit exposure in E risk category, while the highest credit risk arises from the exposure to accommodation facilities and catering services (Annex 20). The

Figure 53 Calculated impairment and special reserves and coverage of nonperforming loans



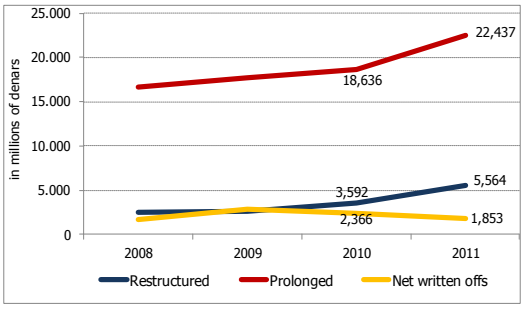
Source: National Bank, based on data submitted by banks.

Figure 54 Share of nonperforming loans – net of impairment in own funds of some countries



Source: IMF's set of financial stability indicators. The data on the Republic of Macedonia is as of December 31, 2011, data on Italy and Croatia is as of June 30, 2011, data on Bulgaria is as of December 31, 2009, and data on other countries is as of September 30, 2011.

Figure 55 Restructured, prolonged and net written off exposure



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

deterioration of household credit portfolio quality was slower, where the exposure in E risk category increased by Denar 709 million, while the exposure in C and D decreased (by Denar 113 and 583 million, respectively). Car credits registered the fastest deterioration of household indicators in 2011 (Annex 19).

Most of the annual growth of impairment and special reserve (88.7%) of the overall banking system (Denar 2,903 million) is attributed to lending to enterprises and other clients (Annex 15). Observing the currency structure, credit exposure in Denars with FX clause reported the highest risk level and deterioration of credit risk indicators (Annex 18).

Compared with other countries from the region and beyond, the full coverage of nonperforming loans positions the banking system of the Republic of Macedonia at the bottom of the scale of risks of losses from any failure to collect the loan in full. Banking systems of Slovenia and Greece are at the top of this scale, where the coverage of net nonperforming loans would require 74.3% and 73.6% of own funds, respectively.

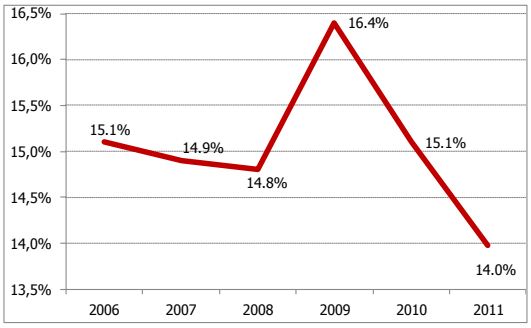
In 2011, the growth of restructured[35] and prolonged exposure accelerated, while the net written off credit exposure substantially decreased. The corporate sector is a generator of the growth of restructured and prolonged exposure, with an annual growth of 61.8% and 20.4%, respectively. Thus, the share of restructured and prolonged exposure in the structure of total credit exposure increased by 0.5 and 0.7 percentage points, respectively. The average risk level of restructured exposure markedly dropped (from 52% at the end of 2010, to 35.3%), and increased in case of prolonged exposure (from 10.7% at the end of 2010, to 12.2%).

[35] Claim restructuring denotes establishment of a new credit exposure by the bank as a replacement of already existing one, causing significant changes in contractual terms as a result of the deteriorated financial position of the borrower.

Restructured and prolonged exposure to natural persons increased marginally (Denar 8 million and Denar 6 million, respectively), but the net write offs notably decreased (by Denar 897 million or 89.7%), solely causing the decline of net write offs of the overall banking system. In 2011, same as in 2010, Denar claims dominated the currency structure of write-offs, making up 73.7%, while most of the write-offs (51.9%) related to interests.

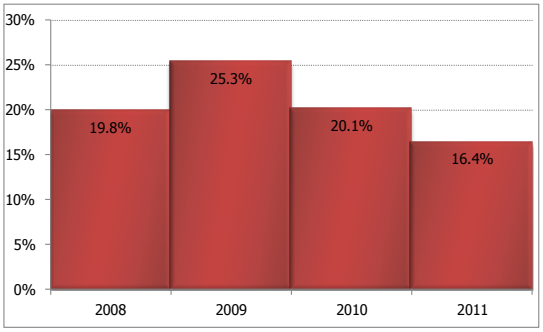
According to the transition matrices, in 2011, the quality of restructured and prolonged credits to natural persons deteriorated more significantly compared to the credits to nonfinancial legal entities. Thus 16.6% of restructured credits to natural persons and 9.1% to natural persons classified in A, B and C risk category (regular) as of the end of 2010, were given a nonperforming status in 2011 (C nonperforming, D, and E) (Annex 22). Additionally, in 2011, 3% of prolonged credits to natural persons and 2.8% to nonfinancial entities became nonperforming (Annex 23).

Figure 56 Share of bullet credits in total gross-credits to nonfinancial entities credits



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

Figure 57 Share of uncollateralized exposure in the total credit exposure to nonfinancial entities

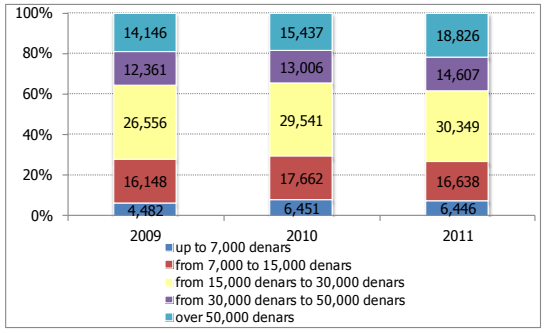


Source: National Bank, based on data submitted by banks.

The decrease of share of approved credits with bullet credits in total gross credits to nonfinancial entities, as a source of credit risk, is worth to be mentioned. At the end of 2011, these credits constituted 14% of total credits to nonfinancial entities, most of which (86.3%) are corporate credits.

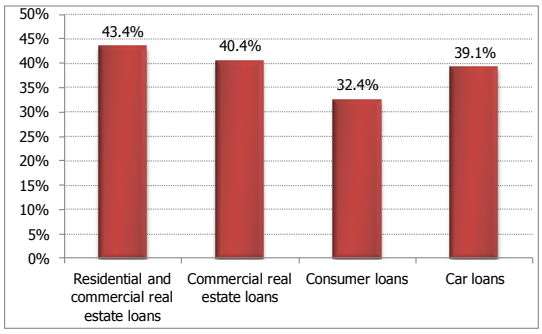
The decrease of uncollateralized credit exposure to nonfinancial entities of 16.1% is yet another success of the banks in their credit risk management. The exposure to corporations and other clients is almost fully collateralized (93.3%). Moreover, 66.6% of the total credit exposure to natural persons is collateralized.

Figure 58 Credit exposure, by monthly income of borrowers (natural persons)



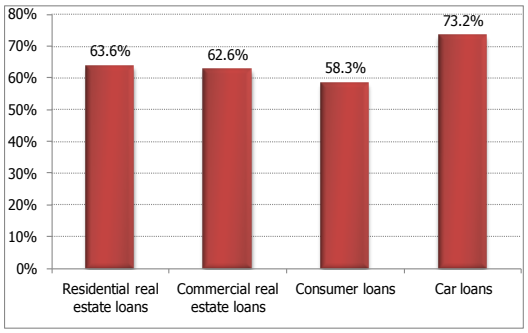
Source: National Bank, based on data submitted by banks.

Figure 59 Average level of the indicator for monthly credit liability / monthly income of borrowers – natural persons



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

Figure 60 Average level of collateralization of credit exposure to natural persons



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

On the other hand, the exposure to persons earning monthly income of above Denar 50,000 (annual growth of Denar 3,388 million, or 21.9%) markedly increased, compared to 2010 which reported the fastest growth of exposure to persons with monthly income of up to Denar 30,000. Yet, most of the credit exposure to natural persons (34.6%) is towards persons earning income from Denar 15,000 to Denar 30,000 (Annex 24). Excluding exposure based on residential and commercial real estate credits, the share of borrowers – natural persons with such income would be somewhat higher (40.4%).

The banks most frequently determine the maximum value of the indicator of monthly credit liability / amount of monthly income of borrowers (natural persons) between 10% in case of consumer credits and 60% in case of housing credits. In 2011, four banks tightened this credit standard, decreasing the required ratio between credit exposure and amount of clients' monthly income.

The average value of credit exposure/ collateral value ratio defers from bank to bank depending on factors (type and quality of collateral, borrowers' creditworthiness and other factors) taken into account in the process of credit approval and depending on the credit product subject of approval. The required value of this indicator ranges from 35% to 128% for natural persons and from 35% to 135% for corporations. In 2011, the banks did not change the required level of this credit standard compared to the preceding year.

Changes in the methodologies for exposure limits, the methodology for capital adequacy and credit risk management

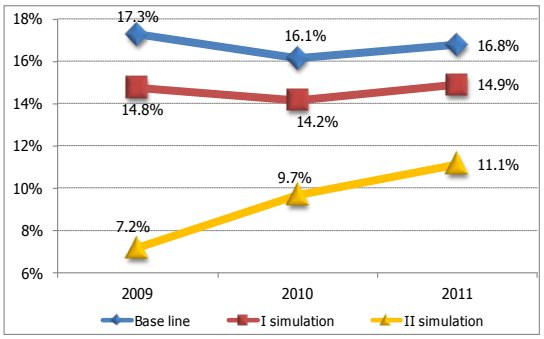
For precise determination of the level of risk to banks' claims on central governments and central banks of other countries, in June 2011, the National Bank amended the **Decision on exposure limits, Decision on methodology for determining capital adequacy and the Decision on credit risk management.** Previously, less risky claims were considered claims on and securities of governments and central banks of EU member states, Switzerland, Canada, Japan, Australia, Norway and the United States. The amendments required the use of credit rating as a criterion for determining the risk of these banks' claims / investments. Only claims / investments in securities of central governments and central banks which were given at least investment credit rating may be considered less risky claims and therefore: (1) to be regarded as deductible items when determining exposure limits; (2) to be given lower risk weight when determining credit risk weighted assets; or (3) to be eligible for better risk category.

Table 10 Simulation results

	Indicator	Enterprises, other clients and natural persons	Credit exposure of the banking system
Base line	Capital adequacy ratio	16.8%	
	% of „C", „D" and „E" in total credit risk exposure	10.9%	8.0%
	Average level of risk	9.1%	6.7%
I simulation	Capital adequacy ratio	14.8%	
	% of „C", „D" and „E" in total credit risk exposure	15.7%	11.5%
	Average level of risk	11.1%	8.1%
II simulation	Capital adequacy ratio	10.1%	
	% of „C", „D" and „E" in total credit risk exposure	25.4%	18.4%
	Average level of risk	15.1%	11.0%

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

Figure 61 Capital adequacy ratio before and after the simulation



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

1.2. Stress test simulations for the banking system resilience to higher credit risk

The resilience of banking system was assessed through assumed migration of **10% (first simulation) and 30% (second simulation)** from credit exposure of each risk category to the next two riskier categories, distributed equally. Simulations included the overall banking system and separately the enterprises and other clients sector (each activity within this sector) and households (and each product within this sector (Annex 25).

The results showed higher resilience of the banks compared to the preceding year. Higher improvement was registered in the case of second scenario, where capital adequacy would reduce by 5.7 percentage points (6.4 percentage points at the end of 2010).

The simulations of credit exposure to both sectors simultaneously (corporations and other clients and natural persons), shows the highest quality deterioration in:

- exposure to real estate services within the sector of corporations and other clients, where the average risk level would increase by 2.3 percentage points in case of first scenario and

by 6.8 percentage points in case of second scenario; and

- exposure based on credit card and overdrafts of natural persons, where the average risk level would increase by 2 percentage points in case of first scenario and by 6 percentage points in case of second scenario.

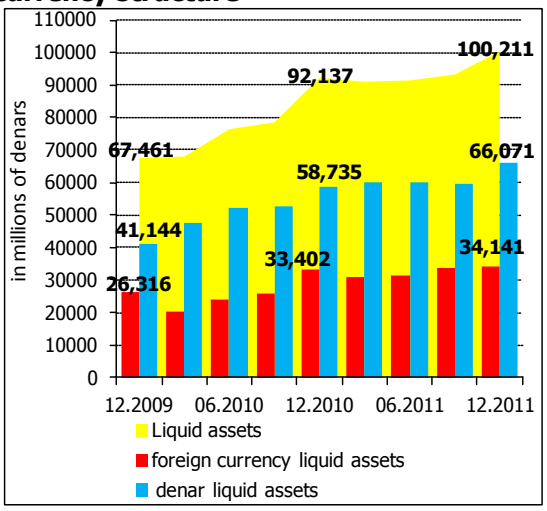
In the case of both scenarios, the adequacy ratio of the banking system remains above the requirement of 8%. Observing by bank, in case of first scenario, the capital adequacy of all banks would remain above 8%, and in the case of second scenario, the capital of five banks would fall below 8%.

2. Liquidity risk

In 2011, the banks in the Republic of Macedonia have been maintaining their liquidity on satisfactory revel. The liquid assets registered annual growth, which, however, shows signs of deceleration compared to 2010. The positive difference between proceeds from Denar and foreign currency liquid financial instruments enabled, slightly higher preference of the banks for investment in Denar liquid instruments. The liquidity indicator at the level of the banking system remained stable. In the last quarter of 2011, amendments to the regulations on calculating the liquidity ratios were introduced, which envisage integrated monitoring from the aspect of the currency. In the structure of the sources of financing, decrease in the used sources of funding from the parent entities, decrease in the financial institutions' deposits and higher share of the long-term sources of financing has been registered. It resulted in smaller maturity mismatch between asset and liabilities with 30-day maturity. In 2011, the part of the new sources of funds the banks have placed in credits increased, at the expense of the reduction in part directed in liquid assets. The stress-test simulations show resilience of the banking system to liquidity shocks.

2.1. Liquid assets and liquidity indicators of the banking system

Figure 62 Liquid assets of banks - currency structure

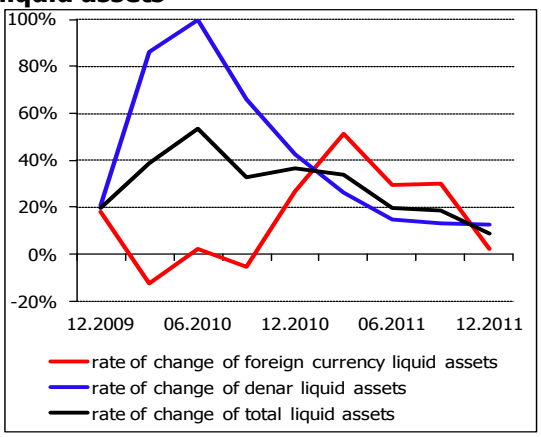


Source: National Bank, based on data submitted by the banks.

At the end of 2011, the liquid assets[36], at the level of the banking system equaled Denar 100,211 million. On annual basis, they augmented by Denar 8,074 million, or 8.8%. The share of the Denar assets in the currency structure of the banks' liquid assets equaled 5.9%. The annual increase in the liquid assets is primarily due to the rise in the Denar liquid assets of 12.5%. The Denar liquid assets growth was registered in the last quarter of 2011, when over 90% of the annual increase in the Denar liquid assets was registered. This occurrence was caused by the evident preference of the banks to place their assets in CB bills during the fourth quarter of 2011. However, the dynamics of the annual growth rate of the liquid assets in 2011 was slower compared to 2010.

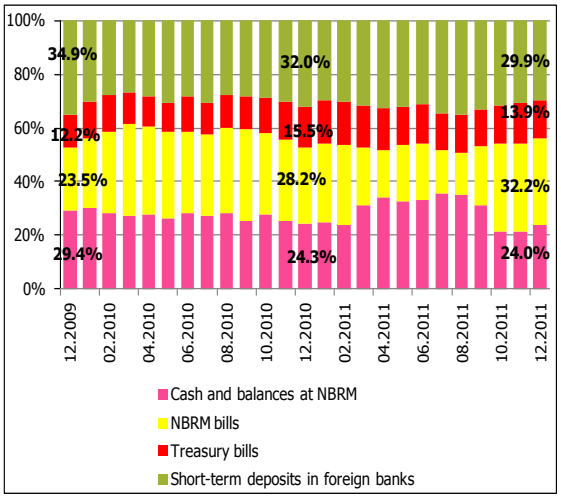
[36] The liquid assets encompass the funds and balances with the NBRM, the NBRM bills, the correspondent accounts and the short-term placements with foreign banks and placements in Treasury bills. For the needs of the liquidity analysis, the assets and liabilities in Denars with FX clause are considered Denar.

Figure 63 Annual change rate of the liquid assets



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

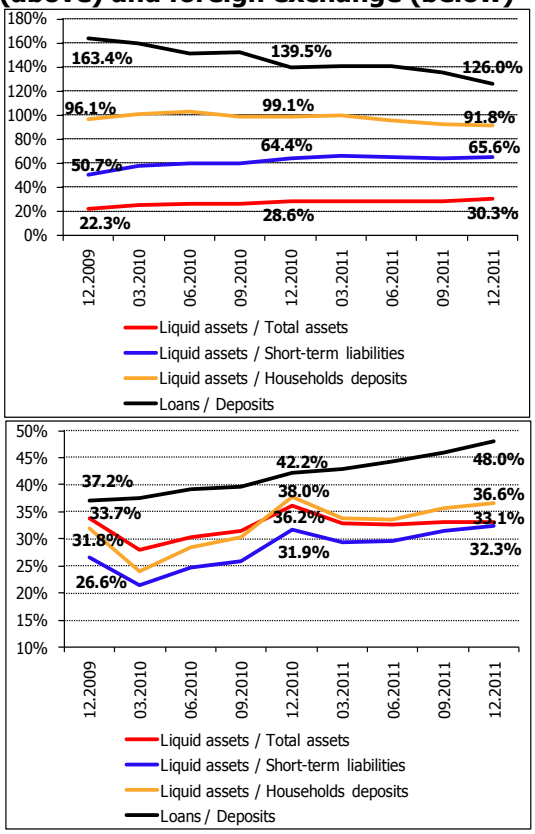
Figure 64 Structure of the liquid assets by its instruments



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

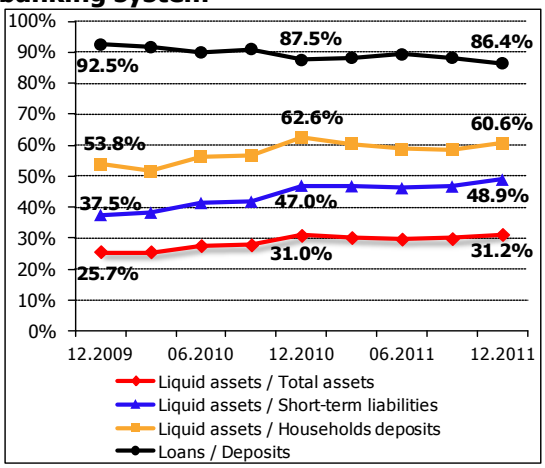
From the viewpoint of the liquid financial instruments, the annual increase in the liquid assets is mainly due to the 24.2% increase in the assets placed in CB bills. In 2011, the structural shares of CB bills and funds and balances with the National Bank in the banks' total liquid assets showed evident variability, which mainly arises from the changes in the regulations for calculation of the liquidity ratios. Namely, in the last quarter of 2011, integrated monitoring of the banks' liquidity ratios was introduced, instead of the previous practice of individual monitoring in Denars and in foreign currency. As a result, the banks have no longer motive to place the assets in bills of six-month deposits with the National Bank, which, according to the previous effective regulations, might have been used for maintenance of the level of the liquidity ratio in foreign currency. Thus, unlike the first three quarters of 2011, when the balances on the account in the National Bank registered higher share in the liquid assets, in the last quarter of 2011 risen structural share of the CB bills was registered. At the end of 2011, the CB bills were the dominant instrument in the liquid assets' structure with a share of 32.3%. The short-term assets placed with the foreign banks registered moderate growth of 1.2%. Their participation equaled 29.9% in the structure of the liquid assets, which is less by 2.1 percentage points on annual basis.

Figure 65 Liquidity indicators of the banking system by currency - Denar (above) and foreign exchange (below)



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

Figure 66 Liquidity indicators of the banking system



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

In 2011, the banks' liquidity indicators[37] showed stable dynamics. The share of the liquid assets in the total assets at the level of the banking system registered slight annual increase, while the coverage of the short-term liabilities with liquid assets registered more dynamical growth in 2011. At the end of 2011, the credit/deposit indicator is smaller by 1.1 percentage point compared to the end of 2010, thus indicating certain smaller use of the banks' deposit potential for financing the private sector credits and improvement in the banks' liquid position. From the viewpoint of the currency structure, in 2011, the FX liquid assets reduced their share in the foreign currency assets, while the share of the Denar liquid assets augmented in the Denar assets, which is due to the slightly more dynamical increase in the Denar liquid assets in 2011. On the other hand, because of the intensive annual increase in the Denar deposits in 2011, the coverage of the household Denar deposits with Denar liquid assets registered a decrease of 7.3 percentage points, while at the end of 2011 this indicator with the foreign currency deposits is smaller by 1.3 percentage points compared to 2010. The faster growth in the foreign currency credits in 2011, in conditions of more evident preference of the non-financial entities for Denar saving, influenced towards increase in the foreign currency credits/deposits ratio in 2011.

[37] The calculation of the liquidity indicators at the level of the banking system does not take into consideration the resident interbank assets and liabilities.

2.2. Sources of financing of the banking system

In 2011, movements towards larger use of long-term sources fall in both the financial institutions deposits and the used sources of funds from foreign parent entities of the banks in the structure of the banks' sources of financing were registered.

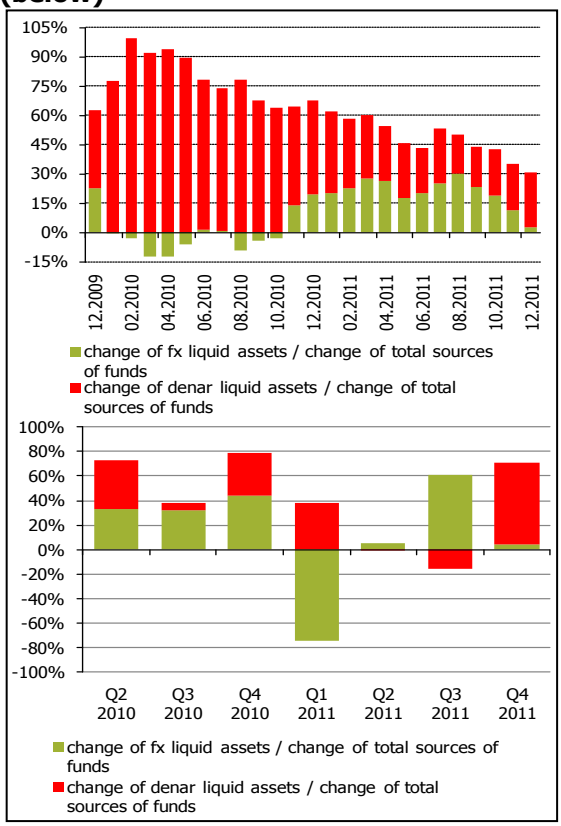
Table 11 Sources of financing of banks

Types of sources of funds	31.12.2010		31.12.2011		Annual change	
	Ammount (in millions of denars)	Share in structure	Ammount (in millions of denars)	Share in structure	Absolute	Relative
Deposits of non-financial enteties	**213,270**	**69.9%**	**234,821**	**71.1%**	**21,551**	**10.1%**
-o.w. parent enteties	0	0.0%	49	0.0%	49	100.0%
Deposits of financial institutions	**18,372**	**6.0%**	**13,169**	**4.0%**	**-5,203**	**-28.3%**
-o.w. parent enteties	7,293	2.4%	4,414	1.3%	-2,879	-39.5%
Loans, issued debt securities subordinated liabilities and hybrid capital instruments	**33,341**	**10.9%**	**38,840**	**11.8%**	**5,499**	**16.5%**
-o.w. parent enteties	12,225	4.0%	11,437	3.5%	-789	-6.4%
Equity and reserves	**40,307**	**13.2%**	**39,299**	**11.9%**	**-1,009**	**-2.5%**
Other sources of financing	**0**	**0.0%**	**4,206**	**1.3%**	**4,206**	**100.0%**
-o.w. parent enteties	0	0.0%	80	0.0%	80	100.0%
Total sources of financing	**305,290**	**100.0%**	**330,334**	**100.0%**	**25,044**	**8.2%**
Long-term sources of financiang	**67,751**	**22.2%**	**106,302**	**32.2%**	**38,551**	**56.9%**
-o.w. parent enteties	14,026	4.6%	8,897	2.7%	-5,129	-36.6%
Shrot-term sources of financing	**197,232**	**64.6%**	**180,528**	**54.7%**	**-16,703**	**-8.5%**
-o.w. parent enteties	5,492	1.8%	7,003	2.1%	1,510	27.5%
Equity and reserves	**40,307**	**13.2%**	**39,299**	**11.9%**	**-1,009**	**-2.5%**
Other sources of financing	**0**	**0.0%**	**4,206**	**1.3%**	**4,206**	**100.0%**
-o.w. parent enteties	**0**	**0.0%**	**80**	**0.0%**	**80**	**100.0%**
Total sources of financing	**305,290**	**100.0%**	**330,334**	**100.0%**	**25,044**	**8.2%**

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

In 2011, the used sources of funding (except equity and reserves) from parent entities reduced by Denar 3,538 million, or 18.1%, as a result of which their share in the structure of the total sources of financing declined from 6.4% to 4.8%. The decrease in these sources is mainly due to the deposit withdrawal and the repayment of part of the used short-term borrowings of the domestic banks to their foreign parent entities. In addition, certain change in the maturity profile of the borrowings from the parent entities, towards increase in the long-term borrowings from the parent entities was registered. By bank, lower annual use of

Figure 67 Change in the liquid assets by currency / change in the total sources of funds, annually (above) and quarterly (below)

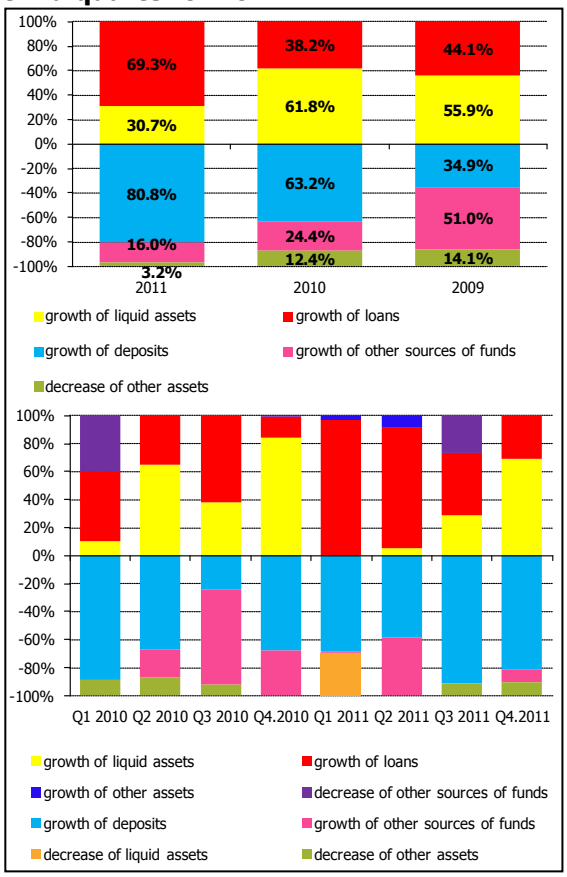


Source: National Bank, based on data submitted by the banks.

sources of funds from the parent entities with nine banks was registered, while three banks registered larger use of sources of funds from the parent entities.

In 2011, the banks' preference to place new sources of funds in liquid instruments continued to diminish gradually. Namely, the ratio between the annual change of the liquid assets and the total sources of funds was continuously decreasing since the beginning of 2011, and in December 2011 it equaled 30.6%, the lowest percentage in the previous years, which is a drop of 39.9 percentage points compared to December 2010. On the other hand, if analyzed on a quarterly basis, significant change in the banks' preference for placing the new sources of funds in liquid instruments in 2011 was registered. Namely, in the first half of 2011, the banks were willing to place smaller part of the new sources of funds, and accordingly, larger portion was used for other placements, including credits, which shows the bigger "appetite" for taking new risks in that period of the year. However, in the second half of the year, the banks' preference, concerning the liquid assets, changed, as a result of which, the largest portion of the new sources of funds was once again placed in liquid assets. With respect to the currency structure, the banks preference for Denar liquid assets was more evident in 2011. On a quarterly basis, the banks showed larger inclination for foreign exchange than for Denar instruments only in the third quarter of 2011.

Figure 68 Cash inflows (above) and cash outflows (below) of the banks during the third quarter of 2011



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

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

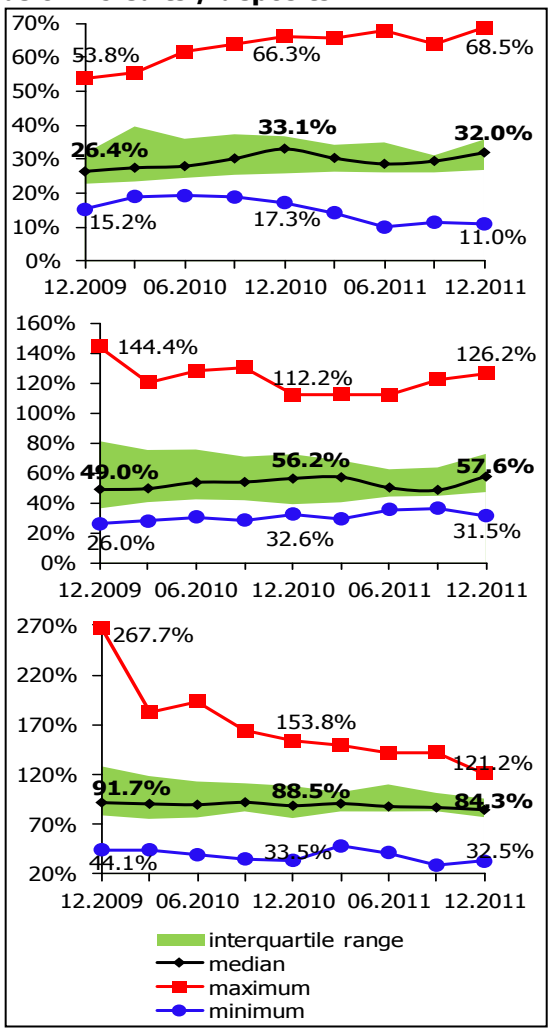
** "Other sources of funds" category encompasses all sources of funds that are not deposits of nonfinancial entities (equity and reserves, deposits of the nonfinancial institutions, borrowings, subordinated instruments etc.).

The main source of the cash flows[38] for the banking system in 2011 was the deposits growth, which generates 80.8% of the total new sources of funds at the level of the banking system. In comparison with the two previous years, the deposits growth had larger contribution to the creation of new sources of funds of the banks. As a contrast, the contribution of the other liabilities growth and the decrease in the assets that are not included in the liquid assets and are not credits also decreased. On the side of the banking system's cash outflows, **higher preference of the banks for directing their assets in credits was registered if compare with the preceding two years, whereas the reduced volume of placements in liquid financial instruments.** On a quarterly basis, in 2011, the contribution of the deposit growth to the banks' new sources of funds remained the largest, an identical situation to most of 2010. On the other hand, as for the employment of these funds, the largest portion of the new sources of funds was distributed in credits, while in the second half of 2011, the preference for liquid assets elevated, so in the last quarter of the year, the liquid assets growth had the largest share in the cash outflows. However, in comparison with 2010, it is evident that the cash outflows of the banks, which were directed towards liquid instruments, had smaller relative share, for the account of the higher share of the credit growth.

By banks, the deposit growth registered the largest share in the structure of the cash inflows with nine banks, while in three banks, the largest share of the cash inflows originate from the increase in the other non-deposit sources of funds. With five banks, the largest portion of the cash inflows was generated from the decrease in certain asset categories, i.e. with two banks by credit reduction, and with other three by decrease in the liquid assets. With ten banks, the

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

Figure 69 Certain liquidity indicators for individual banks
above: liquid assets / total assets
middle: liquid assets/short-term liabilities
below: credits / deposits



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

largest share in the structure of the cash outflows in 2011 accounted for the credit growth, with three banks for the placements in liquid assets, while with one bank, for the increase in other assets. With three banks, the largest part of the cash outflows in 2011 results from the decrease in the liabilities, i.e. decrease in the non-deposit sources of funds.

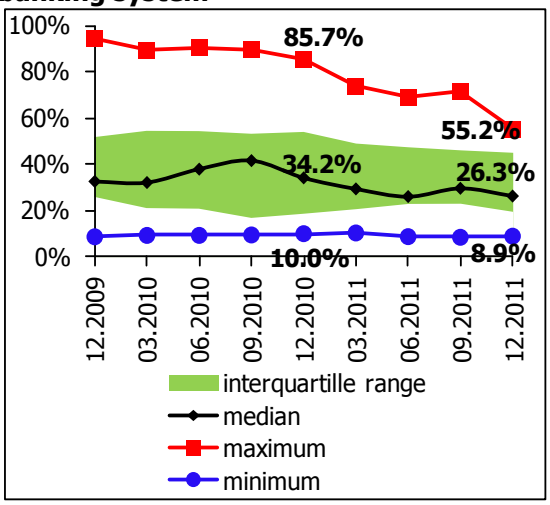
2.3. Liquidity analysis, by bank

In 2011, the liquid assets with seven banks (participating with 27.6% in the assets of the banking system) **registered annual decrease** in the total amount of Denar 4,807 million. The decrease with individual banks ranged from 3.9% to 77.7%, with a median of 11.7%. In 2011, **the liquid assets with other nine banks increased** in the total amount of Denar 14,334 million. By bank, the liquid assets growth ranged from 3.8% to 324.4%, with median of 20.2%.

The liquid assets growth, in conditions of moderate preference of the banks for taking new risks, resulted in improvement in the liquidity indicators with most of the banks. The share of the liquid into the total assets in 2011 increased with eight banks, while the coverage of the short-term liabilities with liquid assets incremented with nine banks. Also, both indicators registered certain narrowing of the interquartille range, thus indicating better homogeneity of the banks regarding these indicators.

The largest dispersion has been registered with the indicator for the credit - deposit ratio of the non-financial entities, with regard to the difference between the bank with maximum and the bank with minimal value. However, despite the obvious difference between the end values, the interquartille range of this indicator is relatively small. In 2011, these indicators showed downward movement with half of the banks, which indicates strengthening of the liquidity position, while with the remaining half, the credit/deposit ratio increased, which points to gradual rise in the degree of deposit use for

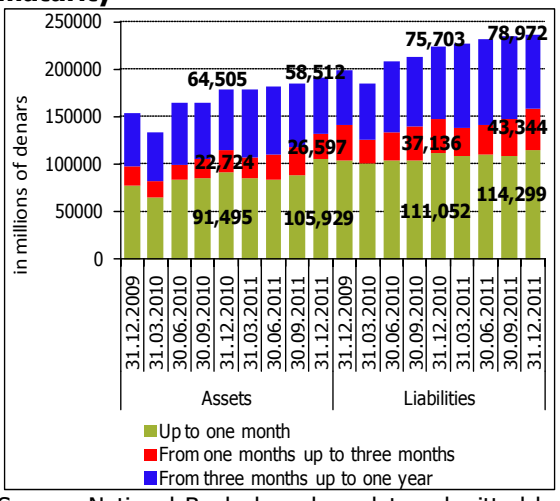
Figure 70 Deposits concentration in the banking system



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

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

Figure 71 Structure of the banks' assets and liabilities by the contractual residual maturity



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

credit activity funding. The difference between the individual banks with this indicator is actually a reflection of the different strategies of the banks for funding and acquiring sources, as well as the different degree of aggression in taking certain participation on the credit market.

The relatively high deposit concentration can also be indicated as a source of liquidity risk for the banking system of the Republic of Macedonia. However, in 2011, certain decrease in the non-financial entities' deposit concentration was registered. Thus the medial value of the share of the deposits of the 20 largest depositors in the total deposits equaled 26.3% on December 31, 2012, which is a decrease of 7.9 percentage points compared to the end of 2010. Also, on December 31, 2011, this share by bank ranges from 8.9% to 55.2%, while at the end of 2010, it equaled from 10.0% to 85.7%.

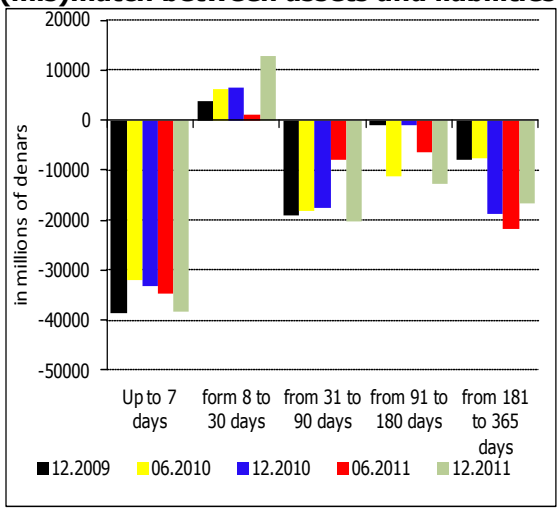
At the end of 2011, all banks have met the minimal liquidity ratio level (in value of 1)[39] up to 30 and up to 180 days. At the end of 2011, the medial value of the liquidity ratios up to 30 and 180 days equaled 2.3 and 1.3, respectively.

2.4. Maturity (mis)match of the banks' assets and liabilities

At the end of 2011, the banks retained the higher contractual residual maturity in comparison with the assets of the banking system (Annex no. 27). The largest annual increase of 16.7% was registered with the liabilities with contractual residual maturity to one year. The assets with the residual maturity to one month registered the highest absolute annual rise, opposite to the annual fall in the assets with

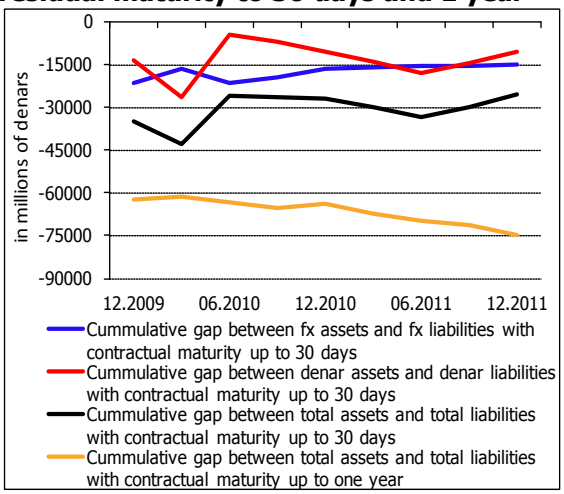
[39] In 2011, the manner of calculating the liquidity ratios by the banks changed. Namely, instead of separate liquidity ratios for the Denar and foreign exchange positions, since October 2011, the banks calculate and fulfill single liquidity ratio, with the banks began integrated monitoring of the liquidity ratios from the aspect of the currency. In addition, when calculating the liquidity ratios, the time deposits are included as outflow in the amount of 80%, instead of the full amount, as it was practiced previously.

Figure 72 Contractual residual maturity (mis)match between assets and liabilities



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

Figure 73 Cumulative difference between assets and liabilities with contractual residual maturity to 30 days and 1 year



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

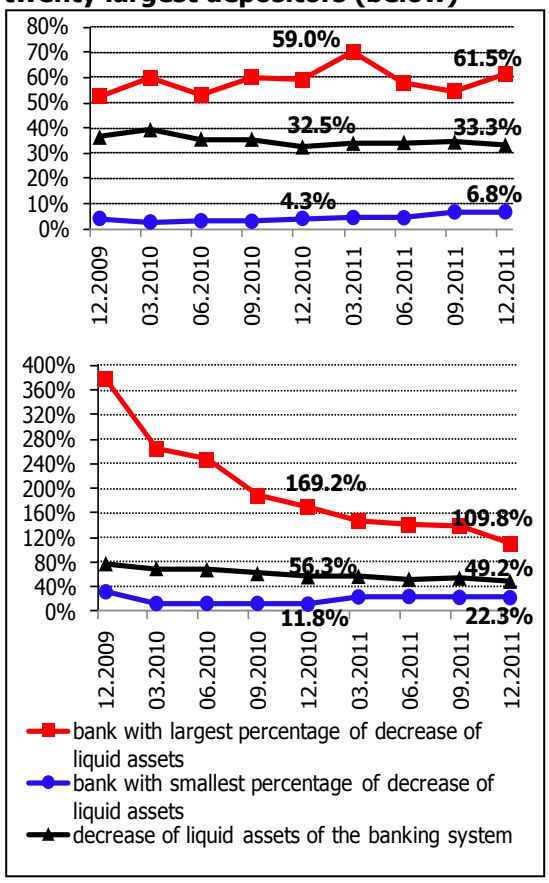
maturity of three months to one year, thus indicating the banks' preference to make placement in liquid financial instruments and thus to strengthen its liquid position.

In 2011, certain increase in the assets and liabilities mismatch in most of the maturity segments was registered, except assets and liabilities with contractual residual maturity from six months to one year. The largest mismatch between assets and liabilities is registered within the maturity segment of up to seven years, which arises from the classification of the sight deposits in this maturity segment. At the end of 2011, positive gap between assets and liabilities has been evidenced only in the residual maturity block from 8 days to 30 days.

In 2011, cumulative negative gap between assets and liabilities with contractual residual maturity to one year deepened, but reduction of the cumulative negative difference between assets and liabilities to one month reduced. This situation was caused by the risen liabilities with contractual maturity from one to three months, given the assets growth with contractual residual maturity to one month.

On the other hand, according to the expectations, the gap between assets and liabilities in all maturity segments is positive, primarily because of the banks' expectations for relatively high stability of the deposits. Namely, on a short run, the banks expect outflow of 13.2% of the total deposits with residual maturity to three months (Annex no. 28). The banks expect similar stability also with the time and sight deposits. Thus as for the time deposits, the banks expect that 86.4% will remain in the banking system in the following three months, while this percentage with sigh deposits is almost 90%.

Figure 74 Results of the simulation of withdrawal of 20% of the household deposits (above) and withdrawal of the twenty largest depositors (below)



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

2.5. Stress test simulation of the resilience of the banking system to liquidity shocks

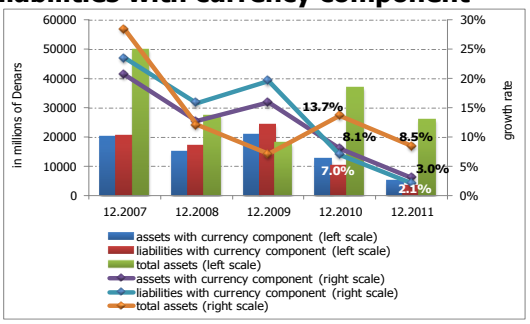
The resilience of the banking system to liquidity shocks shows satisfactory degree in 2011. The simulations of the resilience of the banking system show that the banking system manages enough liquid assets to deal with shocks related to the possible outflow of deposits, which are the most important source of financing. Just slightly larger vulnerability was evidenced in case of possible withdrawal of the deposits of the 20 largest depositors outside the banking system, in comparison with the withdrawal of 20% of the household deposits, which arises from the high deposit concentration degree with some of the banks. Thus at the end of 2011, in case of withdrawal of the deposits of the twenty largest depositors, the liquid assets at the level of the banking system would reduce by 49.2%, while 33.3% of the liquid assets would be sufficient to absorb the possible withdrawal of 20% of the household deposits. In comparison with 2010, the results of these simulations approximated, i.e. the difference between the bank with the largest percentage reduction i.e. the poorest result and the bank with the smallest percentage reduction, i.e. the best result narrowed.

In addition, the simulation encompassing outflow of sources of financing that the banks use from their parent entities (except subordinated and hybrid capital instruments the payment of which should be approved by the National Bank), the liquid assets by bank should reduce from 1.4% to 49.5%, or 9.5% at the level of the banking system, while its share in the total assets would fall from 31.2% to 29.2%.

3. Currency risk

On December 31,2011, the exposure of the banking system to currency risk increased, which can be seen in the gap widening between assets and liabilities with currency component relative to the smaller increase in the banks' own funds. The enlargement of the Euro assets and liabilities gap (which is the dominant foreign currency in the banks' balances) is the main reason for the larger exposure to currency risk. All banks, except one, are within the prescribed limit for the aggregate foreign currency position (30% of the own funds).

Figure 75 Annual change of the total assets and liabilities and assets and liabilities with currency component



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

Table 12 Assets and liabilities with currency component and their share in the total assets

Item	Amount (in millions of Denars) 31.12.2010	Amount (in millions of Denars) 31.12.2011	Share in total asstes	
			2010	2011
Assets in Denars with FX clause	69,349	63,732	22.7%	19.2%
Assets in foreign currency	94,733	105,354	31.0%	31.8%
Assets with currency component	164,082	169,085	53.7%	51.1%
Total assets	**305,290**	**331,176**	**100.0%**	**100.0%**
Liabilities in Denars with FX clause	8,377	7,393	2.7%	2.2%
Liabilities in foreign currency	148,841	153,150	48.8%	46.2%
Liabilities with currency component	157,217	160,543	51.5%	48.5%

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

In 2011, the gap between assets and liabilities with currency component increased by 24.4%, or Denar 1,678 million, which was smaller than the gap deepening in 2010, when in equaled 39.8%. The gap widening in 2011 results from the growth of the assets with currency component (Denar 5,003 million) compared to the increase in the liabilities with currency component (Denar 3,325 million).

The increase in the assets with currency component is more due to the FX credits growth (Denar 7,897 million)[40], and less to the increase in the cash and cash equivalents in foreign currency (Denar 3,287 million)[41]. Decrease is evident only with the financial assets available for sale in Denars with FX clause (Denar 6,279 million, Annex no. 29) and with deposits in other banks in Denars with FX clause (Denar 308 million)[42].

The increase in the liabilities with currency component is due to the increase in the natural persons' foreign currency deposits from three months to one year maturity (Denar 3,605 million, or 9.7%), to the liabilities based on credits in foreign currency to domestic banks with

[40] The intensified crediting in foreign currency arises primarily from the foreign currency long-term corporate credits (Denar 5,678 million), as well as from the foreign currency of household credits (Denar 1,485 million).

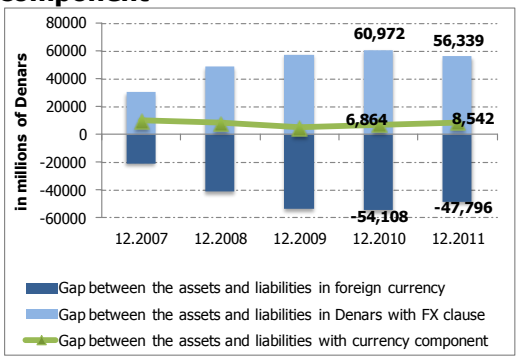
[41] The largest share in the cash and cash equivalents growth accounts for the foreign currency cash, which increased by Denar 1,151 million, or 38.6%, with an increase with the reserve requirement in foreign currency with the National Bank and with current accounts in foreign currency in foreign banks (Denar 960 and 813 million, respectively) being also registered.

[42] The reduction of the financial assets available for sale in Denars with FX clause is a result of the reduction of the banks' placements in Treasury bills in Denars with FX clause. In 2011, the number of issued Treasury bills compared to the previous year increased (by 68.5%), while the Treasury bills in Denars with FX clause went down by 8.6% (the due amount of Treasury bills with FX clause in 2011 exceeds the amount of these bills issued in 2011).

maturity from two to five years (Denar 2,872 million, or 68.7%) and the natural persons' current accounts in foreign currency (Denar 1,327 million, or 14.0%). On the other hand, the foreign currency deposits of nonresidents registered a decrease of Denar 3,447 million[43] (annex no. 30).

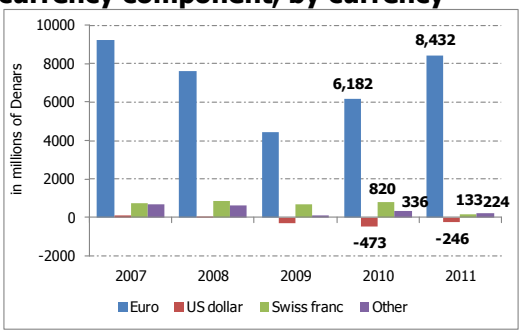
For the first time in several years, such movements resulted in higher drop in both the negative gap between assets and liabilities in foreign currency and the positive gap between assets and liabilities in Denars with FX clause (on December 31, 2011 the gap between the assets and liabilities with currency component equaled Denar 8,542 million).

Figure 76 Structure of the gap between assets and liabilities with currency component



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

Figure 77 Dynamics of the gap between assets and liabilities with currency component, by currency



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

Most of this gap is due to the Euro assets and liabilities gap, which equals Denar 8,432 million, i.e. increase of Denar 2,250 million, or 36.4% compared to December 31,2010. On the other hand, the gap between assets and liabilities in US Dollars (which remains negative) and assets and liabilities in Swiss Franks reduced.

The Euro dominance can be perceived also by its share in the assets and liabilities with currency component, which is at the level of approximately 90%.

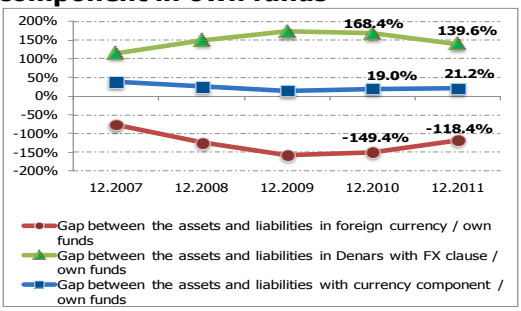
Table 13 Currency structure of the assets and liabilities with currency component and their gap

Currency	31.12.2010			31.12.2011		
	Currency structure of the assets with currency component	Currency structure of the liabilities with currency component	Currency structure of the gap between assets and liabilities with currency component	Currency structure of the assets with currency component	Currency structure of the liabilities with currency component	Currency structure of the gap between assets and liabilities with currency component
Euro	89.7%	89.7%	90.1%	88.9%	88.4%	98.7%
US dollar	6.5%	7.1%	-6.9%	7.2%	7.8%	-2.9%
Swiss franc	2.0%	1.6%	11.9%	1.9%	1.9%	1.6%
Other	1.8%	1.6%	4.9%	2.0%	1.9%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

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

[43] More detailed analysis of the sources of financing of the banks is provided in part 2. Liquidity risk.

Figure 78 Share of the gap between assets and liabilities with currency component in own funds



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

The deeper gap between assets and liabilities with currency component, in conditions of smaller increase in the own funds, resulted in their higher ratio, which is indicator for the higher level of currency risk. The gap/own funds ratio increased by 2.2 percentage points compared to December 31, 2010 and it equaled 21.2%.

Table 14 Banks by the share of the aggregate foreign currency position in the own funds

Aggregate currency position/own funds	Number of banks	
	Aggregate long position	Aggregate short position
under 5%	3	
from 5% to 10%	6	
from 15% to 30%	6	
over 30%	1	

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

3.1. Open currency position (aggregate and by currency)

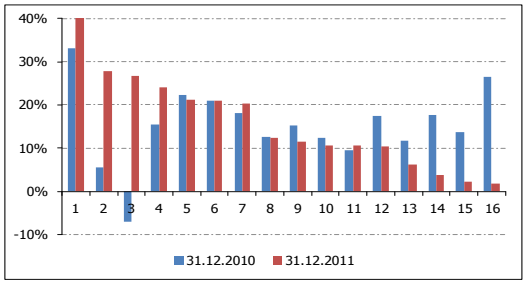
Twelve banks register open currency position ranging from 5% to 30%, while aggregate foreign currency position below 5% was registered only by three banks. None of the banks registered short open currency position in Euros, while six, i.e. four banks have short open currency positions in US Dollars, i.e. Swiss Franks.

Table 15 Open currency position by currency compared to the banks' own funds

Open currency position by currency /own funds	Number of banks							
	Euro		US Dollar		Swiss franc		Other	
	Long	Short	Long	Short	Long	Short	Long	Short
under 5%	5		10	6	12	4	16	
from 5% to 10%								
from 10% to 20%	6							
from 20% to 30%	4							
over 30%	1							

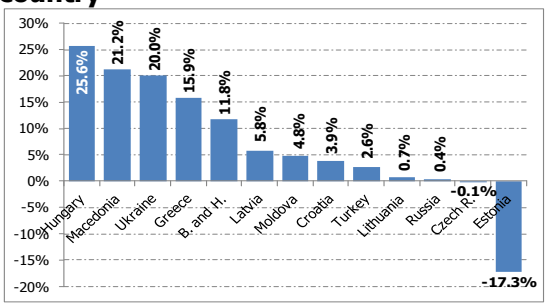
Source: National Bank, based on data submitted by banks.

Figure 79 Ratio of aggregate foreign currency position and own funds, by banks



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

Figure 80 Ratio of aggregate foreign currency position and own funds, by country



Source: National Bank, based on data submitted by the banks; International Monetary Fund (financial stability indicator).

Analyzed by individual banks, most of the banks registered certain decrease in the aggregate foreign currency position and own funds ratio, with three banks being registered more evident reduction of that ratio. At the end of 2011, one bank exceeded the prescribed 30% limit for the aggregate foreign currency position relative to the own funds (48.6%)[44].

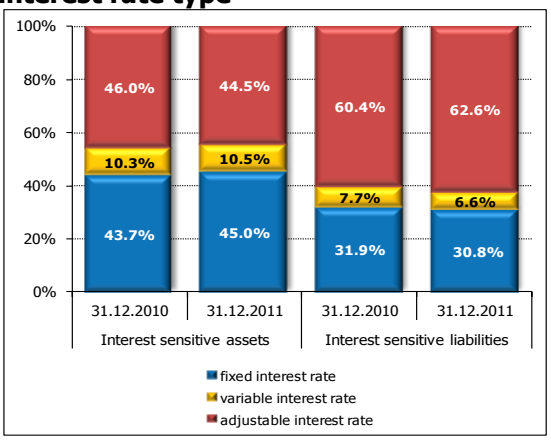
The analysis of the ratio between the aggregate foreign currency position and the own funds with certain countries indicates that this ratio is among the highest in the analyzed countries.

[44] Pursuant to the Decision on managing the currency risk ("Official Gazette of the Republic of Macedonia" no. 17/2008), the banks are required to inform the National Bank on the reasons for the exceeding, as well as to state the activities it will undertake to attain the adequate limit. According to the explanation submitted by the bank, the exceeding results from the intensified activities for purchasing foreign currency assets in line with the requirements of the bank clients.

4. Interest rate risk in the banking book

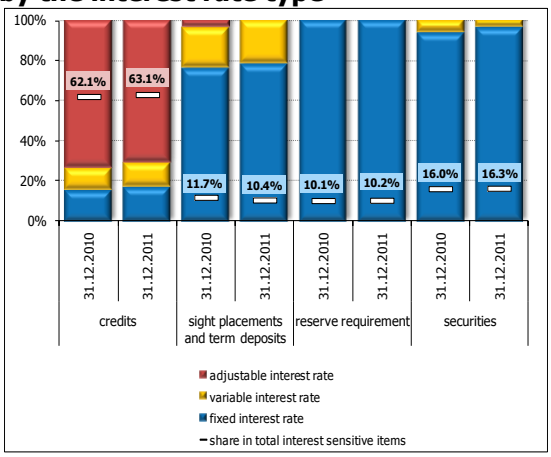
The banks exposure to interest rate risk in the banking book remained low, in comparison with the exposure to other risks. The reason for the moderate role of this risk arises from the current practice of the banks to apply the adjustable interest rates[45], in most of the credit and deposit agreements (which are the dominant banking products). By avoiding this risk, the banks transfer it to the users of the banking products, thus transforming it into indirect credit risk. The large presence of the adjustable interest rates raise the dilemma whether their use is aimed at ensuring better management, avoidance or transfer of undertaken risks, or they serve as an instrument for liquidity and profitability management of the banks.

Figure 81 Structure of the interest sensitive assets and liabilities by the interest rate type



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

Figure 82 Structure of the interest sensitive assets by individual categories, by the interest rate type



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

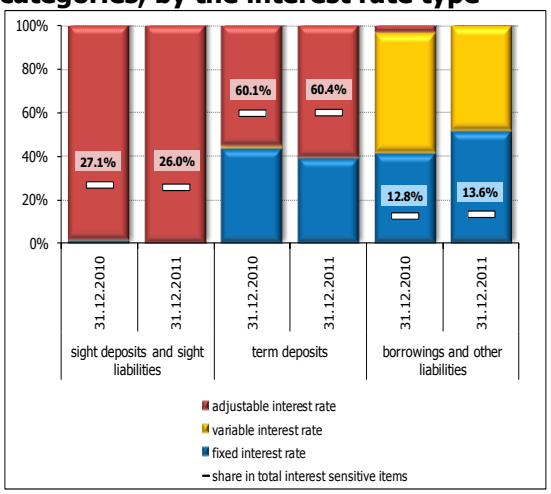
4.1. Structure of the interest sensitive assets and liabilities

At the end of 2011, the positions with fixed interest rates (45.0%) became equal to the share of the positions with adjustable interest rates (44.5%) in the structure of the interest sensitive assets, primarily because of the higher share of the fixed interest rates with the credits and their dominance with the securities. On the other hand, the adjustable interest rates preserved and additionally increased their share in the structure of the interest sensitive liabilities (62.6%). The possibility for unilateral change in the level of the interest rates (by using the adjustable interest rates with credit and deposit products) enables the banks to fulfill the set goals regarding the planed level of gain. Simultaneously, the adjustable interest rates are used as an instrument for easier management of competitiveness pressure and liquidity management.

The adjustable interest rates, with their share of 70.6%, are the most common with the credits which represent almost all the assets with adjustable interest rates. The credits are also the dominant financial instrument in the structure of the banks' interest sensitive assets (63.1%). Regarding the other financial instruments (sight deposits, time deposits, reserve requirement, Treasury bills and CB bills), which comprise the rest (36.9%) of the interest sensitive assets, the

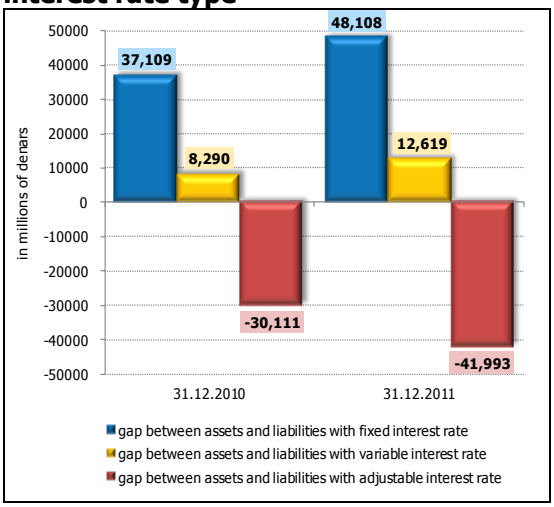
[45] The adjustment of the amount of the interest rates is usually performed unilaterally by referring to the changes in the banks' interest rate policy.

Figure 83 Structure of the interest sensitive liabilities by individual categories, by the interest rate type



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

Figure 84 Gap between the interest sensitive assets and liabilities, by the interest rate type



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

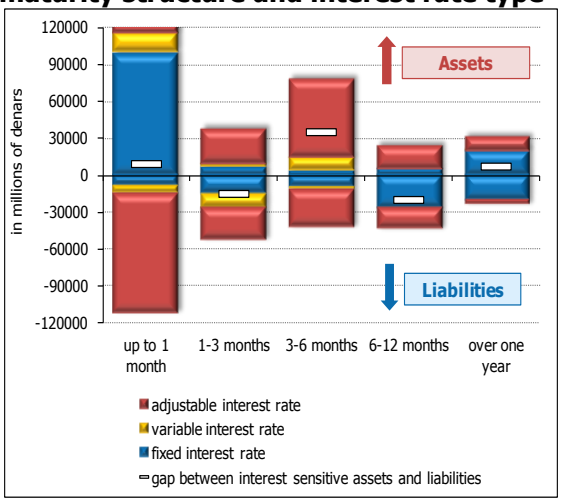
largest portion accounts for the positions with fixed interest rates.

On the interest sensitive liabilities side, larger variability in individual interest rate types can be evidenced. Almost all of the sight deposits and liabilities are with adjustable interest rates (99.2%), with these interest rates having the dominant share (60.8%), also in the most common financial instrument in the interest sensitive liabilities - the time deposits. The liabilities with adjustable interest rate almost fully (99.9%) consist of these two categories of financial instruments. The largest share in the borrowings and other liabilities (subordinated debt) accounts for the positions with fixed interest rates (51.1%), which, as regards their share, equalized and exceeded the variable interest rates (48.5%).

The gap between the interest sensitive assets and liabilities by the interest rate type is positive with the positions with fixed and variable interest rates, while negative with the positions with adjustable interest rates. In comparison with the end of 2010, the gap registers a widening with all interest rate types. The positive gap with the positions with fixed interest rates is due to the allocated reserve requirement (100%), the Treasury bills and the CB bills (96.5%) and the banks investments in deposits (92.7%), whose interest rates are almost fully fixed. The positive gap with the positions with variable interest rates is result of the large portion of sight placements (74.5%) that have variable interest rates. The negative gap with the positions with variable interest rates is due to the fact that substantial part of the time deposit and almost all sight liabilities has adjustable interest rates.

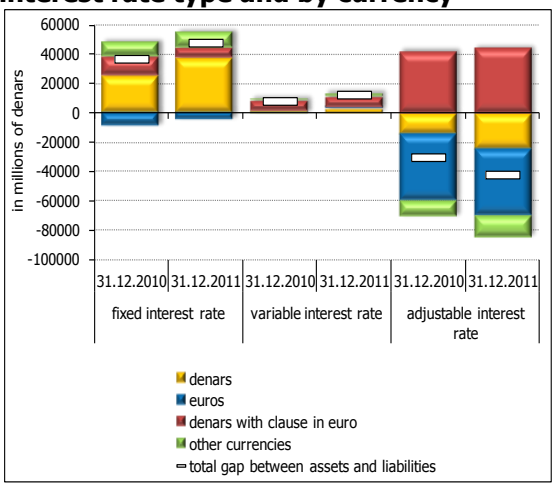
The banks' exposure to interest rate risk is the largest in the one-to-three-months maturity segment. Within the maturity segments with shorter maturity (to three months), there is bigger balance between the interest sensitive assets and liabilities. Although the adjustable interest rates are present with

Figure 85 Absolute amount of interest sensitive assets and liabilities by the maturity structure and interest rate type



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

Figure 86 Gap between the interest sensitive assets and liabilities by the interest rate type and by currency



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

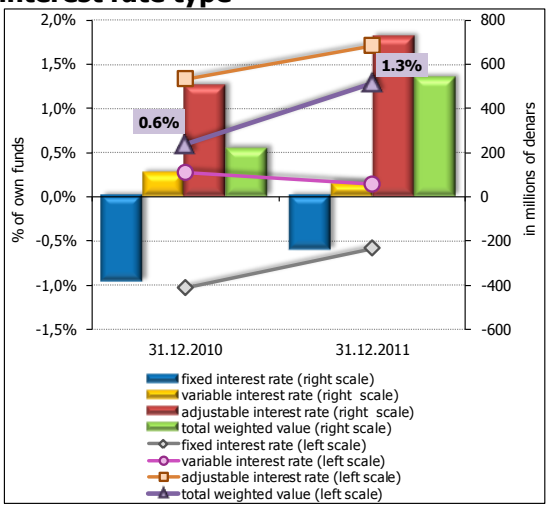
both the assets and the liabilities in almost all maturity segments, the interest sensitive assets in the maturity segment up to one month are exception, where they are absent because of the dominance of the positions with fixed interest rates. This arises from the maturity characteristics of the monetary policy's main instruments (the reserve requirement and CB bills are encompassed in the maturity block of one month) and the instruments on the domestic money market, along with the apparent preference of the banks to place their foreign currency assets as deposits on a short run in foreign banks. On interest sensitive liabilities side, the positions with adjustable interest rates dominate the segments with shorter maturities, mainly because of the sight deposits, while the positions with fixed interest rate prevail in the segments with longer maturities, mainly as a result of the time deposits with residual maturity of over six months. In addition, there is a substantial positive gap with the positions with fixed interest rates, while with the positions with adjustable interest rates, there is evident negative gap. In both cases, the imbalance between the interest sensitive assets and liabilities is due to the maturity segment up to one month. Hence, it can be concluded that the banks apply adjustable interest rates as a tool for establishing balance between the interest sensitive assets and liabilities, mainly within the maturity segments on a short run. The maturity structure of the adjustable interest rates de facto mirrors the banks expectations for the period till the next "adjustment" of the interest rate level, which, for the assets with adjustable interest rates, is expected for three to six months and for a month for the liabilities with adjustable interest rates.

The gap between the interest sensitive assets and liabilities is positive with the positions in Denars and in Denars with FX clause, while negative with the positions in Euros. The extremely positive gap between the fixed interest rates arises from the Denar positions, which contributed more to the creation of this gap, primarily because of the Treasury

bills and CB bills with fixed interest rate. On the other hand, the negative gap with the adjustable interest rates arises from the Euro positions and it is a result of the fact the time deposits in Euros have mainly adjustable interest rates.

4.2. Weighted value of the banking book

Figure 87 Net weighted value and ratio between the total weighted value of the banking book and own funds by the interest rate type



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

The adjustable interest rates in the credit and deposit banking products are the main reason for the current moderate importance of the interest rate risk in the banking book for the banks. The total weighted value of the banking book at the level of the banking system[46] equals Denar 539 million, which is an increase of Denar 319 million compared to the end of 2010, mainly due to the increase in the positive net weighted position with adjustable and the decrease in the negative net weighted position with fixed interest rate (Annex no. 31). The ratio between the total weighted value of the banking book and own funds[47] is 1.3%, and in comparison with December 31,2010, is higher by 0.7 percentage points. By individual banks, this ratio ranged from 0.6% to 8.6%, with median of 1.4%, with the lowest and the highest ratio being registered with two banks from the group of medium-size banks.

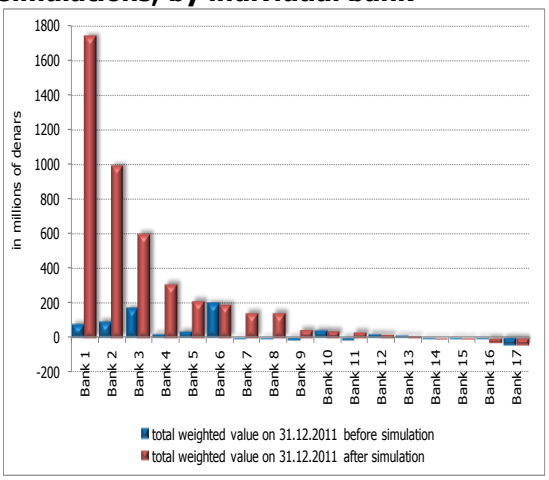
In order to assess the effect of the possible changes that would mean limited possibilities for the banks to use adjustable interest rates[48], hypothetical simulation

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

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

[48] Possible regulatory modifications (for example, within the domain of obligatory relations, consumer protection, etc), which would set a framework for applying the clauses for unilateral interest rate adjustability would emphasize the actual meaning of this risk for the banks. Namely, the Law on Obligations ("Official Gazette of RM" no. 18/2001, 78/2001, 04/2002, 59/2002, 05/2003, 84/2008, 81/2009 and 161/2009) restricts the interest rate level, but there are no provisions for the manner of interest rate determination and change, i.e. it is left to be included in the loan agreement. The Law on Consumer Loans in Case of Consumer Loan Agreements ("Official Gazette of RM" no.

Figure 88 Total weighted value of the banking book, before and after the simulations, by individual bank



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

assuming that all positions with adjustable interest rates are treated as positions with fixed interest rates[49] was made (they are allocated according to their residual contractual maturity). **The results of the simulation with individual banks and the banking system as a whole, point to substantial increase in the exposure to interest rate risk. The total weighted value of the banking book at the level of the banking system would rise by eight times** and it would equal Denar 4,405 million. The increase in the total weighted value of the banking book has been registered almost with ten banks (except for four banks from the group of medium-size and three banks from the group of small banks)[50]. The largest increase in the total weighted value after the conducted simulation would occur with the large banks (increase by 23 times with one bank), followed by two-medium size banks (with increase by 6 times and 16 times). The largest part of the crediting with adjustable interest rates accounts exactly to these banks. The largest changes in treating these positions with adjustable interest rate as fixed interest rates are registered with the credits, where the movement from the period with shorter to the period with longer maturity is most apparent.

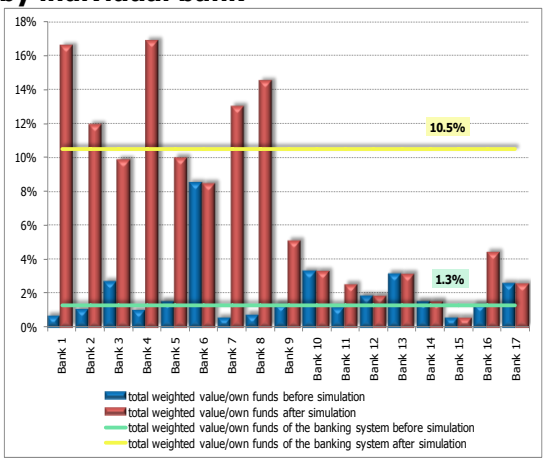
The ratio between the total weighted value of the banking book and own funds would increase with ten banks (it would remain unchanged with the seven aforementioned banks). With these ten banks, this ratio, after the simulations, would range from 2.6% to 16.9%, with median of 5.1%, and it would be the highest with one medium-size bank and one large bank, where the increase is by

51/2011) defines the terms "interest rate" and "fixed interest rate", but there is no definition for "variable interest rate", thus failing to ban the existence of adjustable interest rates.

[49] Assuming that the banks are not allowed to use adjustable interest rates (only fixed and variable interest rates are applied), these positions are reclassified as positions with fixed interest rates, with the sight assets and liabilities being allocated in the first maturity segment, the on-balance sheet and off-balance sheet claims based on negative balances on the current account, and credit cards are allocated by the validity/renewal, and the positions with annuity repayment are allocated by the residual maturity of each annuity.

[50] Three medium-size and three small banks treat and allocate the positions with adjustable interest rates as positions with fixed interest rates, i.e. the frequency of the change of the interest rate is identified with the residual maturity, because of which the total weighted value with these banks would remain unchanged. One bank does not apply adjustable interest rates.

Figure 89 Ratio between the total weighted value of the banking book and own funds, before and after simulations, by individual bank



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

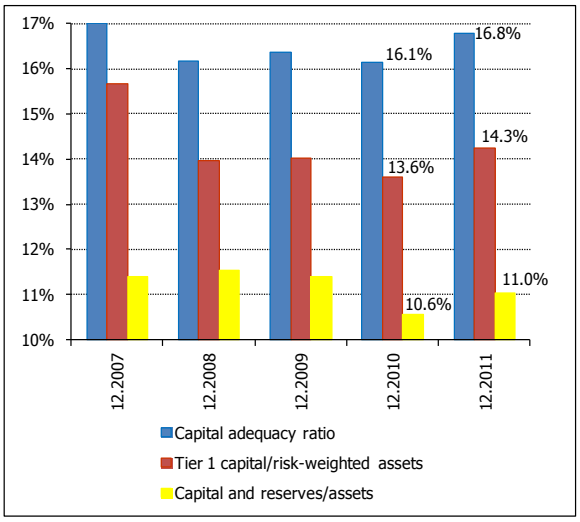
15.9 percentage points relative to the current ratio. In this manner, the ratio of the total weighted value of the banking book and own funds at the level of the banking system in case of simulations would equal 10.5%, compared to the current ratio of 1.3%. This ratio would show tendency of approaching the prescribed maximal ratio with one large and two medium-size banks. This points to the significant presence of the interest rate risk in the banking book with individual banks at the level of the banking system, under assumption that the banks will not be in possibility to perform unilateral adjustment to the interest rates level. **However, it should be taken into consideration that this is the most conservative scenario that does not envisage the banks' possibility to use variable interest rates as instrument for managing interest rate risk. Even in case of this scenario, with all banks, the total weighted value of the banking book is below 20% of their own funds.**

5. Insolvency risk

The solvency and the capitalization of the banking system improved, which arises from the higher growth rates of the banks' capital positions compared to the growth rates of the banking system activities (risk weighted assets). In 2011, the own funds of the banking system registered intensified growth, which is a result of the three new issues of common shares, retaining of part of the profit for 2010 in the banks' capital funds and the issuance of four new subordinated instrument. The banks used the largest part of the annual increase in the own funds for strengthening of the "free" capital over the required risk coverage minimum. For the purpose of reconciliation with the provisions of the new Decision on the methodology for determining capital adequacy, which will be enforced from July 1, 2012, the banks should allocate additional capital of about Denar 0.9 billion, on aggregate level, primarily for the covering the operational risk in the operations.

5.1. Indicators for solvency and capitalization

Figure 90 Solvency and capitalization indicators

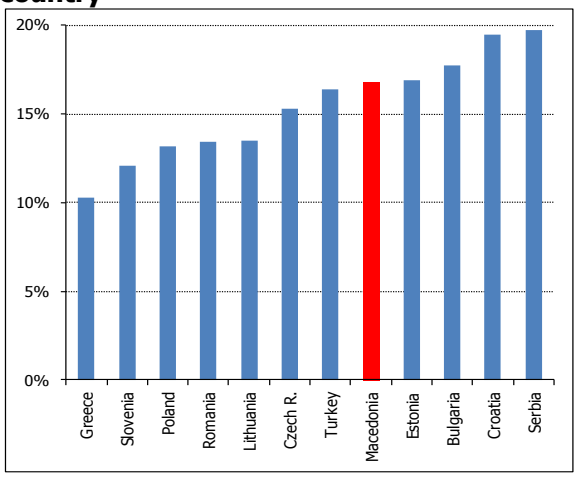


Source: National Bank, based on data submitted by the banks.

The solvency and capitalization indicators of the banking system remained high and registered additional improvement. On annual basis, the capital adequacy ratio and the share of the core capital[51] in the risk weighted assets registered increase by 0.7 percentage points. The ratio between the capital and the reserves and the total assets augmented by 0.4 percentage points.

[51] The amount of the core capital before the deductable items of the core and additional capital is used.

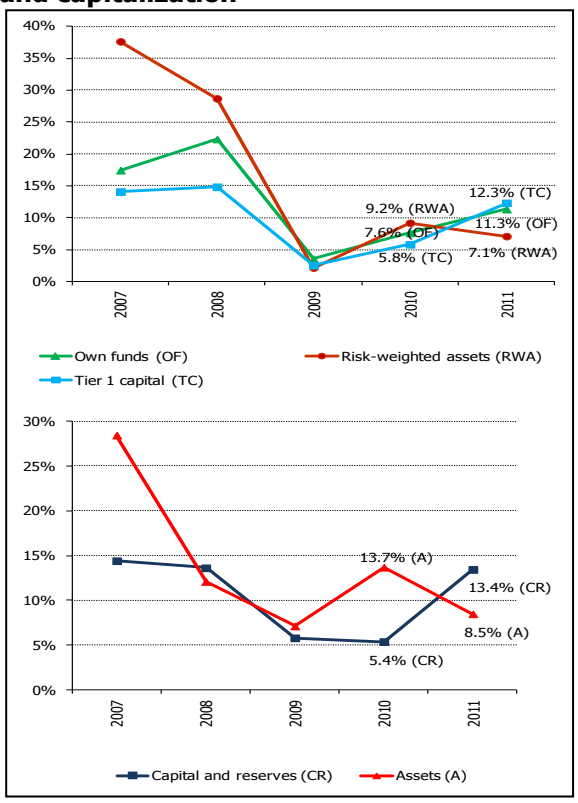
Figure 91 Capital adequacy ratio, by country



Source: National Bank, based on data submitted by the banks, web site of IMF in the part pertaining to the financial stability indicators and the web sites of the individual central banks.
Note: The data about all countries are given as of September 30,2011 except for Macedonia (December 31,2011).

According to the amount of the capital adequacy ratio, the banking system of the Republic of Macedonia belongs to the upper half of the list of the seventeen analyzed countries.

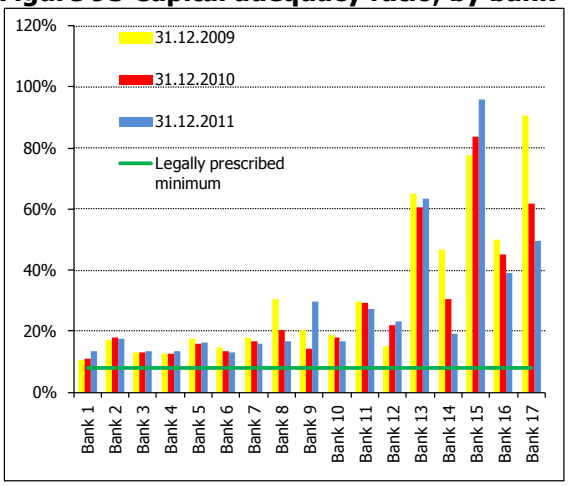
Figure 92 Annual growth rates of the components of the indicators for solvency and capitalization



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

In 2011, the annual growth rates of the own funds, the core capital and the capital and reserves register acceleration, while the annual increase in the total assets and risk weighted assets slowed down. The fastest growth acceleration is registered with the capital and reserves of the banking system, the annual growth rate of which is higher by 8 percentage points compared to the growth rate registered in December 31,2009 - December 31,2010 period. As a contrast, the total banks' assets registered the largest slowdown of the annual growth rate (compared to the other components of the indicators for solvency and capitalization of the banking system), which is lower by 5.2 percentage points compared to the growth registered in December 31,2009 - December 31,2010.

Figure 93 Capital adequacy ratio, by bank



Source: National Bank, based on data submitted by the banks.
Note: The banks are presented by the share of each bank in the total assets of the banking system as of December 31,2011.

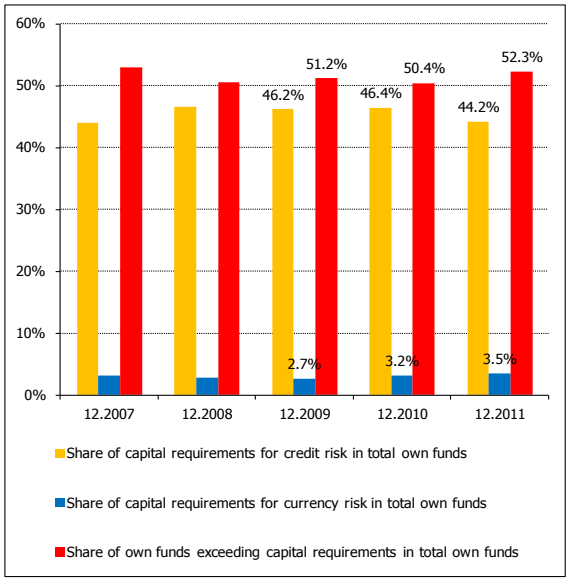
The bank-by-bank analysis indicates solid solvency and capitalization of individual banks. In 2011, almost half of the banks registered higher capital adequacy ratios. Individual banks in the Republic of Macedonia have at least 65% higher capital adequacy ratio from the legally prescribed minimum of 8%. In 2011, two large banks and three medium and small-size banks registered rise in the capital adequacy ratio.

5.2. Own funds and capital requirement for risk coverage

The annual increase in the own funds of the banking system (of Denar 4,282 million) is mostly due to the three new issues of shares in 2011. The retaining of part of the profit for 2010 in the banks' capital and the issuance of new subordinated instruments additionally contributed to the annual increase in the own funds. In 2011, three banks (one from the group of large banks and two from the medium-size banks) issued shares in the total amount of Denar 3,314 million (conditioning almost 78% of the total increase in the own funds of the banking system). The retaining of part of the realized gain for 2010 in the banks' capital funds contributed for increase in the own funds of the banking system by Denar 1,934 million. Simultaneously, two banks (by one bank from the group of medium and small-size banks) issued four new subordinated instruments in the total amount of Denar 584 million[52]. As a contrast to these movements, the accumulated loss from the previous years and the current loss went up by Denar 653 million, i.e. by Denar 704 million, respectively (Annex no.32).

[52] Individual banks registered decrease in the amount of the subordinated instruments which can be part of the own funds, mainly because of the penetration of part of the issued instruments in the last five years until the maturity or payment date, thus imposing their inclusion in the calculation of the own funds at discounted value (item 16 paragraph 4 of the Decision on the methodology for determining the capital adequacy ("Official Gazette of RM" no. 159/2007, 32/2008, 31/2009, 96/2009, 157/2009 and 91/2011).

Figure 94 Own funds used for covering certain risk



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

Most of the annual increase in the own funds in 2011, the banks have used for strengthening the "free" capital over the risk coverage minimum. The own funds over the required risk coverage minimum registered annual rise of Denar 2,952 million (or 15.5%), conditioning almost 70% of the increase of the total own funds of the banking system. Simultaneously, the required risk coverage capital augmented by Denar 1,330 million (or 7.1%), which is less by Denar 247 million (i.e. by 2.1 percentage points) compared to the increase in the growth in 2010. Usually, the capital requirement for credit risk coverage conditioned the largest portion (about 80%) of the increase in the total capital requirement for risk coverage.

Table 16 Movements of the capital requirement for credit risk coverage arising from the individual activities of the banks, by the type of client and the risk weight of the activity in the calculation of the risk weighted assets

in millions of Denars

Capital requirements for credit risk, arising from the following activities:	31.12.2009	31.12.2010	31.12.2011	Absolute changes		Changes in %	
				31.12.2009-31.12.2010	31.12.2010-31.12.2011	31.12.2009-31.12.2010	31.12.2010-31.12.2011
Activities with government, government funds and state agencies	**0.04**	**0.08**	**0.01**	**0.04**	**-0.06**	**108.2%**	**-81.2%**
- risk weight 50%	0.04	0.08	0.01	0.04	-0.06	108.2%	-81.2%
Activities with financial institutions	**814**	**1,007**	**1,261**	**193**	**254**	**23.8%**	**25.2%**
- risk weight 20%	444	533	545	89	13	20.0%	2.4%
- risk weight 100%	370	475	716	105	241	28.3%	50.8%
Activities with enterprises	**9,034**	**9,496**	**9,955**	**462**	**459**	**5.1%**	**4.8%**
- risk weight 20%	0.4	2	1	1.4	-1	362.1%	-64.4%
- risk weight 100%	9,033	9,494	9,954	461	460	5.1%	4.8%
Activities with households	**5,230**	**5,522**	**5,681**	**291**	**160**	**5.6%**	**2.9%**
- risk weight 50%	467	544	639	77	96	16.5%	17.6%
- risk weight 100%	2,450	2,663	2,837	213	174	8.7%	6.5%
- risk weight 125%	2,313	2,315	2,204	1	-110	0.1%	-4.8%
Other activities	**1,136**	**1,502**	**1,698**	**366**	**196**	**32.2%**	**13.0%**
- risk weight 20%	0	1	1	0	0	151.6%	1.0%
- risk weight 100%	1,136	1,502	1,697	366	196	32.2%	13.0%
Total amount of capital requirements for credit risk	**16,214**	**17,527**	**18,595**	**1,313**	**1,068**	**8.1%**	**6.1%**

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

The annual increase in the credit activity with the financial and nonfinancial companies imposed a need for higher amount of capital requirement for credit risk coverage. However, the increase in the capital requirement decelerated, which is

due to the decrease in the off-balance sheet activities with the "households" sector and the smaller increase in the other assets[53] (which bear credit risk to the banks). More than 40% of the additionally engaged capital for credit risk coverage in 2011 account for the capital for credit risk coverage, arising from the increased corporate crediting[54]. In the structure of the capital requirement for credit risk coverage growth acceleration in the part required for credit risk coverage has been registered, which arises from the enhanced crediting of the financial corporations, which is fully due to the increased long-term placements of MBPR with the domestic banks intended for financial support to the domestic corporate sector[55]. Contrary to these movements, the off-balance sheet credit support to the "households" sector registered annual drop[56], which resulted in more evident slowdown of the credit growth in the engaged capital requirement for credit risk coverage which arises from the total activities with this sector[57]. Almost twice smaller annual growth of the other risk-bearing assets for the banks is additional reason for the growth slowdown of the total capital requirement for credit risk coverage in 2011[58].

[53] Land, real estate, equipment and other non-mentioned assets.
[54] The credits of the nonfinancial companies registered annual increase of about Denar 9.9 million, or by 8.7%. The annual increase in the nonfinancial companies' credits contributed to the total increase in the nonfinancial entities' credits in 2011 with almost 63%.
[55] These institution's long-term credits to domestic banks registered annual increase of about Denar 3 billion, or by 54.2%.
[56] The off-balance sheet credit exposure to the households' sector registered annual fall of about Denar 1.5 billion (or by 10.7%).
[57] Annual decrease in the off-balance sheet credit exposure was registered also with the sectors of the financial and nonfinancial companies. However, such movements has no reflection of higher importance on the total annual changes in the capital requirement for credit risk coverage arising from the activities of these two sectors, because of the more significant rise in the on-balance sheet credit exposure to the financial and nonfinancial companies.
[58] In 2011, the other non-mentioned banks' assets, as an item in the on-balance sheet asset weighted by the credit risk augmented by Denar 2.6 billion, which is almost twice less compared to the increase registered in the previous year (2010).

Table 17 Movements of the capital requirement for currency risk coverage, according to net foreign currency positions by individual currency

in millions of Denars

Capital requirements for currency risk arising from the following net-positions:	31.12.2009	31.12.2010	31.12.2011	Absolute changes		Changes in %	
				31.12.2009-31.12.2010	31.12.2010-31.12.2011	31.12.2009-31.12.2010	31.12.2010-31.12.2011
Net positions in foreign currency	**939**	**1,203**	**1,465**	**264**	**262**	**28.1%**	**21.8%**
- EUR	852	1,112	1,398	261	286	30.6%	25.7%
- USD	24	32	40	7	8	30.7%	25.8%
- CHF	31	28	4	-3	-24	-9.2%	-85.6%
- Other	32	31	23	-1	-8	-3.8%	-25.1%
Net positions in gold	**0.003**	**0.003**	**0.003**	**0.0**	**0.0**	**0.0%**	**0.0%**
Total amount of capital requirements for currency risk	**939**	**1,203**	**1,465**	**264**	**262**	**28.1%**	**21.8%**

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

The annual increase in the capital requirement for currency risk coverage fully arises from the increased net foreign currency position in Euros[59]. The increase in the net position in Euros in 2011 is a result of the widening of the Euro assets and liabilities gap[60] of Denar 3.8 billion. The higher annual assets growth in Euros (by Denar 7.7 billion), in comparison with the increase in the liabilities in Euros (of Denar 3.9 billion) is the main reason for the gap widening (Annex no. 33).

Assessment of the effects of the implementation of the new Decision on the methodology for determining capital adequacy

The new Decision on the methodology for determining capital adequacy will be enforced from July 1,2012, which is an important step forward in the adoption and implementation of the international capital standards towards the first pillar of the new capital accord (Basel 2). Pursuant to the new decision, the banks, inter alia, should implement the so-called standardized approach[61] in the determining of the credit risk weighted assets, and additional obligation for the banks, in comparison with the valid Decision in this domain, is the need for determining the operational risk coverage, i.e. determining the operational risk weighted assets (by applying the basic indicator approach[62] or standardized approach[63]).

[59] The net foreign currency position of the banks in certain currency is calculated according to item 52 of the Decision on the methodology for determining capital adequacy ("Official Gazette of RM" no. 159/2007, 32/2008, 31/2009, 96/2009, 157/2009 and 91/2011).

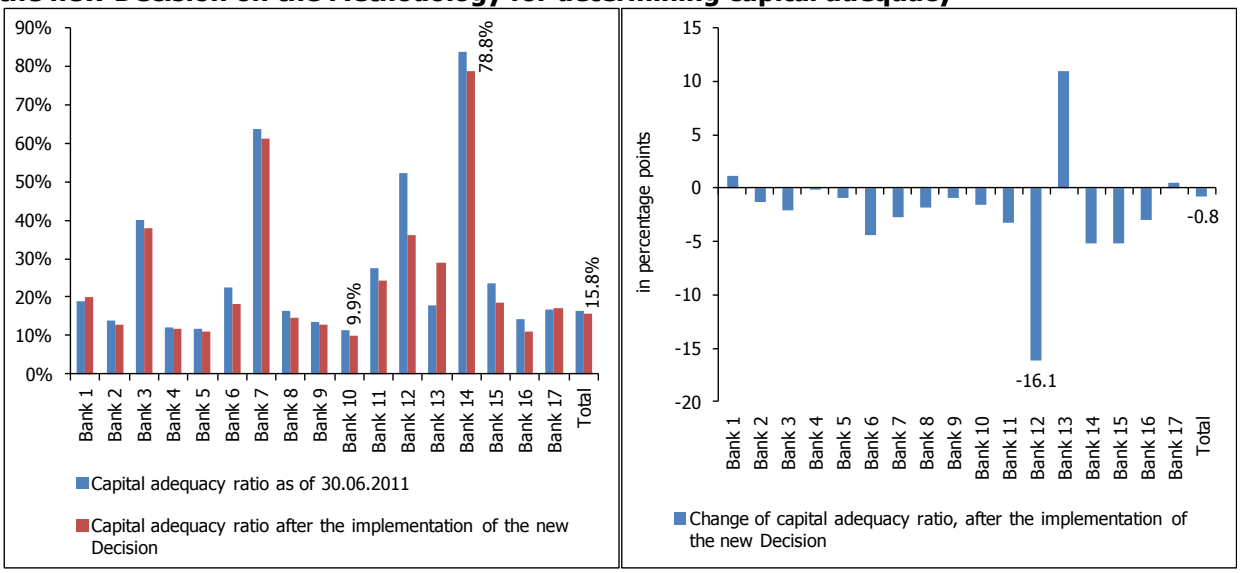
[60] Determined pursuant to the valid Decision and the Instructions for the methodology for determining capital adequacy.

[61] According to this approach, the bank is obliged to allocate on-balance sheet and off-balance sheet claims in thirteen exposure categories and to give them an adequate risk weight depending on the degree of the debtors' credit quality or the claim. The degree of credit quality serving as a basis for using adequate risk weight is determined according to the debtor's credit rating, or the claim, determined by a recognized external institution for credit risk assessment, or by exception, for certain exposure categories, the bank may use the credit assessment by the recognized export crediting agency. The product obtained from the claim allocated in adequate exposure category (net of the impairment, i.e. special reserve, the premium, or the discount and the effects of the change in the fair value) and the adequate risk weight, give the weighted value of the claim which is included in determining the credit risk weighted assets.

[62] According to this approach, the banks are obliged to allocate capital requirement for operational risk coverage in the amount of 15% of the average amount of positive amounts of the basic indicator (a sum of determined income and expenditures from regular operating) realized in the last three years from the banks operating.

For the purpose of better perception of the possible effects by applying the new Decision for the methodology for determining capital adequacy, the National Bank conducted a survey (questionnaire) requesting from the banks to determine the capital amount required for credit and operational risk coverage according to the new decision[64]. The simulation showed that 14 banks should allocate approximately Denar 1.48 billion additional capital for credit and operational risk coverage, while the remaining three banks registered capital release of about Denar 573 million. Analyzed by individual risks, 17 banks would allocate total of about Denar 2.26 billion additional capital necessary for covering operational risk, 6 banks would determine approximately Denar 203 million for credit risk coverage, while 11 banks would register release of about Denar 1.56 billion capital requirement for credit risk coverage. The largest portion of the release of capital requirement for credit risk coverage would arise from the reduction of the capital requirement for credit risk coverage coming from the claims collateralized with residential facilities and retail credits portfolio.

Figure 95 Assessment of the effects on the capital adequacy ratio in the implementation of the new Decision on the Methodology for determining capital adequacy



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

In case of ceteris paribus, the application of the provisions of the new Decision on the methodology for determining capital adequacy would result in lower capital adequacy ratio of the total banking system by 0.8 percentage points. Analyzed by banks, 14 banks would register decrease in the capital adequacy (the decrease would range from 0.1 to 16.1 percentage points), while with three banks,

[63] This approach is a kind of complement to the basic approach indicator, since it requires from the banks determining the basic indicator for eight business lines in which the banks are required to allocate their financial activities. Each business line has been determined an adequate weight, i.e. beta-factor (with standardized approach ranging from 12% to 18%, while in the basic indicator approach, it is equal to 15%), while the total capital requirement for operational risk coverage is calculated as an average of the simple total of the capital requirement for covering operational risk arising from each business line, in each of the last three years. The three large banks notified the National Bank that they will apply the standardized approach in the determining of the capital requirement for operational risk coverage.

[64] The questionnaire covered 17 banks of the banking system, with June 30,2011 being taken as a cut-off date for simulation conduct (one of the banks conducted the simulation of the amount of the capital requirement for credit risk coverage with cut-off date on September 30,2011). The simulation for determining the amount of the capital requirement for operational risk coverage is performed on the basis of the realized income and expenditures (basic indicator) for 2008, 2009 and 2010, except two banks performing the calculations according to the realized income and expenditures (basic indicator) in 2009, 2010 and planned income and expenditures (basic indicator) for 2011.

the capital adequacy ratio would register increase (from 0.5 to 11 percentage points). With four banks the capital adequacy ratio would fall below 12%, with the lowest level of the capital adequacy being equal to 9.9%.

5.3. Stress test simulation for the resilience of the banking system to hypothetical shocks

On December 31,2011, the conducted simulations showed that the banking system and the individual banks are relatively resilient to the influence of the assumed shocks.

Table 18 Results of the stress test simulations for the resilience of the banking system and individual banks to hypothetical shocks, as of December 31,2011

No. of simulation	CAR at the level of banking system, before simulation	Number of banks with CAR before simulation below the CAR of the overall banking system before simulation	CAR at the level of banking system, after simulation	Bank with lowest CAR, after simulation	Number of banks with CAR after simulation below the CAR of the overall banking system after simulation (number of banks with CAR after simulation below 8%)
1	16.8%	7	16.0%	12.7%	7 (0)
2	16.8%	7	14.4%	11.0%	6 (0)
3	16.8%	7	12.8%	8.0%	7 (0)
4	16.8%	7	14.5%	11.0%	6 (0)
5	16.8%	7	12.6%	8.7%	7 (0)
6	16.8%	7	12.7%	8.7%	7 (0)
7	16.8%	7	16.7%	13.2%	7 (0)
8	16.8%	7	14.1%	9.6%	8 (0)

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

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

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

No decrease in the capital adequacy ratio below 8% with any bank was registered in case of a simulation.

Table 19 Results of the stress-test simulations for the resilience of the banking system and individual banks to hypothetical shocks on December 31,2011, taking into consideration the implementation of the new methodology for determining capital adequacy

No. of simulation	CAR at the level of banking system, after simulation (and after the effects of the new Decision)	Bank with lowest CAR, after simulation (and after the effects of the new Decision)	Number of banks with CAR after simulation below the CAR of the overall banking system after simulation and after the effects of the new Decision (number of banks with CAR after simulation below 8%)
1	15.3%	10.3%	7 (0)
2	13.8%	9.9%	8 (0)
3	12.2%	6.4%	8 (1)
4	13.9%	9.9%	8 (0)
5	12.1%	7.5%	7 (1)
6	12.1%	8.2%	7 (0)
7	16.0%	10.6%	6 (0)
8	13.5%	8.7%	7 (0)

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

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

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

If the effect of the implementation of the new Decision on the methodology for determining capital adequacy is taken into consideration, the results of the stress-test simulations[65] are slightly poorer, with some banks registering decrease in the capital adequacy below 8% in case of two simulations.

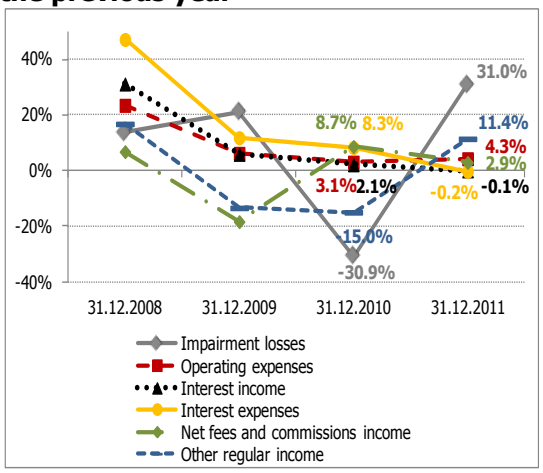
[65] The effect of the new Decision on the methodology for determining capital adequacy is taken into consideration by upgrading the expected risk weighted assets change that will occur in case of application of the new Decision to the risk weighted assets after stress-test simulations (this change is determined on the basis of the questionnaire to the banks about the expected effects of the new Decision on the methodology for determining capital adequacy, as of June 30,2011).

6. Profitability

Despite the profit gained in 2011, one of the major risks for the banking system is the tendency for further deterioration of the profitability. The gain showed at the end of 2011 is on considerably lower level compared to the last several years. The most evident negative influence on the banks' profitability arose from the increased credit risk, i.e. the increase in the impairment, as well as from the further rise in the banks' operating expenses.

The profit at the level of the banking system realized in 2011 equaled Denar 1,183 million. Its amount is halved compared to the previous year, and simultaneously, the number of loss-making banks increased to six at the end of 2011 (from four at the end of 2010). This contributed to enlarge the share of the assets of the loss-making banks in the total assets of the banking system from 5.6% (in December 2010), to 12.6% (in December 2011). However, the capitalization of loss-making banks in 2011 is not questionable. The average capital adequacy ratio of these banks equals 23.9%, while measured by individual banks it ranges from 16.4% to 49.7%.

Figure 96 Increase/decrease in the main income and expenditures compared to the previous year



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

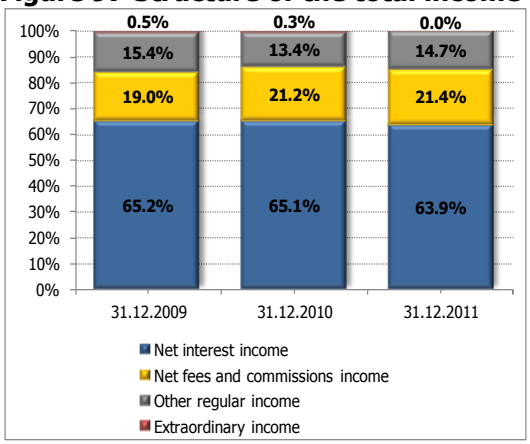
The allocated impairment "consumes" more than 1/3 of the net interest income. In comparison with 2010, its increase is primarily due to one bank from the group of large banks and two banks from the group of medium-size banks. Additional reason for the reduced profitability of the banking system in 2011 is the further rise in the operating expenses. The generator of the banks' profitability is the rise in other regular income, which has been registered for the first time in the last three years.

6.1. Income and expenditures structure of the banking system

In 2011, the downward trend of banks' **total income** (total regular income[66] and extraordinary income), which was typical for the previous two years, ceased. The realized total income in the amount of Denar 16,275 million is higher by Denar 307 million, or by 1.9% compared to 2010. However, the increase in the total income is not characteristic for the entire 2011, but it is a result of events that happened in

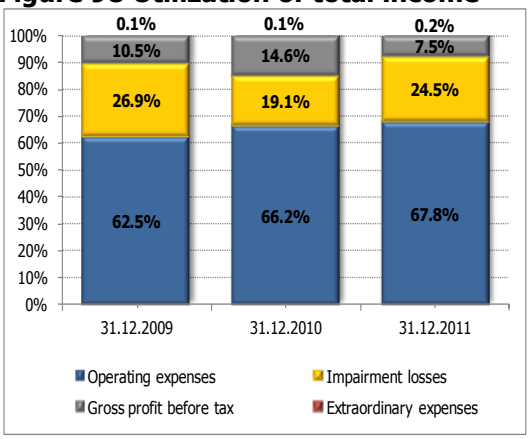
[66] The total regular income includes: net interest income, net fees and commissions income and other regular income. The other regular income includes: net trading income, net income from financial instruments recorded by objective value, net income from foreign exchange rate differentials, income based on dividends and capital investments, profit from sale of financial assets available for sale, capital profit realized from sale of assets, release of provisions for off-balance sheet items, release of other provisioning, income on other basis, income on the basis on collected, previously written off claims and losses from sale of financial assets available for sale).

Figure 97 Structure of the total income



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

Figure 98 Utilization of total income



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

the last quarter of the year - increase in other regular income with two banks from the group of large banks, one medium-size bank and one small bank[67]. In the first three quarters of the year, the banking system registered lower total income compared to the same periods of 2010.

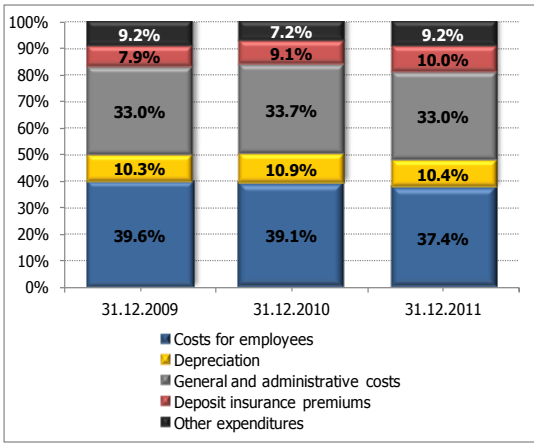
Unlike the rise in other regular income (causing also an increase in the structural share in the total banks' income), for the first time in the last several years was registered a decrease in the interest income and interest expenditures. In conditions of larger decrease in the interest expenditures than the decrease in the interest income measured in absolute values, in 2011 the net interest income remained on almost same level as in 2010. However, the **net interest income** is still the main component in generating banks' total income. The net income from commissions and fees, which is the second most important income in the total income structure, in 2011 registered three times smaller increase measured in absolute values, i.e. by three times lower annual growth rate (from 8.7% in 2010, to 2.9% in 2011). The decrease in the extraordinary income (of Denar 42 million, or by 93.9%) caused additional decrease in the already smallest structural share of this income component to the total income structure.

The largest part of the banks' total income is used for covering **operating costs**[68]. The bearer of the further increase in the operating costs in the previous several years (which equal Denar 453 million, or 4.3% compared to the preceding year) are one bank from the group of large banks, one bank from the group of medium-size banks and one small bank. The increase in the operating costs with these three banks equals Denar 613 million, as opposed to the decrease with one bank from the large banks

[67] The increase in other regular income with these banks equals Denar 474 million. Contrary, the other regular income with one bank from the group of large banks and one medium-size bank reduced by totally Denar 184 million. The increase in other regular income at the level of the banking system equal Denar 245 million, or 11.4% (compared to 2010).

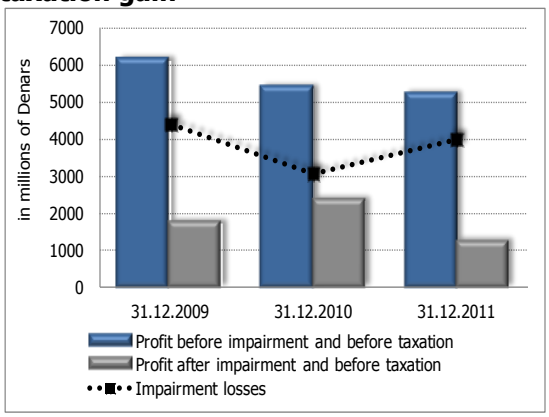
[68] The operating expenses include: employees expenses, depreciation, general and administrative costs, deposit insurance premiums and other expenditures, excluding the extraordinary expenditures.

Figure 99 Structure of the operating costs



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

Figure 100 Pre-impairment and pre-taxation gain, post impairment and pre-taxation gain



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

group and one medium-size banks (in the amount of Denar 139 million).

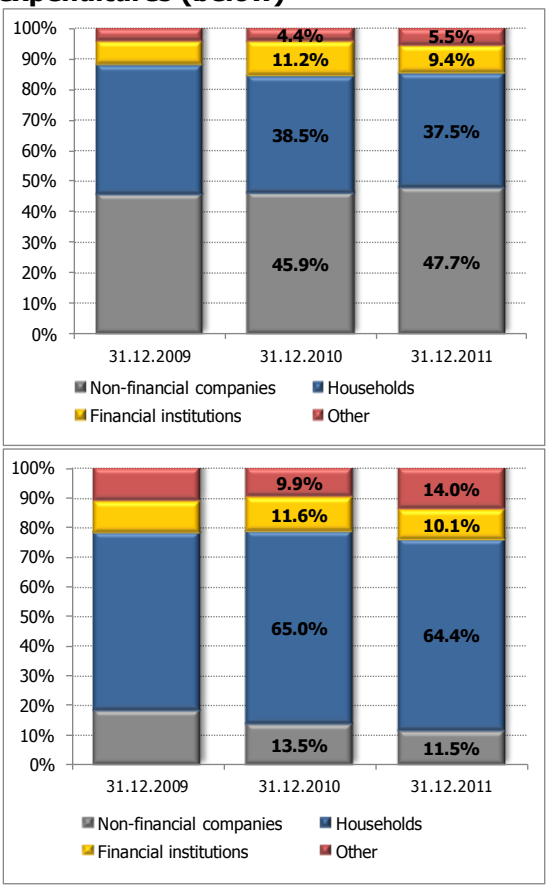
The structure of the operating costs is still dominated by **the employees and general administrative costs despite the decrease of 0.3% and 0.5%, respectively.** However, the largest contribution in the growth of total operating expenses have insurance premiums on deposits, expenditures on other basis and the special reserve for off-balance sheet exposure. The increase in the deposit insurance premiums (of Denar 144 million, or 14.9%) has been registered in conditions of household deposits growth of Denar 17,818 million, or 12.1% (compared to 2010), and it is concentrated with three banks from the group of large banks. The increase in the expenditures on other basis (of Denar 151 million, or 58.4%) is fully conditioned by one bank from the group of medium-size banks, while the largest contribution to the increase in the special reserve for the off-balance sheet exposure (by Denar 87 million, or 20.7%) had one bank from the group of large banks and one medium-size bank (as a result of the worsening of the quality of its credit portfolio).

The largest contribution to the decrease in the banks' profitability level arose from the substantially increased **impairment** (by Denar 945 million, or by 31% compared to 2010), concentrated with one large and two medium-size banks[69]. The dominant influence of the increased impairment on the reduced profitability of the banking system in 2011 can also be seen through the minor decrease in the amount of the gain prior to both, the allocation of the impairment and the taxation (by Denar 177 million, or 3.3%).

In 2011, the **interest income of** households and financial companies declined. The lower interest income of households (by Denar 161 million, or by 2.2%) is a result of the more evident downward trend of the lending interest

[69] The increase in the impairment with these three banks equals Denar 1.700 million. As a contrast, the impairment with one bank from the group of large banks and one small bank fell by total amount of Denar 803 million.

Figure 101 Sector structure of the interest income (above) and expenditures (below)



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

rates of households despite the larger credit support to this sector. The reduction of the interest income of financial companies (by Denar 329 million, or 15.7%) is fully conditioned by the reduced interest income from the central bank (lower interest rate on CB bills despite the higher investments compared to 2010, as well as the lower income generated on the basis on the six-month deposit at the central bank). The interest income from investments in Treasury bills is included in "interest income from other entities" category, which increased by 24.4% compared to 2010.

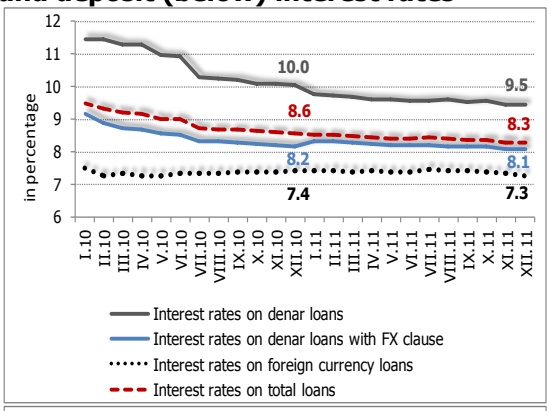
Unlike these movements, the interest income from non-financial companies, although with the same dynamics as in the preceding year, continued to mount and remained dominant component in the sector structure of the interest income. The interest income from non-financial companies went up by Denar 350 million, or by 4.0%. Its increase was contributed by more than a half of the banks (except one bank from the group of large banks, three banks from the group of medium-size banks and one small bank).

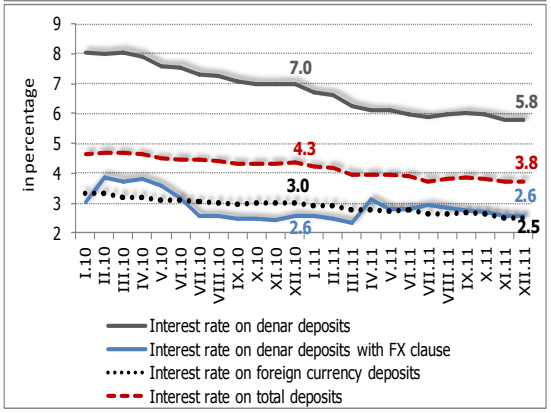
Adequately to the household deposit domination, **the interest expenses** for the households sector still prevail in the structure of the interest expenses despite their slight decline. The reduction of the interest expenses for the non-financial companies (of Denar 185 million, or 15.0%) and the interest expenses for the financial companies (of Denar 135 million), or 12.8%) resulted in lowering their share in the structure of the total interest expenses. The decrease in the expenditures for the household sector and enterprises is primarily a result of the decrease in the interest rates on the deposits of these sectors, despite the annual growth of the deposits of these sectors.

6.2. Movement of the interest rates and the interest rate spread

The decrease in the banks' **interest rates** continued also in 2011. It is most evident with the interest rates on Denar deposits, which

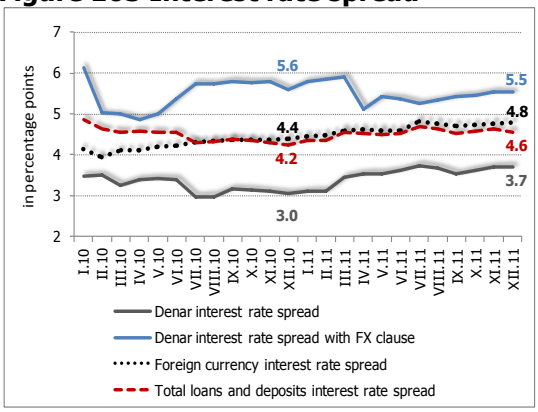
Figure 102 Movement of lending (above) and deposit (below) interest rates





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

Figure 103 Interest rate spread



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

contributed for the highest increase in the interest rate spread in Denars (of 0.7 percentage points). The interest rate on the foreign currency credits went dawn by 0.1 percentage point, while on the foreign currency deposits it went down by 0.5 percentage points.

In conditions of relatively harmonized movements of the interest rates on Denar credits and deposits, the interest rate spread among them remained relatively stable. Simultaneously, the interest rate spread is the highest exactly in this type of credits and deposits.

Such movements of the interest rates and consequently, the interest rate spreads, resulted in approximation of the interest rate spreads in Denars, foreign exchange and those with FX clause.

6.3. Indicators for profitability and efficiency of the banks

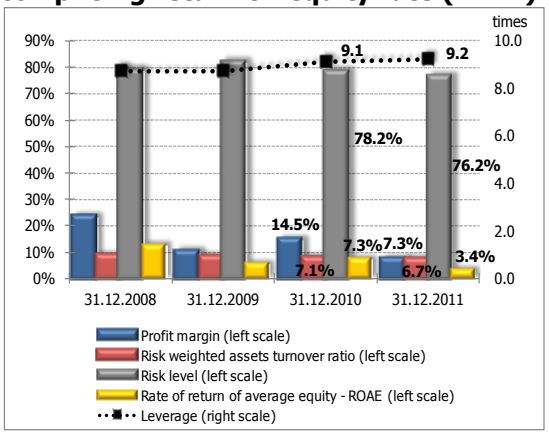
The downward movement of banks' financial result resulted in considerable fall in the banks' profit margin and deterioration in the **basic indicators for profitability and efficiency of the banks.**

The reduced gain versus the asset growth of the banks contributed towards substantial decrease in the **rate of return on assets (ROAA)**. Simultaneously, the **rate of return on equity (ROAE)[70],** under negative influence of the movements of the profit margin[71] is more than halved relative to the preceding year. The halved profit margin (compared to 2010) is the basic signal for the worsened operational efficiency of the banks, which is proved also by the smaller coverage of the non-interest bearing expenditures with net interest income and the increase in part of the total regular income used for covering the operating costs coverage. The

[70] The rate of return on equity = profit margin x return on risk weighted assets x indebtedness x level of taken risk. Profit margin = pre-taxation gain / total regular income. Return on risk weighted assets = total regular income/ average risk weighted assets. Indebtedness (leverage) = average assets / average amount of capital and reserves. Risk level = risk weighted assets / average assets.

[71] Profit margin is a correlation between the gain (loss) from the operating and the total regular income.

Figure 104 Dynamics of the components comprising return on equity rate (REER)



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

slower credit growth and the higher placements in liquid, and less profitable instruments, resulted in reduction of the share of the average risk weighted assets in the average total assets, as one of the components comprising the rate of return on assets.

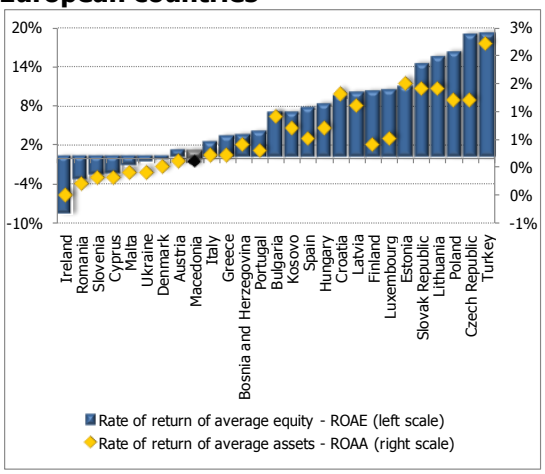
In addition, more evident increase in the impairment, contrary to the minimal rise in the net interest income, contributed for increasing the part of this regular income necessary for "covering" the anticipated loss from the banks' credit portfolio.

Table 20 Indicators for the profitability and efficiency in the banks operating

Indicators	Banking system		Large banks		Medium-size banks		Small-size banks	
	31.12.2010	31.12.2011	31.12.2010	31.12.2011	31.12.2010	31.12.2011	31.12.2010	31.12.2011
Rate of return of average assets (ROAA)	0.8%	0.4%	1.4%	1.2%	-0.4%	-1.1%	-0.3%	-1.0%
Rate of return of average equity (ROAE)	7.3%	3.4%	15.5%	12.2%	-3.5%	-9.7%	-0.7%	-4.5%
Cost-to-income ratio	66.4%	67.8%	55.2%	55.8%	85.8%	82.0%	109.2%	124.1%
Non-interest expenses/Total regular income	72.1%	74.3%	59.3%	60.4%	94.2%	91.9%	120.7%	135.8%
Labour costs /Total regular income	26.0%	25.4%	21.4%	20.9%	33.5%	29.7%	46.8%	50.4%
Labour costs /Operating expenses	39.1%	37.4%	38.7%	37.5%	39.0%	36.2%	42.9%	40.6%
Impairment losses of financial and non-financial assets /Net interest income	29.3%	38.4%	30.4%	34.0%	32.0%	56.2%	-10.2%	-9.9%
Net interest income /Average assets	3.6%	3.3%	3.5%	3.2%	3.8%	3.5%	4.0%	2.9%
Net interest income /Total regular income	65.3%	63.9%	63.9%	62.7%	69.9%	69.0%	57.3%	53.6%
Net interest income /Non-interest expenses	90.6%	86.0%	107.8%	103.9%	74.2%	75.1%	47.5%	39.4%
Non-interest income/Total regular income	34.7%	36.1%	36.1%	37.3%	30.1%	31.0%	42.7%	46.4%
Financial result/Total regular income	14.5%	7.3%	25.3%	22.6%	-7.8%	-21.5%	-3.8%	-19.2%
Assets per employee (in millions of Denars)	50.4	55.1	66.2	70.3	37.0	44.6	22.4	26.1
Financial result per employee (in millions of Denars)	0.4	0.2	0.9	0.8	-0.1	-0.5	-0.1	-0.3
Operating expenses per employee (in millions of Denars)	1.7	1.8	1.9	2.0	1.6	1.7	1.5	1.7

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

Figure 105 Comparison of the return on assets and return on equity in the European countries

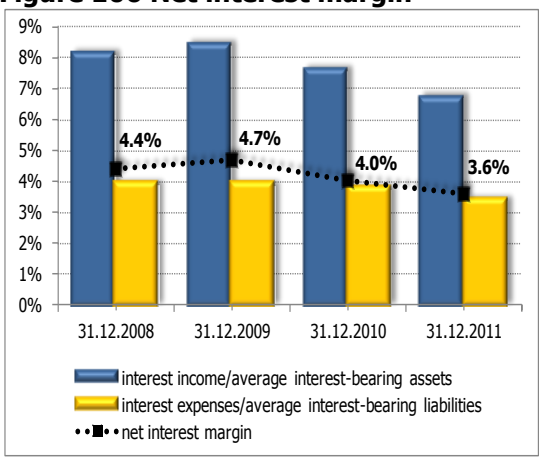


Source: Global Financial Stability report of IMF, September 2011 and web site of the central banks of respective countries .

Note: The data on the analyzed countries refer to September 2011, except Ireland, Cyprus, Ukraine, Italy, Portugal, Kosovo, Spain, Hungary, Croatia, and Estonia the data of which refer to June 2011 and Greece with data referring to March 2011.

According to the value of the indicators for the return on assets and equity, the banking system of the Republic of Macedonia belongs to the lower half of the group of analyzed countries. However, although in the lower section, it is however within the banking systems registering positive rates of return on assets and equity.

Figure 106 Net interest margin

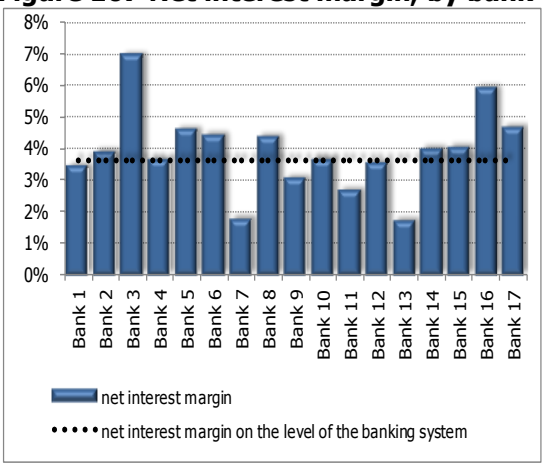


Source: National Bank, based on data submitted by the banks.

Analyzed on annual basis, **the net interest margin**[72] went down because of the higher increase in the average interest assets than the rise in the net interest income. Simultaneously, it was also registered a decrease of the interest income per interest-bearing asset unit and interest expenses per interest-bearing liabilities unit as a result of the downward movement of the interest rates on banks' credits and deposits.

[72] The net interest rate margin is calculated as a ratio between net interest income and the average interest bearing assets.

Figure 107 Net interest margin, by bank



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

The increase in the interest-bearing assets, although with slower dynamics, continued also in 2011. At the end of 2011, the interest bearing assets are higher by Denar 22,910 million than the interest-bearing liabilities. In comparison with 2010, the interest-bearing assets were higher by Denar 23,323 million (or by 8.4%), while the interest-bearing liabilities were higher by Denar 21,033 million, (or 8.1%).

Six out of seventeen banks (two large, two medium-size and two small banks)[73] had a lower net interest margin than the net interest margin at the level of the banking system.

[73] The share of the assets of these six banks in the total assets of the banking system equals 46.8%.

ANNEX