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National Bank of the Republic of Macedonia

Financial stability report for the Republic of Macedonia in 2011

August, 2012

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Summary

Financial stability in the Republic of Macedonia in 2011 was maintained at a satisfactory level. However, the risks for its future maintenance, especially in the second half of the year increased. This situation was largely determined by the conditions in the global macroeconomic environment, where in 2011, although at a slower pace than in the previous year, the gradual recovery of the global economy continued. In such conditions, the macroeconomic environment in the Republic of Macedonia generally created a positive climate for maintaining financial stability. The growth of the domestic economic activity, at somewhat faster pace than in the previous year, continued in 2011. This growth was supported mainly by the growth in domestic demand, with strong positive impetus from domestic investment and private consumption, but also from export growth. However, they brought pressure on imports, resulting in a negative contribution of net exports to the economic growth in 2011. Despite the increased risks and unstable global environment, the country's external position remained relatively favorable, which allowed growth of foreign exchange reserves, and slight expansion of the current account deficit and higher capital inflows from direct investment and external government borrowing. The positive trends were emphasized primarily in the first half of the year, while in the second half, in line with the movements in the global environment, the risks coming from the macroeconomic environment increased and the growth of the domestic economy slowed down.

Macroeconomic projections for 2012 indicate continuation of the climate of relatively stable macroeconomic environment, however with increased risks. The risks are primarily associated with the possibility of their spillover from the global environment, primarily from the deepening and continuation of the debt crisis in the Euro area (which would reflect on the future pace of export demand and access to and cost of capital in global markets). Another risk, though less pronounced are the possible pressures for growth in the oil price due to geopolitical tensions.

The favorable domestic macroeconomic environment positively contributed to maintaining the stability of the domestic financial system. In 2011, total assets of the financial system continued to grow, albeit at a slower pace than in the previous year, with growth being registered almost in all segments of the financial system. Despite the turbulent external environment and the high degree of uncertainty regarding the future development of the debt crisis in the Euro area, the structure and position of the domestic financial system minimize the possibility of disturbing the stability of its segments through spillover of the risks from one institutional segment into another. Contagion risk is mainly associated with deposits of non-deposit institutions invested in banks, which represent a significant item in the assets of part of the non-banking institutional segments.

The stability of the domestic financial system is mostly determined by the stability of the banking system as its predominant segment. In 2011, although the activities of banks grew at a slower pace than in the previous year, the contribution of the banking sector to the economic activity of the country increased. Despite the growth of activities, the banks were extremely cautious and continued to work steadily and carefully. The growth of the banks' activities

was mainly supported by the growth in deposits, primarily in the households sector. At the end of 2011, the level of euroisation decreased, which was expressed primarily through enhanced propensity to save in domestic currency. Besides the present confidence in the domestic macroeconomic stability, an important factor were the unfavorable developments in the Euro area. Banks have shifted a significant part of the growth of the sources of funds towards credit support of the real sector, which led to some acceleration of banks' credit activity. However, banks still refrain from taking risks. Banks have directed part of their potential to further strengthen their liquidity position, through investments in low-risk domestic securities and on accounts in foreign banks. Stability and reliability of the banking sector is confirmed by its high capitalization expressed through the capital adequacy ratio twice higher than the statutory prescribed minimum, and by the high quality of the equity positions. This is supported by the results of the stress tests, which show satisfactory resilience of the banking system to the simulated shocks.

In 2011, the level of risks in the banking sector remained in a controlled framework. Exposure to credit risk increased, but that increment was mitigated by the full coverage of non-performing loans with the allocated impairment and special reserve. Maintaining high capitalization and liquidity and increased credit risk during 2011, led to further reduction in profitability, which is one of the main risks for the banking system.

The other segments of the financial system have a modest impact on the overall financial stability in the Republic of Macedonia, as they still dispose of a moderate amount of assets and activities. Although with significantly lower participation compared with the banking system, the mandatory pension funds are the next most significant institutional segment in the financial sector. Despite the slower growth than in 2010, compared with the other segments, in 2011 they registered the highest growth and are the second largest segment within the financial system. Investments in securities bearing higher risk (stakes in investment funds and shares abroad) were present also in 2011, which increases the risk of growth of capital losses (realized and unrealized) of pension funds. In 2011, the Agency for Supervision of Fully Funded Pension Insurance continued to strengthen the supervisory capacity, and at the end of the year it began with the implementation of the project for introduction of risk based supervision. The significance of the insurance sector is still small, but it has potential for further development especially in the life insurance segment. Thus, unlike in 2010, when the assets of this sector remained virtually unchanged, in 2011, Macedonian insurance market grew, due to the increased demand in the field of life insurance. Risks arising from the insurance sector are downward, which is mostly based on the activities of the supervisory and regulatory authority toward completion of the regulatory framework and strengthening the supervision of this sector.

Risks to financial stability produced by the households and the corporate sector during 2011 are within controlled framework. These two segments are not expected to cause more serious adverse consequences for the financial stability in the short run.

In 2011, the scope of activities, performances and financial capacity of enterprises in a small and open economy like the Macedonian, were largely

determined by the developments on a global and regional level. In conditions of different dynamics of the real economic activity in the first and in the second half of 2011, the value added of the domestic corporate sector manifested faster growth in the first half of 2011, while in the second half the effects of the problems in the economies of the Euro area were felt, which slowed down the pace of the domestic economy and the value added of the corporate sector. Hence, the main risks associated with the corporate sector arise from the extension or possible deepening of the turbulence in the broader external environment, subsequent recession pressures that the domestic economy would face and the effects it brings on the turnover, liquidity and capacity for regular servicing of the liabilities of domestic enterprises. During 2011, there was a certain improvement in the ability of domestic enterprises for regular servicing of the liabilities to the banking system. On the other hand, however, the annual growth of non-performing loans to the corporate sector significantly accelerated, which leads to the conclusion that the positive developments in the ability to service liabilities are not equally distributed among all entities of the domestic corporate sector.

The scope of activities and performances of the corporate sector and its efficiency in dealing with the risks it is exposed to, determine, to a large extent, the disposable income and general financial strength of the households. The negative gap between disposable income and private consumption in 2011 led to growth of the negative saving rate of households. The high rate of unemployment and low productivity remain to be the main cause of the insufficient growth of disposable income and at the same time they prevent a more dynamic growth in the inflows of funds of the employees. However, private consumption continued to grow in 2011, at a faster pace, due to favorable movements in the labor market, growth in the permanent part of the disposable income and the positive findings regarding the macroeconomic environment in the first half of the year. The ability of households to repay the entire debt at once also improved due to the faster growth in the financial assets compared with the growth of the household debt.

Banks' minor easing of lending conditions in the first half of the year, supported by the favorable developments in the domestic and global economy gave positive impulses on the part of supply and demand for loans. That led to a faster pace of growth of household loans granted by domestic banks, which caused increased indebtedness of the hoseholds. However, the higher annual growth rate of financial assets, compared with the growth rate of household debt led to an improved ability of households to repay the total debt. Given that almost half of the sources of funding of domestic banks are deposits from households, every possible materialization of the risks households are exposed to, may have negative effects on the liquid and stable operations of domestic banks. One of the main risks arising from this non-financial sector, which may impose more significant consequences for the financial stability, stems from the possibility of excessive borrowing, particularly of the segments of the population with lower levels of coverage of credit liabilities with monthly income.

The high exposure of households to currency risk and the risk of changing interest rates represents risk to the financial condition of the corporate sector and households. Possible materialization of these risks would be directly

reflected on their ability to service debt, and hence on the performance of financial institutions, primarily banks.

Generally, the financial system stability was maintained in 2011. The main carrier of stability is the banking sector, which proved to be extremely careful in its activities. Certainly, a key factor for the stability of the banking system, along with the favorable macroeconomic environment, are the performances and the financial condition of the non-financial entities (households and enterprises).

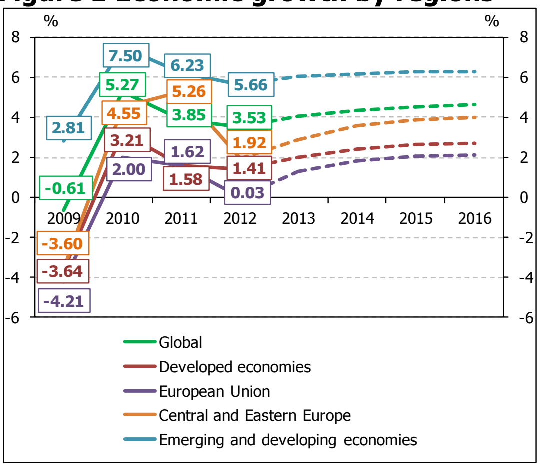
The National Bank remains consistent in the implementation of the legally prescribed objective (which is subordinated to the main objective of maintaining price stability), to contribute towards maintaining a stable, competitive and market oriented financial system and will take all available steps and measures in that direction.

I. Macroeconomic environment

1. International environment

During 2011, although at a slower pace than in the previous year, the gradual recovery of the world economy from its deepest recession in the last eighty years, continued. The growth of economic activity in 2011, though even slower, is expected to continue throughout 2012. However, the global macroeconomic environment is characterized by still high risks that could jeopardize the expected pace of economic growth. Fundamental risks still come from the high instability and lack of confidence present in the financial markets amid further extension and deepening of the sovereign debt crisis in the Euro area. In such conditions, increased risk aversion significantly worsens the terms for financing the countries and banks in Europe, which is especially evident from the reduced amount of funding and rising risk premiums. The sovereign debt crisis, banks' exposure to this debt and the economic slowdown have mutual negative feedback effect, leading to further increase of the uncertainty in the markets. These negative trends were somewhat mitigated in early 2012 after the string of measures undertaken by the European Central Bank (ECB). These measures have mitigated the risk of pronounced deleverage[1] and reduction of lending in the European banking sector. However this risk is still present, which is primarily due to the still unfavorable funding conditions imposed by the market and to some extent the stricter capital requirements by regulators.

Figure 1 Economic growth by regions



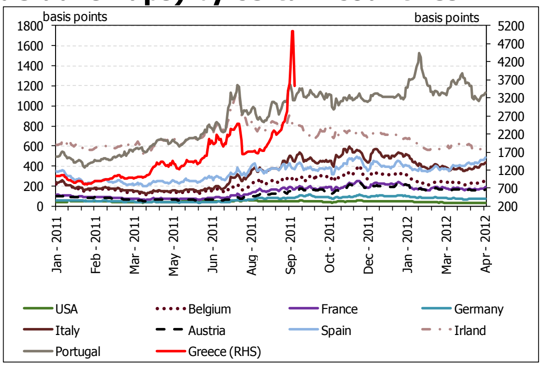
Source: World bank (WEO, April 2012).

In such conditions, forecasts for economic growth in the Euro area and the countries of Central and Eastern Europe suffer significant downward adjustments, and the possibility of another recession in the Euro area is not excluded, which certainly would have negative global implications. Fiscal consolidation and the possibility of reducing the public debt on levels sustainable in a long run are the fundamental factors that will determine the future pace of economic activity in Europe and beyond.

The continuous efforts of the Euro area Member States to stabilize government debt markets have not yet yielded significant positive results. Packages for the salvation of Ireland and Portugal, and Greece on two occasions did not significantly improve the climate in these markets. Inability to ensure investor confidence resulted in spreading of the crisis also in the government debt markets of Italy and Spain, whose risk

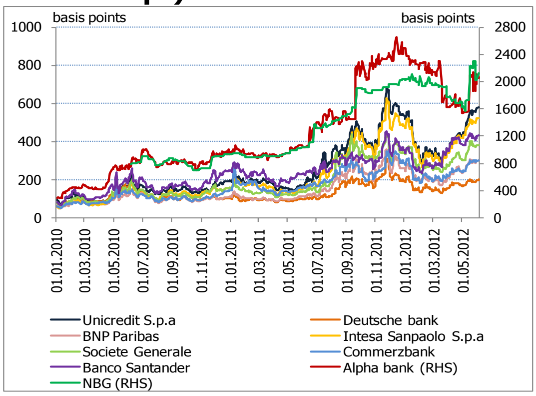
[1] The term generally refers to the process of reducing the level of indebtedness of the banks, primarily through the sale of part of their assets, which further reduces the size of their balance sheets. The basic effect of this process is limiting the ability of banks for credit support of the real sector.

Figure 2 Dynamics of CDSs (credit defaul swaps) by certain countries



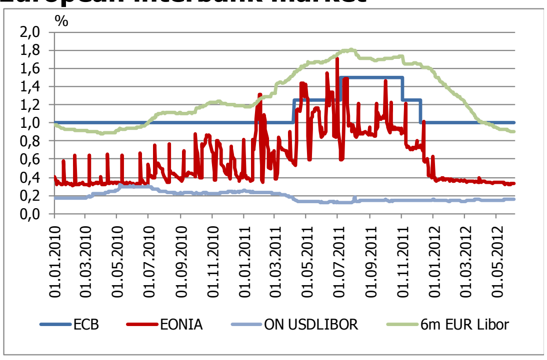
Source: Bloomberg.

Figure 3 Dynamics of CDSs (credit defaul swaps) for certain banks



Source: Bloomberg.

Figure 4 Basic interest rates at the European interbank market



Source: Bloomberg.

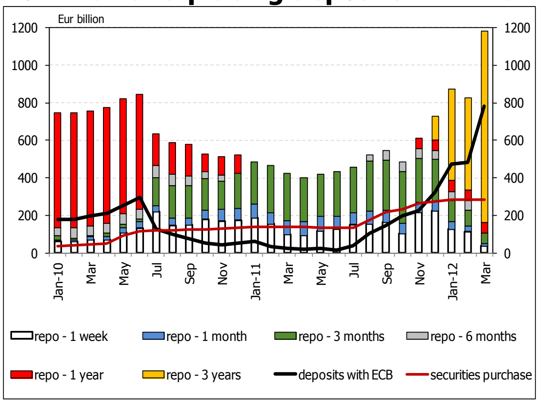
premiums (measured by the amount of credit default swaps - CDS[2]), also increased to long-term unsustainable levels.

One of the main problems is the perception of the markets that the European Financial Stability Facility - EFSF has sufficient financial strength to provide unlimited liquidity to the government bonds markets. On the other hand, with the existing institutional setup there is no guarantee for the risk of default on government debt, in conditions when in countries with strong public finances there is no political and public support for automatic transfers of funds in countries with financial deficits, in which there is an absence of broader political and public support for the necessary long-term downward adjustment of public spending. In this sense, the fiscal agreement[3] from March 2012, is a positive move and should contribute to the strengthening of fiscal discipline in the Euro area Member States. The long-term stabilization of the markets largely depends on this agreement, the implementation of which is followed by a series of legal and political problems, which further emphasizes the uncertainty of markets.

Important role in deepening the crisis of government debt is that of the negative feedback loop between government debt and banks in the Euro area. The high exposure of banks to government bonds of countries with "problematic" public finance results in significant losses in their balance sheets. That coupled with the perception of the markets that the possibility of state aid for the undercapitalized banks is limited, during 2011 led to a significant deterioration of the conditions on the markets for long-term funding of banks and significant reduction of the turnover on the interbank market. All that reduces the capacity of banks to finance

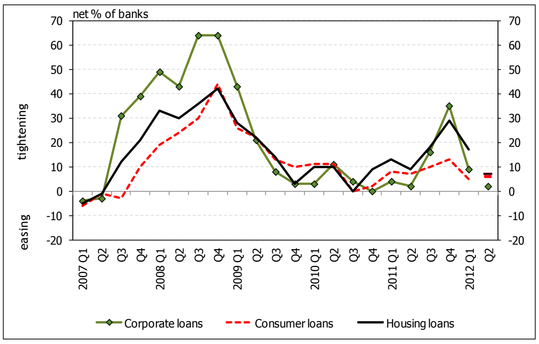
[2] The cost of credit default swaps (CDS) is an annual amount of premium that the buyer of CDS pays to protect themselves against credit risk associated with a particular issuer of securities, in this case a particular state. The growth of this range reflects investors' perception of increased risk of certain entity/state, i.e. it means an increase of the premium that you pay for insurance against credit risk associated with a particular entity/state.
[3] This agreement provides constitutional limit on the amount of the budget deficit and public debt by applying automatic penalties and enhanced supervision over fiscal and economic policies of member states and countries aspiring to join the monetary union.

Figure 5 Average monthly borrowing from ECB and placing deposits with ECB



Source: ECB.

Figure 6 Survey on credit activity of the ECB



Source: ECB. The data for the second quarter of 2012 are expectations of the bank.

the real sector, which deepens the possibility of recurrence of the economic and financial crisis in the Euro area, which due to the multiple links with the world financial system could be spilled over abroad and cause a new global crisis. The negative effects of the feedback loop between public finance and banking systems clearly reflected in the movement of risk premiums, measured by the price of credit default swaps of individual banks. The markets successfully differentiate banks that originate from countries with less favorable fiscal position, for which risk premiums are higher.

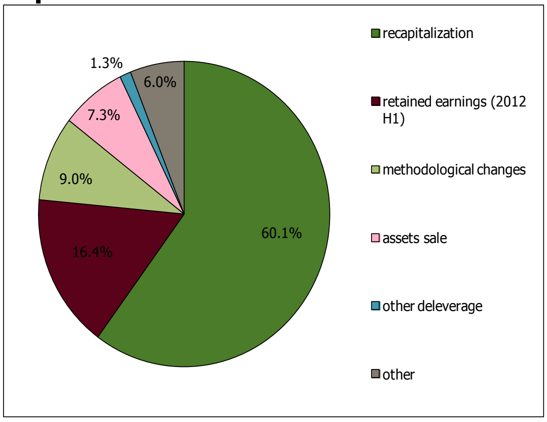
Because of the turbulence in the Euro area, during 2011, banks' access to finance on the markets became significantly limited and costly. The negative impact of the sovereign debt crisis on the banking systems, is clearly seen also through the liquidity tensions in the European interbank market. Amid pronounced lack of confidence, interest rates on the interbank market have risen constantly. At the same time, the banks of the EU that had excess liquid assets placed them in deposits with the ECB, while those with short liquidity position necessarily needed liquidity support from the ECB. In order to stabilize the markets and prevent further escalation of the crisis, starting in mid-2011 the ECB took several measures that positively affected the liquidity and interest rates. The program for purchase of government securities was reintroduced, and it was expanded to include the sovereign debt of Spain and Italy.

Also ECB continued with the measures for providing unlimited liquidity, reintroducing the liquidity operations with maturities of 6 months and 1 year, and in the last quarter of the year it introduced three-year long-term refinancing operations - LTRO. On two occasions (in December 2011 and in February 2012) banks used nearly one billion euros within the three-year refinancing operations of the ECB.

Such operations of the ECB mitigate the risk of deleverage or reduction of assets of banks, but their channeling to the real sector remains limited. Ensuring sufficient liquidity by the ECB significantly reduces the risk of credit disintermediation in the banking systems in EU, but it is not expected to significantly affect the easing of the conditions for financing the real sector. This conclusion is confirmed by the results of the recent Surveys on the credit activity of the ECB in which despite the downward trend, still the majority of banks reported tightening of credit conditions for enterprises and households. Furthermore, banks are expected to use the liquidity from the ECB as a substitute for the still expensive market funding.

However, despite such mitigation, the deleverage risk in the banking sector of the Euro area is still present. The reasons for this are several. First, there are still banks that have not undergone the process of "cleaning" of bad assets. Second, because of the budget deficits and high public debt in many European countries, the needs for financing and refinancing of this debt highlight the risk for the banks beeing crowded out of the markets, by the states. Finally, the stricter capital requirements of the European Banking Authority - EBA may result in significant adjustments to the banks' balance sheets. Preparations for Basel 3 will have some impact in strengthening the process of deleveraging of banks in the Euro area. Though in response to the crisis of confidence, starting from 2015 banks will have to meet stricter capital requirements, EBA has prescribed a minimum core Tier 1 ratio of 9%[4], which leading European banks have to meet starting from June 2012. This requirement of EBA results in the need for additional capital amounting to Euro 114.7 billion[5].

Figure 7 Structure of the planned fullfilment of the stricter capital requirements of the EBA

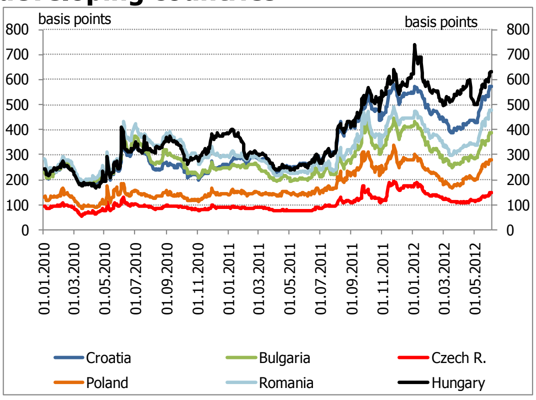


Source: EBA.

[4] The EBA Recommendation adopted on December 8, 2011 is part of a wider European framework adopted by the Council of Europe on October 26, and confirmed by the ECOFIN on November 30, 2011 in order to restore confidence and stability of markets in the EU. Pursuant to the recommendation of EBA, this "new" capital ratio is required to be achieved mainly through growth of the capitalization, rather than by reducing the risk weighted assets.

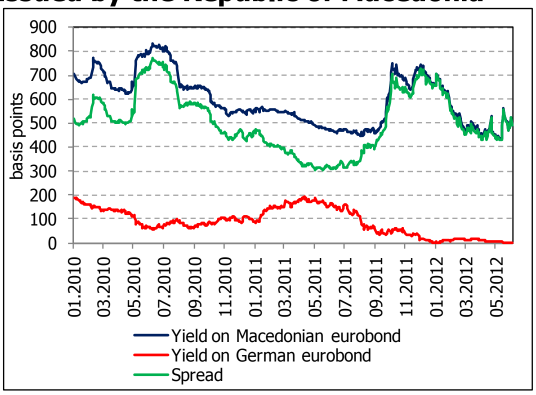
[5] Estimates of the required additional capital are based on a sample of 71 banks from the EU, which are the same banks that were involved in the stress test made in 2011 (EU-wide stress test). The selection of banks in the sample was in coordination of EBA with domestic supervisory authorities, taking into consideration the assets of the banks involved from all countries to cover over 60% of the assets of the entire banking system of the EU and at least 50% of the assets of each banking system of Member States.

Figure 8 Dynamics of CDSs (credit defaul swaps) by certain emerging and developing countries



Source: Bloomberg.

Figure 9 Risk premium on the Eurobond issued by the Republic of Macedonia



Source: Bloomberg. The data refers to the second Eurobond issued in July 2009, with maturity date in January 2013.

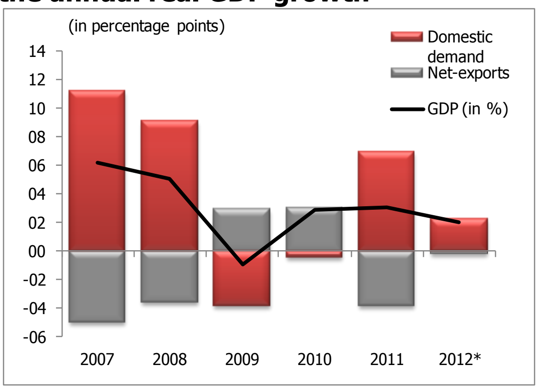
According to the plans submitted to the EBA, the banks plan moderate deleveraging to meet stricter capital requirements. Amid deteriorated financing conditions on the markets, i.e. low market valuation of shares, the banks plan to fulfill the regulatory requirement to meet the minimum core Tier 1 ratio of 9%, partly by reduction (sale) of assets. In such circumstances, banks reduce their debt or go through a process of deleveraging, thus limiting the possibility of growth of credit, which leads to further recovery of the economies. That adversely reflects on lending to the real sector and on the economic activity, and consequently on the fiscal performance of the countries, and thus their ability to support the banking systems. In such conditions, large and global banks from Europe, which are important global financiers, reduce their exposure everywhere, which becomes the main channel of spreading of the crisis globally. These developments in the EU are not expected to have more significant direct impact on the banking system of the Republic of Macedonia which is very little exposed to and indebted with the banks from the EU. In this regard is the upward trend of the assets of the banking system of the Republic of Macedonia in 2011, whose carrier remain to be resident deposits. However, one should not neglect the possibility of indirect adverse impact which the Macedonian subsidiaries can feel through the more conservative lending policies of their parent banks.

Stabilization of the public debt market and banking sector is not only essential prerequisite for sustainability and dynamization of the economic growth in the EU, but given the high contagion risk, they are of great importance for the growth and stability in emerging and developing countries in Europe, because of their high economic and financial integration with the EU. The main transmission channels of the debt crisis in these countries are: a) trade and foreign direct investment, b) reducing the support of banks in these countries by their parent banks from the EU due to the possible deleveraging process and c) growth of the costs for funding. The impact of the last channel is clearly confirmed by the trend of risk premiums on government bonds of these countries, which after the decline in late 2011 and early 2012 (after the ECB's actions to overcome the liquidity tensions), since May 2012 have registered an upward trend again.

2. Domestic environment

In 2011, the macroeconomic environment in the Republic of Macedonia generally created a positive climate for maintaining the financial stability. The recovery of the domestic economic activity, which began in 2010, with somewhat faster dynamics, continued throughout 2011. The positive dynamics of economic activity was supported mainly by domestic demand growth, amid strong positive impetus from domestic investments and private consumption, but also from export growth. However, they imposed pressure on imports, as a result of which in 2011 net exports had a negative contribution to economic growth. Despite the increased risks and unstable international environment, the country's external position remained relatively favorable, which allowed growth of the foreign reserves, amid slight expansion of the current account deficit and higher capital inflows from direct investments and external government borrowing. Positive trends were expressed primarily in the first half of the year, while in the second half, in line with the movements in the international environment, increased risks of macroeconomic environment and slower growth of the domestic economy were registered. Despite the expected deterioration, the relatively favorable environment in terms of maintaining macroeconomic and financial stability, is expected to continue over the next year. However, the generally favorable macroeconomic outlook is burdened with several risks, which arise primarily from the international economic environment. The primary risk is the uncertainty created by the debt crisis in the EU and the possible effects on the global and domestic economy in conditions of various ongoing speculations about possible scenarios concerning Greece and the Euro area. Another risk, though less pronounced are the possible pressures for growth in the oil prices due to geopolitical tensions.

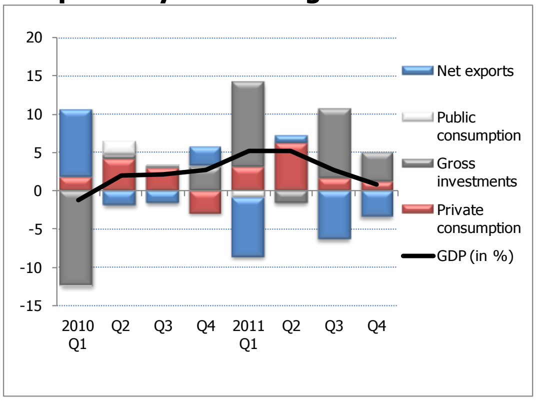
Figure 10 Components contribution to the annual real GDP growth



Source: SSO and NBRM calculations. *The 2012 data are NBRM estimates.

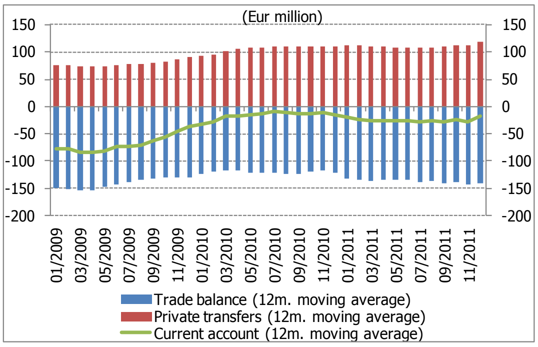
The recovery of the domestic economy continued in 2011 when real GDP growth was 3.1%. The growth was mainly common for the first half of the year when high average growth of the domestic economy of 5.9% was realized. The gradual increase of the global economic growth, favorable conditions on the world market for our export products and more optimistic expectations of economic agents positively affected the domestic economic activity. The stimulus of government capital investments, which continued in the second half of the year also gave positive contribution.

Figure 11 Components contribution to the quarterly real GDP growth



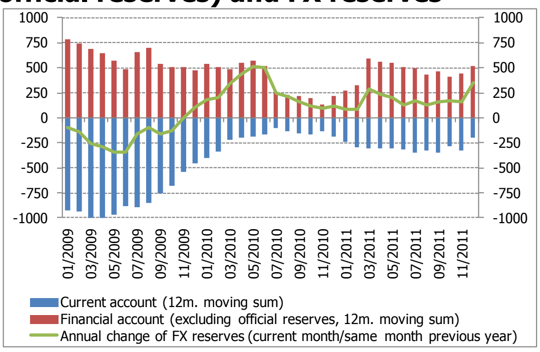
Извор: SSO and NBRM calculations.

Figure 12 Dynamics of the trade balance, private transfers and current account deficit



Source: NBRM.

Figure 13 Dynamics of the current and financial account balance (excluding official reserves) and FX reserves

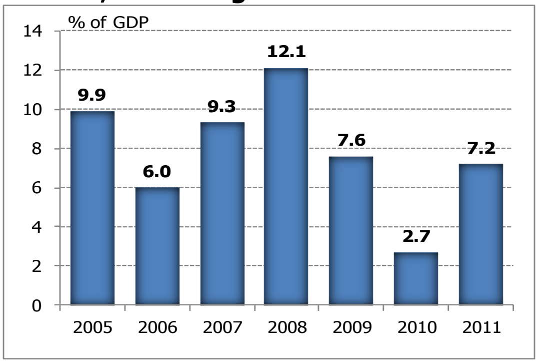


Source: NBRM.

However, in the second half of the year, the deepening of the sovereign debt crisis in the Euro area and permanent downward revisions to growth rates of our major trade partners led to weaker performance of the domestic economy. Adverse global trends affected the foreign demand for Macedonian products and accordingly the domestic industry and export sector. Higher uncertainty in the second half of the year reflected on the expectations of domestic agents and led to a higher propensity to save and refraining from spending. As a result of these developments, the average growth in the second half of the year slowed to just 0.7%.

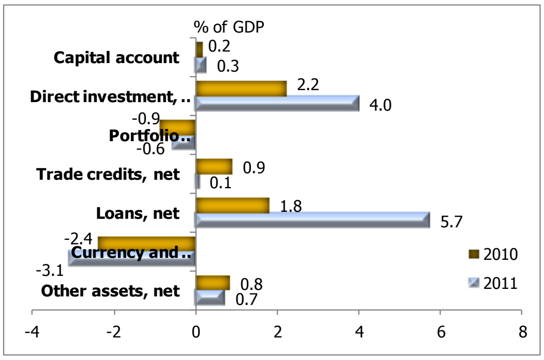
In 2011, the relatively favorable external position of the Macedonian economy remained, despite the increased risks in the global environment. The negative balance on current account moderately increased (by 0.5 percentage points of GDP on an annual basis) and accounted for 2.7% of GDP. This increase largely reflects the expansion of the trade balance deficit which in 2011 reached 22.3% of GDP (annual growth of 1.5 percentage points of GDP). The increase in the foreign trade deficit was a result of deteriorated energy balance in conditions of increased energy demand and higher energy prices during 2011. On the other hand, still weak domestic demand did not cause significant import pressures, which in conditions of favorable conditions on the metals market and increased utilization of some of the new export capacities, led to narrowing of the non-energy trade deficit. Current transfers, mainly remittances continued to grow, especially towards the end of the year, influenced by the uncertainty and numerous speculations about the future of the European currency, amid retained confidence in the domestic currency. This contributed to a strong growth in the net inflows from private transfers, which allow "coverage" of about 85% of the trade deficit.

Figure 14 Capital and financial account balance, excluding official reserves



Source: NBRM and SSO.

Figure 15 Components of the capital and the financial account



Source: NBRM and SSO.

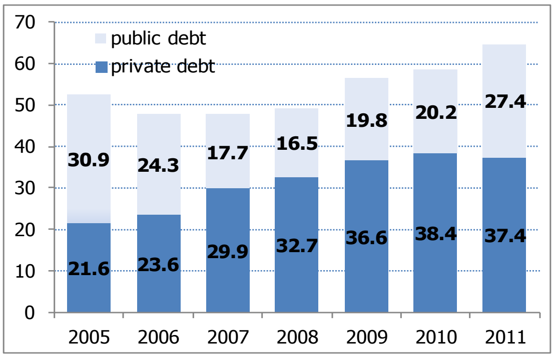
Capital inflows in 2011 were sufficient for financing the current account deficit and for an additional increase of foreign reserves. In 2011, net inflows on the capital and financial account (excluding official reserves) were almost three times higher than the previous year. Thus, they were sufficient for full funding of the relatively low current deficit and enabled additional foreign currency inflows in the domestic economy. A significant part of the inflows resulted from the increase of foreign investments in the country that were almost twice higher than the deficit in current transactions. Additional capital inflows came through external borrowing, especially of the government. Inflows have contributed to achieving the historically highest level of foreign reserves at the end of the year of Euro 2,069 million, which provides greater capacity to buffer the potential pressures on the foreign exchange market and preserve the stability of the exchange rate. The stock of gross foreign reserves provides a relatively favorable position also in terms of coverage of imports of goods (f.o.b.) and services in the next year of over 4 months.

The total external debt of the Macedonian economy in 2011 continued to grow. After rising by 2.2 percentage points of GDP in 2010, gross external debt of the Republic of Macedonia in 2011 increased by additional 6.1 percentage points and at the end of the year it was 64.7% of GDP. Moreover, unlike the previous year, when growth was mostly due to the private sector debt[6] in 2011, driver of the growth was the public external debt[7] (with a contribution of 85.8%). Just over half (55.1%) of the growth of the public external debt was conditioned by the increased debt of the government, though at more favorable terms than those of the market, by using funds from the concluded precautionary credit line with the International Monetary Fund in the first quarter of the year and borrowing under the Policy-Based Guarantee Program between the Republic of Macedonia and the World Bank

[6] The debt of the private sector covers: the debt of banks (excluding the Macedonian Bank for Development Support), the debt of other sectors (excluding public enterprises) and inter-company debt.

[7] The public sector debt includes: debt of central government and funds, monetary authorities, public enterprises and the Macedonian Bank for Development Support.

Figure 16 Gross external debt in % of GDP



Source: NBRM.

toward the end of the year. Additionally, the growth of the debt of the monetary authorities based on short-term repo transactions[8], which the National Bank began to conclude in the second quarter of 2011, conditioned 36.6% of the growth of the gross external debt. The exclusion of these transactions (which have a neutral effect on net external debt) would reduce the gross external debt to 61.6% of GDP or 3.1 percentage points more than in 2010.

Growing external debt increases the sensitivity of the domestic economy to external shocks, which is especially pronounced in the current environment of major lack of confidence on the international financial markets, which imposes higher costs and difficult access to financing.

Macroeconomic projections for 2012 indicate a continuing climate of relatively stable macroeconomic environment, but with increased risks. Risks are associated with the possibility of spillover of risks from the global environment, primarily from the Euro area, and the future dynamics of world oil prices. Uncertainty about the future pace of recovery and financial instability in the countries of the Euro area, can spill over in the Republic of Macedonia through several channels. Problems with sustainability of public finances are large and produce negative transmission effects on the possibilities for economic recovery in the Euro area, which put in question the future dynamics of the export demand for Macedonian products. Lesser demand would adversely affect the expected dynamics of domestic economic activity and would create negative pressures on the external position of the country. On the other hand, the instability of financial markets and the need to refinance the high public debt in the Euro area make the access to capital in global markets

[8] Within its activities related to foreign reserves management, the National Bank is engaged in securities lending by making repo and reverse repo agreements in identical amounts. In this respect, when concluding repo transactions liabilities are created that increase the gross external debt, while when concluding reverse repo agreements claims are created that increase the gross external claims of the monetary authority. Consequently, on a net basis, these transactions have a neutral effect, i. e. they do not reflect the total net external debt.

significantly more difficult and more expensive. In such conditions, the possibility for external financing of the external debt and fiscal deficit of the government is significantly limited. Materialization of this risk was evident in 2011, when the Republic of Macedonia made a change in the planned structure of external borrowing and instead of the planned Eurobond issue, it used part of the available funds from the precautionary credit line concluded with the International Monetary Fund in the first quarter of the year and raised a loan under the Policy-Based Guarantee Program between the Republic of Macedonia and the World Bank toward the end of the year. In such conditions, the maintenance of the planned low budget deficits will be of particular importance. Additionally, the development of the domestic public debt market, especially for longer maturities, would contribute to reduce the exposure to risks of the changing conditions for external financing.

Additional risk to the domestic environment is the possibility for repeated inflationary pressures amid the pressures for growth in oil prices due to the geopolitical tensions. Inflation in 2011 moderately accelerated as a result of the higher world oil and food prices and rising domestic regulated prices, and it was 3.9%, on average. The dynamics of inflation largely corresponded with the changes in the external environment - rapid growth in the first half of the year and its stabilization in the second half of the year. The gradual exhaustion of global inflationary pressures, and the administrative and tax measures, contributed to the slowdown of the domestic inflation in the second half of the year, which continued in 2012. Despite expectations of continuation of this trend of falling inflationary pressures, risks to their upward movement are not exhausted, and are influenced by the movements in world oil prices.

Survey on banks' observations of the risks in their operations[9]

The purpose of the Survey is to reveal the banks' perceptions of the major risks they are facing at the moment of answering the Survey, and the potential risks they are expecting to be exposed to during 2012. The Survey covers five groups of risks: macroeconomic risks, risks of financial markets, risks of the banking sector, risks of the bank's internal strategy and risks arising from banking supervision and regulation. Banks rank the current level of each of the five groups of risks in the interval from 1 to 5 (1 indicates that this group of risks has little significance for the bank, while 5 means that the group risks is extremely important for the bank at the moment). Future expectations are expressed through a qualitative assessment of the direction of the risks in the next six months (growing - "+1", declining - "-1" or unchanged - "0").

According to the results of the Survey, there is no change in banks' perceptions of the risks in their operations compared with the previous year. Macroeconomic risks are assessed as extremely important in their work, and the biggest rise in importance of certain risk groups is evident in the risks of banks' internal strategies. In terms of expectations, the banks expect an increased significance of the risks of financial markets.

Table 1 Banks' perceptions of macroeconomic risks

	2010	2011
Average grade of the current risk	4,1	3,9
Average grade of the risk in 2012	0,2	0,4
Number of banks with grade 5	8	9
Number of banks with expectations to increase the risk in 2012	4	7

Source: NBRM, on the basis of provided answers to the survey by banks.

Macroeconomic risks in 2011 still have the highest, however lower importance on the scale of all the analyzed risks. Three banks have increased, and four have lowered their grade of the level of bank's exposure to macroeconomic risks. Banks indicate the risks associated with business tendencies in the industry (particularly in construction) and the risks associated with the movement and pressure on prices as risks that directly affect the level of exposure to credit risk.

Most banks have indicated the risk of business tendencies in construction as a growing risk in 2012, given the weak sales realized in 2011, amid the upward trend of performed construction work in 2010 and 2011. This situation would affect the liquidity and ability to service debts of construction firms to banks. **Banks expect increased risk also in the scope of export oriented industries.** They expect the debt crisis in the Euro area countries that are major trade partners of the Republic of Macedonia to affect the reduction in the volume of sales in these markets by the Macedonian export companies, which could result in deterioration of banks' loans to legal entities.

[9] The Survey includes the responses of all 17 banks that make up the banking system of the Republic of Macedonia.

Table 2 Banks' perceptions of risks in financial markets

	2010	2011
Average grade of the current risk	3,1	3,0
Average grade of the risk in 2012	0,3	0,5
Number of banks with grade 5	2	2
Number of banks with expectations to increase the risk in 2012	6	8

Source: NBRM, on the basis of provided answers to the survey by banks.

Regarding the group of risks arising from the developments in financial markets, three banks increased, while four lowered their grade for the significance of these risks. In this group of risks, the risk assosiated with the events in international financial markets, the foreign exchange market, the movement of the euro and the debt crisis, have the biggest impact. Banks expect the debt crisis in the Euro area to be the main source of instability of the global financial system, and therefore they increased their expectations for higher importance of this group of risks.

Table 3 Banks' perceptions of risks in bankng sector

	2010	2011
Average grade of the current risk	2,8	2,6
Average grade of the risk in 2012	0,3	0,2
Number of banks with grade 5	2	1
Number of banks with expectations to increase the risk in 2012	6	5

Source: NBRM, on the basis of provided answers to the survey by banks.

Banks' perceptions and expectations about the risks of the banking sector are almost unchanged compared to 2010. Two banks had changed their perceptions in terms of increased risks arising from the banking sector, while according to four banks the grade for the exposure to this risk group should be lowered. The majority of banks reported that high concentration of the banking sector in the country continuously increases the risk of systemic crisis. Also, some banks say the lack of competition and high concentration could generate uniform lending conditions.

Table 4 Banks' perceptions of risks from their internal strategy

	2010	2011
Average grade of the current risk	2,2	2,7
Average grade of the risk in 2012	0,2	0,0
Number of banks with grade 5	3	4
Number of banks with expectations to increase the risk in 2012	4	4

Source: NBRM, on the basis of provided answers to the survey by banks.

Risks from internal strategy are going upward in four banks, while only one bank has reduced this kind of risk relative to 2010. This risk group has registered the largest growth compared to the previous year. Banks highlight operational risk as carrier of this risk group. However, through the processes of continuous improvement of the organizational structure and its efficiency, on average, the banks in the Republic of Macedonia do not expect materialization of these risks in 2012.

Banks assess lower risks arising from banking supervision and regulation. Thus, only two banks have increased, while four have lowered their grade for the current levels of exposure to this risk group. Banks have emphasized the effect that different approaches of the supervisory and oversight bodies and differences in terms of specific laws have on their operations, as a significant risk. Here, the banks stress the Decision on the Methodology for determining capital adequacy, which will take effect in 2012, and will require significant amount of time and human and technical resources.

The Survey included banks' observations of the effects of current developments with the government debt of individual countries in the Euro area, and the appropriateness of the requirements contained in Basel 3 and its impact on the stability of banks.

All banks responded that the current developments with the national debt of individual countries in the Euro area have direct effects on their operations. The effects of the developments in the Euro area are being observed indirectly, as an influence on the legal entities - customers of banks that are export oriented and that may face deterioration of the financial condition and creditworthiness. Banks believe that the debt crisis has already spilled over into the real sector with adverse effects both on the global, and the domestic economy.

Banks responded that the requirements contained in Basel 3 are aimed at increasing the stability of the financial system, primarily due to the strengthening of the capital framework (increasing the required level of capital) and the introduction of an international liquidity standard. Banks expect that the strengthening of the capital framework, may limit the growth and structure of banking activities. They expect that the introduction of liquidity standards will affect the cost of funding, net interest margin and profitability in terms of finding stable sources of funding.

II. Non-financial sector

1. "Households" sector

The risks to financial stability arising from the "households" sector remained in controlled frames in 2011. The growth of household debt was reflected on some of the indicators of households' indebtedness, which registered slight deterioration in 2011. Minor easing of credit conditions by banks in the first half of the year, supported by favorable developments in domestic and global economy, gave positive impulses on the side of supply of and demand for loans. That led to a faster pace of growth of loans extended by domestic banks to households, which caused their increased indebtedness. The higher uncertainty in the second half of the year and significantly slower domestic activity led to a tightening of the credit conditions and restraint of banks from lending to households, despite the unchanged demand for credit by this sector. However, the households' debt experienced significantly lower annual growth rate compared with the financial assets, which has improved the ability of households to repay their whole debt at once and increased the possibility for further borrowing.

The high households' exposures to interest rate and currency risks remain fundamental sources of risk, which may affect the ability to service households' debts, and consequently the stability of individual segments of the financial system. Namely, the "households" sector is a significant creditor of the banking sector, as half of the sources of funding for domestic banks account for household deposits, and the possible materialization of the risks that households are exposed to may negatively affect the liquid and stable operation of domestic banks.

The negative gap between disposable income and private consumption in 2011 caused growth of the negative saving rate of households. The high rate of unemployment and low productivity remain major causes of insufficient growth in disposable income and at the same time they prevent a more dynamic growth in inflows of funds of employees. However, private consumption continued to grow in 2011, at a faster pace, due to the favorable shifts in the labor market, growth in the permanent part of the disposable income and the positive perceptions in the first half of the year, despite deteriorating perceptions regarding the macroeconomic environment prevailing in the rest of the year.

Households' disposable income

Disposable income represents the disposable funds remaining after taxation of primary income. The Organization for Economic Cooperation and Development (OECD) defines it as income obtained when all applicable current transfers (other than social transfers in kind) are added to and all paid current transfers (other than social transfers in kind) are deducted from the balance of primary income of the institutional units or sectors. Our analysis refers to the disposable income of households presented as the difference between total current inflows and outflows of households. Disposable income is used for calculation of certain indicators of indebtedness of households, their capacity to repay debt and for determining the rate of saving.

Given the importance of this indicator and its multiple uses and the fact that this data is missing in the official statistics, since 2007, the National Bank has been creating time series of disposable income of the households in the Republic of Macedonia, which is updated on an annual basis due to the frequency of the data used in the calculation. For part of the components of disposable income for which there is no official data, estimation is made, so that disposable income determined in this way may not provide the clearest picture of the net inflows of households.

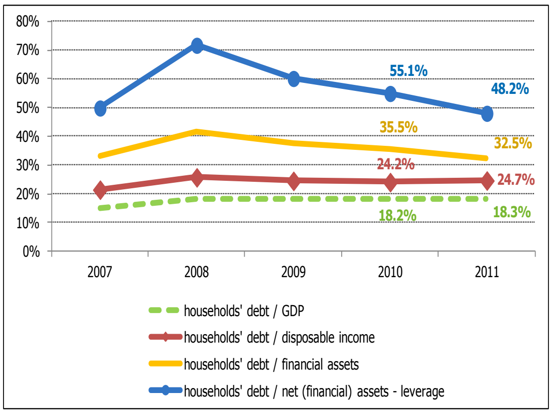
In calculating the disposable income, the total inflows of households include: funds of the employees, income of individual producers, private transfers, social transfers, income from dividends, interest payments from banks and treasury bills, payments from old foreign currency savings, revenue from property and property rights, royalties, capital gains, proceeds from denationalization bonds, revenue gains from games of chance and other prize games. The total outflows of households include: total wage contributions paid (for pension fund, health fund, employment fund), personal income tax, interest payments to banks and outflows based on private transfers. However, disposable income determined in this way may not be comprehensive, and its structure may lack other components due to the lack of available data and inability to get the estimated data.

There are several indicators that the disposable income determined in this way is underestimated.

Consumption and savings of households and their ability to repay debts to the financial sector depend on the size of the disposable income. The low level of disposable income of households in the Republic of Macedonia does not leave a big opportunity for saving, and suggests that the current income is entirely used for consumption, which mostly relates to essential needs. This movement contributed to the formation of a negative gap between private consumption and disposable income in 2011. Households' expectations for increase in the permanent part of the disposable income have stepped up consumption, but also the indebtedness of the sector. However, in 2011, household deposits grew (by 12.1% or Denar 17,818 million) more than loans (8.2% or Denar 5,874 million).

1.1. Debt servicing ability of the household sector

Figure 17 Indicators of households' indebtedness

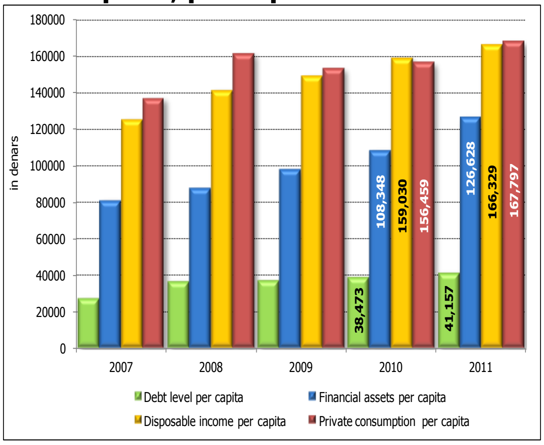


Source: National Bank, based on data submitted by banks, saving houses, MF, CSD, MAPAS, SEC, ISA and SSO.

The faster growth of household debt in 2011 was accompanied by a **slightly increased indebtedness** as measured by the share of debt in the gross domestic product and disposable income[10]. However, household debt experienced a significantly lower annual growth rate compared with the financial assets, which improved the ability of households to repay their whole debt at once (as measured through the debt to financial assets ratio) and increased the possibility for further borrowing (measured by the debt to net financial assets ratio[11]). Higher level of debt per capita compared with the previous

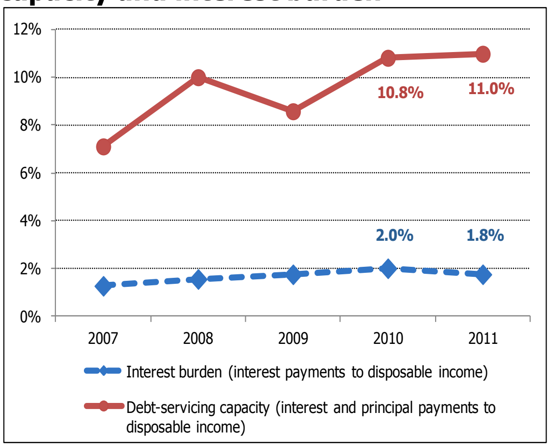
[10] Disposable income is determined by internal calculations of the National Bank based on data from the SSO, and approximations of the National Bank for the data from the Ministry of Finance.
[11] Net financial assets represent the difference between financial assets and debt of households.

Figure 18 Movement of households' indebtedness, financial assets, disposable income and private consumption, per capita



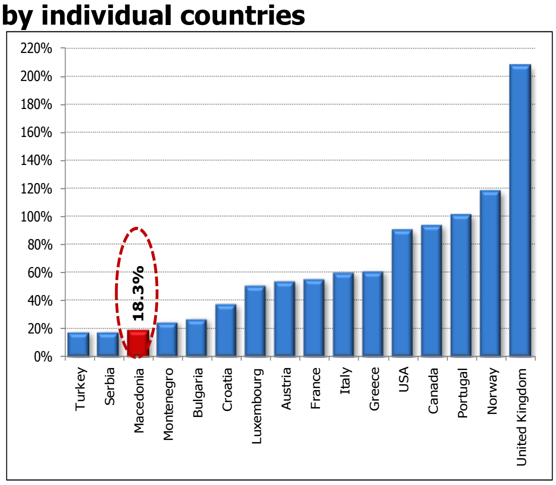
Source: National Bank, based on data submitted by banks, saving houses, MF, CSD, MAPAS, SEC, ISA and SSO.

Figure 19 Households' debt-servicing capacity and interest burden



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

Figure 20 Households' debt to GDP ratio, by individual countries



Source: National Bank, based on data submitted by banks and saving houses, SSO, MF, IMF (Financial Soundness Indicators (FSI) and World Economic Outlook Database-for GDP data) and websites of central banks. Last available data for 2011, and 31.03.2012 for Montenegro.

year is due to the faster growth in household debt relative to the growth of disposable income. The increase in indebtedness was further fueled by higher growth of private consumption compared with the growth of disposable income, in circumstances where the growth of financial assets created room for further borrowing by households.

The ability of households to service interest, as well as principal and interest together, registered minor changes in 2011. The insignificant increase in the indicator of repayment of interest and principal is due to the higher growth rate of repayment of principal and interest (6.4%) than the rate of growth of disposable income (4.8%). The decline in the lending interest rates (in line with easier credit terms of banks) and the increased demand for loans, were manifested in an accelerated pace of growth of household indebtedness in 2011. This meant an increased burden for repayment given the slow rate of growth of disposable income.

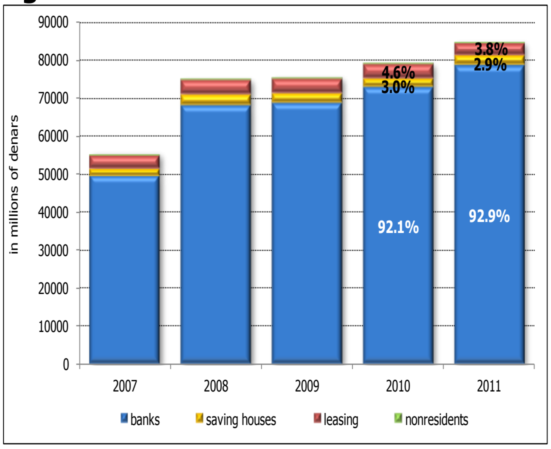
Household debt in 2011, compared with selected countries, suggests that Macedonia has a relatively low share of household debt in GDP. The lower indebtedness is typical of countries with low levels of disposable income. Historically, the "households" sector in the Republic of Macedonia received a relatively low financial support, which makes it difficult to approach the level of indebtedness in developed countries. Although there is room for increasing the indebtedness of households, however, one must not neglect the risk of possible high indebtedness of certain segments of the population. Despite the low level of debt relative to GDP, households represent a significant debtor to banks and other financial institutions. Possible overindebtedness of households can seriously affect the macroeconomic and financial stability. **Hence, maintaining the ability to service the debt of households has particular significance for the overall financial stability.**

1.2. Household debt

Annual growth of household debt reached Denar 5,661 million. In 2011, the annual growth rate of 7.2% was the highest in the last three years (4.9% in 2010 and 0.8% in 2009). Loans from banks (amounting to Denar 78,710 million) still represent the majority of the total debt of households and are the main driver for its growth. Indebtedness based on leasing is the only segment which recorded a negative contribution (of 6.9%) to the total growth of indebtedness.

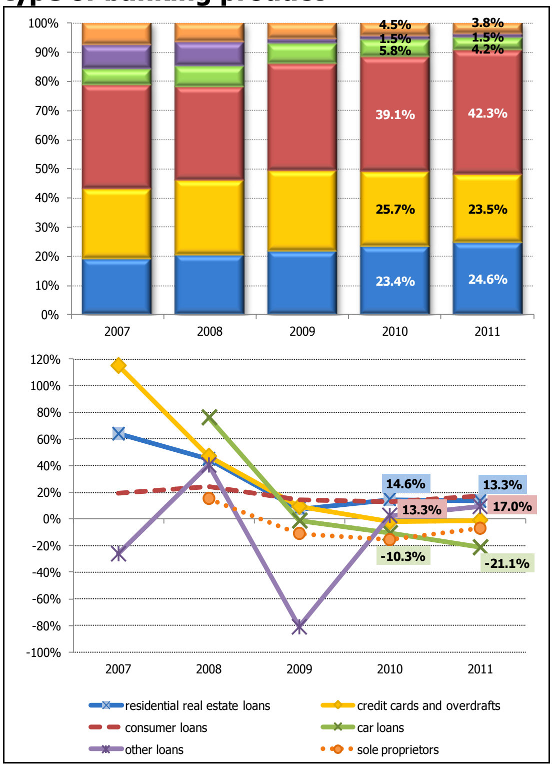
Most of the household debt to banks (71.6%) still refers to the debt for consumption (consumer loans, car loans, current accounts, credit cards and other loans). In 2011, the fastest growing was the indebtedness based on consumer loans (17.0%) and housing loans (13.3%), strengthening the role of these two loan products in the household debt, and almost entirely causing the growth of household debt to banks. In contrast, the debt based on car loans registered the most notable decrease (21.1%), and further reduced its share in total debt to 4.2%. Other banking products had a negative or negligible annual change. The reduction in the off-balance sheet credit exposure is fully attributed to the refinancing of debt based on credit cards with consumer loans.

Figure 21 The households' debt



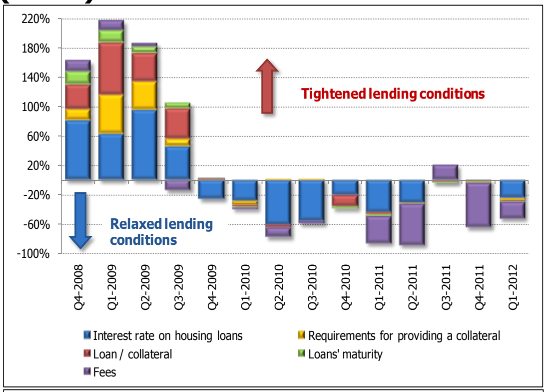
Source: National Bank, based on data submitted by banks, saving houses and MF.

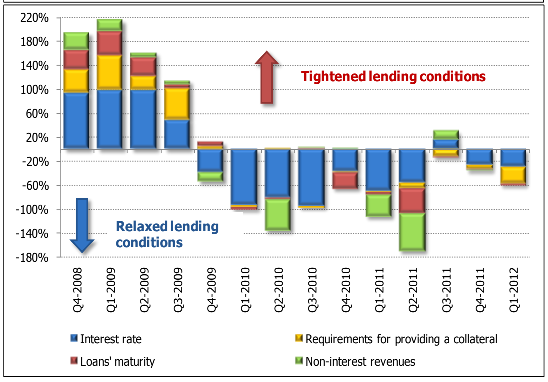
Figure 22 Structure (up) and annual rate of change (down) of households' debt by type of banking product



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

Figure 23 Net-percentage* of banks which declared tightening/relaxing of concrete condition for extending housing (up) and consumer and other loans (down) to households





Source: National Bank, Surveys on banks' lending activity.

* Note: Net-percentage represents the difference between banks that declared relaxing of the loans conditions and banks that declared tightening of loan conditions for crediting households.

The accelerated lending to households in 2011 was in line with more relaxed credit conditions of banks, which (according to the surveys on the lending activity[12]) was most pronounced in the first half of 2011, along with the increased demand for loans by households. Factors that contributed to the relaxation of credit conditions for housing[13] and consumer loans to households in the first half of 2011 pertain to the expectations for the overall economic activity and credit worthiness of consumers, the cost of funds and pressure from competition. The neutral effect of all factors along with the negative impact of the colateral risk factor contribute to ensuring consistency of credit conditions in the second half of 2011. In view of the second quarter of 2012, most banks expect further reinforced net easing of credit conditions[14].

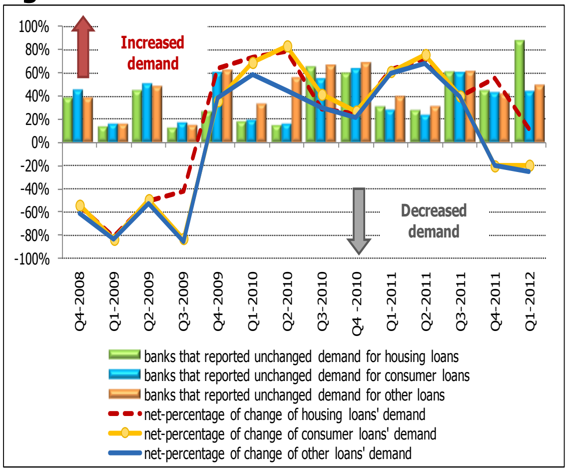
According to surveys on lending activity of banks, the demand for loans by households in the first half of 2011 increased significantly, while movements in the second half of the year indicate generally insignificant changes in demand. Enhanced credit demand has escalated in the second quarter of 2011 when 72% and 75% of banks reported increased demand for housing and consumer loans, respectively. In the fourth quarter of 2011, the survey results indicate a generally unchanged demand for all types of loans, excluding housing loans for which

[12] A more detailed review of the conditions for lending to households is given in the Surveys on the lending activity posted on the website of the National Bank - www.nbrm.mk.

[13] Regarding housing loans, most banks reduced the interest rates and commissions in the first two quarters of 2011, while in the last quarter they reduced only the commissions.

[14] A more detailed review of banks' expectations about the conditions for lending to households is given in the Survey on the lending activity from April 2012, published on the website of the National Bank - www.nbrm.mk.

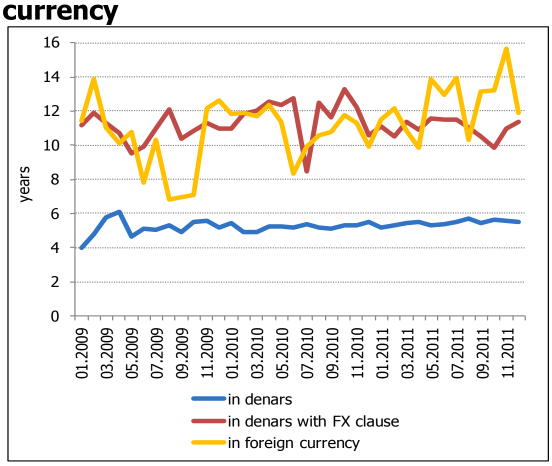
Figure 24 Households' demand for loans



Source: National Bank, Surveys on banks' lending activity.

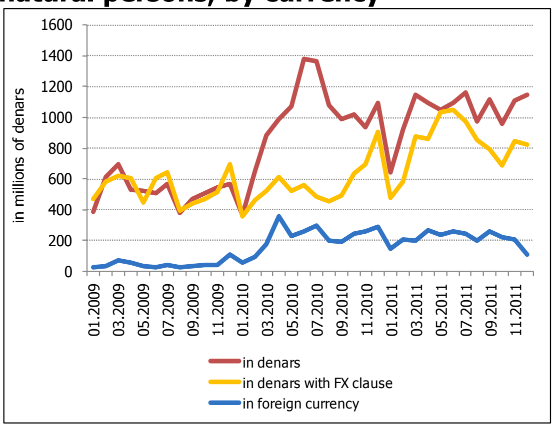
* Note: Net-percentage for change in demand represents the difference between banks that declared increased demand for loans and banks that declared reduced demand for loans by households.

Figure 25 Average maturity on newly extended loans to natural persons, by currency



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

Figure 26 Newly extended loans to natural persons, by currency



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

perceptions of growth in demand prevailed. The banks highlighted consumer confidence and savings of the households as the main factors that stimulate increased households' demand for housing loans from banks, while consumption of durable goods and consumer confidence stimulate increased demand for consumer loans. In the second quarter of 2012, the banks agree in their expectations for growth in the total net demand for loans[15].

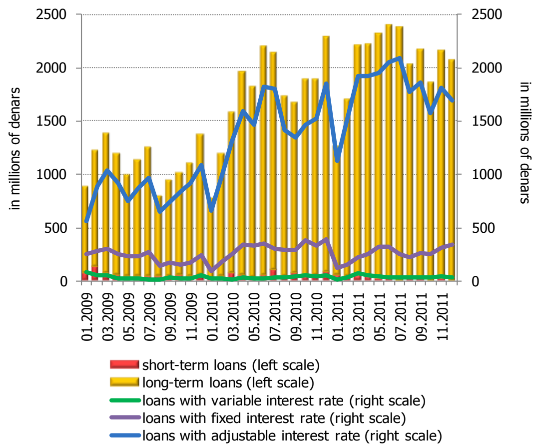
The amount of newly granted bank loans to natural persons in 2011 grew by 17.1% compared to 2010.

The average maturity of new loans to households during 2011 increased by approximately 0.4 years and equaled 8.4 years. The extension of the maturity of new loans primarily comes from foreign currency loans whose maturity increased to 12.5 years (increase of 1.6 years). On the other hand, maturity features of the newly extended Denar loans and loans in Denars with FX clause generally showed greater stability.

According to currency features, and influenced by lower interest rates, the amount of newly extended loans in Denars with FX clause recorded the highest growth of 47.0%, versus the newly extended Denar loans, which increased by 4.8%. Thus, the share of newly extended loans in Denars and with foreign currency component became almost equal. It should be noted that the enhanced deeuroization, which began in late 2011 (i.e. the strong growth of deposits in Denars), began to reflect on the currency structure of lending, by strongly pronounced

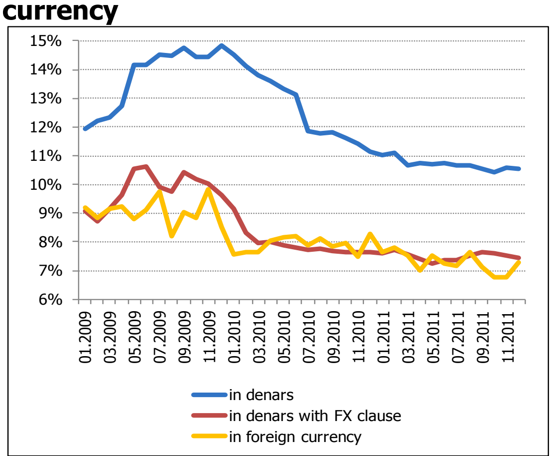
[15] A more detailed review of the banks' expectations for the demand for loans by the household is given in the Survey on the lending activity from April 2012, published on the website of the National Bank - www.nbrm.mk.

Figure 27 Newly extended loans to natural persons, by maturity and interest rate type



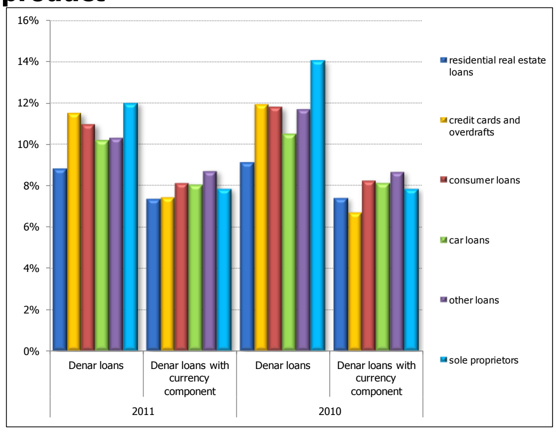
Source: National Bank, based on data submitted by banks.

Figure 28 Average interest rate on newly extended loans to natural persons, by currency



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

Figure 29 Average interest rate on households' loans, by type of banking product



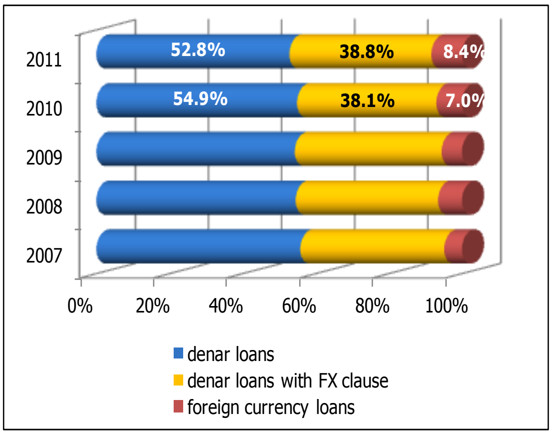
Source: National Bank, based on data submitted by banks.

uptrend of Denar loans in the first five months of 2012.

The maturity structure of new loans is almost entirely dominated by long-term loans, and according to the type of interest rate, about 85% of the new loans are with adjustable interest rate.

The banks' perceptions of the general economic situation, quality of credit demand and the level of risk are the main factors that influenced the cost of lending. Average interest rates on new loans to natural persons during 2011 continued to shrink. Their average interest rate for 2011 was 9.1% and was lower by 1.4 percentage points compared with the average interest rate on new loans extended in 2010. Falling of the interest rates on new loans to natural persons was most pronounced with Denar loans (by 1.8 percentage points), which however still have the highest interest rate. In contrast, newly extended foreign currency loans and loans in Denars with FX clause showed stability in the level of interest rates. These trends contributed to further narrow the difference between interest rates on Denar and foreign currency loans.

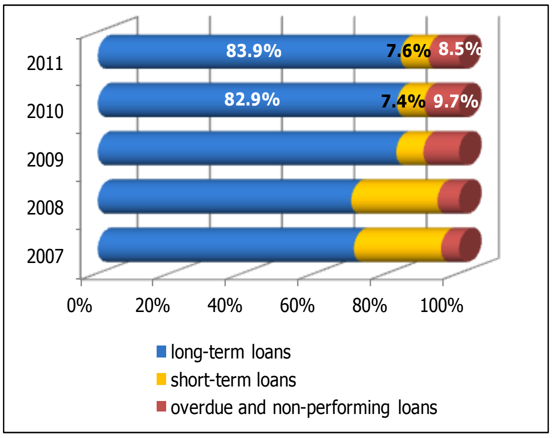
Figure 30 Currency structure of loans to households



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

Households' high exposure to interest rate and currency risks remains a major source of risk, which may affect their ability to service debt, and consequently the stability of their creditors. In such conditions, of particular importance for maintaining the ability of households to repay their liabilities is the maintaining of the stability of the Denar exchange rate and interest rates in the domestic economy. According to the currency structure, the share of the debt with currency component is still high (47.2% versus the share of Denar debt of 52.8%) in the total household debt to banks.

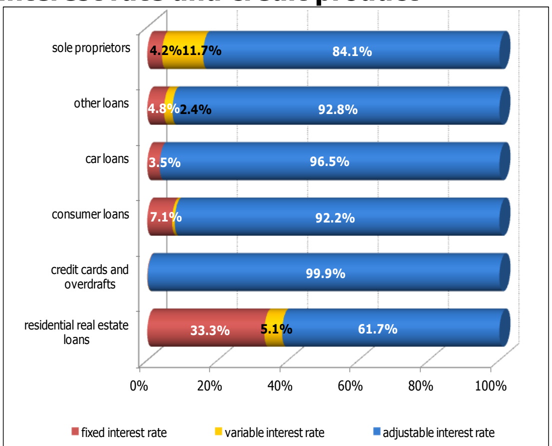
Figure 31 Maturity structure of loans to households



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

Additionally, the dominance of long-term debt further highlights the sensitivity of households to interest rate and currency risks. Contractual arrangements with embedded protective currency and interest rate clauses carry higher risks for the creditors in the long run.

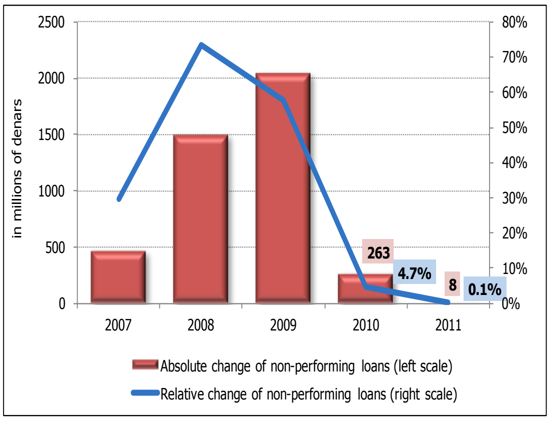
Figure 32 Loans to households by type of interest rate and credit product



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

The high presence of the adjustable interest rates is common for all types of credit products for households. Moreover, credit cards and overdrafts on current accounts are entirely with adjustable interest rates, unlike the housing loans where the share of these interest rates is 61.7%.

Figure 33 Non-performing loans to households

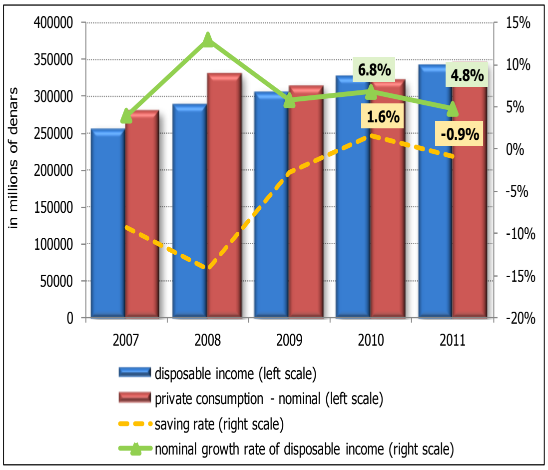


Source: National Bank, based on data submitted by banks.

Non-performing loans to households (7.5% as of December 31, 2011) remained almost unchanged, indicating maintained solvency of borrowers in this sector. Growth (in absolute amount of Denar 8 million, or 0.1%) of non-performing loans to households is the slowest in the last six years. The stagnation of the growth of non-performing loans stems partly from the effect of written-off claims[16]. If one excludes the effect of written-off claims, the growth rate of non-performing loans would be 4.3%. Indicator for participation of non-performing loans to total loans indicates reduced credit risk from the exposure to the "households" sector. By types of banking products, loans intended for consumption (consumer loans and loans based on credit cards) bear the highest risk, thus giving the largest contribution to non-performing loans to households.

1.3. Savings rate, disposable income and private consumption of the "households" sector

Figure 34 Disposable income, private consumtion and saving rate of households



Source: National Bank and SSO.

The ability of households[17] for timely debt servicing is related to the amount and regularity of their income. **In 2011, disposable income[18] continued to grow at a slower pace, but it still achieved an annual growth** of Denar 15,582 million or 4.8%. The movements on the labor market, reflected through the declining unemployment rate and nominal increase in the net wage per employee positively affected the rise in the households' disposable income. According to the separate components of the disposable income, assets of the employees, the income of individual producers and the social and private transfers are the main drivers of growth in total inflows of

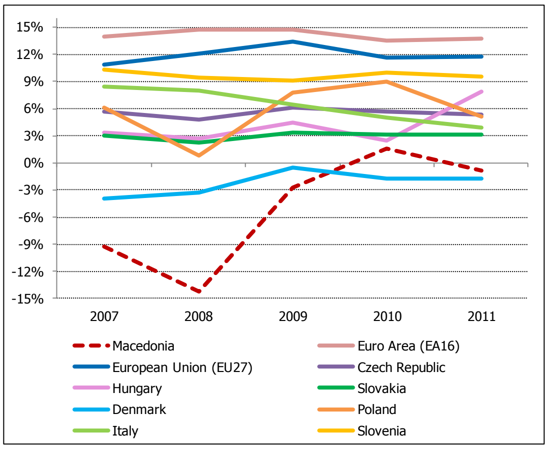
[16] Net write-offs among natural persons in 2011 amounted to Denar 103 million, but they significantly decreased (by Denar 897 million, or 89.7%) compared to 2010, which affected the fall in net write-offs at the level of the banking system.

[17] In preparing this chapter, the source of some of the findings is the Annual Report of the National Bank in 2011.

[18] Disposable income is the difference between inflows (funds of employees, assessment for private transfers, income of individual producers, social transfers, income from dividends, interest payments from banks, payments of old foreign currency savings, income from property and property rights, royalties, capital gains, inflows from denationalization bonds, revenue from gains from games of chance and other prize games and interest payments from treasury bills) and outflows (total social contributions, remittances, personal income tax and interest payments) of households. All components of disposable income are nominal. The data is calculated by the National Bank.

households, while the moderate growth of total outflows arises mainly from the total contributions, interest outflows and personal income tax.

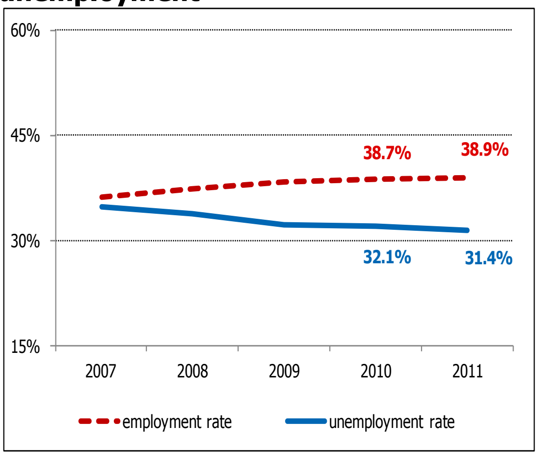
Figure 35 Households' saving rates, by individual countries



Source: National Bank, SSO, Eurostat, OECD Economic Outlook No.90 (data by individual countries are estimated).

The negative gap between disposable income and private consumption in 2011 determined the level of the saving rate[19]. The households' saving rate in the Republic of Macedonia is negative and equals to -0.9%, in contrast to its positive value in 2010. **The negative saving rate results from the significantly faster pace of growth of private consumption in comparison with the slower growth in disposable income.** Compared to saving rates in other countries, the saving rate of the households in the Republic of Macedonia is far lower, with the exception of Denmark.

Figure 36 Rate of employment and unemployment

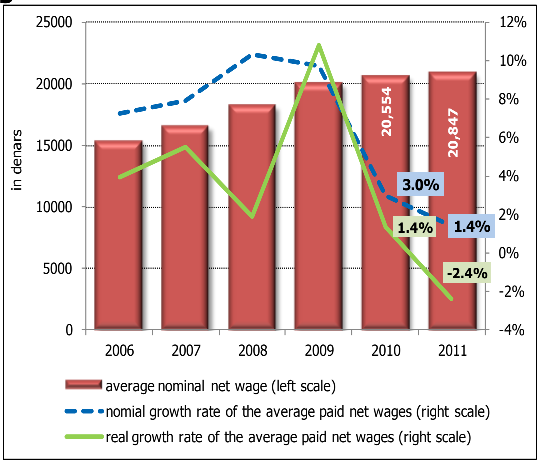


Source: SSO.

Changes in the pace of economic growth had transmission effects also on the conditions on the labor market. The acceleration of growth in late 2010 and in the first half of 2011 has facilitated the process of creating new jobs. Amid simultaneous increase in the number of employees with formal status in agriculture[20], the average employment rate rose by 0.2 percentage points compared to 2010 and reached 38.9%. Employment growth in 2011 was accompanied by an increase in the aggregate supply of labor. **Amid simultaneous growth of supply of and demand for labor, in 2011, the unemployment rate dropped by 0.7 percentage points and equaled 31.4%.** However, unemployment rate is still high despite its downtrend and positive shifts in the labor market. Despite the favorable indicators of trends in the labor market at the end of 2011, during the year a gradual shift of the positive trend was registered. In terms of unemployed persons, their number in the first half of 2011 was falling constantly, while throughout the rest of the year this movement changed and the

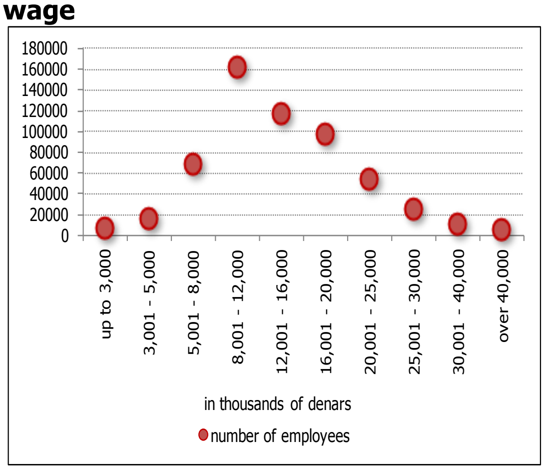
[19] The rate of household saving is the ratio of the gap between disposable income and private consumption to disposable income.
[20] With the Program for financial support to rural development, in 2010 activities were undertaken toward improvement of the conditions for agricultural development and providing financial assistance, through the shift of part of the workers from the informal to the formal sector.

Figure 37 Movement of average nominal net-wage and its nominal and real growth rate



Source: SSO.

Figure 38 Number of employees by net-wage



Source: SSO.

number of unemployed persons began to grow.

Regional comparison shows further increase in unemployment in most countries except the Republic of Macedonia (reducing unemployment) and Montenegro and Romania (where unemployment stagnated[21]). Increased labor productivity[22] by 2% was not sufficient to offset the loss in the overall level of productivity in the economy that occurred during the recession year of 2009. High unemployment rate and low labor productivity, are the major cause for the lack of sufficient growth of disposable income and they also prevent a more dynamic growth of inflows based on employees' funds.

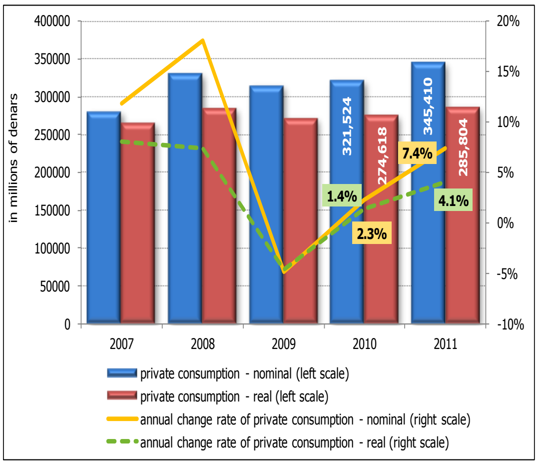
The growth of the average net-wage continued during 2011, but at a slower pace. The average nominal net-wage in 2011 reached Denar 20,847 and it was 1.4% higher than in the previous year. Given a cumulative inflation rate of 3.9%, net wages registered a real decline of 2.4%, compared with the realized real growth of 1.4% in 2010. All countries of the region registered moderate growth in nominal net-wages (with the exception of Croatia, where slight decline was registered and Serbia where a significant increase was noted) and a decline in real net-wages caused by intensified inflation in the region[23].

Statistics shows that out of approximately 638 thousand employees in the Republic of Macedonia[24], 43.9% receive a net-wage[25] of Denar 8,000 to 16,000, which is below the average monthly wage, indicating that the high wages of individuals in certain activities dictate the average wage. Moreover, only 0.9% of the employees

[21] The highest growth rate of unemployment in 2011 was realized in Serbia (3.8 percentage points), where the unemployment rate at the end of the year reached 23% (source: Eurostat).
[22] Productivity and unit labor costs for the whole economy are calculated on the basis of data on GDP, on the total number of employees, according to the Labor Force Survey of the State Statistical Office and according to the average gross wage.
[23] Source: Eurostat and national statistical offices.
[24] Of the total number of employees in the Republic of Macedonia, 10.1% are unpaid family workers (persons working without pay in a business entity, shop or farm property owned by a member of their family), 0.8% did not receive wage, while for 0.2% data is not available.
[25] Source: State Statistical Office - Labor Force Survey for 2010. The total number of employees includes unpaid family workers.

belong to the segment with the highest net-wage[26]. In contrast, only 8.6% of the employees have wages equal to or slightly higher than the average monthly net-wage in the Republic of Macedonia (of which about 24% work in administration). According to the amount of net-wages, about 53% of the total debt is concentrated with households with monthly income of Denar 7,000 to 30,000[27].

Figure 39 Nominal and real private consumption and their annual gowth rate



Source: SSO and National Bank calculations.

The recovery of private consumption continued in 2011 (with enhanced dynamics), with the volume of consumption coming closer to the level registered in the pre-crisis year of 2008. Thus in 2011, the annual real growth of private consumption accelerated to 4.1%, following the modest growth of 1.4% in the previous year. The growth was common for the whole year, with particularly high rate of 7.4% registered in the second quarter. Namely, at the beginning of the year, given the positive signs from the global economy and strong growth in the domestic export sector, there were favorable perceptions and expectations among the domestic economic entities. Positive perceptions, favorable shifts in the labor market and the growth in the permanent part of the disposable income enabled the rapid growth of consumption. In conditions of optimistic expectations for the future economic growth and consumer confidence, the banks provided easier access to credit, as an additional source of funding for household consumption. However, in the second half of the year, growth in household consumption slowed significantly. Unfavorable movements in the real sector, due to the debt crisis in the Euro area, changed the expectations about future developments, led to downward movements in the labor market and a decline in the wages in the second half of the year. Such macroeconomic environment of worsened perceptions was

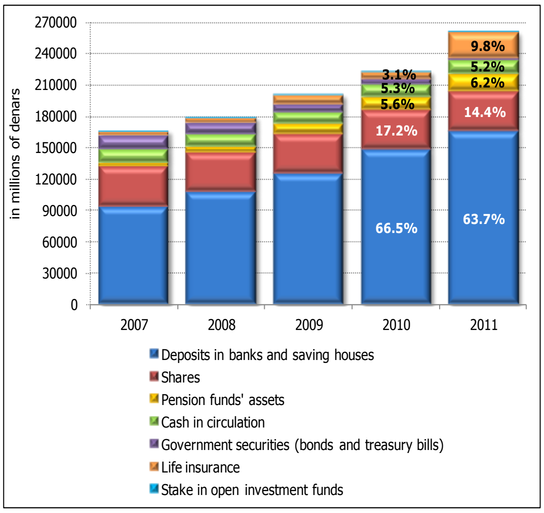
[26] Of the total number of persons with such income, 818 (or 14.2%) are employed in wholesale and retail trade, repair of motor vehicles, motorcycles and personal household items. Second largest group with such monthly income consists of 808 (or 14.1%) persons employed in the administration or public administration, defense and compulsory social security. The category of employed persons with the highest net salary includes only 102 persons or 1.8% (of 8,907) engaged in activities related to financial intermediation. The analysis of the percentage share of persons with the highest income in certain activities indicates that 18.6% of the employees in exterritorial organizations and bodies have net income of more than Denar 40,000.

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

followed by a restraint in spending. In 2012, the rebound in the uncertainty, the moderately lower financial support from banks, the expected stagnation in the labor market and the increased propensity to save are expected to contribute to slower growth in private consumption.

1.4. Financial assets of the "households" sector

Figure 40 Amount and structure of financial assets of households by type of assets



Source: National Bank, based on data submitted by banks, saving houses, MF, CSD, MAPAS, ISA and SEC.

Note: For the purpose of this analysis, according to National Bank's assessment, 70% of cash in circulation (outside of banks) is included in the financial assets of households; Shares represent sum of listed and non listed shares on the Stock Exchnage, at nominal value; Life insurance is represented by the amount of life insurance policies.

Financial assets of the "households" sector continued to grow in 2011, at a faster pace (growth of Denar 38,008 million or 17.1%) compared with the last year (when they increased by Denar 22,206 million or 11.1%). Such dynamic caused an increase in the share of financial assets to GDP by 5 percentage points compared with 2010, so that at the end of 2011 they reached the level of 56.3%. **The growth of financial assets in 2011 was conditional on the households' investments in deposits with domestic banks and savings houses and in life insurance policies, which caused about a half of their annual growth.** Unlike previous years when deposits in banks and savings houses almost entirely determined the growth of financial assets, in 2011, households' interest in investments in life insurance policies has increased substantially. In 2011, these investments were the fastest growing component of financial assets, which rose by almost four times.

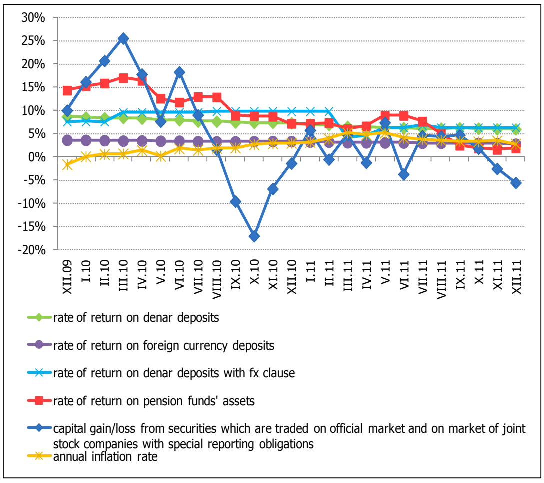
At the end of 2011, despite the slowing pace, household deposits in banks and savings houses increased by Denar 17,885 million, or 12.1%. The gradual slowing of household deposits growth is explained by the movements in underlying fundamentals that determine households' income (slower annual growth in nominal net-wages and pensions and the annual growth rate of employees) and the gradual reduction of interest rates on deposits (Denar and foreign currency), but also the reduced inflow of funds on the basis of private transfers in the first half of the year. **Given that household deposits occupy almost half of the sources of funding of domestic banks, this sector is a significant**

creditor of the banking system and may transmit negative effects on the operations of domestic banks, in case of materialization of the risks it is exposed to.

Household assets in private pension funds take a significant place in the structure of the household financial assets, registering an annual growth of 29.1% and contributing with 9.6% to the growth of financial assets in this sector. Other types of household assets had negligible impact on the growth of the financial assets of households.

All instruments of the household financial assets throughout 2011 had positive rates of return, with the exception of securities[28], whose rates of capital gain[29] fluctuated throughout the year and in five months they registered capital loss. Weighted annual interest rates on Denar, foreign currency, and Denar deposits with FX clause averaged 6.0%, 2.8% and 6.3% respectively. The annual nominal rate of return of pension funds[30] is the highest in four months of 2011 (April, May, June and July), compared with the rates of return on other instruments.

Figure 41 Movement of annual rate of return of some households' financial assets instruments



Source: National Bank, based on data submitted by banks, MAPAS, MSE and SSO.

Changes in legislation relating to the protection of consumers in contracts for consumer loans

In April 2011, the new Law on Consumer Protection in Contracts for Consumer Loans was adopted, which started to be applied from October 1, 2011. By its adoption, full compliance was achieved with the Directive of the European Council and Parliament 2008/48/EZ on Consumer Protection in Contracts for Consumer Loans. This Law to a large extent contains the provisions covered in the previous Law on Consumer Protection in Contracts for Consumer Loans, but also significant innovations were introduced, especially in increasing the transparency of operations of the creditors in terms of pre-contract information that is given to the consumer, the mandatory elements of the loan agreement and the total cost of the loan. In order the consumers - natural persons to be fully aware of all relevant data and information before they commit to conclude an agreement for consumer loan with a creditor, the Law accurately specifies the data and information that the creditor must communicate to the consumer before they conclude a consumer loan

[28] For the purposes of this analysis, securities denote bonds and shares traded on the official market and shares traded on the market of stock companies with special reporting obligations.
[29] The annual rates of capital gain/loss are calculated on the basis of the annual change in market capitalization of securities.
[30] The annual nominal rate of return is calculated on the basis of weighting the rate of return of individual pension funds to their net assets.

agreement. For greater uniformity among creditors in providing pre-contractual information, the National Bank prescribed a **form** in which creditors should list all information on the credit and which would serve the consumer as a tool to compare different offers of creditors in order to make a more information-based decision on concluding the most appropriate consumer loan agreement.

Also, in this Law the number of mandatory provisions in contracts for consumer loans has increased, such as information about the name and headquarters of the competent supervisory authority, the right of off-court settlement of disputes and how to use that right, provision on the payment of notary costs of loan approval, the treatment of additional services related to the loan agreement and the like. In addition, loan agreements should explicitly state the **type of interest rate**, conditions which govern **the use of interest rate**, if applicable, **any index or reference rate** of the initial interest rate, and the **periods, conditions and procedures** for its change. The creditor is obliged to inform the consumer of any change in interest rate, in writing or in another appropriate manner, **before** the new interest rate takes effect. The information given to the consumer shall include the new amount and new dates for payment of annuities that will be repaid under the new interest rate.

2. Corporate sector

In conditions of different dynamics of the real economic activity in the first and in the second half of 2011, the added value of the domestic corporate sector manifested faster growth in the first half of 2011, while in the second half, the effects of the problems in the economies of the Euro area were felt, which led to deceleration of the pace of the domestic economy and of the added value of the corporate sector. These movements in the domestic economy confirm that the volume of activities, performance and financial capacity of enterprises in a small and open economy such as the Republic of Macedonia, are largely determined by the developments on global and regional level. Hence, the main risks associated with the corporate sector arise from the prolongation or possible enhancement of the turbulence in the broader external environment, subsequent recession pressures that the domestic economy would face and the effects it brings on the turnover, liquidity and capacity for regular servicing of the liabilities undertaken by the domestic enterprises.

Indicators of performance of the corporate sector did not register major changes. Liquidity indicators are still relatively low, and debt indicators pointed to a relatively moderate level of indebtedness of the domestic corporate sector. Indicators of efficiency of use of funds in 2011 indicate a slightly improved utilization of assets by the domestic corporate sector, although there are pronounced differences between different activities. Profitability indicators remained positive, although more than one third of domestic enterprises operate at loss.

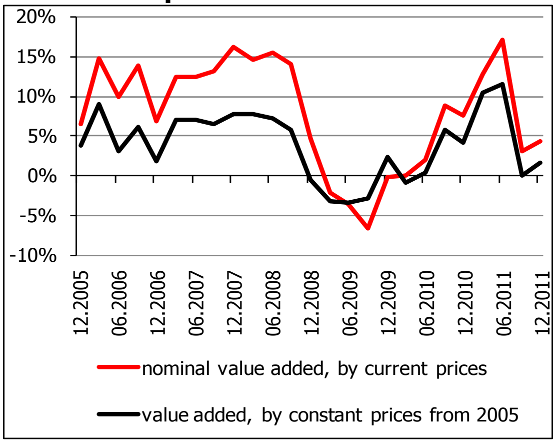
Foreign debt and debt with adjustable interest rates are dominant in the structure of the indebtedness of the corporate sector by currency and type of interest rates, making this sector vulnerable to possible changes in the level of these market variables.

During 2011, there was a certain improvement in the ability of domestic enterprises for regular servicing of liabilities to the banking system, primarily

due to the reduction of the approximate calculation of the probability of default of the corporate sector to the banks. On the other hand, however, in 2011, the annual growth of non-performing loans to the corporate sector and the exposure to credit risk with greater risk accelerated significantly, which leads to the conclusion that the positive developments in the ability to service liabilities is not equally distributed among all companies.

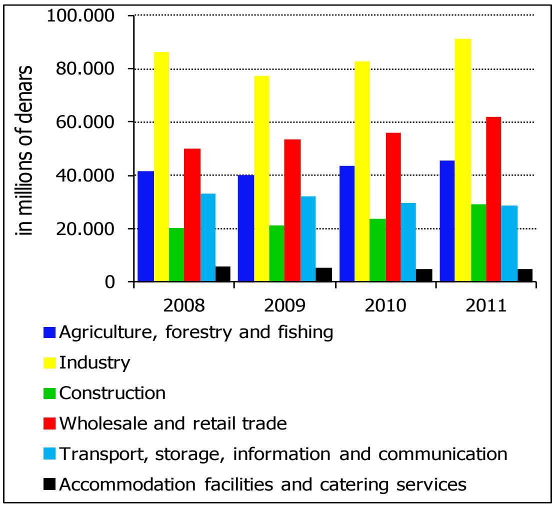
2.1. Analysis of performance of the corporate sector

Figure 42 Annual change rateof value added of corporate sector



Source: State Statistical Office.

Figure 43 Nominal value added of corporate sector by current prices and by activities



Source: State Statistical Office.

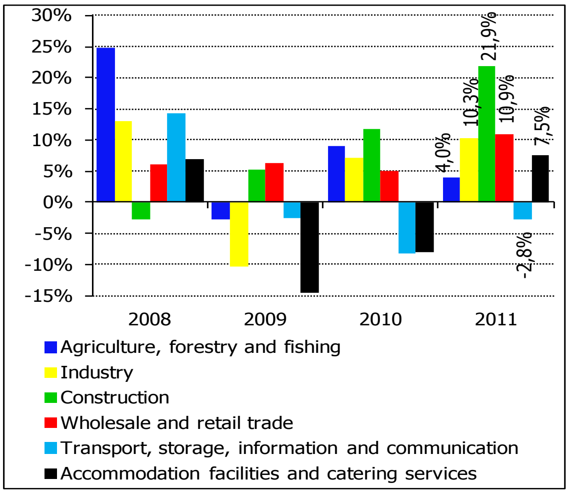
The added value of the corporate sector at the end of 2011 registered moderate growth. In 2011, the annual growth rate of the nominal added value of the corporate sector[31] was 8.8%, with real GDP growth for 2011 of 3.1%. The added value of the corporate sector manifested different dynamics in the first and in the second half of 2011. Namely, in the first half of the year, the growth rate of the nominal added value at current prices (and added vale at constant prices of 2005) registered rapid growth as a result of the increasing foreign effective demand, the growth of investment activity and greater utilization of capacities[32]. In contrast, in the second half of the year, the negative effects of the debt crisis in the Euro area started to appear, leading to stagnation and reduced foreign demand for domestic products, followed by a slowdown in the annual growth of added value of the corporate sector.

Growth of added value of the corporate sector is concentrated in three activities - "construction", "industry" and "wholesale and retail". Namely, these three activities generated 93.9% of the total annual growth of added value at current prices of the corporate sector. The highest increase of activity was registered in the construction companies, which in 2011, driven by the increased investment activity and capital spending of the government, registered annual growth rate of added value at current

[31] Entities included in the corporate sector are those whose prevailing activity is in the branches "industry", "agriculture, forestry and fisheries", "wholesale and retail trade and repair of motor vehicles and motorcycles", "construction", "transportation, storage, information and communications", "accommodation and food service activities "and" activities related to real estate, professional, scientific and technical activities and administrative and support service activities". When calculating the value added of the corporate sector, "activities related to real estate, professional, scientific and technical activities and administrative and support service activities" are not taken into consideration. The data on added value in 2011 is estimated data by the SSO.
[32] See detail in the Annual Report of the NBRM for 2011.

prices by 21.9%, making this activity increase its share in the added value to the corporate sector from 9.9% in 2010 to 11.1% in 2011. In 2011, the activities "wholesale and retail" and "industry" increased their share in the total added value of the corporate sector by 0.4 and 0.5 percentage points, respectively. "Industry" remained an activity with the highest share in the total added value in 2011 (share of 34.8%) achieving an annual growth rate of 10.3%.

Figure 44 Annaul change rate of nominal value added by current prices and by activities



Source: State Statistical Office.

Table 5 Number of companies in Republic of Macedonia

Description	2008	2009	2010	2011	Annual change 2011 / 2010		Annual change 2010 / 2009	
					absolute amount	in %	absolute amount	in %
Number of enterprises in bankruptcy procedure, during the year	1.737	2.270	1.445	1.823	378	26,2%	-825	-36,3%
Number of newly established enterprises, during the year	13.534	10.729	11.685	8.620	-3.065	-26,2%	956	8,9%
Number of total enterprises, at the end of year	120.448	124.559	128.376	129.910	1.534	1,2%	3.817	3,1%
Number of enterprises with blocked transaction accounts, at the end of year	14.213	22.518	31.047	36.695	5.648	18,2%	8.529	37,9%

Source: Natioanl bank own calculations based on data received by Central Registry of the Republci of Macedonia
*Note: Data include all legal enteties, most of which being corporate legal enteties (nonfinancial legal enteties).

Growth of domestic demand in the first half of 2011, determined primarily by the favorable global conditions, led to increased optimism among domestic economic agents. That in turn gave impetus to strengthening the investment demand and annual growth of gross investments[33] by 18.2%. Hence, investments gave the greatest contribution to the growth of gross domestic product in 2011. During 2011, the export-oriented segment of the domestic corporate sector registered growth in exports of 32.9%, mainly due to the increased foreign demand in the first half of the year. Imports mainly followed the dynamics of exports and in 2011 they achieved an annual growth of 28.0%. The growth of foreign trade was particularly

[33] The growth of gross investments is calculated at constant prices from 2005.

pronounced in the first half of 2011, while in the second half of the year it decelerated. This confirms the sensitivity of the performance of the domestic corporate sector to the movements of external demand and external shocks, especially considering the limited competitiveness of domestic enterprises on foreign markets and high structural share of products with low added value. However, in 2011 there was a notable enrichment of the range of exports and hence a decrease in the level of export concentration[34].

However, the economic slowdown in the second half of the year reflected also on the reduction of entrepreneurial initiative, increased vigilance and deterioration of the climate for starting new businesses. Thus in 2011, the formation of new enterprises decreased by 26.2% compared with the previous year, while the total number of registered enterprises increased by 1.2%. The unfavorable environment for operation of the domestic corporate sector is evident also in the growth in the number of companies with blocked accounts and those in which bankruptcy proceedings are initiated. The bankruptcy rate[35], as a sort of approximation for the so-called "default rate", increased from 1.1% in 2010 to 1.4% in 2011. At the same time, 28.3% of the total number of registered companies in the Republic of Macedonia had their accounts blocked on various basis at the end of 2011, which is about 4.2 percentage points more compared to 2010.

[34] At the end of 2011, the indicator for the share of exports to the three countries - major trade partners of the Republic of Macedonia was 42.3%, where 37.5% of the realized export accounts for iron, steel and clothing, which compared with 2010 is less by 2.6 percentage points.

[35] The rate of bankrupt companies is calculated as the ratio between the number of enterprises in which bankruptcy proceedings in the current year were opened and the number of enterprises at the end of the previous year.

Table 6 Corporate sector performance ratios

INDICATORS	2011	2010
Debt indicators		
Total debt ratio	50,1%	50,2%
Leverage ratio - assets/equity	2,0	2,0
Debt to equity ratio	1,0	1,0
Long term debt ratio	20,0%	19,7%
Interest coverage ratio	2,84	2,98
Liquidity ratio		
Current ratio	1,24	1,19
Acid-test ratio	0,89	0,83
Cash ratio	0,21	0,20
Net working capital (in millions of denars)	108.290	77.738
Efficiency ratios		
Days sales outstanding	120	119
Days sales of inventory	61	66
Days payable outstanding	171	186
Total assets turnover	0,80	0,75
Inventories turnover	6,00	5,54
Receivables turnover	3,03	3,06
Equity turnover	1,59	1,50
Coverage of operating non-current assets with long-term sources of financing	133,2%	128,0%
Operating non-current assets/Total assets	46,8%	48,4%
Profitability indicators		
Return on assets	3,78%	3,84%
Return on equity	7,58%	7,73%
Net profit margin	4,76%	5,14%
Return on capital employed	4,12%	4,29%
Operating profit margin	5,19%	5,73%
Operating income per employee, in millions of denars (productivity indicator)	1.983	1.655
Net - profit after taxes per employee, in millions of denars (productivity indicator)	213	167

Source: National bank calculations, based on data received by Central Registry of the Republic of Macedonia.
*Note: 1) The calculation of ratios for performance of the corporate sector is based on annual accounts of 52.242 companies, that submitted annual accounts to the Central Registry for 2011. As of 31.12.2011, in Republic of Macedonia there were 129.910 legal enteties. The difference refers to legal enteties that did not submitted annual accounts to the Central Registry and legal enteties that have dominant activity outside of the scope determined for the corporate sector by the National Bank of the Republic of Macedonia (this legal enteties are taken into account in calculation of the corporate performance ratios by size of the companies and by reported financial result); 2) Some of the efficiency ratios are calculated by approximation, because unavailable data for cost of good sales and amount of the purchases made during the calendar year. Calculation metodology of the ratios is given in Annex 8.

Indicators of performance of the corporate sector in 2011 did not point to significant changes in the amount of its indebtedness, compared with 2010. Minimal improvement was observed in the liquidity indicators, although they are relatively low, signaling liquidity difficulties for the domestic corporate sector. In 2011, indicators for the efficient use of funds, as well as indicators for productivity of employees, registered some improvement, while profitability indicators have maintained positive values and are relatively stable.

Table 7 Corporate sector performance ratios, by activities

INDICATORS	Agriculture, forestry and fishing		Industry		Construction		Wholesale and retail trade		Transport, strorage, information and communication		Accommodation facilities and catering services		Real estate activities, professional, scholar and technical activities and administrative and auxiliary services	
	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
Number of enteties as of 31.12.2011	1909		7353		4071		23514		6929		3429		5037	
Debt indicators														
Total debt ratio	17,3%	17,0%	51,9%	52,3%	66,8%	67,3%	58,3%	59,3%	37,5%	37,5%	57,8%	56,9%	52,5%	54,6%
Leverage ratio - assets/equity	1,21	1,20	2,08	2,10	3,01	3,06	2,40	2,45	1,60	1,60	2,37	2,32	2,11	2,20
Debt to equity ratio	0,21	0,20	1,08	1,10	2,01	2,06	1,40	1,45	0,60	0,60	1,37	1,32	1,11	1,20
Long term debt ratio	5,1%	4,4%	26,0%	25,5%	25,4%	25,5%	16,9%	16,9%	13,0%	12,0%	32,7%	34,4%	22,4%	25,3%
Interest coverage ratio	3,56	2,56	1,82	2,24	5,38	3,83	4,41	4,34	2,17	3,88	0,57	1,36	5,57	2,45
Liqudity indicators														
Current ratio	0,98	0,93	1,29	1,20	1,14	1,11	1,34	1,32	1,18	1,10	0,72	0,77	0,96	0,93
Acid-test ratio	0,61	0,58	0,94	0,82	0,77	0,78	0,85	0,83	1,09	1,01	0,58	0,63	0,85	0,82
Cash ratio	0,11	0,10	0,18	0,16	0,15	0,15	0,18	0,17	0,41	0,41	0,31	0,33	0,35	0,32
Net working capital (in millions of denars)	-200	-784	49.389	33.062	7.057	4.652	47.341	39.757	8.088	4.505	-2.249	-1.637	-1.136	-1.817
Efficiency ratios														
Days sales outstanding	141	143	143	136	183	218	89	90	114	109	80	92	145	150
Days sales of inventory	103	104	62	77	108	109	65	66	15	16	40	42	31	30
Days payable outstanding	292	307	171	195	306	349	136	140	150	179	286	299	312	298
Total assets turnover	0,17	0,16	0,71	0,65	0,69	0,61	1,38	1,37	0,62	0,59	0,48	0,43	0,51	0,50
Inventories turnover	3,53	3,52	5,87	4,74	3,38	3,35	5,60	5,51	23,84	23,54	9,09	8,74	11,64	12,24
Receivables turnover	2,58	2,56	2,55	2,68	2,00	1,68	4,11	4,07	3,20	3,34	4,53	3,96	2,52	2,43
Equity turnover	0,20	0,20	1,49	1,37	2,09	1,85	3,32	3,36	0,99	0,95	1,14	1,00	1,07	1,10
Coverage of operating non-current assets with long-term sources of financing	1,02	1,00	1,36	1,31	1,48	1,38	1,81	1,77	1,19	1,15	0,94	0,95	1,24	1,14
Operating non-current assets/Total assets	85,8%	86,9%	47,6%	48,7%	30,0%	31,9%	27,8%	27,7%	60,4%	61,9%	66,8%	69,1%	49,3%	53,1%
Показатели за профитабилноста														
Return on assets	0,8%	0,6%	2,8%	3,1%	6,0%	4,1%	5,1%	5,2%	4,1%	6,7%	0,0%	0,8%	6,8%	2,8%
Return on equity	1,0%	0,7%	5,8%	6,4%	18,2%	12,5%	12,2%	12,6%	6,5%	10,7%	0,0%	1,9%	14,3%	6,1%
Net profit margin	4,9%	3,7%	3,9%	4,7%	8,7%	6,8%	3,7%	3,8%	6,6%	11,2%	0,0%	1,9%	13,3%	5,5%
Return on capital employed	1,2%	1,0%	5,4%	6,4%	15,2%	10,6%	11,7%	12,0%	3,3%	6,8%	1,2%	2,3%	11,4%	5,3%
Operating profit margin	6,3%	5,4%	4,9%	6,3%	9,8%	7,7%	4,3%	4,3%	3,8%	8,1%	1,6%	3,5%	13,7%	6,4%
Operating income per employee, in millions of denars (productivity indicator)	131	113	2.291	1.985	1.690	1.159	4.507	3.214	2.516	2.590	441	419	1.396	1.528
Net - profit after taxes per employee, in millions of denars (productivity indicator)	18	12	216	196	225	163	286	195	610	552	71	64	342	247

Source: National bank calculations, based on data received by Central Registry of the Republic of Macedonia. Calculation metodology of the ratios is given in Annex 8.

Indebtedness of the Macedonian corporate sector is moderate and stable. The capital of the domestic corporate sector in 2011 registered a growth rate (of 9.7%) similar to its total liabilities (of 9.1%). Therefore the ratios of total debt, the leverage ratio and the debt to equity ratio remained almost identical as at the end of 2010. On the other hand, the twice faster growth of expenditures for funding compared with the increase in profit from regular activities in 2011 (expenditures for funding increased by 10.7%, while profit from regular activities grew by 5.2%) caused the indicator for coverage of the expenditures for funding with the profit from regular activities[36] to report a slight decline, indicating an increase in the relative interest burden on domestic enterprises in 2011. In terms of individual activities, the highest level of indebtedness was recorded with the construction companies, while the indicators for indebtedness are the lowest in the enterprises engaged in "agriculture, forestry and fisheries" as a prevailing

[36] Profit from regular activities is calculated as the difference between revenues and expenditures from regular operations in the domestic corporate sector.

activity. The indicator for long-term debt is highest in the activity "accommodation and food service activities", but the general conclusion is that this indicator is relatively low, which reflects the low use of long term debt by the companies and their reliance primarily on short-term liabilities as a source of funding. Regarding the size of legal entities[37], debt indicators are lower for large companies. From the total number of legal entities that have submitted annual accounts to the Central Registry, 0.3% are classified as large legal entities, but they account for 40.2% of total assets and 37.4% of total revenues from the regular operations of the legal entities. On the other hand, however, small legal entities had the largest share in the total annual growth in the revenues from regular operations (45.1%) during 2011, and in the annual growth of total assets of legal entities (48.1%).

In 2011, the indicator for the current liquidity of domestic enterprises registered some improvement, resulting from the faster growth of current assets (13.2%) compared with the growth of short-term liabilities (7.8%). Also in 2011, the share of more liquid assets (cash, securities and receivables) in the structure of current assets increased at the expense of the reduced share of stocks, which improved the indicators of current and cash liquidity of enterprises. However, the amount of these indicators is below the generally accepted satisfactory values of 1 for quick ratio, or 2 for the current ratio. The indicators of liquidity in 2011 noted some improvement in almost all industries and the level of these indicators is the highest among enterprises engaged in "transport, storage, information and communications" as their prevailing activity. Regarding the size of the legal entities, the lowest indicators of liquidity are common for the micro legal entities, which also register a negative value of the net working capital. The indicator of current liquidity is greater than 1 only in medium legal entities.

Indicators of the efficient use of funds in 2011 point to a slightly improved utilization of assets by the domestic corporate sector. The turnover of all categories of assets increased, due to the faster growth in revenues from regular activities (by 16.2%) as compared to total assets (9.4%) of the corporate sector, and the individual types of assets. In addition, there was a decline in the share of operating non-current assets[38] in total assets, and an increase in their coverage with long-term sources of funding. In 2011, the average time required for collection of claims was 120 days, inventories turnover took 61 days and the average period of payment of liabilities amounted to 171 days. Although the analysis of indicators for the efficient use of funds at the level of the total corporate sector (analysis of enterprises from all industries, on aggregate basis) is not of greater practical importance, primarily because of the decisive role of the activity of specific companies on their level, it is obvious that the collection of claims and settlement of liabilities of the corporate sector take a relatively long time, which can be considered another indicator of liquidity difficulties faced by domestic companies.

Indicators of the efficient use of funds by individual activity, differ significantly. Thus, the turnover of claims is in the interval of 2 times (with the construction companies) to 4.53 times with the companies engaged in "accommodation and food service activities" as their prevailing activity, while the turnover of inventories ranges from 3.38 times in the activity "construction" to

[37] Classification of legal entities into large, medium, small and micro entities is made according to the criteria of Article 470 of the Companies Act (in this Law the term traders is used).

[38] Non-current operating assets are considered to be the sum of tangible assets, intangible assets and investment in property.

23 times in the activity "transport, storage, information and communications." What is noticeable is that except for "industry" and "wholesale and retail," in all other activities the period of conversion of cash[39] is negative and arises mainly from the long period needed for payment of liabilities (large values of the indicator for the days of payment of liabilities). This may be interpreted as another signal of liquidity difficulties domestic enterprises face with, leading to a lack of synchronization of their cash flows.

[39] The cash conversion period shows the time (usually in days) it takes to convert the inputs used in the operation of the company into cash. Hence, the indicator in the calculation is based on the time required for collection of claims, payment of liabilities and the time during which the assets are engaged in inventories. The lower this indicator, the faster the operating cycle of the company, which is considered favorable for its operating efficiency and liquidity.

Table 8 Corporate sector performance ratios, by size of legal enteties

INDICATORS	Large enterprises		Medium enterprises		Small enterprises		Micro legal enteties	
	2011	2010	2011	2010	2011	2010	2011	2010
Number of enteties as of 31.12.2011	152		602		16059		41269	
Debt indicators								
Total debt ratio	38,3%	39,5%	51,5%	50,6%	56,2%	56,4%	68,9%	66,8%
Leverage ratio - assets/equity	1,62	1,65	2,06	2,02	2,28	2,29	3,21	3,01
Debt to equity ratio	0,62	0,65	1,06	1,02	1,28	1,29	2,21	2,01
Long term debt ratio	15,4%	14,9%	20,6%	20,6%	23,1%	23,7%	30,6%	29,2%
Interest coverage ratio	1,84	2,30	2,95	2,68	4,78	4,26	-3,47	-1,34
Liquidity indicators								
Current ratio	1,29	1,19	1,37	1,31	1,26	1,23	0,87	0,93
Acid-test ratio	0,98	0,84	1,00	0,94	0,88	0,86	0,63	0,70
Cash ratio	0,28	0,25	0,22	0,20	0,22	0,23	0,18	0,21
Net working capital (in millions of denars)	41.159	26.328	29.554	22.784	51.215	39.751	-7.331	-3.311
Efficiency indicators								
Days sales outstanding	100	97	119	122	124	125	339	273
Days sales of inventory	44	56	56	58	69	71	159	115
Days payable outstanding	125	153	151	159	192	202	609	468
Total assets turnover	0,71	0,65	0,95	0,87	0,85	0,81	0,30	0,40
Inventories turnover	8,34	6,47	6,56	6,24	5,26	5,12	2,30	3,18
Receivables turnover	3,65	3,78	3,07	2,98	2,95	2,93	1,08	1,34
Equity turnover	1,16	1,07	1,96	1,77	1,95	1,85	0,97	1,20
Coverage of operating non-current assets with long-term sources of financing	1,25	1,20	1,57	1,55	1,59	1,54	1,07	1,15
Operating non-current assets/Total assets	58,2%	59,4%	38,8%	40,1%	35,8%	37,2%	42,1%	40,9%
Profitability indicators								
Return on assets	3,7%	4,1%	3,7%	3,6%	5,6%	5,3%	-2,5%	-1,5%
Return on equity	5,9%	6,7%	7,6%	7,3%	12,9%	12,1%	-8,0%	-4,5%
Net profit margin	5,1%	6,3%	3,9%	4,2%	6,6%	6,5%	-8,2%	-3,7%
Return on capital employed	4,8%	5,7%	7,6%	7,3%	9,7%	8,7%	-4,7%	-2,0%
Operating profit margin	4,9%	6,3%	4,9%	5,2%	6,5%	6,2%	-6,9%	-2,3%

Source: National bank calculations, based on data received by Central Registry of the Republic of Macedonia.
Note: For calculation of performance ratios by size of companies (legal enteties), are taken into consideration all legal enteties that submitted annual accounts to the Central Registry of the Republic of Macedonia for 2011, which number is 58.082, including those registeres with dominant activitiesthat are not included in the scope of the coprorate sector. Calculation metodology of the ratios is given in Annex 8.

Indicators of profitability of domestic companies in 2011 registered slight reduction and suggest that the domestic corporate sector has maintained profitable operations. The net profit in 2011 was by 7.7% (or Denar 3,247 million) higher than in 2010, while the profit from operations before financial expenditures and taxes, grew by 5.2%. Return on assets and return on equity at the level of the corporate sector amounted to 3.8% (3.8% in 2010) and 7.6% (7.7% in 2010), respectively. However, it should be borne in mind that the realized positive financial result is not evenly dispersed across different enterprises. Thus, given the size of the legal entities, it is notable that the group of micro legal entities, which covers over 70% of the legal entities which submitted annual accounts in the Central Register of the Republic of Macedonia has realized a loss from operations and negative indicators for return on assets and return on equity. The highest indicators for the return are observed among the small legal entities. Regarding the prevailing activity for which the legal entities are registered, most notable growth in the profitability indicators in 2011, compared with 2010, was recorded for the activities "construction" and "activities related to real estate and professional, scientific and other technical activities". In these two activities the net profit margin and return on assets in 2011 were the highest. In contrast, in most other activities profitability indicators in 2011 reduced, and this reduction was most pronounced with the enterprises engaged in "transport, storage, information and communications" as their prevailing activity.

The indicators for the operation of legal entities according to the financial result they showed in 2011 adds to the picture of the performance of the Macedonian corporate sector. Namely, 36% of the legal entities in the Republic of Macedonia operated at a loss in 2011 and they account for 26.4% of total assets, i.e. 17.3% of total revenues from ordinary activities of all legal entities. These legal entities, compared to legal entities which operated at a profit, are characterized by worse indicators of liquidity, negative net working capital[40], higher debt indicators, they have higher leverage and lower coverage of operating non-current assets with long-term sources of funding. Although the differences in the indicators of turnover of assets between legal entities that showed loss and legal entities that showed profit are not large, it is obvious that the collection of claims is significantly more difficult for legal entities operating at a loss, which consequently causes a longer period required for payment of liabilities and thus represents a factor which determines their lower liquidity.

[40] Net working capital is obtained as the difference between the amount of current assets and the amount of short-term liabilities.

Table 9 Corporate sector performance ratios, by financial result reported by the legal enteties

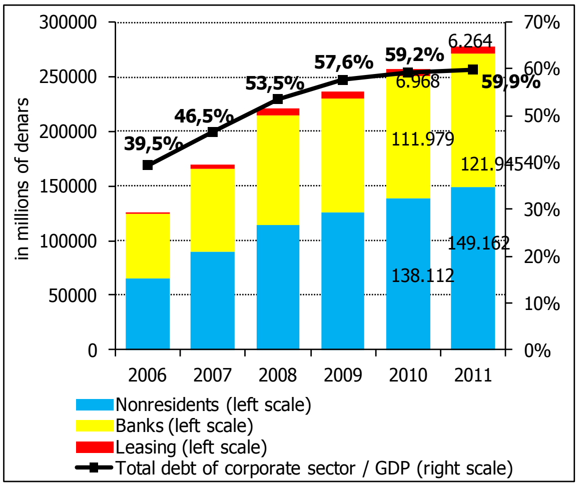
INDICATORS	Legal enteties with positive financial result - profit		Legal enteties with negative financial result - loss	
	2011	2010	2011	2010
Number of enteties as of 31.12.2011	37193		20889	
Debt indicators				
Total debt ratio	42,1%	44,0%	69,2%	62,6%
Leverage ratio - assets/equity	1,73	1,79	3,25	2,67
Debt to equity ratio	0,73	0,79	2,25	1,67
Long term debt ratio	12,5%	13,2%	43,5%	36,5%
Interest coverage ratio	6,07	5,15	-4,07	-1,63
Liquidity indicators				
Current ratio	1,48	1,37	0,76	0,82
Acid-test ratio	1,06	0,96	0,57	0,60
Cash ratio	0,29	0,27	0,12	0,14
Net working capital (in millions of denars)	151.839	110.399	-37.242	-24.853
Efficiency ratios				
Days sales outstanding	112	112	162	152
Days sales of inventory	60	65	61	64
Days payable outstanding	149	164	268	272
Total assets turnover	0,86	0,81	0,50	0,49
Inventories turnover	6,10	5,59	6,02	5,66
Receivables turnover	3,25	3,24	2,25	2,40
Equity turnover	1,49	1,44	1,64	1,32
Coverage of operating non-current assets with long-term sources of financing	1,62	1,52	0,91	1,00
Operating non-current assets/Total assets	40,8%	42,5%	59,7%	59,0%
Profitability ratios				
Return on assets	8,5%	7,1%	-8,9%	-4,1%
Return on equity	14,6%	12,8%	-29,0%	-10,9%
Net profit margin	9,8%	8,8%	-17,7%	-8,2%
Return on capital employed	12,2%	10,6%	-14,0%	-5,0%
Operating profit margin	9,4%	8,5%	-15,2%	-6,0%

Source: National bank calculations, based on data received by Central Registry of the Republic of Macedonia.
Note: For calculation of performance ratios by financial result reported by the legal enteties, are taken into consideration all legal enteties that submitted annual accounts to the Central Registry of the Republic of Macedonia for 2011, which number is 58.082, including those registeres with dominant activitiesthat are not included in the scope of the coprorate sector. Calculation metodology of the ratios is given in Annex 8.

2.2. Corporate debt

Revival of global and domestic economic activity, particularly in the first half of 2011, followed by the steady growing readiness of domestic banks to finance the domestic real sector strengthened the credit demand and moderately increased the corporate debt. In 2011, corporate debt increased by Denar 20,312 million, i.e. by 7.9% compared to the previous year. Domestic companies' debt to nonresidents registered the largest absolute growth of Denar 11,050 million (or by 8.0%) which is more than half

Figure 45 Corporate debt, by type of creditor



Source: NBRM, Ministry of Finance and State Statistical Office.

*Note: For the purposes of this analysis, the total corporate debt includes debt based on loans, interests and other claims of banks, total corporate external liabilities (nonresidents) and value of active leasing agreements. The corporate external debt data are preliminary, and the GDP data is estimated.

of the total annual growth of the domestic corporate debt. Hence, debt to nonresidents dominates with 53.8% of the structure of total debt of domestic companies as of December 31, 2011[41]. Corporate debt to lease companies reduced by 10.1% (or by Denar 704 million), suggesting insignificant demand and lower access to funds through the lease sector. Debt to domestic banks went up by 8.9% (or Denar 9,966 million), increasing its share in the total domestic corporate debt from 43.6% at the end of 2010, to 44.0% on December 31, 2011.

In 2011, the fastest absolute growth was registered in the corporate foreign currency debt (in the currency structure), long-term debt (in the maturity structure) and debt with administrative interest rates (according to the type on interest rate on principal).

Table 10 Structure and changes of corporate debt components

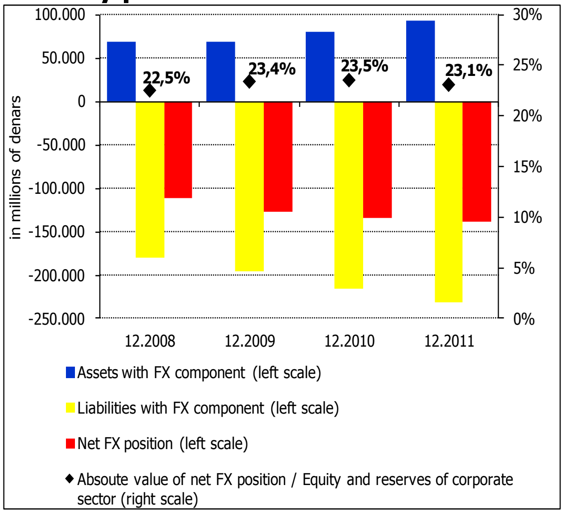
	Type of indebtedness	Structure (во %)		Annual change in] 2011		
		31.12.2010	31.12.2011	Absolute amount (in millions of denars)	Relative change (in %)	Change of share (percentage points)
currency	Denar indebtedness	15,1%	15,6%	4.564	12,1%	0,5
	FX indebtedness	71,5%	72,7%	18.324	10,3%	1,2
	Denar indebtedness with FX clause	13,4%	11,7%	-1.871	-5,6%	-1,7
maturity	Short term indebtedness	37,2%	37,3%	7.735	8,1%	0,1
	Long term indebtedness	57,6%	57,0%	10.015	6,8%	-0,6
	Other indebtedness (past-due and nonperforming)	5,1%	5,7%	2.562	19,4%	0,5
type of interest rate	Indebtedness with fixed interest rate	15,8%	15,6%	1.107	3,6%	-0,2
	Indebtedness with variable interest rate	36,4%	35,4%	1.382	2,0%	-1,0
	Indebtedness with administrative interest rate	44,8%	45,7%	6.225	7,2%	1,0
	Other - non-interest bearing indebtedness	3,1%	3,3%	748	12,6%	0,2

Source: The National Bank and the Ministry of Finance

Note: The currency structure and the structure by type of interest rate do not take into account active lease agreements, due to unavailability of data on their currency structure and the type of interest rate. Debt structure by type of interest rate takes into account the debt to the banking system and nonresidents solely based on loan principal.

[41] The data on external corporate debt are preliminary.

Figure 46 Corporate sectors' foreign currency position



Source: The National Bank

Most of the foreign currency debt (60.3% of the total annual growth) is attributed to the increase of external debt of domestic companies. Note that in 2011, Denar debt with FX clause reduced, and the share of this debt component decreased by 1.7 percentage points. However, the debt currency component of the domestic corporate sector constitutes above 84% of the total debt, which contributes to the higher sensitivity and relevance of the level of exchange rate to the corporate sector performances and stability.

The higher sensitivity to currency risk is also illustrated by the short net currency position of domestic companies[42]. Short net currency position reflects higher liabilities than assets with FX component, which increased in 2011 by Denar 3,941 million, i.e. by 2.9% compared to the end of 2010. Considering the nature of business of some companies or economic features of certain activities, there is a risk of uneven distribution of net FX position by activity, or by company, i.e. the assets and liabilities with FX component are not evenly concentrated in various activities or companies, implying that they are even more exposed to currency risk. Hence, the National Bank's policy of *de facto* fixed nominal exchange rate of Denar against Euro plays a vital role for the sustainability of corporate debt and for stability of its performances.

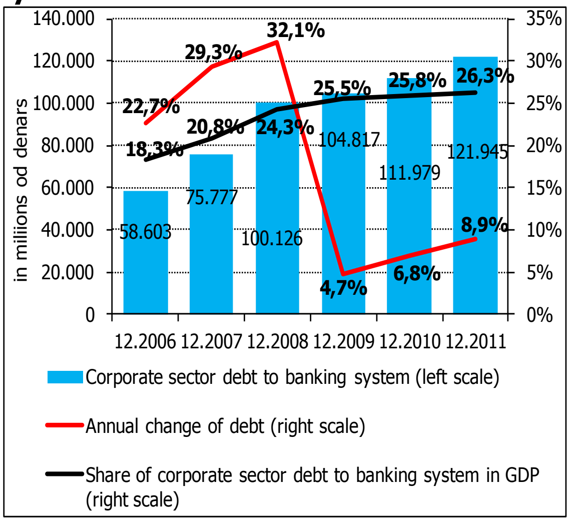
In 2011, the long-term debt registered the highest absolute growth in the maturity structure of corporate sector. This increase of long-term debt corresponds with the gradual increase of the readiness of domestic banks to take higher credit risk. Domestic banks are key generators of the growth of long-term debt (they make up almost two thirds of the annual increase of long-term debt). On the other hand, the short-term corporate debt registered faster relative growth (8.1% in 2011), mainly attributable to financing from nonresidents. Yet, due and nonperforming loans increased most rapidly, registering annual growth rate of 19.4% in 2011, which is an indicator for the poorer conditions for running business in the domestic corporate sector. Thus, the due or nonperforming loans increased their structural share in the total debt from 5.1% (2010) to 5.7% (2011).

Domestic banks prefer to extend administrative interest rate loans to the corporate sector, and therefore, make this part of corporate debt making up the most of the total debt. Also, in 2011, loans with administrative interest rates registered the fastest growth of Denar 6,225 million or 7.2%. The last year, variable interest rate debt registered moderate growth of 2.0% (i.e. by Denar 1,382 million), and decreased the structural share by 1.0 percentage point. Above 70% of variable interest rate debt is

[42] Net currency position is the difference between the assets and liabilities with currency component of the corporate sector. Assets with currency component include deposits with currency component, cash on accounts abroad, total claims of residents on nonresidents and investments abroad. Liabilities with currency component include credits with currency component from domestic banks and total liabilities of residents to nonresidents. Since there are no data available on investments abroad as of December 31, 2011, the calculations use data as of December 31, 2010.

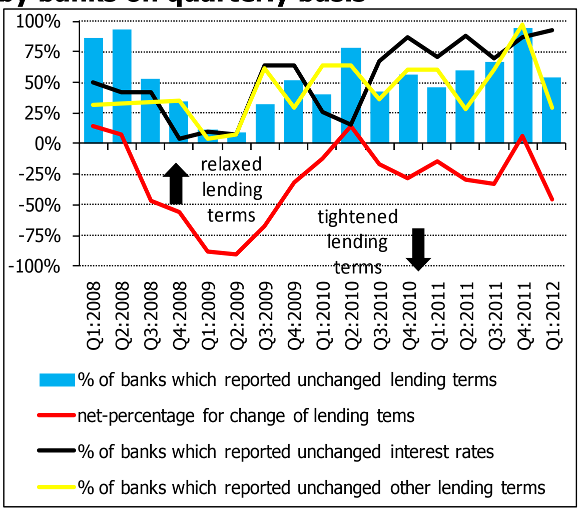
attributable to the debt of domestic companies to nonresident creditors. However, note that in 2011, variable interest rate loans to nonresidents went down (by Denar 2,062 million), and therefore, the annual growth of these loans was caused by the lending activity of domestic banks. The high share of debt with administrative and variable interest rates demonstrates the relevance of changes in interest rates on the domestic or international financial market to the financial performances of domestic companies, referring to higher interest risk exposure of the corporate sector.

Figure 47 Corporate debt to the banking system



Source: the National Bank, based on data submitted by banks and State Statistical Office

Figure 48 Terms of lending to corporations by banks on quarterly basis

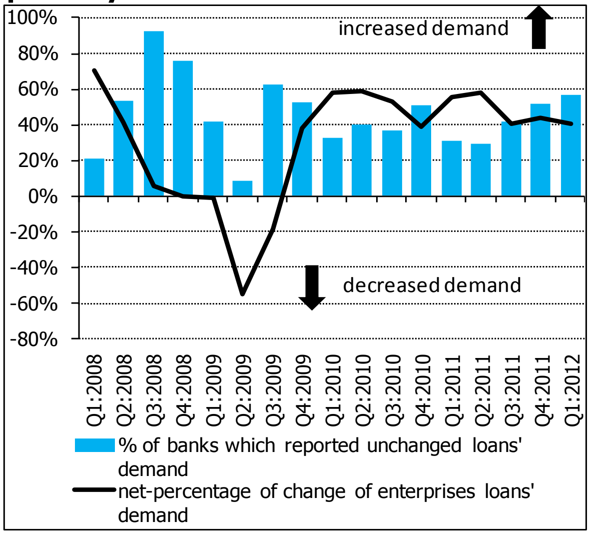


Source: the National Bank, according to data from the lending surveys of the banks
*Note: The percentage of banks is weighted by the share of each bank in the total corporate loans on specific dates. Net percent is the difference between banks that reported easing of their terms and banks that reported tightening of the corporate lending terms.

In 2011, corporate debt to the domestic banking system[43] registered a slightly faster growth compared to 2010, and its share in the gross domestic product reached 26.3% at the end of 2011 and confirmed that the Macedonian banking system, in conditions of stable domestic macroeconomic environment and increase of deposits as a primary source of funding, even apart from the external financial markets turmoil, is still capable to provide credit support to domestic companies. It is also confirmed that the absorption capacity of the corporate sector for credit financing in the post crisis period is still modest. These conclusions also correspond with the results of the lending surveys of banks in 2011. In 2011, the number of banks that reported unchanged corporate lending terms was permanently increasing. In the last quarter, no bank reported tightening of corporate lending terms, compared to the previous quarters when the banks that changed lending terms, were actually inclined to tighten these terms. In 2011, the stability of corporate lending terms was mainly attributable to the lending rate that remained the same in roughly 80% of the banks, on average. Moreover, the other (noninterest) lending terms demonstrated relatively high level of stability in 2011. Factors that ensured firmness of corporate lending terms in 2011, emphasized by the banks in the lending surveys, refer to costs of funding and the favorable banks' balance sheet, and to factors that indicate minor pressure of the competition of other banks. Relative to 2010, the group of factors perceived most differently by the banks to make the lending terms remain unchanged relates to risk perception or expectations for

43 Corporate debt to the banking system includes debt based on credits, interests and other claims. More than 98% of the total domestic corporate debt to the banking sector is based on credits.

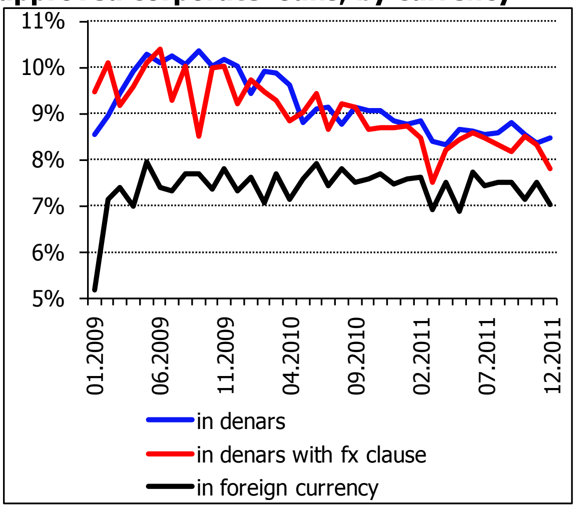
Figure 49 Corporate demand for credits on a quarterly basis



Source: the National Bank, according to the lending surveys of banks

*Note: The percentage of banks is weighted by the share of each bank in total corporate loans on specific dates. Net percent is the difference between banks that reported higher demand for corporate credits and banks that reported lower demand for corporate credits.

Figure 50 Average interest rate on newly approved corporate loans, by currency



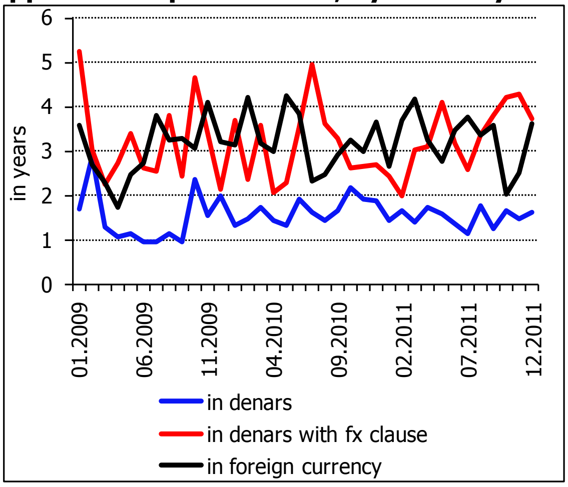
Source: the National Bank, based on data submitted by banks

the future developments in the overall economy, the expectations for the perspectives of business activities such companies belong to and expectations for the performances of specific companies[44]. On the other hand, according to the banks assessments, corporate loan demand mainly increased in 2011, which was somewhat faster in the first half of the year. Banks pointed to the need of investment in inventories and working capital and to restructuring of the existing corporate debt as main factors that increased the corporate demand for loans in 2011. According to the results of the last Lending Survey conducted in April 2012, most banks expect further moderate increase of the demand for corporate loans and also, net tightening of the lending terms.

In 2011, the amount of newly approved corporate loans by the Macedonian banks was by 5.8% higher compared to 2010. In 2011, the average interest rate on newly approved corporate loans was by 0.6 percentage points lower compared to the average interest rates on newly approved loans in 2010. The cut of interest rates on newly approved corporate loans in 2011, was more noticeable in Denar loans (by 0.7 percentage points) and in Denar loans with FX clause (by 0.8 percentage points). On the other hand, interest rates on newly approved foreign currency corporate loans generally demonstrated greater stability, but they are at a lower level compared to the interest rates of newly approved Denar loans and Denar loans with FX clause, that contributed to narrowing of the interest rate differential between Denar and foreign currency interest rates. Lower interest rates, alongside the higher foreign currency borrowing of the domestic banks from abroad made the newly approved foreign currency loans in 2011 increase at a faster pace (16.8%) compared to Denar newly approved loans (9.8%). Conversely, in 2011, newly approved Denar loans with FX

[44] According to the results of the Lending Survey in 2011, banks' expectations for the total economic activity and the expectations for the perspectives of the business activity the company belongs to and of the perspectives of specific companies, on average made the lending terms to remain unchanged by 61.3% and 60.3%, respectively, of the banks and in 2010 these percents were 39.0% and 39.7%, respectively.

Figure 51 Average maturity of newly approved corporate loans, by currency



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

clause decreased (by 16.6%), indicating that some banks changed their preferences, lending Denar or foreign currency loans rather than loans with FX clause.

In 2011, newly approved loans with currency component had a longer average maturity, which on the one hand reflects the maturity profile of banks' sources of funding, and on the other, represents the banks' expectations for greater stability of foreign currency sources of funds. In 2011, long-term loans accounted for 58.7% of the maturity structure of newly approved corporate loans compared to 2010 when the share of newly approved short-term loans was higher (55.1%).

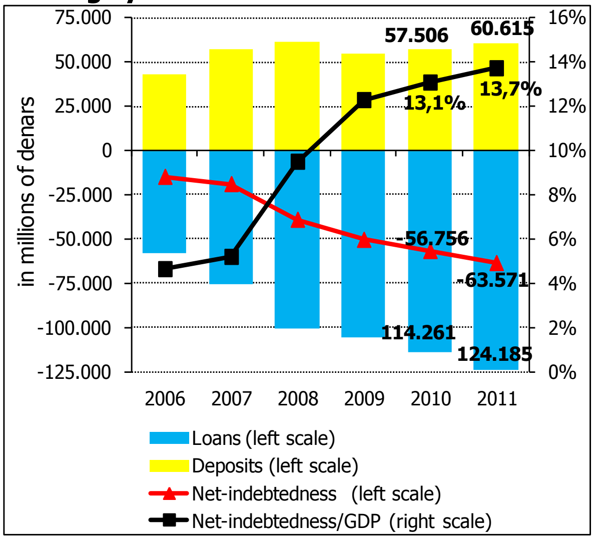
The average interest rates on performing undue corporate loans marginally decreased in 2011. Thus, at the end of 2011 compared to 2010, the average interest rate on Denar loans was cut by 0.2 percentage points, and the interest rate on loans with currency component was cut by 0.4 percentage points annually. The average interest rates on corporate loans with currency component are somewhat lower, but incorporate almost two percentage points higher risk premium (above the one-month EURIBOR), compared to the risk premium incorporated in the Denar loan interest rates (above the CB bill interest rate), indicating that from banks' viewpoint, in environment of fixed exchange rate policy, even thought the loans with currency component have lower interest rate, they actually bear higher yield compared to Denar loans.

Table 11 Average interest rate on corporate loans and risk premium expressed as a difference above the rate of CB bills or of one-month EURIBOR, by activity

Activities	31.12.2010				31.12.2011			
	denar loans		loans with foreign currency component		denar loans		loans with foreign currency component	
	average interest rate	percentage point over NBRM bills interest rate	average interest rate	percentage points over 1 month EURIBOR	average interest rate	percentage point over NBRM bills interest rate	average interest rate	percentage points over 1 month EURIBOR
Agriculture, forestry and fishing	8,6%	4,61	7,6%	6,82	8,3%	4,29	7,3%	6,27
Industry	8,8%	4,75	7,6%	6,85	8,7%	4,66	7,3%	6,30
Construction	9,0%	5,00	8,1%	7,35	8,9%	4,93	8,1%	7,03
Wholesale and retail trade	8,8%	4,83	8,1%	7,31	8,6%	4,55	7,6%	6,59
Transport, storage, information and communication	9,3%	5,30	8,8%	8,03	9,2%	5,15	8,6%	7,54
Accommodation facilities and catering services	10,6%	6,61	8,5%	7,71	10,1%	6,14	8,4%	7,35
Real estate activities, professional, scholar and technical activities and administrative and auxiliary services	9,3%	5,28	7,8%	7,00	8,9%	4,89	7,7%	6,71
Total corporate sector	**8,9%**	**4,91**	**8,0%**	**7,18**	**8,7%**	**4,70**	**7,6%**	**6,62**

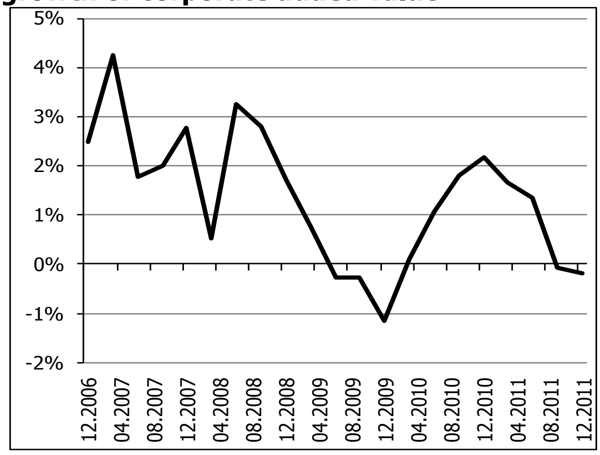
Source: the National Bank, based on data submitted by banks

Figure 52 Net corporate debt to domestic banking system



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

Figure 53 Annual growth of sight deposits and corporate transaction accounts / annual growth of corporate added value

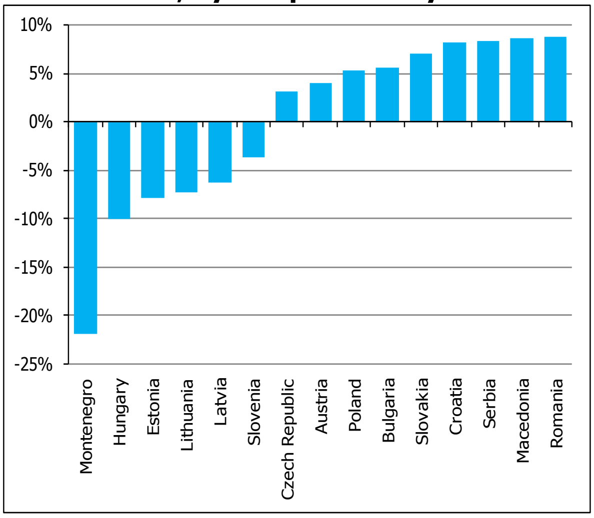


Source: the National Bank, based on data submitted by banks and the State Statistical Office

Note: The calculation of added value in the corporate sector does not include the added value in real estate businesses, professional, scholar and technical activities and administrative and ancillary services

In 2011, corporate loans from domestic banks registered faster growth compared to deposits, and the net corporate debt to domestic banks increased by 12.0%. Accordingly, its share in the gross domestic product equaled 13.7% at the end of 2011 and compared to 2010 it increased by 0.6 percentage points. On the other hand, as of December 31, 2011, the corporate loan –to- deposit ratio equals 48.8%, which is a fall of 1.5 percentage points on annual basis. Additionally, note that relatively high amount of corporate deposits has been concentrated with one company (including the connected entities/persons) which does not appear to be a borrower from domestic banks. Had this depositor been excluded from analyses, the indicator for the share of net corporate debt in GDP would equal 15.7%, and the corporate loan –to- deposit ratio would reduce to 41.4%. Development of the indicator for the ratio between the change in transaction accounts and sight deposits of the corporate sector and the corporate added value in 2011 was downward, indicating worsened corporate liquidity position. Driver of the pace of this indicator in 2011 was the decrease of sight deposits and transaction accounts of the corporate sector by 1.6%.

Figure 54 Annual growth rates of corporate loans in 2011, by sample country



Source: NBRM, based on data submitted by banks (for the Republic of Macedonia), website of the European Central Bank and websites of some national central banks (for other countries)

The comparison of annual growth rates of bank loans to corporate sector among several sample countries indicates that the banking system in the Republic of Macedonia registered one of the highest annual growth rates in 2011. Worsened global conditions for access to financial markets and restrain of financial institutions from taking new risks and accordingly, absence of more aggressive lending activity resulted in reduced lending to the corporate sector by the banks in some surrounding countries, while in those that registered an increase, it was relatively modest. In 2011, the annual lending growth of the Macedonian banks to the domestic corporate sector was lower (8.7%) only than the growth in Romania.

Table 12 Indicators for servicing contractual liabilities to the banking system

	2010	2011
Probability of Default* (PD - probability of default of the contractual obligations of domestic companies for payment of debt to banks)	14,0%	12,4%
Increase of banking system nonperforming loans to corporate sector, in millions of Denars (in %)	1.175 (11,6%)	2.778 (24,6%)
Increase of banking system credit exposure with higher degree of riskiness towards domestic enterprises, in millions of Denars (in %)	778 (5,5%)	4.237 (28,9%)
Amount of restructured credits of corporate sector, in millions of Denars (% of share of restructured credits in current year in total debt of corporate sector towards banks at the end of previous year)	3.200 (3,1%)	5.157 (4,6%)
Amount of written-off claims of corporate sector, in millions of Denars (% of share of written-off claims in current year in total debt of corporate sector towards banks at the end of previous year)	1.206 (1,2%)	1.762 (1,6%)

Source: the National Bank, based on data submitted by banks
*Note: Calculated as a share of the number of credit agreements of companies - debtors with domestic banks that during the year (from December 31 of the preceding year to December 31 of the current year) changed their status from regular to nonperforming relative to the total number of credit agreements of companies - debtors classified as regular as of December 31 of the preceding year.

In 2011, concerning the capacity of domestic companies to service their liabilities to the banking system regularly, there are signs of lowering the probability of default on contractual corporate liabilities, and deterioration of the banks' risk exposure to the domestic corporate sector. In 2011, the approximate calculation of the probability of default on contractual corporate liabilities to domestic banks decreased from 14.0% in 2010, to 12.4% in 2011. On the other hand, in 2011, the annual rise of corporate nonperforming loans soared. Thus the annual growth rate of domestic corporate nonperforming loans was twice as high in 2011 compared to 2010[45]. Such acceleration of the growth of the "worse" segment of bank exposure to domestic companies shows that there is a time lag of the global crisis effects on domestic corporate performances and consequently, on the credit exposure quality, and that the economic distortions in the countries that are relevant trading partners of the domestic economy (primarily, debt crisis in the Euro area) create severe conditions for revival of domestic corporate businesses. The increase of "bad loans" including write-offs could be a factor for the improved debt service indicators. Had the effect of written-off claims on corporate sector in 2011 been exempted, the increase of nonperforming loans would be even faster (40.3%). Besides, in 2011, the amount of loan with changed contractual terms due to the deteriorated financial condition of debtor companies increased. Thus the amount of restructured loans in 2011 went up by 61.2% compared to the amount of restructured loans in 2010. Hence, global developments and their effect on the external demand and on the risk expectations and perceptions of domestic economic agents would be of crucial importance for the further quality of credit portfolio of the domestic companies and their capacity to service their debt.

[45] The rate of nonperforming loans to the corporate sector equaled 10% as of December 31, 2010 and 11.4% as of December 31, 2011.

III. Financial sector

1. Structure and level of concentration in the financial sector of the Republic of Macedonia

The financial sector of the Republic of Macedonia is characterized with a simple structure, where the banking system[46] is the most significant segment, and the role of non-depositary financial institutions is still insignificant. The increase of the assets of banks and pension funds almost solely determined the growth of total financial sector assets[47], which in 2011 was at a slower pace compared to the preceding year. In spite of the turbulent external surrounding and the high level of uncertainty clouding the further development of the euro area debt crisis, the structure and setup of the domestic financial system are major factors that minimized the possibility to disturb the stability of its segments as a result of spilling the crisis over from one institutional segment into another. The risk of interdepartmental contagion in the domestic financial system primarily arises from deposits of non-depositary institutions with banks that represent a significant item in the assets of some of these institutional segments.

Table 13 Structure of total assets of the financial sector in the Republic of Macedonia

Type of financial institution	Total assets (in millions of Denars)		Structure in %		Change 31.12.2011/31.12.2010		Number of institutions	
	2010	2011	2010	2011	Absolute change	In percent	2010	2011
Depository financial institutions	**308.276**	**334.339**	**90,1%**	**89,5%**	**26.063**	**8,5%**	**26**	**25**
Banks	305.290	331.176	89,2%	88,6%	25.886	8,5%	18	17
Saving houses	2.986	3.163	0,9%	0,8%	176	5,9%	8	8
Non-depository financial institutions	**33.980**	**39.431**	**9,9%**	**10,5%**	**5.451**	**16,0%**	**73**	**75**
Insurance companies	11.963	12.886	3,5%	3,4%	923	7,7%	13	15
Insurance brokers	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.	14	15
Insurance agents	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.	6	5
Leasing companies	8.459	9.278	2,5%	2,5%	820	9,7%	10	10
Pension funds	12.494	16.131	3,7%	4,3%	3.637	29,1%	4	4
- Mandatory pension funds	12.449	16.019	3,6%	4,3%	3.570	28,7%	2	2
- Voluntary pension funds	44	112	0,0%	0,0%	67	152,2%	2	2
Pension fund management companies	401	452	0,1%	0,1%	50	12,5%	2	2
Brokerage companies	468	411	0,1%	0,1%	-56	-12,1%	14	12
Investment funds	170	257	0,0%	0,1%	87	51,4%	6	8
Investment fund management companies	26	16	0,0%	0,0%	-10	-37,6%	4	4
Private equity fund management companies	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.
Total	**342.256**	**373.770**	**100,0%**	**100,0%**	**31.514**	**9,2%**	**99**	**100**

Source: For each institutional segment, the competent supervisory authority (NBRM, SEC, MAPAS, ISA and the Ministry of Finance).

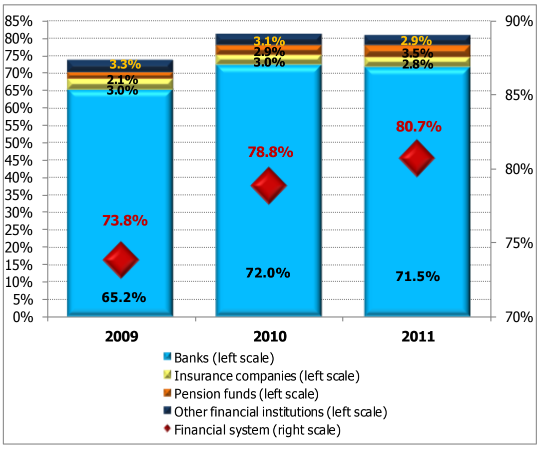
Notes: In line with the regulation, private funds and private fund management companies are not required to submit data on the value of their assets and net-assets. Under the Insurance Supervision Law, insurance brokerage houses and insurance representation companies are not required to submit financial reports to the Insurance Supervision Agency.

In 2011, the decelerated growth of total assets was the main feature of the financial sector of the Republic of Macedonia. They registered an annual increase of 9.2% (Denar 31.5 million) which is by 3.9 percentage points less compared to the growth in 2010. **The deceleration of the growth of total assets of the**

[46] The term "banking system" includes only banks, and the term "depositary institutions" includes savings houses, as well.

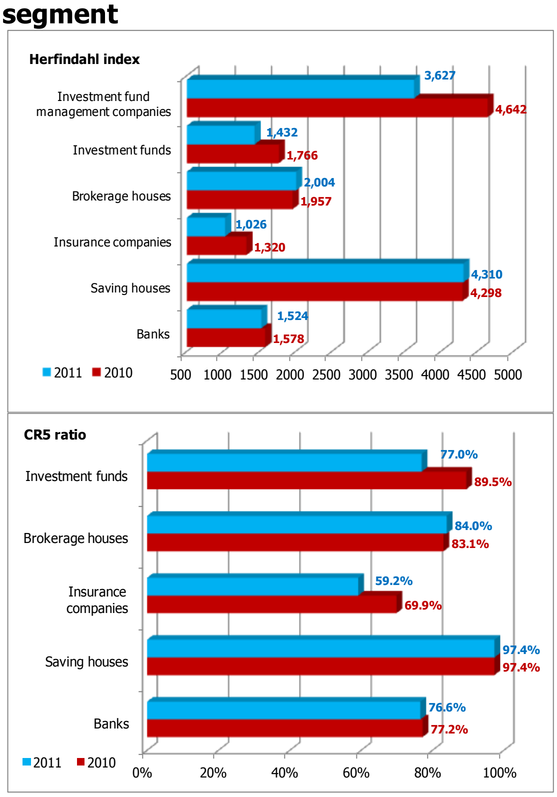
[47] Once this report was drafted, the National Bank received new data on the insurance companies' total assets and their structure, which is not included in the analysis because of the time of their submission.

Figure 55 Share of assets of the financial sector in GDP



Source: For each institutional segment, the competent supervisory authority (NBRM, SEC, MAPAS, ISA and the Ministry of Finance).

Figure 56 Herfindahl index and CR5 ratio for the total assets, by financial sector segment



Source: For each institutional segment, the competent supervisory authority (NBRM, SEC, MAPAS, ISA and the Ministry of Finance).

financial system was mainly attributable to the slower growth of the funds of the banking system and to a lower extent, to the assets of the pension funds. The increase of the funds of insurance and leasing companies and savings houses accelerated in 2011.

Banks[48] maintained their role as a crucial institutional segment for preserving the stability of the overall financial sector, notwithstanding the minor decrease of their share in the overall financial potential. Although with significantly lower share compared to the banking system, compulsory pension funds are the next most important institutional segment in the financial sector. Relative to other segments, they reported the fastest increase in 2011, as a result of the higher cash inflows based on contributions, and insignificantly higher cash outflows based on pensions.

Although at a slower pace, the annual growth of total financial sector assets contributed to the increase of its significance to the economic activity in 2011. At the end of 2011, the total assets of the financial sector accounted for 80.7% of the gross domestic product (or by 1.9 percentage points higher relative to 2010). The higher share in the gross domestic product was almost fully determined by the growth of the assets of the banking system and partially, by the growth of the assets of pension funds.

The concentration of all analyzed segments of the financial sector, from the aspect of total assets, is at a high level[49]. Measured through the Hefindahl index, it gravitates around the ceiling of the acceptable boundaries, except for savings houses and investment fund management companies. The substantially high

[48] In 2011, the number of banks reduced from 18 banks to 17 banks. The Decision of the Governor of the National Bank of the Republic of Macedonia no. 5082 dated December 7, 2010, allowed for a status change - acquisition of Stater Bank AD Kumanovo by the Central Cooperative Bank AD Skopje. On January 3, 2011, the acquisition was registered in the Central Registry of the Republic of Macedonia, and Stater Bank AD Kumanovo was deleted from the Registry.

[49] Due to the low number of pension funds in the Republic of Macedonia (two), they are not included in the analysis of the concentration in the institutional segments of the domestic financial system.

concentration of savings houses is showed through the fact that 86.0% of the total assets is concentrated in two of eight savings houses, in total. Moreover, 72.7% of the total assets of brokerage houses is concentrated in three of twelve institutions, in total. The lower number of brokerage houses contributed to the increase of the concentration level. The high level of Herfindahl index of investment fund management companies results from their low number (four).

Table 14 Ownership structure of certain financial institutions

Owners	Banks	Saving houses	Insurance companies	Brokerage houses	Leasing companies	Pension fund management companies	Investment fund management companies
Domestic shareholders	***24.9%***	***100.0%***	***16.5%***	***83.2%***	***5.4%***	***49.0%***	***25.9%***
Nonfinancial legal entities	8.5%	83.4%	1.9%	36.1%	5.0%	0.0%	0.0%
Banks	1.9%	0.0%	2.1%	2.7%	0.3%	49.0%	17.1%
Insurance companies	0.1%	0.0%	0.2%	2.8%	0.0%	0.0%	0.0%
Other financial institutions	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%
Natural persons	7.1%	16.6%	9.3%	41.6%	0.1%	0.0%	4.4%
Public sector	6.7%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%
Foreign shareholders	***74.9%***	***0.0%***	***83.5%***	***16.8%***	***94.6%***	***51.0%***	***74.1%***
Natural persons	4.4%	0.0%	0.2%	5.8%	0.0%	0.0%	0.2%
Nonfinancial legal entities	8.2%	0.0%	0.1%	11.0%	19.6%	0.0%	3.6%
Financial institutions	62.4%	0.0%	83.2%	0.0%	75.0%	51.0%	70.3%
Unclassified	**0.2%**	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***	***0.0%***
Total	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***	***100.0%***

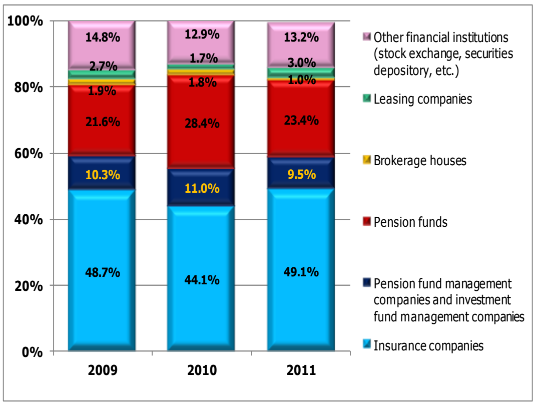
Source: For each institutional segment, the competent supervisory authority (NBRM, SEC, MAPAS, ISA and the Ministry of Finance).

Typical for most financial segments in 2011 is the dominant share of foreign shareholders in the ownership structure. Banks reported an increase of foreign shareholders as a result of the recapitalization of three banks by their foreign shareholders. Leasing companies are a segment with the highest share of foreign capital in the ownership structure, while the insurance companies are also characterized with high presence of foreign ownership. On the other hand, brokerage houses are mostly in domestic ownership, and the savings houses[50] are the only financial sector segment in full ownership of domestic entities.

[50] The regulation allows only for the citizens of the Republic of Macedonia to be owners of savings houses.

2. Interdepartmental relation

Figure 57 Deposit structure of non-depositary financial institutions with domestic banks

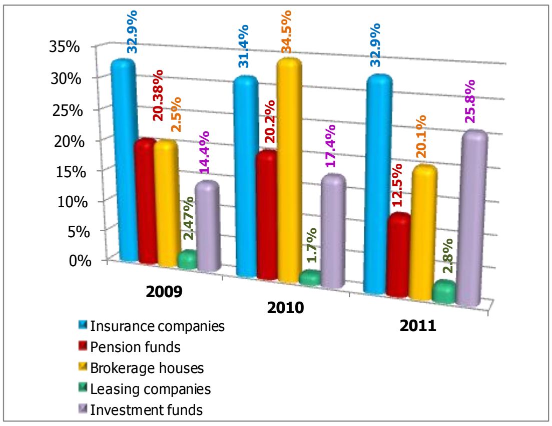


Source: NBRM, based on data submitted by banks.

The low level of interdepartmental integration of segments remains one of the major features of the financial sector of the Republic of Macedonia. The relatively simple market structure, absence of complex financial groups and limited offer of financial instruments and services make it less possible to transmit risks from one institutional segment into another. The level of integration of the institutional segments measured through the size of capital investments is insignificant. Banks as a main financial sector segment are drivers of the link with other segments. In 2011, the banks' capital investments make up only 0.2% of the total assets of the banking sector, most of which (95.3%) in domestic financial entities.

Banks and pension or investment fund management companies reported the highest level of capital connection. Analyzing the banks' capital holding in the capital of the entity subject of investment, these investments range from 25.0% to 50.0% of the capital of the entity subject of investment.

Figure 58 Share of deposits in total assets of each non-depositary financial institutions

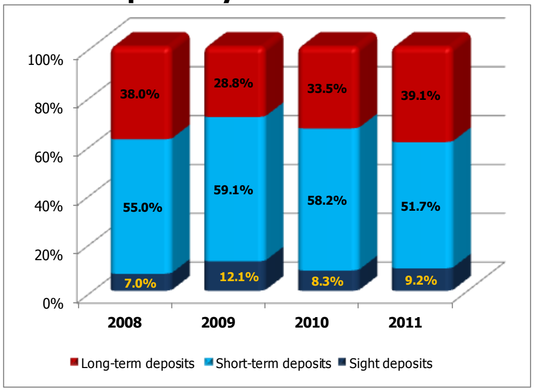


Source: NBRM, based on data submitted by banks.

Business relations between banks and non-depositary financial institutions arise from invested deposits[51] of these institutions in the banking system. As a result of the limited offer of financial instruments on domestic markets, bank deposits are safe and significant way for non-depositary financial institutions to invest their funds. In 2011, the total assets of non-depositary institutions invested in banks amounted to Denar 8,615 million, which is by 3.3% (or by Denar 296 million) less compared to the previous year. The share of deposits of non-depositary institutions in the overall deposit base of the banking system is insignificant and equals 3.5% (which is by 0.3 percentage points less compared to 2010). Insurance companies register the highest level of business connection with banks on this ground, where one third of the assets is deposited with banks. The assets of

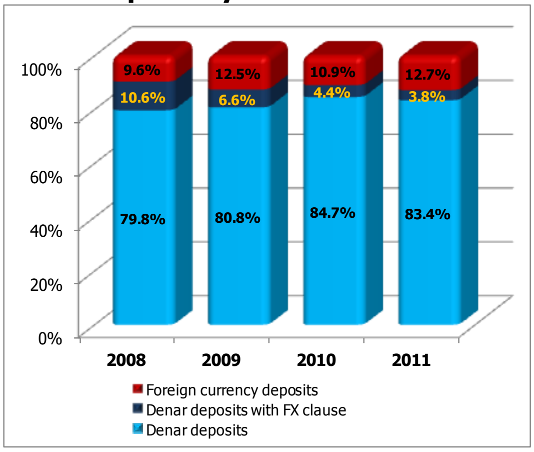
[51] Deposits also include transaction accounts of other institutional segments in the banks.

Figure 59 Maturity structure of deposits of non-depositary financial institutions



Source: NBRM, based on data submitted by banks.

Figure 60 Currency structure of deposits of non-depositary financial institutions



Source: NBRM, based on data submitted by banks.

brokerage houses, investment and pension funds invested in domestic banks is also a significant item, that also confirms the significance of the banking system for the maintenance of the stability of the institutions and the overall financial system.

Observing the maturity structure, in spite of the gradual maturity extension, short-term deposits (up to one year) dominate the deposits of non-depositary financial institutions with banks.

Analyzing the currency structure of deposits of non-depositary institutions with banks, Denar deposits prevail (insurance companies, in particular).

3. Deposit institutions

3.1. Banks

In 2011, the activities of the banking system accelerated at a slower pace compared to the previous year (2010), but its contribution to the economic activity of the country has increased. The annual increase of deposits of nonfinancial entities determined most of the growth of the sources of funding, and the banks addressed a significant part of the increase of sources of funding to credit the real sector. However, in spite of the certain acceleration, the banks' lending activity reported one-digit growth rate at the end of 2011 arising from the still present restraint of the banks to take risks and higher caution when making assessments. This is closely related to the euro area debt crisis and the uncertainty clouding the recovery of domestic economic activity (primarily in the second half of 2011).

Banks partially committed the increased deposit base to further strengthen their liquidity position, investing in low-risk domestic securities and foreign bank accounts. High amount of liquid assets ensures continuous satisfactory coverage of sight deposits and of total household deposits with liquid assets.

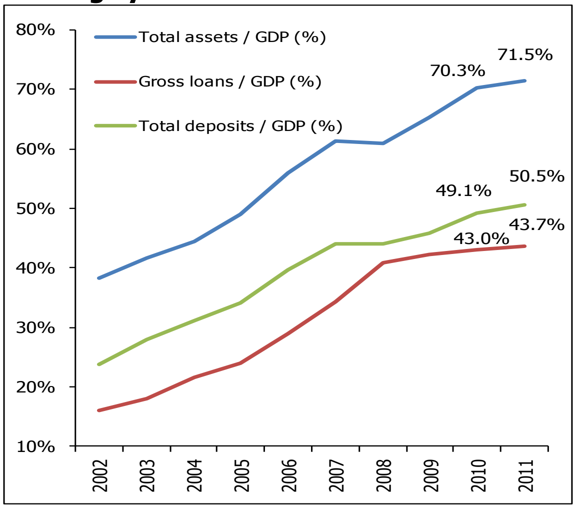
The banking system preserved its stability. Solvency and capitalization remained high and additionally improved. Banking system's capital positions are of high quality, taking into account that the core capital accounts for almost 85% of the banks' own assets. High banking system capitalization contributes to the satisfactory resilience of the banking system and the banks individually, assessed through stress test simulations of hypothetically adverse shocks.

Banking system exposure to credit risk increased, which is offset by the full coverage of nonperforming loans with impairment and special reserve.

High capitalization and liquidity and the higher credit risk in 2011, led to further decrease of the banking system's earnings.

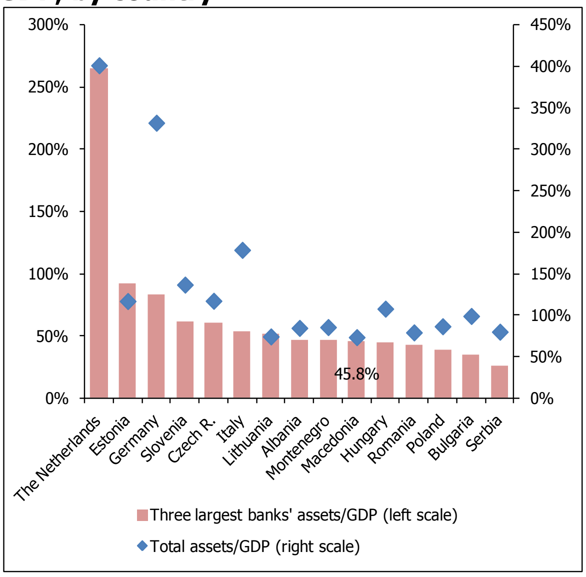
3.1.1. Structure, concentration and activities of the banking system

Figure 61 Financial intermediation in the banking system



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

Figure 62 Share of assets of the banking system and of the three largest banks in GDP, by country



Source: the National Bank, based on data submitted by banks.
Note: Share of assets of the three largest banks in GDP is a product of multiplying CR3 of the banking system with the share of its total assets in GDP. In general, data are as of December 31, 2011. For the Albanian, Czech and Hungarian banking system, CR3 is as of December 31, 2010, and for the Estonian, it is as of March 31, 2011. CR5 was used for the Polish and Romanian banking system, and CR4 for the German banking system. CR5 for the Romanian banking system is as of June 30, 2011, and CR4 for the German banking system is as of December 31, 2010.

Bank activities kept on enhancing although at a slower pace compared to the preceding year (2010), that speed up the uptrend of financial intermediation. The increase of financial intermediation was faster in terms of deposits -to- GDP ratio, due to their faster growth compared to the growth of loans of nonfinancial entities. Hence, banks were still restrained and fairly cautious when taking risks and making assessments, which is closely related to the euro area debt crisis and uncertainty surrounding the recovery of domestic economic activity (in the second half of 2011).

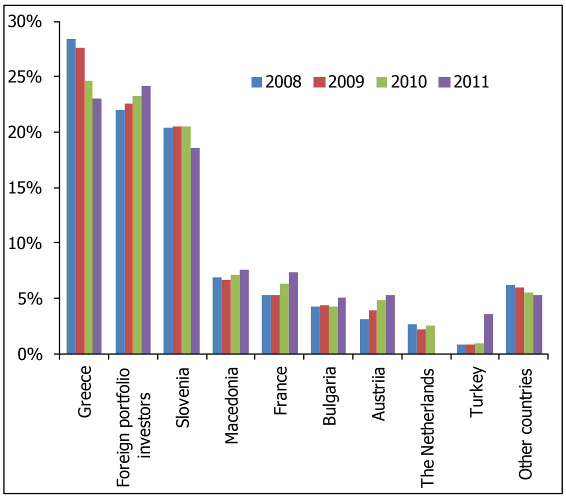
According to the share of the banking system assets in GDP, the Macedonian banking system is positioned at the very bottom of the list of fifteen countries under observation.

Simultaneously, the Macedonian banking system is positioned somewhat higher on the list of countries under observation, analyzed by the share of assets of the three largest banks in GDP. **The concentration in the banking system[52] is relatively high in terms of all segments of banks operations.** High concentration is registered in several systemically important banks with performances that played an overriding role for the total banking system, including the domestic economy. On the other hand, the role of small-size banks (according to the internal methodology of the National Bank, as of December 31, 2011 the group of small-size banks consists of banks whose assets is below Denar 6,200 million) is modest. Some of them face lower competitiveness, low volume of activities and passive presence on the market. In a longer run, the outlook for survivor of these institutions is in the further market consolidation. Thus, in 2011, the number of banks reduced by one as a result of the acquisition of one small-size bank by another

[52] Measured through the Herfindahl index and through CR5 and CR3 indicators - Annex 4.

bank (similar form of restructuring in the banking system happened in 2006 for the last time, when two banks merged in a new bank). Usually, acquisitions or mergers of banks tend to consolidate individual institutions, improve their competitiveness in the system, increase portfolio diversification, improve efficiency by increasing income and market share and streamline costs. Market consolidation of the domestic banking system will continue in the period ahead (there is already an announcement for a merger in 2012). An alternative for the future and survival of some small banks is specialization of their activities and adjustment of their products and services to particular types of clients. The fact that the assets of the largest bank in the system is 90 times as high compared to the smallest bank, is an illustration of the modest volume of activities and passiveness of some banks, and as of December 31, 2011 there are two banks whose assets are lower compared to some savings houses in the Republic of Macedonia. On the other hand, there are banks that finance most of their activities using shareholder equity (as of December 31, 2011, the share of equity and reserves in the total sources of funding of one bank reached 45%) or invest most of their assets in low-risk bills issued by the government or the central bank (as of December 31, 2011, above 50% of the total assets of some banks was invested in treasury and CB bills).

Figure 63 Market share (assets) of banks, by country of origin of the dominant shareholder



Source: NBRM, based on data submitted by banks.

In 2011, dominant share of foreign financial institutions in the ownership structure of the banking system was additionally strengthened by 2.7 percentage points and exceeded 63% at the end of the year. Usually, the investment of large foreign financial institutions in the shareholder structure (that was particularly typical for the Macedonian banking system in the recent period) should ensure higher competitiveness in the system, improve risk management systems, provide better access to international financial markets and in general, rise the overall quality of banking business. However, note that foreign shareholders simultaneously increase the domestic banks' sensitivity to external shocks. The current problems with the government debt of some countries of the euro area currently represent one of the major external risks to the stability of the banking system in the Republic of Macedonia. Banks in majority ownership of shareholders from Greece and Slovenia and banks in ownership of foreign portfolio investors[53] play a leading role in the assets of the Macedonian banking sector (share of 23.0%, 18.6% and 24.2%, respectively). This is the epicenter of the potential reputational risk which is crucial for the stability not only of these banks but of the overall system. The direct exposure of the banking system to external shocks, expressed through the share of claims and liabilities to residents in the banks' total assets is low and additionally reduced in 2011[54]. Thus, when funding its activities, the Macedonian banking system is not dependent on the sources of international financial markets. Domestic deposits are major generator of the growth of banks' assets that actually minimize any adverse effects on the banks from the so called financial deleverage of their parent banks.

Traditional baking, as a business model (loan and deposit activity with domestic nonfinancial entities), dominates in the banking business in the Republic of Macedonia. Such business model, in spite of the credit risk, also creates a bank run risk and maturity mismatch between assets and liabilities (nonfinancial entities mostly save in a short run, and borrow in longer runs). Conversely, usually the traditional banking is associated with low bank exposure to market risks or risks arising from operations with complex financial instruments. In addition, Macedonian banks tend to avoid market risk by incorporating clauses in the agreements on certain financial instruments and to transform such risk in another type of risk, primarily credit risk.

[53] Banks in dominant foreign ownership, but without strategic investors.

[54] The share of liabilities to nonresidents in total sources of funding decreased by 1.2 percentage points, and reached 10.4% as of December 31, 2011. Simultaneously, claims on nonresidents account for 9.8% of total banks' assets, which is an annual decrease of 0.5 percentage points.

Panzar and Rosse Competition Index in the Macedonian banking system

Panzar and Rosse (1987) H-statistic is widely used method for measuring the competition level in the banking system. This test is based on an equation in a reduced form for long-term equilibrium of the banking system with restricted scope of individual bank income. Banks' income $(R_{i,t})$ depend on the factor prices $(W_{i,t})$: sources of funding, labor and physical capital and a set of bank-specific variables $(Y_{i,t}^{k})$ that affect the banks' income function and cost function (their purpose is to include the influence of banks' financial intermediation risk).
Mathematically:

$$logR_{it} = \alpha + \sum_{j=1}^{J} \beta_j log\, W_{it}^{j} + \sum_{k=1}^{K} \gamma_k log\, Y_{it}^{k} \quad (1)$$

for t = 1,..., T where T is the number of time periods, i = 1,..., N, where N is the total number of banks, j = 1,..., J, where J is the total number of inputs - variables for sources of funding, k = 1,..., and K, where K is the number of bank-specific variables. H-statistic is a sum of elasticities that correspond to factor prices, i.e.:

$$H = \sum_{j=1}^{J} \beta_j \quad (2)$$

The calculated value of H-statistic is an indicator for a type of market structure. In a perfectly competitive market, an increase of factor prices would increase both marginal and average costs, without influencing the optimal level of output of any bank. This should result in equivalent increase of income and the H-statistic should have value equal to 1. On the other hand, if the market is a monopoly, the input price increase would rise marginal cost which will also increase prices of product offered (lending interest rates). Considering that loan demand elasticity is a decreasing function of lending interest rates, the increase of lending interest rates would tend to reduce the lending (lower output in equilibrium), and hence, lower banks' income. In this case, H-statistic should be 0 or negative. In the "middle" case of monopolistic or incomplete (imperfect) competition, when banks enjoy certain market power, under assumption of free entry of new competitors, H-statistic is expected to have positive values below 1. According to Bikker (2004):

$H \leq 0$ monopoly equilibrium: each bank operates independently as under monopoly profit maximization conditions (H is a decreasing function of demand elasticity).
$0 < H < 1$ monopolistic competition, free entry equilibrium (H is an increasing function of demand elasticity).
$H = 1$ perfect competition. Free entry equilibrium with full efficient capacity utilization.

Important characteristic of Panzar and Rosse test is that banks have to be in a long-term equilibrium. The reason behind is the market categorization as a perfectly competitive, monopolistically competitive or a monopoly, that is based on the assumption that the banking system is in equilibrium. Long-term equilibrium is tested using the equation (1) where the dependent variable is the rate of return on assets or rate of return on equity. Under long-term equilibrium, the rate of return on assets should not vary when production factors change. In such case, when the value of H-statistic is 0, equilibrium requirements are considered satisfied, since rates of return adjusted for the risk will be equated for all banks and shall not be correlated with input prices.

Panzar and Rosse test was conducted in the Macedonian banking sector by using quarterly observations for the period 2003 QI - 2011 QIII of the balance sheets and income statements. Timeframe of the model is shortened and does not include 2001 and 2002 in order to circumvent turbulence arising from the introduction of Euro and the ethnical conflict, and the highest level of nonperforming loan ratio at the end of 2002. The sample includes 16 banks, excluding the Macedonian Bank for Development Promotion AD Skopje that does not accept deposits. To obtain H-statistic, the Panel Least Squares method with fixed effects is used in order to include individual bank effects. Additionally, such model allows for correction of heteroscedasticity in the standard errors by using Cross-section SUR (PCSE) robust standard errors.

The H-statistic calculation uses two definitions of bank income as a dependent variable: gross interest income -to- total assets ratio and total income -to- total assets ratio. With this specification, the banks' income equation is called price/return equation.

The equation uses three variables as production factors as follows: sources of funding costs, labor costs and physical capital costs. Source of funding costs (SFC) are represented by the interest expenses -to- sum of deposits and other borrowings ratio. Labor cost (LC) is calculated as wage cost -to- employee number ratio. Physical capital costs (PCC) use the sum of amortization, material costs and services in relation to the sum of fixed assets and foreclosures, which is an indicator for the cost for holding material property.

Equation determining H-statistic also uses 5 bank-specific variables as follows: total assets (TA), deposits of nonfinancial entities in relation to total assets (DTA), gross loans of nonfinancial entities in relation of total assets (LTA), equity and reserves in relation to total assets (ETA) and share of nonperforming loans in total loans of nonfinancial entities (NPL).

Including all above variables, the equation for banks' return is presented below:

$$log(R/TA)_{it} = \alpha + \beta_1 logSFC_{it} + \beta_2 logLC_{it} + \beta_3 logPCC_{it} + \gamma_1 logTA_{it} + \gamma_2 logDTA_{it} + \gamma_3 logLTA_{it} + \gamma_4 logETA_{it} + \gamma_5 logNPL_{it} \qquad (3)$$

Where R refers to gross interest income or banks' total income.

Variables included in the equation have the expected signs according to the economic theory, the expected power on dependent variable and most of them are statistically significant at the level of significance between 1% and 5% (except for ETA which is not significant, but it is a control variable and is not of a crucial interest for the analysis because it is not one of the three production factors).

Table 15 Results of the Panzar-Rosse banking system competitiveness test

Independent variable	Gross interest income / Total assets	Total income / Total assets
	Coefficient in front of variable	
SFC	0.22***	0.16***
LC	-0.09**	-0.09*
PCC	0.14***	0.08***
TA	-0.03*	-0.14***
DTA	-0.07**	-0.07*
LTA	0.17***	0.12***
ETA	0.01	0.06
NPL	-0.07***	-0.07***
Statistical tests		
Adjusted R^2	0.90	0.71
F-statistics	207.52	55.61
Probability	0.00	0.00
H-statistic	**0.17**	**0.15**

***/**/* denotes statistical significance at the level of 1%, 5% and 10%, respectively.
Source: NBRM, based on conducted econometric calculations.

The results show that H-statistic ranges from 0.15 to 0.17, placing the Macedonian banking system in the group of monopolistic competitive markets, with relatively low level of competition[55]. Compared to the research of Giustiniani and Ross (2008) that analyzed the competitiveness of the Macedonian banking system in the period 2002-2005 using the same method and same variables, and estimated the value of H-statistic from -0.20 to 0.13, our results show marginal increase of competitiveness.

Observing the influence of individual variables on banks' income the source of funding costs is the variable with the greatest elasticity. The positive sign of the coefficient before the sources of funding costs denotes that the increase of interest expenses is accompanied with simultaneous increase of interest income primarily due to adjustability of interest rates, i.e. in case of increase of interest expenses, banks will correct the interest rates on their placements. The negative sign before the labor cost variable denotes that the increase of this expense item tends to decrease interest income. The relation between physical capital costs and fixed assets and interest income is positive, i.e. the increase of physical capital costs tends to the increase the interest income since banks transmit such increases of costs to higher loan interest rates, in a way similar to the transmission of the sources of funding costs.

Deposit/total assets indicator has a negative sign before the coefficient, meaning that the increase of share of deposits in the assets will reduce the banks' deposit interest rates, which will, in turn, reduce lending interest rates and respectively interest income. On the other hand, loan/total assets ratio has the expected positive sign, meaning that the credit growth, as the greatest interest bearing item of the banks' assets will result in higher interest income. The coefficient before the indicator for the bank capitalization level is positive, meaning that the higher share of equity and reserves in the total assets leads to

[55] Weill (2011), using data for the period 2002-2008, published the following H-statistics: Bulgaria 0.42, Czech Republic 0.52, Slovakia 0.52, Greece 0.72, Hungary 0.65, Poland 0.61, Romania 0.66, Slovenia 0.78, EU15 0.71, new EU12 0.68, EU27 0.70.

more stable banks' operations and provides a space for greater lending which will be covered by a corresponding amount of equity. Nonperforming loans in relation of total loans have negative sign and represent noninterest bearing assets item, i.e. their increase will bring reduction of interest bearing assets and respective decrease of banks' interest income.

3.1.2. Earnings

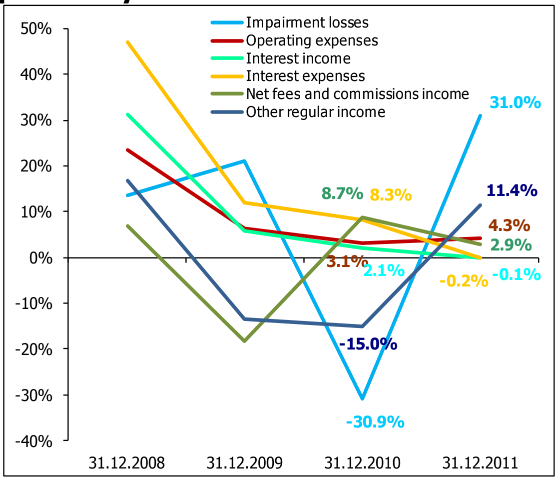
Banks' earnings and operational efficiency deteriorated. The earnings of the banking system for 2011 was halved compared to the previous year, and the number of banks that reported a loss increased to six at the end of 2011 (with a market share of 12.6% of the assets) from four at the end of 2010 (with a market share of 5.6% of the assets). The capitalization of banks that reported a loss in 2011 is not questionable. However, any further deterioration of banks' earnings might have negative effects on their long-term stability. In the recent period, reinvested earnings are one of the most significant sources of increase of own funds of the banking system.

Table 16 Earnings and efficiency indicators in the banks' operations

Indicators	31.12.2009	31.12.2010	31.12.2011
Rate of return of average assets (ROAA)	0.6%	0.8%	0.4%
Rate of return of average equity (ROAE)	5.6%	7.3%	3.4%
Cost-to-income ratio	62.8%	66.4%	67.8%
Non-interest expenses/Total regular income	67.4%	72.1%	74.3%
Labour costs /Total regular income	24.9%	26.0%	25.4%
Labour costs /Operating expenses	39.6%	39.1%	37.4%
Impairment losses of financial and non-financial assets /Net interest income	41.2%	29.3%	38.4%
Net interest income /Average assets	4.1%	3.6%	3.3%
Net interest income /Total regular income	65.5%	65.3%	63.9%
Net interest income /Non-interest expenses	104.2%	90.6%	86.0%
Non-interest income/Total regular income	34.5%	34.7%	36.1%
Financial result/Total regular income	10.3%	14.5%	7.3%
Assets per employee (in millions of Denars)	44.1	50.4	55.1
Financial result per employee (in millions of Denars)	0.3	0.4	0.2
Operating expenses per employee (in millions of Denars)	1.7	1.7	1.8

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

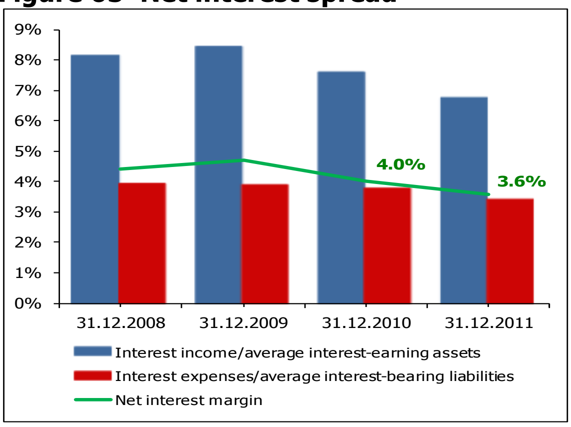
Figure 64 Increase/decrease of major income and expenses, compared to the previous year



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

The operational capacity of banks to create income to cover operating expenses kept on decreasing in 2011. The net interest income remained almost unchanged compared to 2010, while the growth of net income from fees and commissions is by three times lower compared to the increase registered the year before. Other regular income registered faster two-digit relative growth on the income side[56] (primarily capital income based on sale of assets and income on other bases), that cannot be considered a stable form of income. On the other hand, the growth of banks' operating costs accelerated, and impairment is among the balance sheet items with the fastest growth rate in 2011, due to the banks' higher credit risk.

Figure 65 Net interest spread

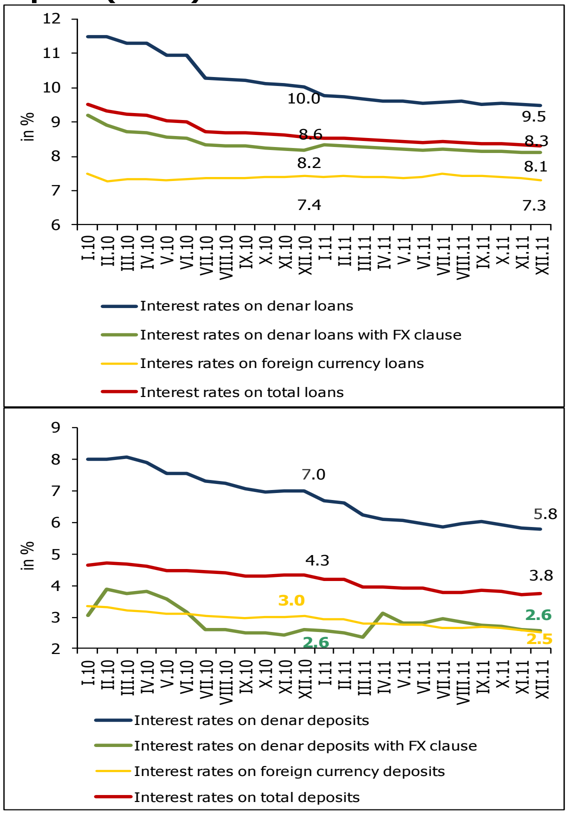


Source: the National Bank, based on data submitted by banks.

Net interest spread[57] of the banking system went down the last two years. The decrease of interest spread in 2011 is due to the banks' caution when taking risks and addressing some sources to less income bearing (and less risky) assets, the materialization of credit risk in the banks' operations, cut of interest rates on loans approved to nonfinancial entities (primarily households) and on CB bills (deposit interest rates, as funding sources, also decreased in 2011), and partially to the increase of interest expenses for the funding sources originating from nonresident financial companies, primarily based on credit liabilities. Such developments in 2011 led to almost unchanged amount of net interest income (in 2011, net interest income is by Denar 4 million or by 0.04% larger compared to 2010) in conditions of faster growth of interest bearing assets (in 2011, interest bearing assets increased by Denar 23,323 million or by 8.4%).

[56] Other regular income include net trading income, net income of financial instruments recognized at fair value, net income of exchange rate differentials, income based on dividend and capital investments, earnings based on sale of financial assets available for sale, capital income based on sale of assets, relief of off-balance sheet items provisioning, relief of other provisioning, income on other bases, income based on collection of previously written off claims and losses from sale of financial assets available for sale.
[57] Net interest margin is calculated as a ratio between the net interest income and the average interest bearing assets.

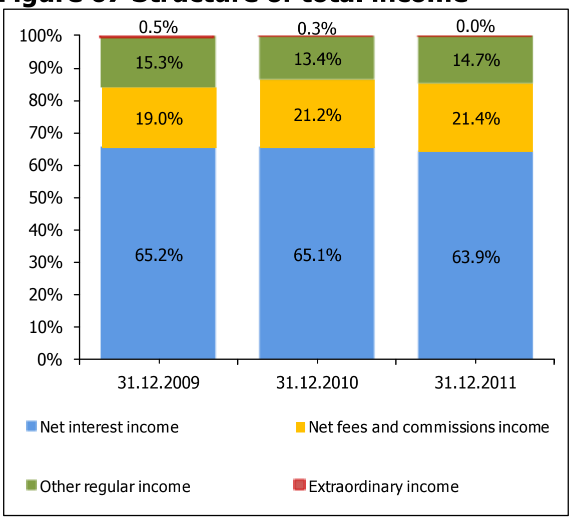
Figure 66 Movement of lending (up) and deposit (down) interest rates



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

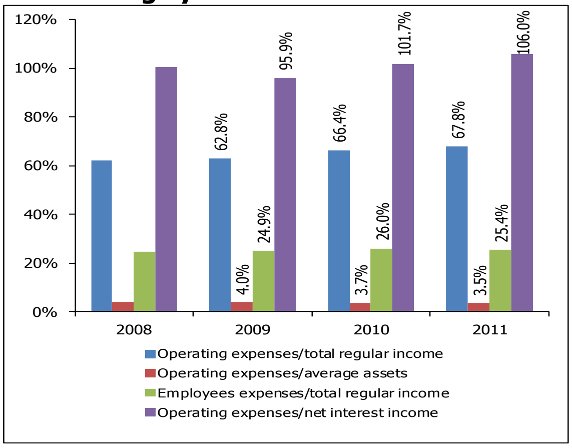
Net interest income is the main component in the formation of total banks' income, making up almost 65% of the income. Hence, earnings of the banking system is particularly sensitive to the changes in interest rates on interest bearing assets and liabilities, and their volume and structure, and the risks that they bear for the banks. Thus, the domination of net interest income in total banks' income emphasizes several basic factors able to cause significant deterioration of the earnings of the Macedonian banking system: potential problems when attracting new sources of funds or refinancing of the existing ones (that would entail increase of deposit interest rates in conditions of limitation of the lending interest rates), materialization of credit risk, particularly in concentrated credit portfolio, changes in the assets structure in favor of assets that bear lower interest income (usually when banks' risk perceptions are deteriorated), pressures for downward correction of lending interest rates, and restricted possibilities (or absence of possibilities) for more significant downward corrections of deposit interest rates (e.g. when the competition among banks is higher and deposits as funding source are dominant), etc.

Figure 67 Structure of total income



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

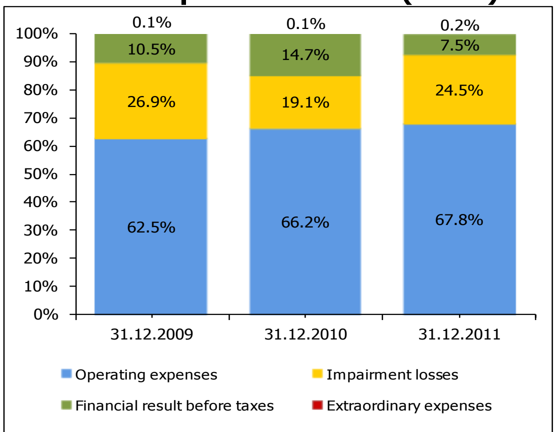
Figure 68 Indicators for cost efficiency of the banking system

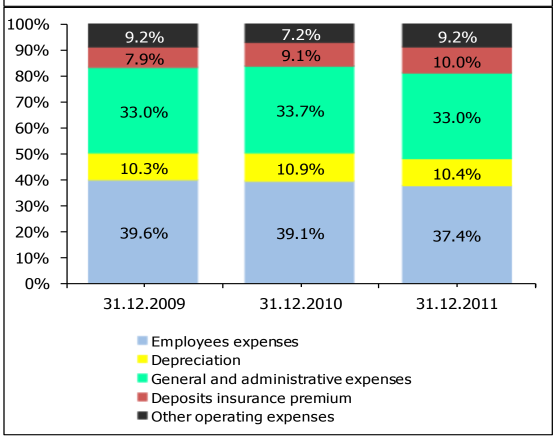


Source: the National Bank, based on data submitted by banks.

The relatively weak cost efficiency of banks additionally deteriorated over the last two years. In 2011, operating costs[58] increased by Denar 453 million, or by 4.3%, which is higher growth rate compared to almost all significant income items of the banks (only other regular income registered faster growth compared to operating costs). Deposit insurance premiums and special reserve for off-balance sheet exposure contributed the most to the increase of total operating costs. Impairment is also distinguished among expense items of the income statement that registered fairly high absolute (Denar 945 million) and relative growth (31%) in 2011, increasing its share in total income by 5.4 percentage points.

Figure 69 Use of total income (up) and structure of operational costs (down)





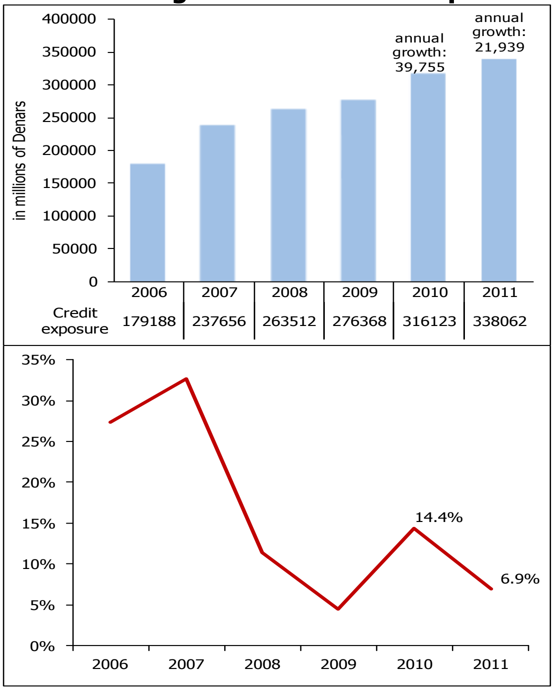
Source: the National Bank, based on data submitted by banks.

Most of the total banks' income are used for covering employee costs, impairment and general and administrative costs (constituting 25.3%, 24.5% and 22.3%, respectively). Advancement of risk management systems in every single stage of the risk management process (particularly in the initial stage of identification and initial risk measurement) should reduce expenses based on impairment. The structure of general and administrative costs is dominated by services costs that account for almost 70% (covered by 15.6% of total banks' income), which should also allow for streamlining. On the other hand, any significant "cut" of employee costs is somewhat limited, i.e. it could be implemented by undertaking, usually, unpopular measures of reducing the number of employees in the banks and/or their wages. Banks operating costs could be streamlined by broader use of e-banking. In recent years, banks in the Republic of Macedonia undertook wide range of activities to introduce e-banking and to make it popular among their clients.

[58] Operatingl costs include employee cost, depreciation, general and administrative costs, deposit insurance premiums and other expenses, other than extraordinary expenses.

3.1.3. Credit risk

Figure 70 Stock and annual absolute and relative changes of total credit exposure



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

Credit risk dominate the bank risks in the Republic of Macedonia. The structure of credit exposure of the banking system is dominated by the exposure to the sector of corporations and other clients, i.e. credit exposure with currency component, according to the currency structure. Such structure of credit exposure highlights the credit risk in banks' operations, in conditions of weak competitive domestic corporate sector, dependent on global and regional developments and without ample capacity to initiate and deliver high quality projects. Thus, in 2011, the credit exposure to corporations and other clients sector played a crucial role in the deterioration of credit risk indicators. On the other hand, indicators for the quality of credit exposure to households registered slower deterioration, mostly owing to the usually slower spillover of conditions, developments and trends from the corporate sector (through the labor market) to the household sector. The high share of loans with currency component in the total loans points to significant banks' exposure to indirect credit risk, which could materialize only in conditions of devaluation of Denar against Euro and/or change of the current regime of *de facto* fixed exchange rate. In addition, the overwhelmingly long-term nature of credit support increases the sensitivity of borrowers to changes in interest rates which is yet another source of banks' exposure to indirect credit risk (for loans with variable and adjustable interest rate). The relatively high level of provisioning of credit exposure mitigates the banking system's exposure to credit risk, which is also mitigated by the high collateralization of credit portfolio (according to estimated value). However, one should take into account the risk of market illiquidity for the given collateral and any inconsistent assessments.

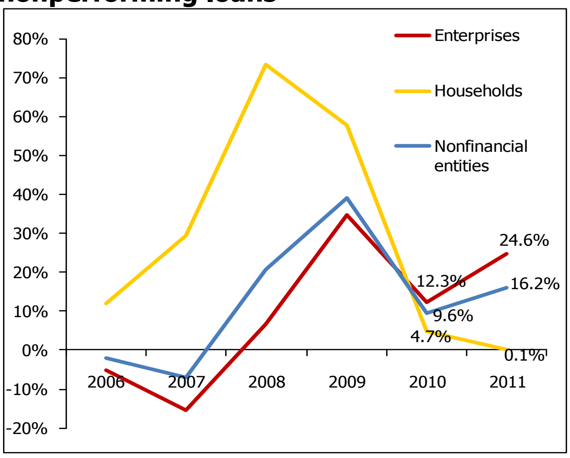
Table 17 Indicators for the quality of the credit portfolio of the banking system

Indicators	31.12.2009	31.12.2010	31.12.2011
Average level of risk	6.5%	6.1%	6.7%
Share of "C, D and E" in total credit exposure	7.9%	7.1%	8.0%
Share of "E" in total credit exposure	3.7%	3.6%	4.5%
Coverage of "C, D and E" with total calculated impairment losses and special reserves	82.4%	85.8%	83.2%
Coverage of nonperforming loans with total calculated impairment losses and special reserves	112.6%	110.2%	111.4%
Coverage of nonperforming loans with total calculated impairment losses and special reserves for nonperforming loans	70.9%	74.2%	77.6%
Share of "C, D and E" net of calculated impairment losses and special reserves in total own funds	23.0%	19.5%	20.4%
Share of nonperforming loans in total loans	8.9%	9.0%	9.5%
Share of nonperforming loans in total loans to nonfinancial entities	9.1%	9.3%	9.9%
Share of restructured and prolonged loans in total loans	10.7%	10.9%	11.6%

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

Credit portfolio quality of all banks deteriorated in 2011. Credit exposure to corporations and other clients sector made major influence on the deterioration of credit risk indicators that determined most of the growth of total nonperforming exposure of the banking system. The greatest deterioration of credit exposure quality indicators was registered in the exposure to food industry, and the credit exposure to accommodation facilities and catering services is characterized with the lowest quality. Deterioration of the indicators for household credit portfolio quality was slower with the automobile loans registering the fastest deterioration of indicators in 2011 (credit exposure quality based on consumer loans and credit cards is the lowest). Analyzing currency structure, credit exposure in Denars with FX clause registered the highest risk level and deterioration of credit risk indicators, while credit portfolio quality indicators for both Denar and foreign currency credit exposure deteriorated.

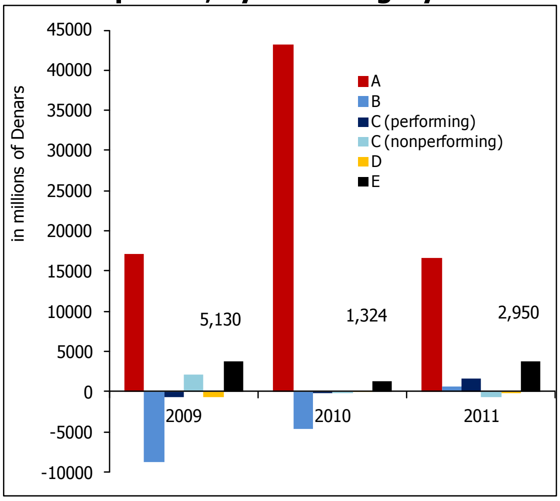
Figure 71 Annual growth rates of nonperforming loans



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

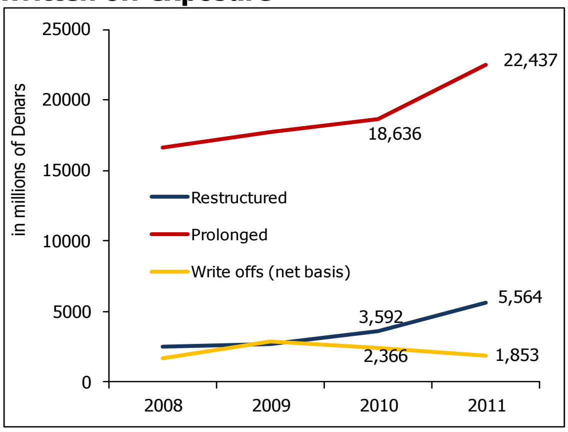
The deteriorated quality is particularly perceived through the development of nonperforming loans that registered the highest relative growth among credit exposure components (16.2%) and increased the share in total loans by 0.6 percentage points. The faster growth of credit exposure

Figure 72 Annual absolute growth of credit exposure, by risk category



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

Figure 73 Restructured, prolonged and net written off exposure



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

with nonperforming status[59] is solely due to the growth of exposure in the category with the highest credit risk (E risk category).

Impairment and special reserve registered faster growth compared to nonperforming loans that contributed to improvement (of 1.2 percentage points) of already full coverage of nonperforming loans with impairment. Given the faster deterioration of credit portfolio quality of the corporations and other clients sector, the increase of impairment and special reserve (by Denar 3,274 million or by 17%), mostly arises from the exposure to this sector. There is still a dilemma about the (in)sufficient provisioning of banks' credit portfolios from the aspect of impairment set on a group basis[60]. The average credit exposure risk classified on individual basis (only for performing exposure to nonfinancial entities) equals 2.7%, compared to impairment determined on a group basis that covers such portfolio with only 1.3%. Impairment on group basis is usually determined by using statistical models, accompanied by model risk, i.e. risk that the model is not compatible to its purpose, generates wrong results (deliberately or accidentally), produces theoretical errors at its designing, etc.

In 2011 the growth of restructured[61] and prolonged exposure accelerated while net write offs decreased. In line with the deterioration of credit portfolio quality, the annual growth of restructured and prolonged credit exposure was almost fully concentrated with companies, while the decrease of write offs was solely concentrated with natural persons.

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[59] Nonperforming credit exposure includes exposures classified in D and E risk categories and C nonfunctional.

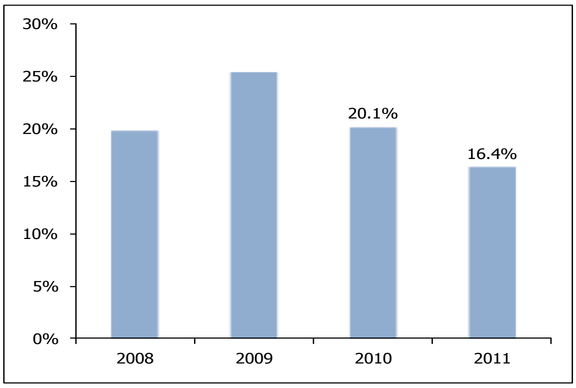
[60] As of December 31, 2011, only about 2% of total impairment and special reserve are determined on a group basis, for portfolios of similar financial instruments that are not impaired on individual basis and for retail credit portfolios that make up about 20% of total credit exposure of the banking system.

[61] Claim restructuring implies establishment of a new credit exposure by the bank in lieu of the already existing one, where significant changes occurred in the contractual terms as a result of the deteriorated financial position of the borrower.

Figure 74 Share of loans with outright payment of principal in the total gross loans of nonfinancial entities

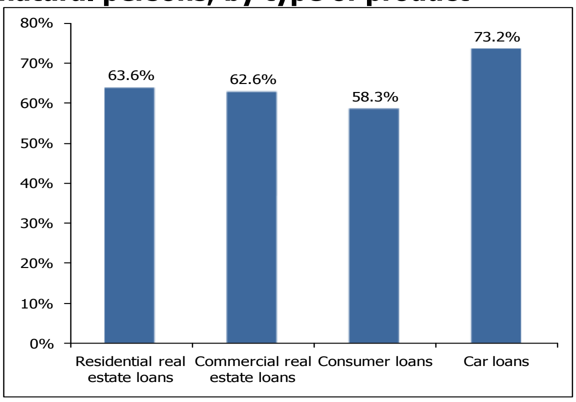
Source: the National Bank, based on data submitted by banks.

Figure 75 Share of uncollateralized exposure in total credit exposure to nonfinancial entities



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

Figure 76 Average level of credit exposure/collateral value ratio with natural persons, by type of product

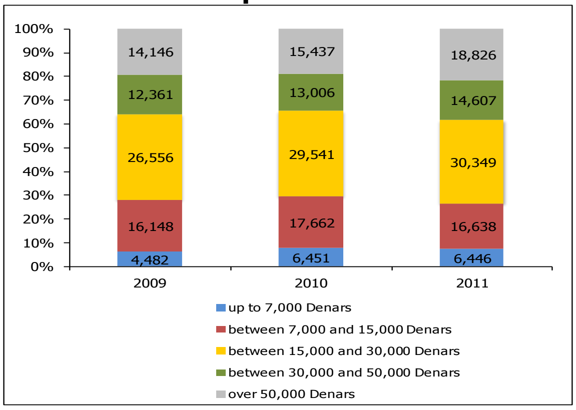


Source: the National Bank, based on data submitted by banks.

Loans with onetime repayment of principal increased moderately by around Denar 131 million (or by 0.5%), that led to a decrease of their share in total loans of nonfinancial entities (a trend present in the last three years). Corporate loans dominate the structure of loans with outright repayment (86.3%). These loans are structured such that borrower pays out the principle at once on the loan maturity date, which would mean higher default risk for the banks.

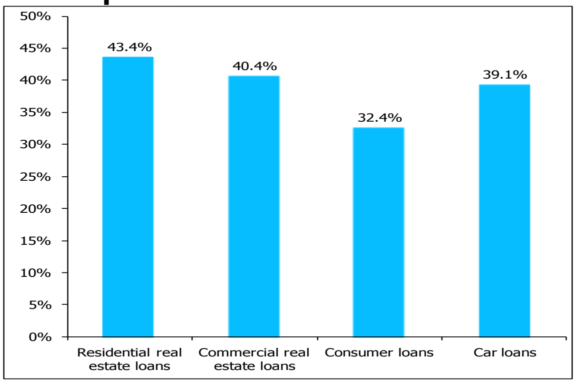
In 2011, uncollateralized credit exposure to nonfinancial entities went down by Denar 7,593 million (or by 16.1%), thus decreasing their share in total credit exposure to these clients. Unlike the higher risk, corporate credit exposure is fully collateralized (93.3%). Conversely, credit exposure to natural persons is 66.6% collateralized. The average value of loan-to-value ratio ranges from 35% to 128% with natural persons and from 35% to 135% with corporations, depending on credit policies of the banks and the type of credit product. However, the analysis of this indicator should also take into account the risk of market illiquidity for the assets offered by the client as a collateral for the loan. For example, taking into consideration the level of (under)development of real estate market in the Republic of Macedonia (real estate is an asset most frequently offered as a collateral for credit exposure), the application of estimated real estate values, during the establishment of credit exposure (collateralized by real estate) and during any foreclosure and its subsequent evaluation (in case of failure to collect the claim collateralized by a real estate), creates a bank risk that arises from the potential differences between estimated values and fair market values of real estate. These differences might result from the overoptimistic evaluations of collateral, i.e. overestimation of its value, which results in incapability to sell the (foreclosed) asset promptly at a price which would not generate (major) capital losses for the bank. In 2011, foreclosed assets (on a gross basis, prior to impairment) increased by Denar 1,623 million, or by 28%. Their share

Figure 77 Credit exposure by monthly income of natural persons



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

Figure 78 Average level of monthly credit liability -to- monthly income ratio of natural persons



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

in total assets is still modest, equaling 2.2% as of December 31, 2011 (1.9% as of December 31, 2010). Banks sell foreclosed movables within a shortest time (by about half a year), while the sale of foreclosed business premises and factories takes 4 and 5.5 years, respectively, on average.

The structure of credit exposure to natural persons registers an increase of the exposure to clients with higher monthly income, mostly to persons with income of above Denar 50,000. Yet, most of the credit exposure to natural persons (61.5% in 2011 and 65.4% in 2010) is to persons with income below Denar 30,000.

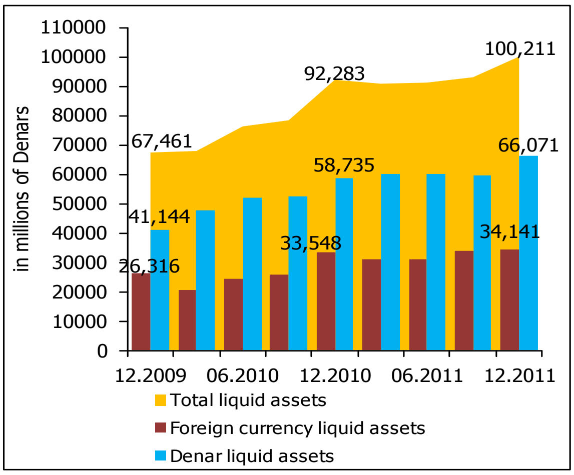
Banks most frequently determine the loan-to-income ratio in the range of 10% for consumer loans to 60% for housing loans.

3.1.4. Liquidity risk

The relatively poor development of secondary markets for assets usually available to the Macedonian banks highlight the risk of impossibility to liquidate certain item (bank's asset) without substantial loss, due to the inadequate market depth of such item or distortions of its operations (so called market liquidity risk[62]). Thus banks insufficiently practice the secondary loan trade, the immovable and movable market is not operational (for sale, for example, of foreclosed assets or some material asset available to the bank), and the secondary domestic securities market (stock exchange and over the counter markets) are characterized by relatively modest width and depth. In addition, the domestic interbank deposit market is also relatively underdeveloped, thus additionally limit the scope of assets that could be promptly converted into cash without larger losses. These include account balances with the National Bank, correspondent accounts and short-term placements with foreign banks with proper rating and securities issued by

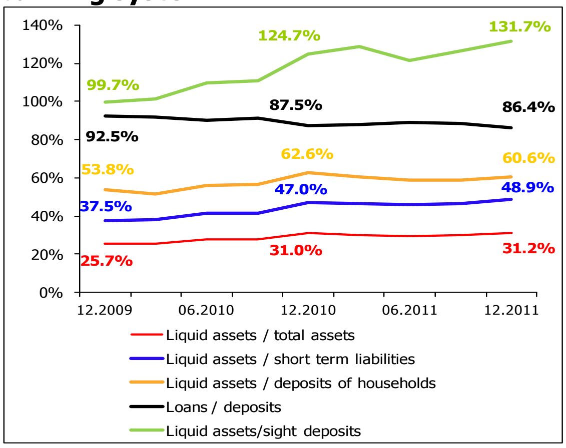
[62] In the literature, usually there are two basic dimensions of liquidity risk: funding liquidity risk and market liquidity risk.

Figure 79 Liquid assets of banks - currency structure



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

Figure 80 Liquidity indicators for the banking system



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

the National Bank of the Republic of Macedonia (for structural purposes or through regular issues), primarily due to their regulatory treatment as collateral instruments during monetary operations conducted by the National Bank[63]. Taking into account the abovementioned, banks in the Republic of Macedonia (should) hold slightly higher amounts of the aforementioned liquid assets in order to fulfill their current and future liabilities regularly and continuously (for the purposes of adequate management of the so called funding liquidity risk). On the other hand, there is a need of well developed cash management system of the banks so as to maximize the already relatively low yield from the liquid assets they hold.

Liquidity indicators[64] of the banking system generally improved due to the increase of liquid assets, primarily the Denar liquid assets. Thus, in 2011, total liquid assets increased by Denar 7,928 million (or by 8.6%), with the largest contribution (of almost 80%) made by the higher banks' demand for CB bills. As of December 31, 2011, CB bills and short-term placements in foreign banks have the largest share in the structure of liquid assets (32.2% and 29.9%, respectively).

[63] Besides the abovementioned, the National Bank also accepts Eurobonds of the Republic of Macedonia, securities issued by governments of OECD and EU member states and securities issued by multilateral development banks and international financial institutions as collateral instruments for credit of last resort, intended for preserving the financial system stability when one or more banks face liquidity problems that cannot be solved by other sources. This credit, however, is not intended for overcoming any daily liquidity shortages in the day-to-day banks' liquidity management (intraday credit and available overnight facility are used for that purpose).

[64] For the purposes of report analyses, liquid assets include cash and cash balances with the National Bank, CB bills, correspondent accounts and short-term placements with foreign banks and placements in short-term securities issued by the government. Also, Denar assets and liabilities with FX clause are regarded as Denar assets and liabilities.

Table 18 Banks' funding sources

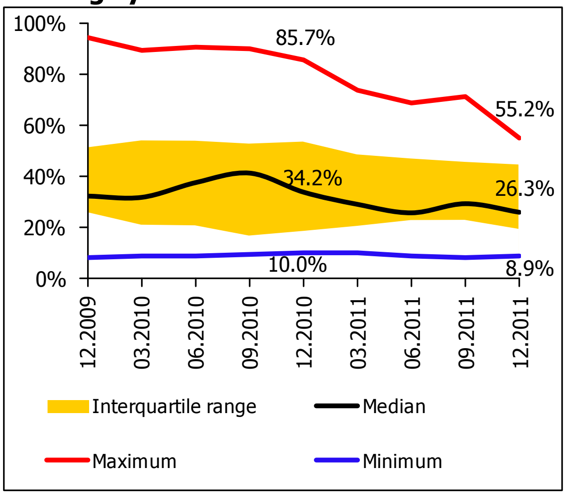
Source of funds	31.12.2010		31.12.2011		Annual change	
	Amount (in millions of Denars)	Share in structure	Amount (in millions of Denars)	Share in structure	Amount	in %
Deposits of nonfinancial entities	**213,270**	**69.9%**	**234,821**	**71.1%**	**21,551**	**10.1%**
-of which parent entities	*0*	*0.0%*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

Source: Data are being submitted by banks based on a special request of the National Bank and therefore, differences could occur in terms of on-balance sheet data the banks submit as required by the Decision on submitting data on account balances and turnovers of the banks' chart of accounts and of the financial statements ("Official Gazette of the Republic of Macedonia" no. 126/2011)

In 2011, the structure of banks' funding sources, in spite of the strengthening of the dominant share of nonfinancial entities' deposits, registered changes in terms of increase of the use of long-term sources, decrease of deposits of financial institutions and reduction of used sources of funding from foreign parent entities of the banks. Deposits of financial institutions decreased due to the fall of deposits of nonresident financial companies (by Denar 3,764 million or by 49.3%), and some banks renew (or additionally increase) credit liabilities to financial companies - nonresidents, but at higher interest rates. In spite of the increase of total credit liabilities (mostly arising from the EIB credit line, used by domestic banks through the MBDP), 2011 witnessed higher liabilities based on subordinated instruments (by Denar 612 million, or by 8.6%), as one of the more expensive funding sources for the banks.

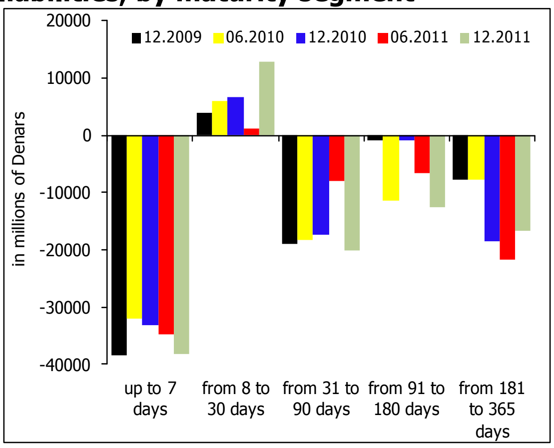
The high deposit concentration could be regarded as a source of liquidity risk for the domestic banking system. Additionally, the banks reported an increase of time deposits which are available for early withdrawal by the clients, thus impeding the liquidity risk management. However, in 2011, the concentration of deposits of nonfinancial entities somewhat decreased. Thus, the

Figure 81 Deposit concentration in the banking system



Source: the National Bank, based on data submitted by banks.
Presents the share of 20 largest depositors in the average deposit base for the last month.

Figure 82 Contractual residual maturity (mis)match between assets and liabilities, by maturity segment



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

medial value of deposit share of the 20 largest depositors in the total deposits went down by 7.9 percentage points, and reduced to 26.3%. Conversely, time deposits available for early withdrawal by the clients increased their share in total time deposits from 73% as of December 31, 2010 to 88.9% at the end of 2011.

Off-balance sheet items that represent potential bank liabilities might create cash outflow in the next year in the amount of Denar 30,746 million. In 2011, off-balance sheet items (the analysis includes only those items with residual contractual maturity of up to one year) surged by Denar 11,117 million (or by 56.6%). However, the coverage of these off-balance sheet items with banks' liquid assets is still high (as of December 31, 2011, their coverage equaled 325.9%, which is by 144.2 percentage points less, compared to 2010). On the other hand, the level of quality of off-balance sheet claims of the banks is relatively high (as of December 31, 2011, the share of C, D and E in the total exposure based on off-balance sheet items equaled 1%, while the average risk level is 1.6%).

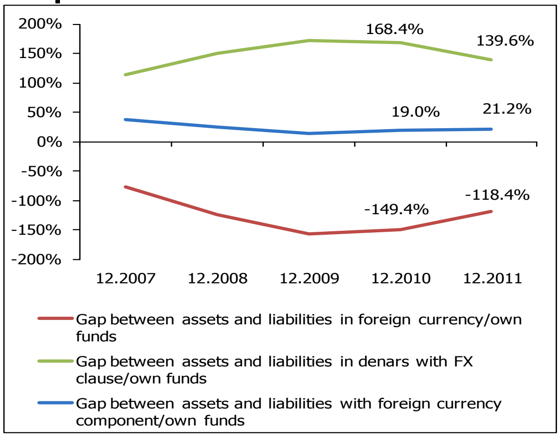
3.1.4.1. Maturity (mis)match of the banks' assets and liabilities

Structural liquidity risk is particularly evident in domestic banks[65]. Except for the maturity segment from 8 to 30 days, all other maturity segments reported a negative gap between assets and liabilities, according to their residual contractual maturity, which was additionally widened in 2011, in most maturity buckets, confirming banks' preferences in 2011 to invest in more liquid financial instruments, and therefore, to strengthen their liquidity position.

According to the banks' expectations, the gap between assets and liabilities in all maturity segments is positive primarily due to the banks'

[65] This risk is related to the so called maturity transformation, when banks use short-term funding sources and lend in a long run so as to meet the needs of their clients. The risk arises from the maturity mismatch between assets and liabilities.

Figure 83 Share of the gap between assets and liabilities with currency component in the banks' own funds



Source: NBRM, based on data submitted by banks.

expectations for relatively great deposit stability. In a short run, banks expect an outflow of 13.2% of total deposits with residual maturity of up to three months. Banks expect similar stability to be demonstrated by time deposits and sight deposits. Thus banks expect 86.4% and almost 90% of time deposits and sight deposits, respectively, to remain in the banking system in the next three months.

According to the regulation, banks in the Republic of Macedonia are required to calculate and fulfill liquidity ratios up to 30 days and up to 180 days[66]. At the end of 2011, all banks fulfilled the minimum liquidity ratio (in a value of 1)[67] up to 30 days and up to 180 days. The medial value of liquidity ratios of up to 30 days and up to 180 days, equaled 2.3 and 1.3 at the end of 2011.

3.1.5. Currency risk

The share of gap between assets and liabilities with currency component in the total own funds went up in 2011, and indicates higher banking system exposure to currency risk. The positive gap between assets and liabilities with currency component implies an exposure to risk of losses for the banks of any Denar appreciation or larger profits for the banks of any depreciation based on positive exchange rate differentials, and materialization of indirect credit risk (due to the high amount of approved loans with currency component), that subsequently, could cause substantial credit losses for the domestic banking system. Nonetheless, such scenarios are impossible for now, taking into account the firm determination for conducting the regime of *de facto* fixed exchange rate of Denar against Euro.

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[66] Decision on managing banks' liquidity risk ("Official Gazette of the Republic of Macedonia" no. 126/2011 and 19/2012).

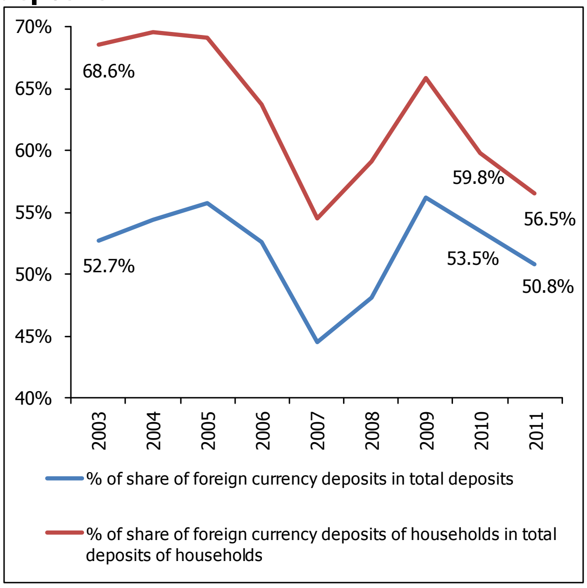
[67] In 2011, the method of calculating liquidity risk by the banks changed. Since October 2011, banks started calculating and fulfilling a single liquidity rate, in lieu of separate liquidity ratios for Denar positions and foreign currency positions, and started monitoring liquidity ratios integrally, with respect to currency.

Table 19 Assets and liabilities with currency component and their share in total assets

Description	Amount (in millions of Denars)		Share in total assets	
	2010	2011	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 foreign 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 foreign currency component	157,217	160,543	51.5%	48.5%

Source: NBRM, based on data submitted by banks.

Figure 84 Share of foreign currency deposits in total deposits of nonfinancial entities and share of foreign currency household deposits in total household deposits

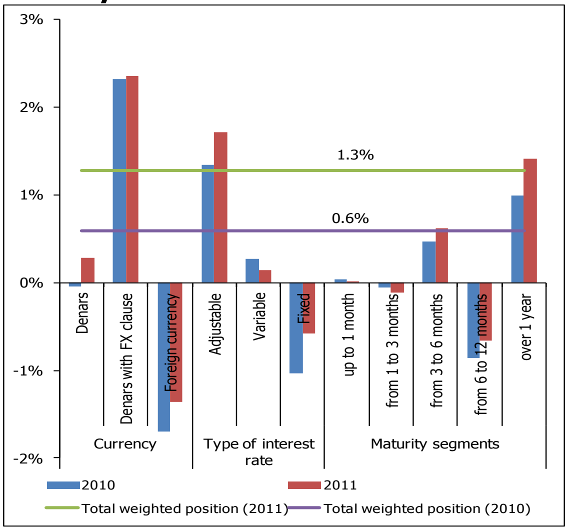


Source: NBRM, based on data submitted by banks.

The relatively high level of Euroization of the Macedonian economy, accompanied by attractive yields for received foreign currency deposits in domestic banks (even in case of so called "zero bound" policy by ECB and some other central banks), and the gradual increase of sources of funding originating from foreign entities, primarily banks' parent entities, are major reasons behind the high foreign currency liabilities in the domestic banks' liabilities (note that the last month of 2011 and early 2012 experienced lowering of the Euroization, mostly due to the deteriorated public confidence in the Euro). At the same time, the assets side lacks full investments of such collected deposits in financial instruments denominated in the respective foreign currency, which is caused by the present regulatory regime (restriction) of foreign currency placements to nonfinancial entities in the country, and due to the generally higher rates of return on placements in Denar financial instruments. Hence, the gap between the foreign currency assets and liabilities is negative, and constitutes roughly 120% of the banks' own funds. The banks "close" (balance) the high negative gap between foreign currency assets and liabilities by active use of FX clauses in their credit products (Denar loans with FX clause) and simultaneously, significantly lower use of Denar deposits with FX clause as sources of funding that create high, but this time, positive gap between assets and liabilities in Denars with FX clause (this gap accounts for roughly 140% of own funds and offset the high negative gap between foreign currency assets and liabilities).

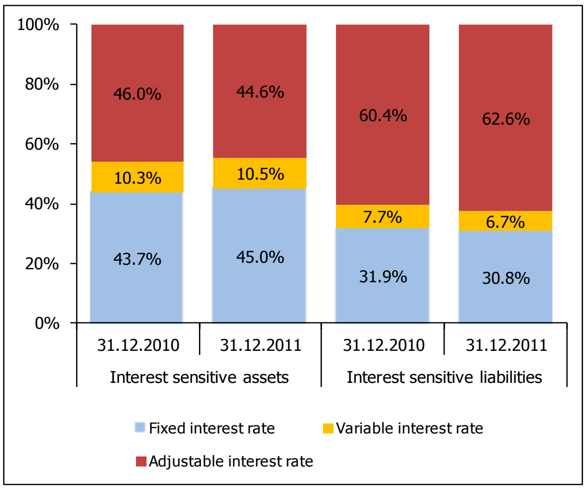
According to the regulations, banks in the Republic of Macedonia are required to calculate aggregate currency position and to maintain it at the level of up to 30% of own funds. Moreover, one should take into account that some banks enter into agreements on Denar loans with FX clause that do not include regular FX valuation (i.e. the FX valuation is optional, only in case of more significant change in the exchange rate, predetermined in the loan agreement), which according to the regulation are not included in the

Figure 85 Ratio between total weighted value of the banking book and own funds, by type of interest rate, currency and maturity



Source: NBRM, based on data submitted by banks.

Figure 86 Structure of interest sensitive assets and liabilities, by type of interest rate



Source: NBRM, based on data submitted by banks.

calculation of aggregate currency position. The inclusion of these loans in the calculation of aggregate currency position would mean noncompliance with the set limit on own funds of some banks.

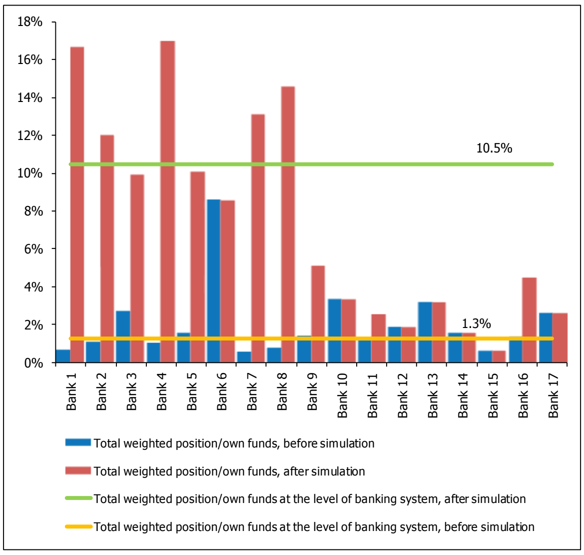
3.1.6. Interest rate risk in the banking book

Banks' exposure to interest rate risk in the banking book, measured as a ratio between the total weighted value of banking book[68] and own funds remained very low, in spite of the certain increase in 2011. Thus the total weighted value of banking book makes up only 1.3% of the own funds of the banking system. The positive total weighted value of the banking book indicates risk exposure arising from the cut of interest rates in this portfolio. Most of the exposure of this risk arises from the higher positive net weighted value calculated for the positions with adjustable interest rates and positions in Denars with FX clause, particularly maturity segments of over one year.

The structure of interest sensitive assets and liabilities registers high presence of positions with adjustable interest rates[69]. According to the bylaws, distribution of positions with adjustable interest rates in maturity segments is made by determining the probability and frequency of the change of interest rates of these positions, which provide an ample space for the banks to use adjustable interest rates also as a tool for establishing a balance between interest sensitive assets and liabilities, mostly in maturity segments in a short run. Any regulatory changes[70] in the use of clauses for unilateral adjustability of interest rates which would, in part or in full, limit the use of adjustable interest rates in loan agreements would mean different distribution of positions

[68] For the purposes of this report, total weighted value of the banking book is obtained by aggregation of net weighted value of each bank. For individual bank, the ratio between net weighted value of the banking book and own funds of the bank may not exceed 20%.
[69] Interest rates are usually adjusted unilaterally, due to the changes in the bank's interest rate policy.
[70] The current regulations concerning this issue is unclear in terms of the use of clauses for unilateral interest rate adjustability, i.e. they do not contain provisions on the method of determining and changing interest rates or definition of variable interest rates. Legal systems of some countries in the region (for example, Serbia) restrict such type of interest rates.

Figure 87 **Ratio between total weighted value of the banking book and own funds, prior and after simulations of individual banks**



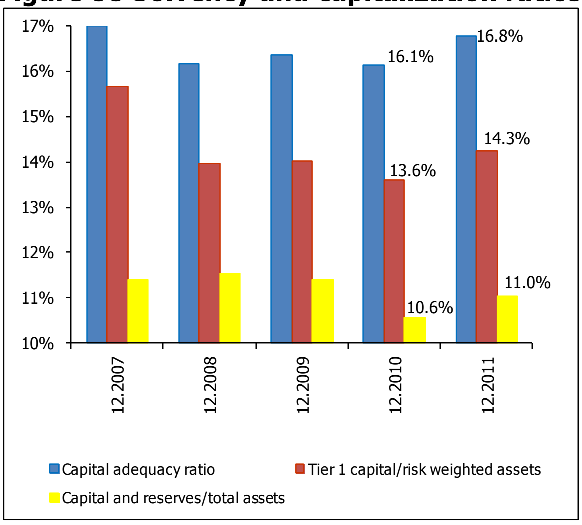
Source: the National Bank, based on data submitted by banks.

with this type of interest rates by maturity segments, which would bring about change in the overall weighted value of the banking book, and consequently, the interest rate risk to this portfolio would probably be of a different size and significance.

To estimate the effect of any regulatory amendments, hypothetical simulation was conducted where the banks were restricted to use adjustable interest rates, assuming that all existing positions with adjustable interest rates receive a treatment of positions with fixed interest rates. In such hypothetical case, banks become increasingly exposed to interest rate risk. The total weighted value of the banking book of the overall banking system would reach 10.5% of own funds, and this ratio in some banks would tend to approximate to the set maximal ratio. Take into account, however, that this scenario is most conservative ever, and does not take into account the possibility for the banks to use variable interest rates as an interest rate risk management instrument.

3.1.7. Insolvency risk

Figure 88 Solvency and capitalization ratios

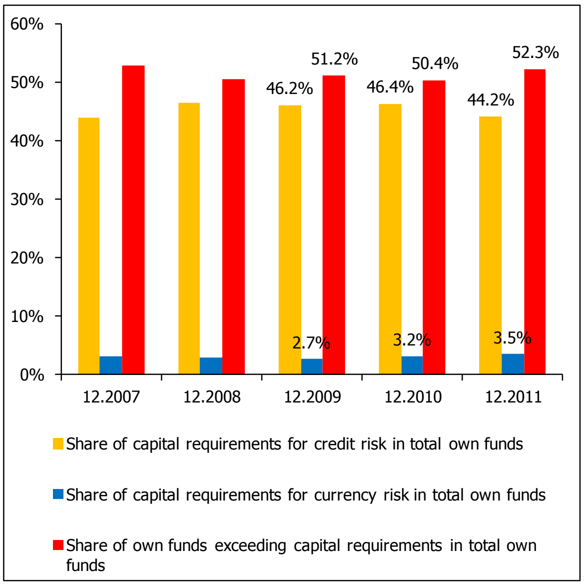


Source: the National Bank, based on data submitted by banks.

Solvency and capitalization of the banking system remained high and additionally improved due to the higher growth rates of capital positions[71] of the banks compared to the growth rates of the banking system activities (risk weighted assets). Moreover, some banks in the Republic of Macedonia have at least 65% higher capital adequacy ratio compared to the statutory level of 8%, that indicates a solid solvency and capitalization level of individual banks. Besides, core capital makes up almost 85% of own funds of the banks, indicating relatively high quality of the capital positions of the banking system.

[71] Banking system's own funds increased annually by Denar 4,282 million (or by 11.3%), given the three new issues of shares in 2011 (in a total amount of Denar 3,314 million), retain of a part of the profit for 2010 in the banks' capital funds (the item of reserves and retained profit or loss of the banks' own funds went up by Denar 1,934 million) and the issue of four new subordinated instruments in the total amount of Denar 584 million.

Figure 89 Use of own funds for covering risks



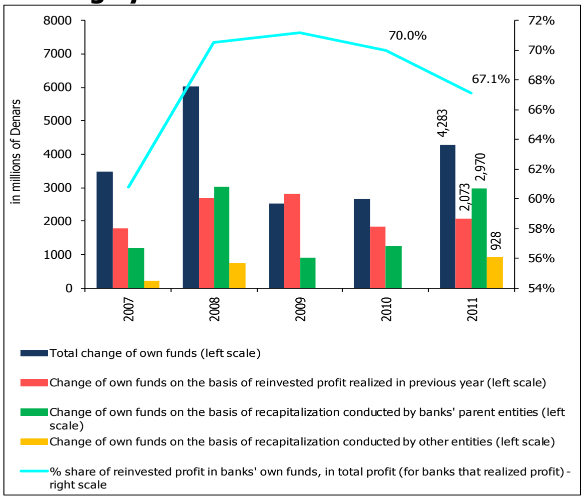
Source: the National Bank, based on data submitted by banks.

Most of the annual growth of own funds in 2011 was used to strengthen the "available" capital over the requirement for covering risks (that registered an annual growth of Denar 2,952 million or 15.5%). Simultaneously, the capital requirement for covering risk increased by 1,330 million (or by 7.1%), where the capital requirement for credit risk determined most (roughly 80%) of the increase of total capital requirement for covering risks. The deteriorated profitability of the banking system in the recent period and the weak perspectives for its faster improvement in the period ahead, and the deteriorated performances and problems of some parent entities of the domestic banks are major factors that restrict the future increase of the banking system's own funds.

As of July 1, 2012, the new Decision on the methodology for determining capital adequacy will start being implemented, which is a significant step towards the adoption and implementation of international capital standards of the first pillar of the new capital accord (Basel 2). According to the new Decision, the banks should, inter alia, implement the so called standardized approach when determining credit risk weighted assets, and additional obligation for the banks, compared to the valid Decision of this field, is the need for determining capital requirement for operating risk (with the implementation of the basic indicator approach or standardized approach). To comply with the provisions of the new Decision on the methodology for determining capital adequacy, the banks will have to allocated, on an aggregate basis, about Denar 0.9 billion of additional capital. Moreover, all other variables being constant, the implementation of the provisions of the new Decision would decrease the capital adequacy ratio of the total banking system by 0.8 percentage points. Analyzing by bank, the capital adequacy of four banks would fall below 12%, and the lowest capital adequacy ratio would equal 9.9%.

Analysis of the operations of foreign banks with subsidiaries in the Republic of Macedonia and of their subsidiaries in other countries in the region

Figure 90 Major sources of increase of the banking system's own funds



Source: Audited financial statements of banks and NBRM calculations.

Note: 1) Parent entity is a shareholder (and its connected entities) with dominant share (of above 50%) of the banks' own structure. 2) Recapitalization include investments in subordinated and hybrid capital instruments, as well.

In the recent period, reinvested earnings and recapitalization of the banks' parent entities are the two most exploited sources of increasing the banking system's own funds. Hence, the lucrative banking business, the financial power of shareholders, and their capacity and willingness to inject capital in the bank when necessary, are major factors that increase the own funds of the banking system. In the Republic of Macedonia, 14 banks are in majority ownership of a single (one) shareholder, whose financial capability, capacity and willingness for recapitalization largely drive the future increase of these banks' own funds. Observing the capability for efficient and effective insolvency risk management, usually foreign banks and financial institutions regarded as high quality shareholders in the domestic banks are in favor. Generally, they run subsidiaries and branches throughout the world and have the opportunity and solid reputation to access the international financial markets easily and less expensively, and therefore, to provide without difficulty the needed liquidity and solvency. As of December 31, 2011, 8 domestic banks are foreign bank subsidiaries, and one bank is in majority ownership of foreign nonbanking financial institution. Societe Generale S.A. is a foreign bank that runs a subsidiary in the Republic of Macedonia that enjoys the highest credit rating, while, presently, the Greek banks have the lowest rating.

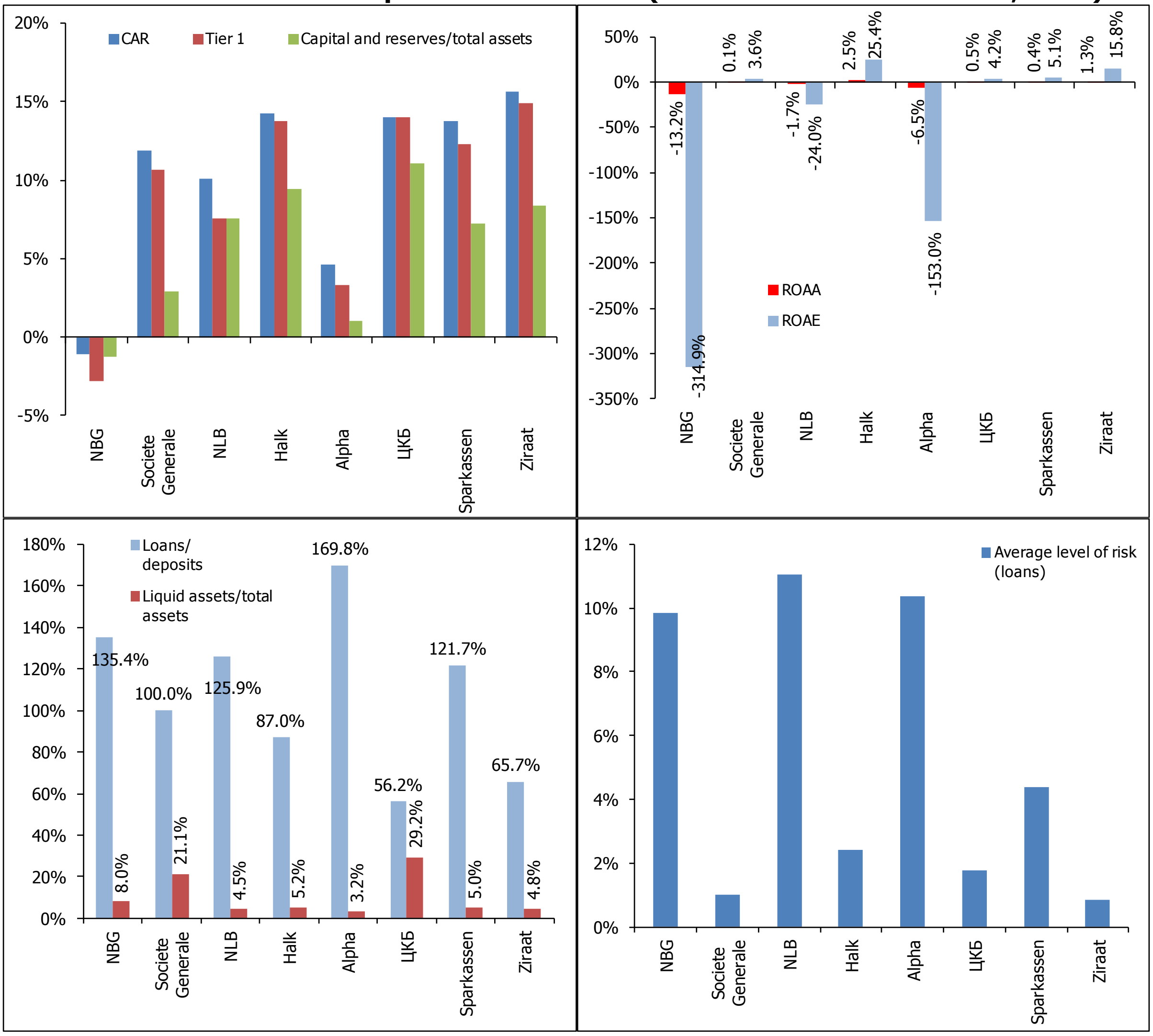
Table 20 Credit rating of foreign banks that run subsidiaries in the Republic of Macedonia and their share in the group's assets (data are as of December 31, 2011, unless otherwise indicated)

Name of the bank	Credit rating, assigned by:			Share in consolidated assets of the gr
	Moody's	Standard and Poor's	Fitch	
National Bank of Greece S.A. (Greece)	Caa2/negative	CCC/negative	B-/stable; CCC (most recent)	81.7%
Societe Generale S.A. (France)	A1/negative	A/stable (most recent)	A+/negative	84.2%
Nova Ljubljanska banka d.d. Ljubljana (Slovenia)	Baa2/negative; Ba2/negative (most recent)	/	BBB/negative	78.9%
Türkiye Halk Bankası AŞ (Turkey)	Ba3/positive	/	BB+/stable	98.9%
Alpha bank A.E. (Greece)	Caa2 (most recent)	CCC (most recent)	B- (most recent)	93.3%
Централна кооперативна банка АД София (Bulgaria)	/	/	/	96.5%
Steiermärkische Bank und Sparkassen AG (Austria)	/	/	/	90.8%
T.C. Ziraat Bankasi A.S. (Turkey)	Ba3/positive	/	BB+/stable	98.7%

Source: Websites, audited financial and annual statements of some banks and NBRM calculations.

A review of some relevant performance indicators for the foreign banks that run subsidiaries in the Macedonian banking system is given below. Relatively bad condition of the Greek banks is obvious, which in 2011 reported high losses, primarily due to their participation in the Private Sector Involvement (PSI). Such situation was partially offset in May 2012 during the recapitalization of the largest Greek banks (including those with subsidiaries in the Republic of Macedonia) with funds from the European Financial Stability Facility, that enable the Greek banks to demand and to obtain liquidity support from the European Central Bank, after they achieve the required solvency ratio. In addition to the Greek banks, in 2011, NLB d.d. Ljubljana also reported losses, but its solvent position is not at risk (this bank have the highest average risk level of credit portfolio among the analyzed foreign banks that run subsidiaries in Macedonia, and in 2011, the impairment of corporate loans also registered a relatively high growth). On the other hand, Turkish banks that run subsidiaries in the Republic of Macedonia have the highest rates of return on average assets and equity for 2011.

Figure 91 Solvency, profitability, liquidity ratios and average credit risk of foreign banks that run subsidiaries in the Republic of Macedonia (data are as of December 31, 2011)



Source: Websites, audited financial and annual statements of some banks and NBRM calculations.

Note: 1) The average credit risk for Sparkassen and CAR and Tier 1 for Societe Generale refer to the groups rather than the banks.

2) Definition and scope of liquid assets of each foreign bank in the calculation of the indicator:

NBG - cash and cash balances on accounts with CB, claims on banks with maturity of up to 3 months, securities available for trade and all other securities with maturity of up to 3 months;

Societe Generale - cash and cash balances on accounts with CB, sight deposits and cash balances on accounts with other banks, securities available for trade and all other short-term securities;

NLB - cash and cash balances on accounts with CB, debt securities available for trade, banks' loans and debt securities with maturity of up to 90 days;

Halk- cash and cash balances on accounts with CB, investments in banks with maturity of up to 3 months, investments in money market instruments (exclusion of reserve requirement);

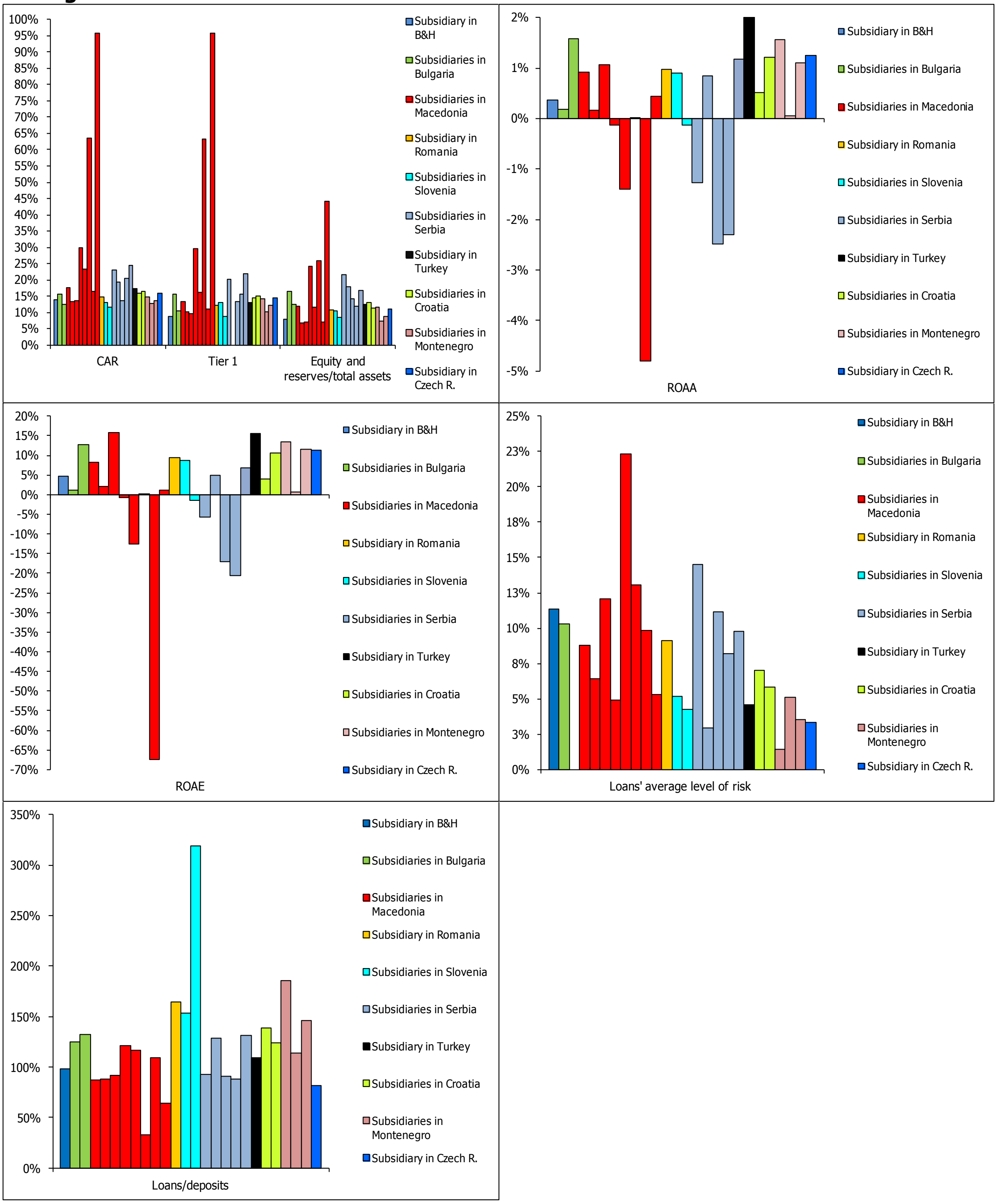
Alpha - cash and cash balances on accounts with CB, reverse repo transactions and short-term investments in other banks;

ЦКБ - cash and cash balances on accounts with CB, investments in banks with maturity of up to 3 months;

Sparkassen - cash and cash balances on accounts with CB and investment in CB bills;

Ziraat - cash and cash balances on accounts with CB, investments in banks with maturity of up to 3 months, investments in money market instruments (exclusion of reserve requirement);

Figure 92 Comparison of selected indicators for the performances of foreign bank subsidiaries in the Republic of Macedonia and of their subsidiaries in other countries in the region



Source: Websites, audited financial and annual statements of some banks and NBRM calculations.

The eight foreign banks under observation run subsidiaries in the Republic of Macedonia and other countries in this region (28 subsidiaries in 14 countries[72] in this region). Comparative analysis[73] among foreign bank subsidiaries that oprerate in the Republic of Macedonia and their subsidiaries in other countries of this region indicates slightly higher risk of the credit portfolio and deteriorated earnings of subsidiaries in Macedonian for 2011, compared to subsidiaries of same financial groups that operate in other countries of the region. Conversely, the Macedonian subsidiaries enjoy robust solvency and liquidity positions (measured through the capital adequacy ratio, Tier 1 ratio and equity and reserves-to-total assets ratio, as solvency ratios and loan-to-deposit ratio as liquidity ratio).

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

As of December 31, 2011, the simulations showed that the banking system and the individual banks are relatively resilient to the influence of assumed shocks. The baseline stress test analysis is based on the application of eight hypothetical simulations, of which:
- three simulations of insulated credit shock (an increase of credit risk exposure classified in C, D and E risk categories by 10%, 30% and 50%),
- fourth simulation as a combination of credit and interest rate shock (an increase of credit risk exposure in C, D and E risk categories by 30% and an increase of interest rates on lending and deposit on-balance sheet and off-balance sheet positions, from 1 to 5 percentage points),
- fifth simulation as a combination of credit and foreign currency shock (an increase of credit risk exposure in C, D and E risk categories by 50% and depreciation of the exchange rate of Denar against Euro and US Dollar by 20%),
- sixth simulation as a combination of shocks on the side of credit risk, foreign currency risk and interest rate risk (an increase of credit exposure in C, D and E risk category by 50%, depreciation of the exchange rate of Denar against Euro and US Dollar by 20% and

[72] More precisely, they run subsidiaries in Serbia, Turkey, Romania, Bosnia and Herzegovina, Montenegro, Croatia, Slovenia, Cyprus, Kosovo, Republika Srpska, Bulgaria, Czech Republic, Greece and Albania.
[73] The comparative analysis include 8 banks as foreign bank subsidiaries in the Republic of Macedonia and 18 banks as subsidiaries of the same foreign banks in other countries in the region, of which 1 in Bosnia and Herzegovina, 2 in Bulgaria, 1 in Romania, 2 in Slovenia, 5 in Serbia, 1 in Turkey, 2 in Croatia, 3 in Montenegro and 1 in the Czech Republic. Data on the other 10 foreign bank subsidiaries (of total of 28 that operate in 14 countries in the region) are not available as of December 31, 2011, due to various reasons.

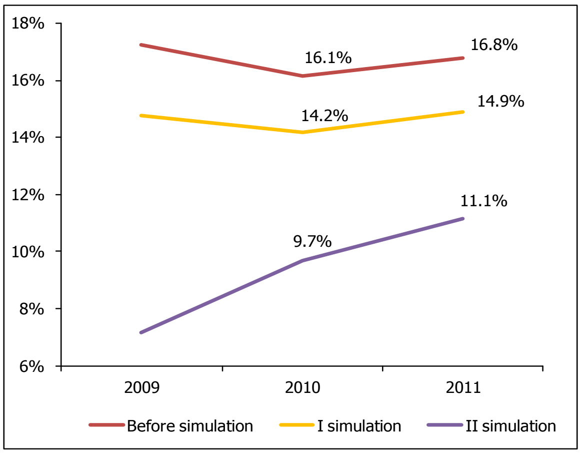
increase of interest rates of certain lending and deposit on-balance sheet and off-balance sheet positions from 1 to 5 percentage points),
- seventh simulation, an appreciation of the exchange rate of Denar against Euro and US Dollar by 20%,
- eighth simulation, simultaneous reclassification in C risk category of the five largest credit exposures to nonfinancial entities (including connected entities).

Table 21 Results from the stress test simulations of 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: the National Bank, based on data submitted by banks.

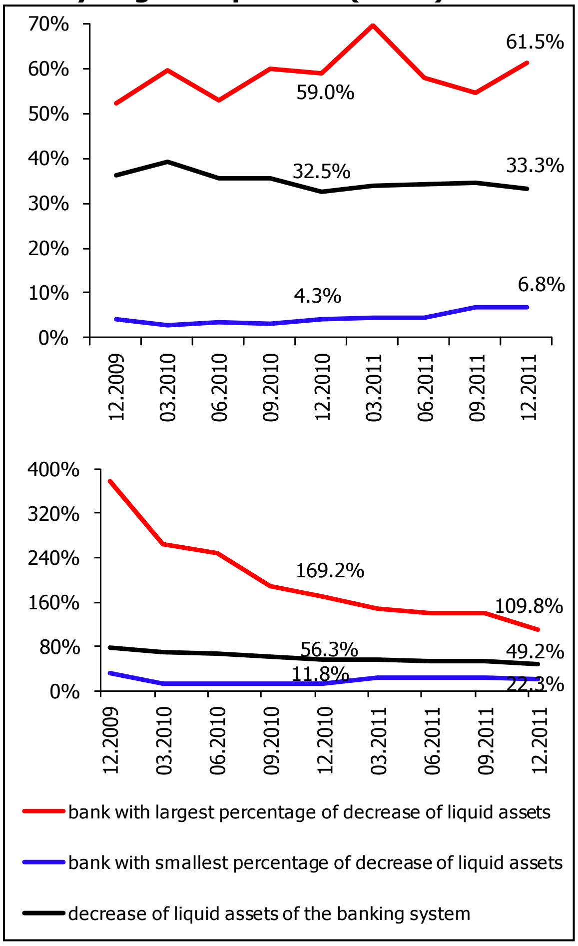
Figure 93 Capital adequacy ratio, prior and after the simulation



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

In order to examine the sensitivity of banking system to the deterioration of quality of some credit portfolio segments, regular simulations are conducted of hypothetical migration of 10% (first simulation) and 30% (second simulation) of the credit risk exposure to corporations and other clients sector (including by activity) and to households (including by credit product) from lower risk categories to the two next higher risk categories, where the mitigated credit exposure is distributed equally (in addition, the simulations take account of identical level of average risk of each risk category, same as before the exposure migration). **The results showed that the banks are more resilient compared to the previous year.** The improvement is more noticeable in the second simulation, where capital adequacy would reduce by 5.7 percentage points (6.4 percentage points at the end of 2010). **During the conduct of the two simulations of the credit exposure to both sectors, simultaneously** (corporations and other clients and natural persons), the largest quality deterioration was registered in the exposure to real estate businesses where the average risk level would increase by 2.3 percentage points in the first simulation and by 6.8 percentage points in the second simulation and in the exposure based on credit cards and overdrafts of natural persons, where the risk level would increase by 2 percentage points in the first simulation and by 6 percentage points in the second simulation. Analyzing by bank, the capital adequacy ratio would not fall below 8% in any bank in the first simulation, and would fall below 8% in five banks, in the case of second simulation.

Figure 94 Results of the simulation of withdrawal of 20% of household deposits (up) and of withdrawal of deposits of the twenty largest depositors (down)



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

Liquidity shock simulations indicate satisfactory level of resilience of the banking system. Two liquidity shock simulations are conducted on a regular basis: assumed withdrawal of deposits of the 20 largest depositors from the banking system and withdrawal of 20% of household deposits. Slightly larger vulnerability is registered in case of withdrawal of the deposits of the 20 largest depositors outside the banking system compared to the withdrawal of 20% of household deposits which results from the high concentration level of deposits with some banks.

Additional simulation of outflow of funding sources used by banks from their parent entities (other than subordinated and hybrid capital assets the payment of which require National Bank approval) was conducted at the end of 2011. In this simulation, liquid assets of individual banks would fall from 1.4% to 49.5% or 9.5% of the banking system, and its share in the total assets would decrease from 31.2% to 29.2%.

Business expectations and planned activities of the banks in 2012

The National Bank of the Republic of Macedonia conducts a survey (questionnaire) for two subsequent years concerning the business expectations and planned activities of banks for the period ahead (the questionnaire is being submitted to banks at the end of the current year and contains questions that refer to the next year). The survey includes quantitative aspects of the banks' plans for 2012 (planned change of some financial statement items or other essential variables for the banks' business), and contains questions concerning the quality of business plans, represented through the basic objectives of the banks for 2012 and the most relevant activities for their achievement, the intention to introduce new products, the development of business network and distributional channels, etc.

Furthermore, the survey also tackles the conditions and developments in the banking system to be expected in 2012 and presents conclusions that could be considered applicable to the overall banking system based on aggregation and processing of answers of the banks in the questionnaire, without analyzing the impartiality and sustainability of projections or providing any assessment for the quality of the banks' planning process[74]. A list of top priorities for 2012 indicated by most of the banks is given below, including the activities to be undertaken for achieving the set objectives:

Table 22 Top priorities for 2012 and planned activities for their achievement

MOST PRIORITY GOALS IN 2012	MOST IMPORTANT PLANNED ACTIVITIES IN 2012
- Increase the scope of activities, loans and deposits, increase market share; - Profitable and efficient operations, cost control; - Safe and sound operation, increase of capital, better risk management, particularly credit risk management, improving the quality of loan portfolio; - Improving information systems; - Improving human resources management	- Expand the range of products and services, expand the branch network, the distribution and sales channels; - Improvement of existing systems for claims collection, enhanced activities for sale of foreclosed assets, improvement of risk management policies, introduction of scoring tools and improvement of clients' files; - Enhanced control of costs and usage of sources of funds; - Maintenance of stability through issues of new shares and/or reinvestment of profits; - Continuous staff training

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

The table below provides a review of the **most relevant internal advantages and external opportunities** the banks expect to facilitate (to help) the achievement of the set objectives and the **most relevant internal weakness and external impediments** that would hinder the achievement of objectives in 2012:

Table 23 Factors arising from the internal and external surrounding that could facilitate/impede the achievement of the set objectives in 2012

INTERNAL STRENGTHS	EXTERNAL OPPORTUNITIES
- Support from the parent entity, synergies arising from the membership of a banking group; - Educated, motivated, professional, dedicated, trained and serviceable employees; - Expanded network of branches; - High liquidity and capital adequacy levels; - Strengths associated with the management	- Macroeconomic stability of the country; - Growth of foreign direct investments; - Existence of still unconquered market segments
INTERNAL WEAKNESSES	**EXTERNAL THREATS**
- Weaknesses in certain segment of the risk management; - Weak market position, in general, or in particular segment of operation; - Insufficient range of products and services; - Weaknesses related with banks' information systems and technology; - Increased concentration of loans/sources of funds	- Strong competition in the banking system; - Often changes in regulation and unfavourable regulatory requirements (administrative limitation of the maximum level of loans' interest rates); - High unemployment rate, low living standards, low creditworthiness and liquidity of clients; - Political and country risk, prolonging the membership process for the NATO and EU; - Uncertainty about the debt crisis in the Euro-zone and its transmission effects on the Macedonian economy

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

[74] The questionnaire was answered, in part or in full, by 17 banks (all banks that operated as of December 31, 2011).

The information and data released by international financial institutions and relevant domestic institutions, and the relevant domestic institutions, as well as the system of knowhow and experience of the bank's management are pointed as being the two most employed sources of data. The qualitative (intuitive)[75] methods of forecasting are those that are mostly used by the banks in their planning process (these techniques are applied by 16 banks). Additionally, a number of banks use analysis of time series in their planning process (14 banks). More sophisticated techniques of prediction (such as quantitative – causal methods) are being applied by one bank particularly during the forecast of some items in the financial statements. Here, there are almost no significant changes compared to the previous year.

The interval of percentage of departure from the projections for 2011[76] (concerning the banks' quantitative forecasts) is quite wide and ranges from minus 656.7% (the bank with the highest percentage of negative departure from the projections for 2011) to plus 377% (the bank with the highest percentage of positive departure from the projections for 2011).

There are myriad of banks that emphasize the lucrative and efficient operations, as a top priority for 2012. Therefore, only two banks expect to incur loss at the end of 2012 (in a total amount of Denar 149 million). According to the banks' plans for 2012, the banking system would recognize a profit by more than 160% higher than the profit recognized for 2011. In 2012, most of the banks do not plan any changes in the lending interest rates, but plan to cut deposit interest rates[77].

[75] They are based on the personal opinion, knowledge, experience, intuition and reasoning of the individual experts and/or group of experts who might use market researches for the projection of future developments of certain variables and/or to make decisions on the basis of historical analogy· Most prominent methods of this group is the Delphi method, where the projection is made on the basis of professional and expert, personal knowledge, reasoning and experience of a group of five to ten experts·

[76] It is calculated as follows: (performed for 2011 - forecasted for 2011)/forecasted for 2011.

[77] According to the results from the questionnaire, 13 banks do not plan any change in the lending interest rates (4 banks even plan to cut these interest rates), and 9 banks plan to cut the deposit interest rates (7 banks do not plan any change in the deposit interest rates for 2012).

Table 24 Projected income statement for 2012

in millions of Denars

Selected items from the income statement	Planned for 2012	Realized in 2011	Planned increase (+)/ decrease (-)	
			in absolute amount	in %
Net interest income	**11,936**	**10,401**	**1,535**	**14.8%**
interest income	**21,430**	**19,522**	**1,908**	**9.8%**
households	7,363	7,084	279	3.9%
corporates (private and public)	10,501	8,997	1,504	16.7%
financial institutions	2,143	1,770	373	21.1%
other entities	796	1,030	-234	-22.7%
impairment of interest income (net basis)	487	641	-154	-24.0%
interest expenses	**-9,277**	**-9,120**	**157**	**1.7%**
households	-5,764	-5,871	-107	-1.8%
corporates (private and public)	-1,353	-1,053	300	28.5%
financial institutions	-1,682	-921	761	82.6%
other entities	-440	-1,276	-836	-65.5%
Net fees and commission income	**3,625**	**3,482**	**143**	**4.1%**
Impairment losses (net basis)	**-2,162**	**-3,883**	**-1,721**	**-44.3%**
Operating expenses	**-10,334**	**-11,026**	**-692**	**-6.3%**
of which, employees expenses	-4,285	-4,125	160	3.9%
Profit (loss) after taxes	**3,107**	**1,183**	**1,924**	**162.5%**

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

Note: the issue concerning the banks' projected income statement for 2012 was fully answered by 16 banks. Data submitted by 1 bank, although partial (due to unavailability of detailed structure of all items of this report), are also presented in the report.

Net interest income based on operations with the corporate sector (nonfinancial companies) is expected to register the greatest absolute growth of Denar 1,204 million. Expenses based on impairment of financial assets (on a net basis) are expected to further decrease, in a total amount of Denar 1,721 million.

Enhancement of the volume of activities is also one of the top priorities for 2012, of most of the banks. The planned increase of assets for 2012 is projected at Denar 37,032 million (or by 11.2%), which is significant acceleration of the growth compared to the actual growth in 2011 (Denar 25,886 million or 8.5%). Most of the planned increase of assets is attributable to loans for which the banks projected a growth of Denar 35,800 million or 16.8% (in 2011, total loans increased by Denar 19.350 million or by 10%). Loans to nonfinancial entities and Denar loans are expected to have the largest share of the growth (54% and 40.7%, respectively, of the projected growth of total loans). Analyzing the maturity structure, long-term loans would have the greatest share in the projected increase of total loans (projected to make up 46.1% of the projected growth of total loans for 2012). In 2012, banks expect an increase of total nonperforming loans of Denar 1,255 million (6.2%), which is twice as low compared to the accrual growth in 2011 (most of the increase of nonperforming loans would be attributable to household nonperforming loans, particularly loans with currency component).

Banks plan to increase off-balance sheet activities in 2012, by Denar 2,592 million (or by 9%)[78], compared to the registered fall of off-balance sheet activities in 2011, by -6.1%.

According to the banks' plans, the increase of the array of products and services and/or launching of new ones is one of the most frequently planned activities for 2012. Thus 16 banks plan to launch a new credit product (new for the bank rather than for the market), 12 banks plan to promote new deposit product (new for the

[78] Two banks have no projections for such data.

bank rather than for the market), and some banks plan to introduce an absolute innovation on the Macedonian market. In addition, 10 banks plan to introduce/develop some of their services, primarily in the field of electronic and/or mobile (SMS) banking.

In 2012, banks plan to improve the access to services and products they offer on the market by opening 27 new branches (2 branches are to be closed) and installing 111 new ATMs. Moreover, 165 new employments are planned for 2012 (primarily for economists).

In 2012, most funding sources are planned to be provided through deposits. Thus the expected deposit growth is valued at Denar 25,513 million, or 10.3% (in 2011, the total deposits went up by Denar 16,380 million or by 7.1%). Household deposits are expected to make the greatest contribution to the growth (58.6% of the planned increase of total deposits), followed by Denar deposits (55.5% of the planned increase), i.e. short-term time deposits (share of 37.6%). In addition, banks plan to borrow based on credits or subordinated assets, in a total amount of Denar 11,004 million. Some banks also plan new issues of shares in the amount of Denar 1,229 million, and the reinvested earnings of 2011 is expected to equal Denar 2,146 million (roughly 80% of the earnings in 2011).

In 2012, banks expect certain deterioration of the solvent position, due to the projected faster enhancement of activities compared to the projected rise of own funds. Thus, in 2012, banks' own funds are projected to increase by Denar 3,795 million (or by 9%), while risk weighted assets would increase by Denar 36,284 million or by 14.5%. Consequently, the capital adequacy ratio will decrease by 0.8 percentage points and is projected to equal 16%.

A review of some of the **crucial banks' indicators** derived from survey data is given below:

Table 25 Projected indicators for banks' performances as of December 31, 2012

Indicator	31.12.2011	Planned as of 31.12.2012
Nonperforming loans/total loans (including financial institutions)	9.5%	9.5%
Coverage of nonperforming loans with calculated impairment losses and special reserves	111.4%	114.5%
Loans/deposits (including financial institutions)	86.0%	91.0%
Gap between assets and liabilities with currency component/own funds	21.2%	19.7%
Capital adequacy ratio	16.8%	16.0%
Tier 1 capital before deductible items/risk weighted assets	14.1%	13.1%
Capital and reserves/total assets	11.0%	10.3%
Return on average assets (ROAA)	0.4%	0.9%
Return on average equity (ROAE)	3.4%	8.3%

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

Banks answers concerning the planned changes in the risk management systems in 2012 are pretty diversiform and the conclusions cannot apply to the overall banking system. However, what is common for most banks are the plans for improvement of stress tests and information systems as a component of the risk management systems[79]. Thus, in 2012, some banks plan to introduce more extreme

[79] Eleven of total of seventeen banks plan to improve the stress tests, and thirteen banks will advance their IT systems as a component of the risk management system.

scenarios and assumptions in the stress tests, and to include some other risks that can materialize in the banks (such as the operating risk). Furthermore, banks plan to introduce a software for monitoring the service of clients' liabilities and to generate a set of reports thereon, to improve the impairment calculation system, to implement new integrated banking software, to change the information systems related to the needs of implementation of standardized approach in the determination of capital requirement for credit risk, monitoring of the operating risk and related to the ICAAP requirements (Internal Capital Adequacy Assessment Process).

Relevant amendments to the regulations derived from the Banking Law

In 2011, the amendments to the banking supervision regulations were directed towards improving the risk management framework and the exposure limits and for assessing the capital adequacy.

Liquidity risk management in banks

Taking into account the positive developments in the banks' liquidity position in the Republic of Macedonia, a new **Decision on managing banks' liquidity management** and **Instructions** was adopted for its implementation that allowed integrated monitoring of banks' liquidity, irrespective of the currency, by fulfilling a single liquidity ratio[80]. However, the obligation remains to comply with the liquidity ratio of up to 30 days i.e. 180 days, as a ratio between assets and liabilities that fall due in the next 30 days, i.e. in the next 180 days. Also, the treatment of time deposits in the calculation of liquidity ratio also changed. Instead of full involvement of time deposits in accordance with their residual maturity, the new decision allowed for time deposits that fall due in the next 30 i.e. 180 days to be included in the amount of 80%. This is the way to recognize certain stability level of time deposits, also confirmed through the recent developments of these deposits in the Macedonian banking system.

Risk management

In 2011, the National Bank adopted a new **Decision on risk management**. This Decision was developed taking into account the need of overcoming certain practical problems that arose from the implementation of the decision of 2007. Also, it further complied with the recent international risk management standards and practices. The decision introduced novelties such as redefinition of risk management concept with respect to its organizational setup; introduction of a definition of outsourcing which cleared all misunderstandings concerning this terminology and banks’ obligations required by the Decision; identification of basic elements of the process of internal identification and assessment of the banks’ capital adequacy ratio; definition of the scope of the reporting system of the bank for the purposes of precise measurement and monitoring of the operating risk; introduction of banks’ obligation to establish physical security standards for their employees, clients and property, etc.

Amendments to the exposure limit methodologies, capital adequacy methodology and credit risk management

[80] Under the methodology for determining the liquidity ratios adopted in 2009, the banks were required to comply with and to meet liquidity ratios separately for Denar positions and for foreign currency positions.

For the purposes of more precise determination of the risk arising from banks' claims on central governments and central banks of other countries, the National Bank amended the **Decision on exposure limits, Decision on the methodology for determining capital adequacy and the Decision on credit risk management.** Instead of considering the claims on and securities of governments and central banks of the EU member states, Switzerland, Canada, Japan, Australia, Norway and the USA as less risky claims, the amendments introduced the credit rating as a criteria for determining the risk of these banks' claims/investments. Only claims on/investments in securities of central governments and central banks that have at least investment credit rating, claim on such basis can be considered less risky so that they can: (1) be regarded as deductible items when determining exposure limits, (2) obtain lower risk weight when determining the credit risk weighted asset and (3) be classified in a less risky category.

3.2. Savings houses

The significance of the savings houses for the financial system in the Republic of Macedonia is minor.[81] The savings houses perform limited scope of activities, which are directed towards collection of household Denar deposits[82], lending to natural persons and in limited scope, to legal entities. The number of savings houses in 2011 remained unchanged.

In conditions of strong bank competitiveness and "expensive" bank operations standards, the uncertain economic sustainability of the savings houses still poses as the largest risk for this segment of the financial system. However, as a result of their marginal role in the financial system and their high capitalization, as well as the current deposit insurance scheme[83], no system danger from this type of institutions is expected.

3.2.1. Assets and liabilities structure of the savings houses

In 2011 the total assets of the savings houses terminated the downward trend and registered an increase of Denar 177 million, or 5.9% (compared to 2010, when the total assets decreased by 9.0%). Regardless, the share of the savings houses' assets in the total assets of the deposit institutions is marginal and it equals 0.9%.

[81] In 2011, the share of the savings houses equaled only 0.9% in the total assets, 0.3% in the total deposits of the natural persons in Denars and in Denars with FX clause and 1.4% in the total credits of the deposit institutions (both banks and savings houses).

[82] The savings houses may collect natural persons' deposits maximum to the double amount of their own funds.

[83] Pursuant to the Law on the Deposits Insurance Fund ("Official Gazette of the Republic of Macedonia" no. 63/2000, 29/2002, 43/2002, 49/2003, 81/2008 and 158/2010), the Fund insures the natural persons' deposits in banks, savings houses, foreign banks branch offices, in the amount up to Euro 30,000.

Table 26 Assets and liabilities structure of the savings houses

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 %
Cash and balances with NBRM	111	174	3.7%	5.5%	63	57.1%
Securities portfolio	39	92	1.3%	2.9%	53	137.0%
Placements to financial institutions	133	126	4.5%	4.0%	-7	-5.2%
Placements to nonfinancial institutions (net)	2,353	2,525	78.8%	79.8%	172	7.3%
Accrued interest	20	29	0.7%	0.9%	9	45.0%
Other assets	177	58	5.9%	1.8%	-119	-67.5%
Fixed assets	153	159	5.1%	5.0%	6	3.7%
Total assets	**2,986**	**3,163**	**100.0%**	**100,0%**	**177**	**5.9%**
Deposits of households	661	728	22.1%	23.0%	67	10.1%
Short-term borrowings	6	6	0.2%	0.2%	0	4.6%
Long-term borrowings	1,010	1,070	33.8%	33.8%	60	5.9%
Other assets	92	74	3.1%	2.3%	-18	-20.0%
Provisions	0.5	0.5	0.0%	0.0%	0	-7.6%
Equity and reserves	1,216	1,285	40.7%	40.6%	69	5.7%
Total liabilities	**2,986**	**3,163**	**100.0%**	**100,0%**	**177**	**5.9%**

Source: National Bank, on the basis of data submitted by the savings houses.
Note: The high increase of the net credits and the decrease of the other assets is due to a revision of commissions and accumulated amortization. By isolating the effect of these revisions, the growth of credits to non-financial entities amounts to Denar 30 million.

The increase in the household assets in 2011 is almost equally mirrored through the increased credits of non-financial entities, cash funds and financial assets held to maturity, primarily Treasury bills. The credits of nonfinancial entities dominate the structure of the total assets of the savings houses. The increase of gross credits in 2011 (in the amount of Denar 50 million) is almost fully due to the increase of the credits in two savings houses, which fully reflects the extremely high concentration with the savings houses.

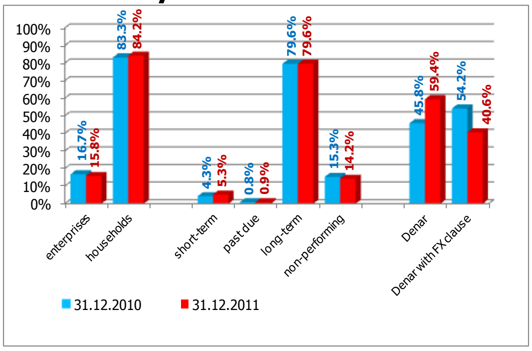
Table 27 CR3 indicator for the total assets, total deposits and gross credits of the savings houses

CR3 ratio	31.12.2010	31.12.2011
CR3 ratio for total assets	93.4%	93.8%
CR3 ratio for total deposits	94.0%	94.7%
CR3 ratio for total loans	92.6%	92.2%

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

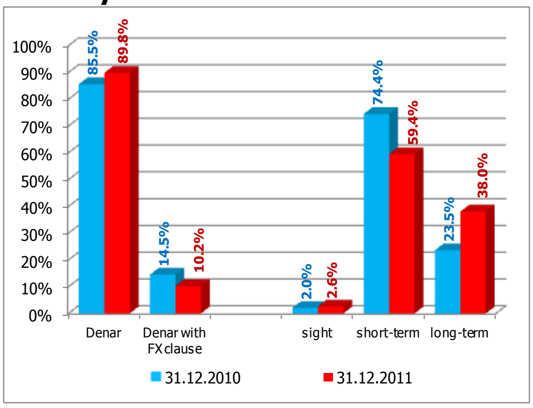
Long-term credits are dominant in the maturity structure of credits, while Denar credits have the highest share in the currency structure. The share of nonperforming loans in the total credit exposure of the savings houses equals 14.2% (less by 0.2 percentage points compared to 2010), with the largest portion (84.6%) being nonperforming

Figure 95 Credit structure of the nonfinancial entities by sector, currency and maturity



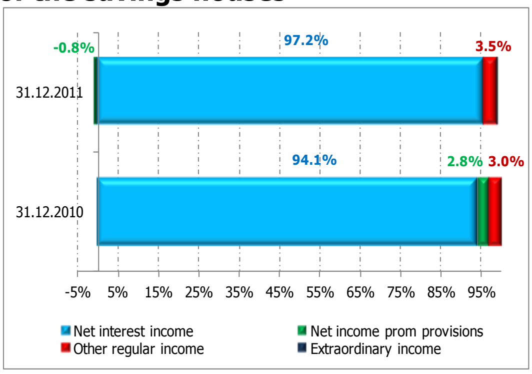
Source: National Bank, on the basis of data submitted by the savings houses.

Figure 96 Structure of the nonfinancial entities' deposits by currency and maturity



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

Figure 97 Structure of the total income of the savings houses



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

household loans, which corresponds to the sector structure of the credits.

The long-term borrowings from domestic banks and capital and reserves are the main sources of financing of the savings houses. The intensified long-term borrowing of the saving houses from the banks in 2011 is a result of the increase in the Denar loans with one savings house (of Denar 52 million, or 84.5%). Regardless, the long-term liabilities based on Denar credits with FX clause dominate (with 89.4%) in the total long-term liabilities towards banks.

In 2011 the household savings in the savings houses increased by Denar 67 million, or 10.1%. The increase is fully due to the increase of the long-term Denar deposits which increased by Denar 119 million, or 83.5% (primarily with two savings houses), which further increased their share in the household total deposits. On the other hand, the short-term Denar deposits went down by Denar 36 million, or 8.9% (primarily with one saving house).

3.2.2. Profitability

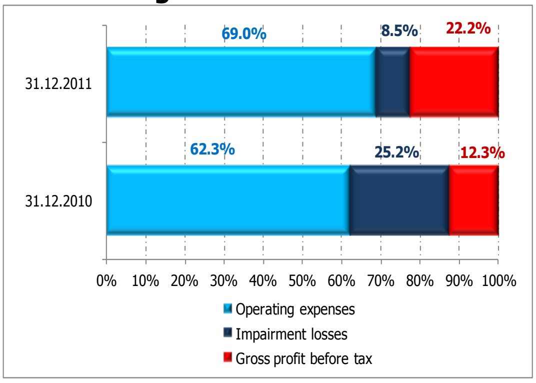
In 2011, the savings houses showed larger profit compared to the previous year by Denar 31 million (or 83.5%), which corresponds to the intensification in their activities. The profit registered by the savings houses in 2011 equals Denar 67 million, with seven out of eight savings houses in total, registering profit (unchanged situation in comparison with 2010).

The total realized income of the savings houses (the total regular income[84] and extraordinary income) increased minimally (by 0.5%) compared to 2010. In 2011 there were more substantial changes in the structure of the regular income as a result

[84] The total regular income includes: net interest income, net income from commissions and other regular income (net income from exchange rate differentials, income based on collected previously written-off claims and income on other bases).

of the correction of certain accounting entries[85].

Figure 98 Utilization of the total income of the savings houses



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

In 2011, the largest portion of the total income of the savings houses has been used for operating costs coverage[86]. As a result of the higher increase in the operating costs (of Denar 22 million, or 11.3%) compared to the increase in the total income, the part of the total income used for operating costs coverage enlarged. The largest portion (58.8%) of the increase in the savings houses' operating costs accounts for the labour costs. The only contributor to the increase in the savings houses' profitability level was the substantially lower **impairment** (by Denar 51 million, or 66.0% compared to 2010, concentrated mainly with one savings house).

Table 28 Indicators for the savings houses profitability and efficiency

Indicators	31.12.2010	31.12.2011
Rate of return of average assets (ROAA)	1.2%	2.2%
Rate of return of average equity (ROAE)	3.1%	5.4%
Cost-to-income ratio	62.4%	69.1%
Non-interest expenses /Total regular income	65.4%	72.5%
Labour costs / Total regular income	29.3%	33.3%
Labour costs / Operating expenses	47.0%	48.2%
Impairment losses of financial and non-financial assets / Net interest income	26.8%	8.8%
Net interest income/ Average assets	9.3%	9.8%
Net interest income / Total regular income	94.2%	97.3%
Non-interest income / Total regular income	5.8%	2.7%
Net interest income / Non-interest expenses	143.9%	134.1%
Financial result / Total regular income	12.0%	21.8%

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

The main indicators for the profitability of the savings houses in 2011 were under the influence of the higher profit.

[85] The net interest income augmented by Denar 11 million, or 3.8%, while the net income based on commission reduced by 128.3%, opposite to the movement in 2010, when the net income from commission registered triple rise. The increase in the net income from commissions in 2010 is mostly due to the amendments to the Law on Obligations from February 2010, i.e. the limitation of the upper amount of the lending contractual and penalty interest rate. In such conditions, the savings houses introduced new category of commission in the crediting area (named "management commission"), which is actually an income based on commission. In 2011, the savings houses began presenting this commission correctly. Hence, the increase in the income in 2010 and 2011 is a result of the same reason - introduction of new type of commission, while the differences in the structure in these two years is a result only of different presentation of this commission in the savings houses' Income Statement.

[86] The operating costs include the costs for employees, depreciation, general and administrative costs, deposit insurance premiums and other expenditures, except extraordinary expenditures.

3.2.3. Credit risk

Having in mind the activities they perform, the credit risk is the main quantifiable risk the savings houses are exposed to in their operating activities. In conditions of faster increase in the total credit exposure, and a decrease in the exposure with higher risk (nonperforming loans), in 2011 the credit risk the savings houses are exposed to lowered. Compared to the banking system, the indicator for the credit portfolio quality indicates higher credit exposure risk with the savings houses. However, the high amount of the savings houses' own funds compared to their credit portfolio, i.e. the high capitalization compared to the undertaken risks in the operating activities, provides certain assurance as for the possibilities for covering new losses arising from the credit risk.

Table 29 Indicators for the credit portfolio quality of the savings houses

Indicator	31.12.2010	31.12.2011
Average level of risk	11.2%	11.2%
* for legal entities	13.4%	14.7%
* for households	11.5%	11.5%
Share of „C", „D" и „E" in total credit risk exposure	15.0%	13.8%
Share of non-performing loans in total loans	14.8%	13.7%
Share of non-performing loans - legal entities in total loans - legal entities	13.5%	13.9%
Share of non-performing loans - households in total loans - households	15.9%	14.3%
Share of non-performing loans in total loans (excluding banks and other financial institutions)	15.5%	14.2%
Share of past due loans in total loans	0.8%	0.9%
Share of past due loans - legal entities in total loans - legal entities	0.5%	1.0%
Share of past due loans - households in total loans - households	0.9%	0.9%
Coverage of „C", „D" и „E" with total calculated impairment losses and special reserves for credit risk	74.5%	81.0%
Coverage of „C", „D" и „E" with impairment losses and special reserves for „C", „D" и „E"	62.2%	66.1%
Coverage of non-performing loans with impairment losses and special reserves for non-performing loans	63.0%	68.1%
Coverage of non-performing loans with total impairment losses and special reserves for credit risk	129.2%	117.1%

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

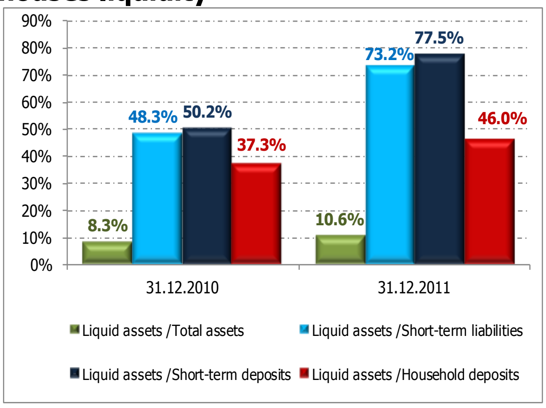
In 2011, the basic indicators for the credit portfolio quality of the savings houses improved. The average level of risk of the savings houses' portfolio remained unchanged compared to 2010. The nonperforming loans went down by Denar 29 million (or by 6.6%), and accordingly their share in the total credit exposure equaled 13.1% (decrease of 1.3 percentage points).

Although the rate of the nonperforming loans is relatively high (higher than the rate with the banks), the savings houses, fully cover the nonperforming loans with the impairment and the special reserve. Additionally, in case of materialization of the scenario for full uncollectibillity of the exposures in the risk categories C, D and E, 34.2% of the savings houses' own funds will be necessary. However, even in that case, the capital adequacy ratio would remain high and almost four times over the legal minimum (from the current 47.6% to 31.3%).

3.2.4. Liquidity risk

In 2011, the savings houses maintained their liquidity on satisfactory level, which was higher compared to 2010. The stable liquid position with the savings houses can be perceived also through the realization of the prescribed liquidity ratios for both maturity segments.

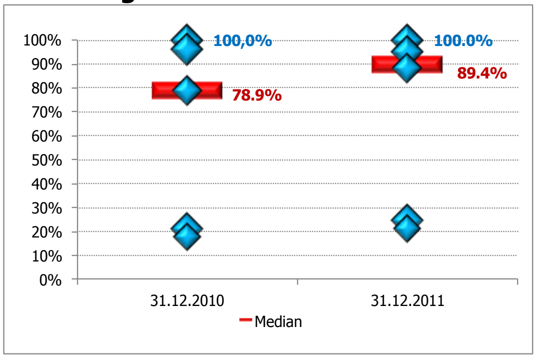
Figure 99 Indicators for the savings houses liquidity



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

In 2011, the savings houses' liquid assets equaled Denar 335 million, which is an increase of Denar 88 million (or 35.6%) compared to the previous year. The increase in the liquid assets influenced on its higher share in the total assets. Its growth has been almost equally divided between the placements in Treasury bills and cash funds. As a result, the coverage of the short-term deposits, as well as the household total deposits with liquid assets substantially improved. The coverage of the short-term liabilities with liquid assets also registered annual increase (of 24.9 percentage points), given the decrease in the short-term liabilities (by 10.5%), compared to the increase in the savings houses' liquid assets.

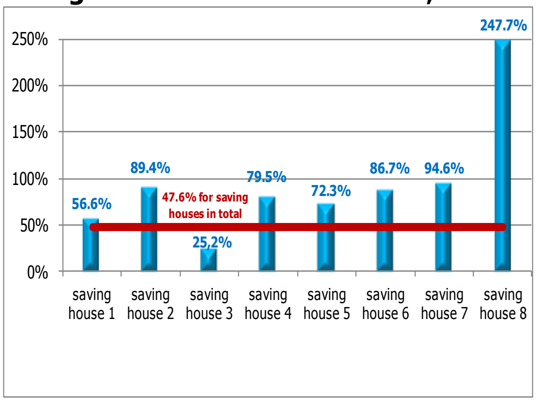
Figure 100 Share of the twenty largest depositors in the total deposit base of the savings houses



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

The deposit concentration in the savings houses (measured according to the share of the twenty largest depositors in the total average deposit base of each savings house) is high and in 2011 additionally increased. The share of the twenty largest depositors in the total deposit core of the savings houses ranged within the interval of 20.9% to 100.0%, while the median has been positioned at high 89.4%. Moreover, only three savings houses register share lower than 25.0%, while with all other savings houses the share of the twenty largest depositors exceeds 85.0%. Despite the fact that such high deposit concentration means high liquidity risk, the share of the deposits in the total assets with these savings houses is relatively low (with exception to one savings house).

Figure 101 Capital adequacy ratio of the savings houses on December 31, 2011



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

3.2.5. Insolvency risk

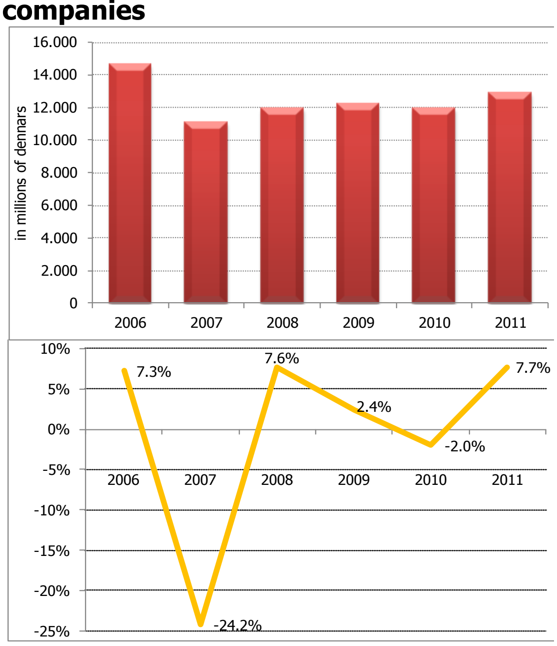
The solvency of the savings houses is extremely high and in 2011 it additionally improved. The capital adequacy ratio of these deposit institutions reached 47.6% (the annual increase equals 4.6 percentage points), which is almost six times higher than the legally prescribed minimum of 8.0%. The type and the volume of the activities the savings houses perform also had large influence on this movement. With the expetion to one saving house, the capital adequacy ratio remained above 50,0% with all other saving houses.

4. Nondeposit financial institution

4.1. Insurance sector

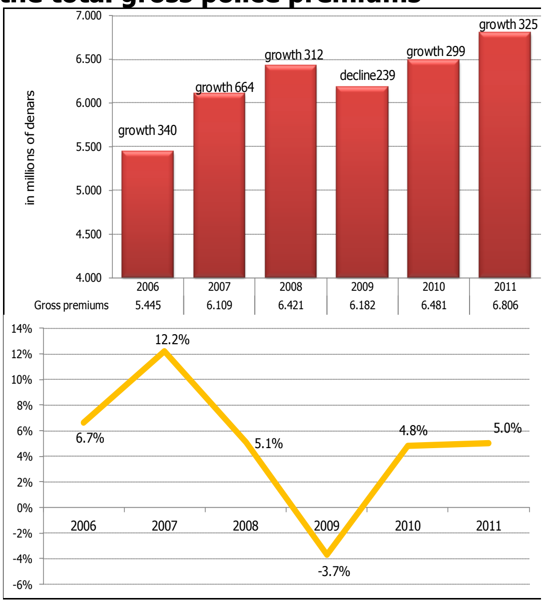
The insurance sector is the third segment in the financial system and it takes only 3.4% of its total assets. The market concentration with this sector is moderate, since no company has share higher than 20% in the total gross police premium. During the financial crisis, the insurance sector preserved its stability. Compared to 2010, when the assets of this sector remained almost unchanged, in 2011 the Macedonian insurance market showed an upward trend, which is due to the larger offer in the life insurance segment. Also, the activities for finalization of the regulations framework and strengthening of the supervision on this sector continued.

Figure 102 Balance (above) and growth (below) of the assets of the insurance companies



Source: Insurance Supervision Agency of RM and internal calculations of NBRM.

Figure 103 Balance and annual absolute (above) and relative (below) increase in the total gross police premiums



Source: Insurance Supervision Agency of RM and internal acts of NBRM.

4.1.1. Movements in the insurance sector

The insurance sector of the Republic of Macedonia consists of[87] fifteen insurance companies (four of which[88] are life insurance companies), seventeen insurance brokerage companies and five insurance agencies.

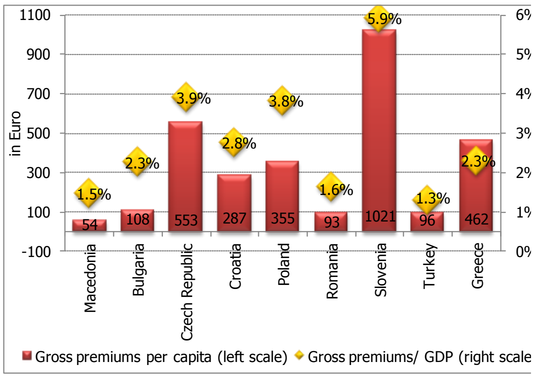
At the end of 2011, the assets of the insurance companies went up by Denar 923 million (7.7%) and it reached Denar 12,886 million (Annex no.6)[89]. The assets growth is fully due to the financial investments of the insurance companies, which registered annual increase of 26.1%. The claims based on insurance and reinsurance went down by 12.9% (2010 - 6.3%), which is a result of the improved legal framework[90] and higher collection of insurance policy sale premiums. **The main generator of the increase in the insurance companies' liabilities was the technical reserves, which increase annually by Denar 498 million, or 8.3%.**

In 2011, the gross police premiums of the insurance sector were continuously mounting. Compared to 2010 when the gross police premiums for the non-life insurance were the growth generator (with share of 81.9%) in 2011 the importance of the gross police premiums for life insurance increased, contributing with 43.7% in the growth of the total gross police premiums.

The growth intensification[91] of the gross police premiums occurred in conditions of decrease in the prices with certain classes of nonlife insurance (which influenced

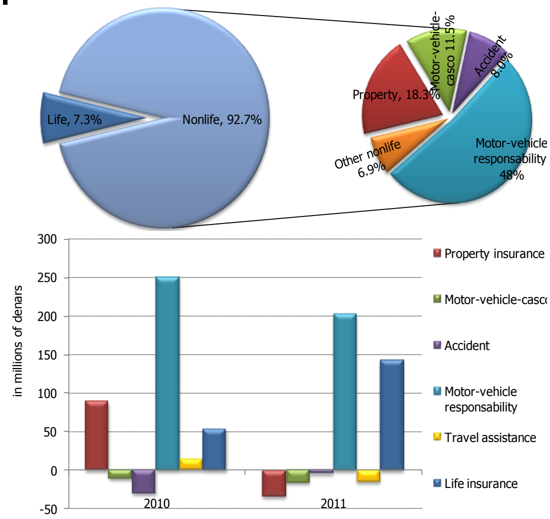
[87] In 2011, two new life insurance companies were established, as well as two brokerage companies and one insurance agencies.
[88] These four companies fail to encompass one company performing life insurance activities, together with the nonlife insurance.
[89] After the report was prepared, new data on the total assets of the insurance companies were submitted, primarily on their structure, which, because of the moment of their submission, are not included in the analysis.
[90] In 2010, the Insurance Supervision Agency adopted the Rulebook for the evaluation of the on-balance sheet asset items and preparation of the business balances, which was enforced from January 2011.
[91] Although the growth acceleration of the gross police premiums is small (0.2 percentage points), having in mind the effect of the competitiveness between the insurance companies and accordingly, the decrease in the prices of their services, the real growth of the gross police premiums, are actually higher.

Figure 104 Development of the insurance sector in the Republic of Macedonia and in certain regional countries



Source: "CEA Statistics No. 44".

Figure 105 Structure and annual absolute increase in the gross police premiums at the end of 2011



Source: Insurance Supervision Agency of RM and internal calculations of NBRM.

substantially for increasing the number of sold policies) and intensified activity with the life insurance.

The development degree presented through the density degree (gross police premium per capita) augmented by 5.0%, while according to the penetration degree (share of the gross police premiums in GDP) registers no change for the third consecutive year. The penetration degree in the Republic of Macedonia remains the lowest compared to the regional countries, except Turkey. At the end of 2011 the density degree in the Republic of Macedonia totaled Denar 3,308 (Euro 54). The comparison with the same indicator for 2010 (Euro 51), parallel to the higher number of sold polices points to larger interest for insurance in the Republic of Macedonia. The indicators for the development are actually even higher, having in mind the price fall given the increased number of insurance polices.

The nonlife insurance is the generator of the total gross police premiums, although the increase in the share of the gross police premiums with the life insurance of 1.8 percentage points compared to 2010 is also worth mentioning.

In the nonlife insurance, only the gross police premiums for the compulsory motor third party liability insurance registered an increase (of Denar 202 million, or 6.6%). This insurance class registers an increase, mainly because of the rise in the number of newly registered vehicles due to the easier import. Except that, the import of vehicles (with foreign registration plates), as well as for the previously noninsured vehicles, favorability arising from the reduced price of these policies have been used.

The life insurance has been seizing the insurance market in the Republic of Macedonia with annual increase in the gross police premiums of Denar 142 million, or 40%. This increase is due to the higher number insurance companies and market mediators, as well as the progress in the households insurance culture.

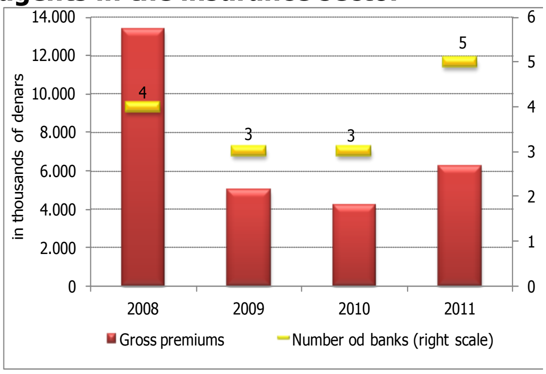
Table 30 Concentration degree measured through the gross police premiums

	Herfindahl-index			
	2008	2009	2010	2011
Insurance sector	1,303	1,237	1,237	998
Nonlife	1,491	1,356	1,250	1,136
Life	4,181	4,496	4,777	8,199
	ЦР5			
	2008	2009	2010	2011
Insurance sector	73.8%	70.7%	69.8%	60.0%
Nonlife	76.5%	73.9%	73.1%	65.0%
Life	/	/	/	100%

Source: Insurance Supervision Agency of RM.

In 2011, the downward trend of the market concentration of the insurance companies measured through the gross police premiums of the sector continued. The Herfindahl index is on moderate level and it equaled 998 points, while the market share, measured through the gross police premium of the five largest companies equals 60%. Market leaders are four non-life insurance companies, having over 10% individual share in the gross police premiums in the insurance sector. Regarding the life insurance, two companies dominate (89.6%) the structure of the gross police premiums at the sector level, which is a reason for extremely high indices values used for measuring the concentration of this insurance class.

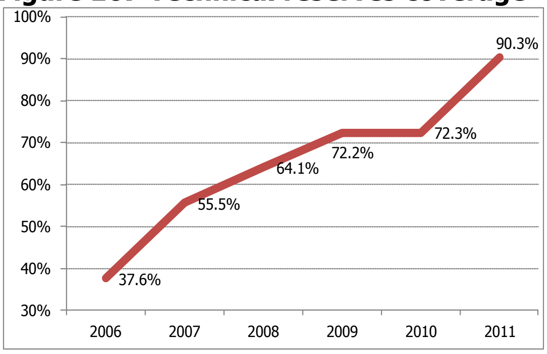
Figure 106 Gross police premiums through banks and number of banks - agents in the insurance sector



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

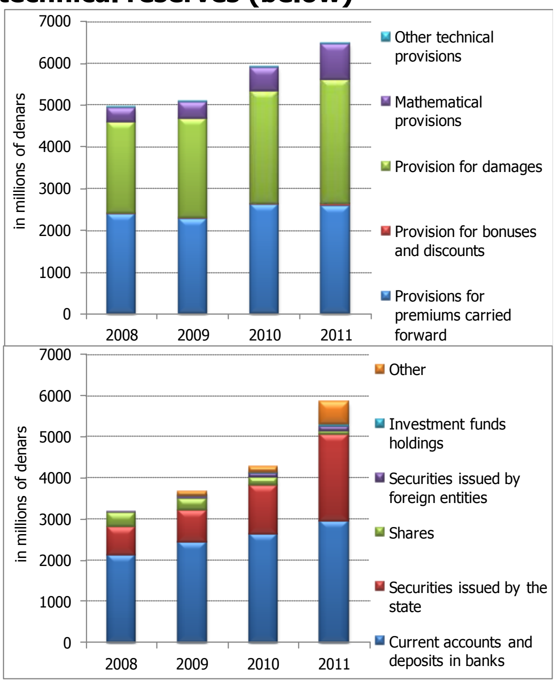
In 2011, the increased gross police premiums in the insurance sector were result of the direct sale (56.2%), sale through insurance agencies (23.1%) and sale through insurance - brokerage companies (20.7%). The share of the banks as insurance agents in the total gross police premiums of the insurance sector, is still very low (0.1%). However, the high annual increase in the gross police premiums (exclusively for nonlife insurance) of 47.7% indicate possibility for increasing the banks - insurance sector connection, i.e. for developing the so-called bancassurance in the Republic of Macedonia.

Figure 107 Technical reserves coverage



Source: Insurance Supervision Agency of RM and internal calculations of NBRM.

Figure 108 Technical reserves structure (above) and assets covering the technical reserves (below)



Source: Insurance Supervision Agency of RM and internal calculations of NBRM.

4.1.2. Risks in the insurance companies operations

The upward trend of the technical reserves[92] in 2011 was followed by the increase in the assets covering the sector's technical reserves of (37.4%)[93]. The liquidity of the technical reserves, i.e. their coverage with adequate assets increased by substantial 18 percentage points and reached 90.3%. It is expected that the full coverage of the technical reserves, missing for several years, will be overcome soon, primarily as a result of the new regulations[94] adopted by the Insurance Supervision Agency in 2011.

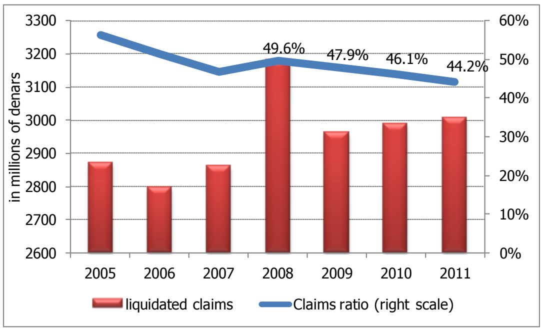
The structure of the investments of the assets covering the technical reserves is dominated by the bank deposits (50.4%) and securities issued by the Government (35.8%).

92 The insurance companies are required to allocate technical reserves created to permanently ensure execution of the liabilities of insurance agreements. They consist of the following: reserves for premiums carried forward (which refer to the residual period to the expiration of the insurance agreement), reserves for bonuses and omissions, provisions for damages (based on estimated liabilities of the company), mathematical reserves (with life insurance) and other technical reserves). In 2010, the Supervision Insurance Agency adopted a Rulebook for the minimum standards for calculating the technical reserves, the implementation of which began on January 1,2011.

93 The assets covering the technical reserves are those used for covering the future liabilities of the insurance company based on insurance agreements, as well as the possible loses from the insurance operations, for which the insurance company is obliged to allocate assets for technical reserves. These assets should be in the amount at least equal to the value of the technical reserves.

94 In April 2011, the Insurance Supervision Agency adopted a Rulebook on the types and the characteristics of the assets covering technical provisions and the assets covering mathematical reserve, as well as detailed placement and limitation on these investments, and their valuation.

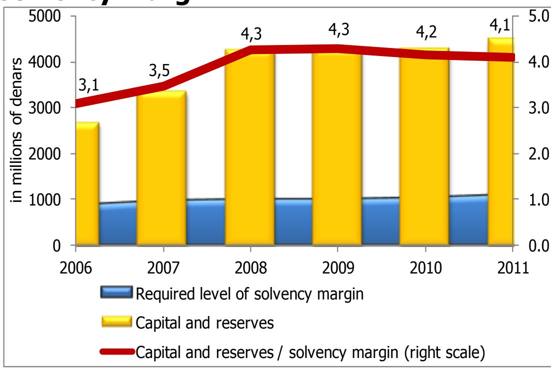
Figure 109 Claims ratio and liquidated claims



Source: Insurance Supervision Agency of RM and internal calculations of NBRM.

Favorable movement also with the damage coefficient was registered (which is a correlation between the liquidated damages based on concluded insurance contracts and gross police premiums). Its value in 2011 reduced by 1.9 percentage points, which was due to the smaller increase in the paid damages (of only 0.6%), compared to the gross police premiums growth (5.0%).

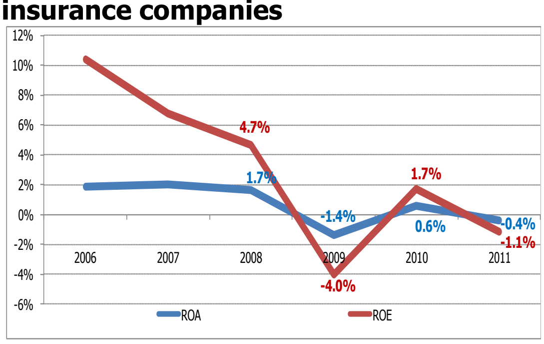
Figure 110 Capital and reserves, required level of solvency margin and share of the capital and reserves in the solvency margin



Source: Insurance Supervision Agency of RM and internal calculations of NBRM.

The solvency of the insurance sector is high. Namely, the capital and reserves exceed the required solvency margin level by 4.1 times[95]. In 2011, the total capital of the insurance companies increased by 5.1%, while the necessary solvency margin augmented by 6.6%.

Figure 111 Profitability indicators of the insurance companies



Source: Insurance Supervision Agency of RM.

The profitability of the insurance companies substantially deteriorated in 2011 compared to 2010 (Annex 7). Two nonlife insurance companies and three life insurance companies registered an operating loss, causing a loss at the level of the insurance sector in the amount of Denar 554 million. The fact that this loss is mostly due to the negative technical reserve, which equaled Denar 508 million[96], is concerning. The nonlife insurance companies had dominant part in the negative technical result (88.3%). The registered loss at the level of the insurance sector, beside the negative technical result, is due also to the expenses arising from the value adjustments of the claims based on insurance premiums - impairment and write-off[97], mostly by the nonlife insurance companies.

[95] The solvency margin is calculation category which shows minimal capital level to be managed by the insurance companies, and it is calculated by applying the following prescribed methods: (1) with nonlife insurance the premium rate method or damage rate method is applied (depending on that which of these two methods will give higher result); (2) regarding the life insurance by applying single methodology prescribed with the Law on Insurance Supervision.

[96] The technical result of the operations of the insurance companies is a result of the performing of their basic activity - insurance - (income from gross police premiums reduced by net expenses for implementation of the insurance and net expenses for damages).

[97] In May 2011, the Insurance Supervision Agency adopted a regulation on the form and the contents of the on-balance sheet asset items, the implementation of which commenced in the second half of 2011.

Important changes in the legal framework referring to the insurance and planned future activities for introduction of Solvency II

In April 2011, Law on Amending the Insurance Supervision Law was made:

- strengthening of the provisions referring to the assessment of the adequacy of the persons intending to establish insurance company. This provision thwarts the possibility for using a loan-based capital and that are subject of any other encumbrance for establishing insurance companies;
- deletion of the limitation for investment in real estate. The insurance companies can invest to 60% of the capital in real estate, as well as in capital investments in other insurance companies, financial institutions and other legal entities, with the individual investment of the insurance company in one real estate may not exceed 1o% of the capital of the company;
- specification of the provisions regarding the allowed investments in assets covering the technical reserves, giving more precise and more acceptable classification of the institutional investors, enabling preparation of more detailed bylaws for investments in assets covering the technical reserves and for liquidity coefficients. The amendments envisage the insurance companies to notify the Agency on the use of derivative financial instruments, as well as on the possible deviations from the envisaged limits;
- larger information and protection of the insured;
- specification of the items included in the calculation of the capital adequacy of the insurance companies;
- terminological harmonization of the maintenance of the trade books and preparation of the financial statements and internal audit provisions.

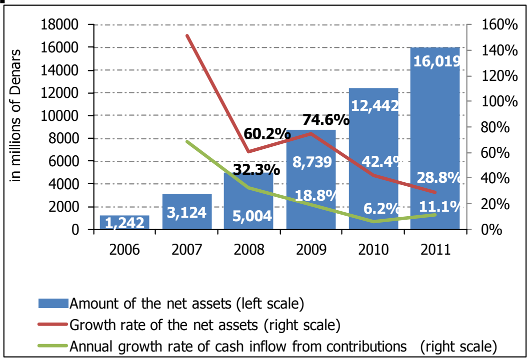
Part of the amendments of the Law is intended for removal of the insurance companies' obligation to allocate profit reserves on two bases, which as trade companies, according to the Law on Trade Companies, are obliged to allocate general reserve requirement, and according to the Insurance Supervision Law, as insurance companies, they are required to allocate safety reserves. Having in mind the identical character of both reserves from the aspect of the objective and the manner of allocation and their use, the amendments enabled the insurance companies to allocate only of the reserve prescribed in the Insurance Supervision Law.

The insurance sector of the Republic of Macedonia fully applies the Solvency I, while the introduction of the risk-based supervision and Solvency II is emerging. In 2011, joint task group of the Insurance Supervision Agency and the Ministry of Finance was established, for the purposes of the preparation of the draft version of a new law incorporating the regulation of the Solvency II. However, neither the insurance companies from our neighboring countries are not fully prepared for Solvency II, starting from Bulgaria, Albania and Montenegro, which are in different stages. The advantage of such slower dynamics of evaluation of Solvency II should be looked for in the possibility to use the experience of the application of this framework by the developed insurance markets in the world, as well as timely elimination of the identified practical problems.

4.2. Fully funded pension insurance

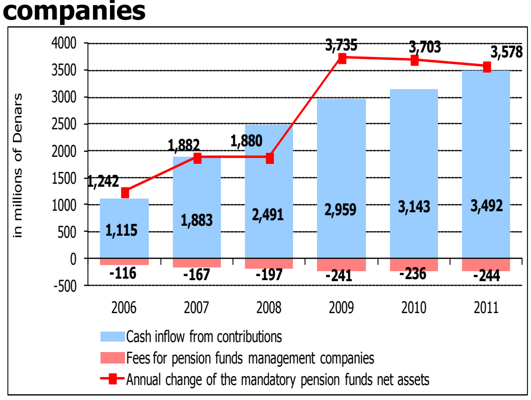
The fully funded capital insurance is the second largest segment, although still playing small role in the financial system of the Republic of Macedonia. In 2011, this segment continued to mount, although with smaller intensity compared to the previous year. The sale of the investments in government bonds of several lower credit rated EU countries and increased investments in the bonds of the Republic of Macedonia and stakes of foreign investment funds, are the main generator of the net assets and the net gain in the pension funds. The investments in securities with higher risk is evident also in 2011, which increases the risk of larger capital losses (realized and nonrealized) of the pension funds. The Supervision Agency for Fully Funded Pension Insurance in 2011 continued to strengthen the supervisory capacities, and at the end of the year, the project for introduction of risk assessment supervision commenced.

Figure 112 Net assets of the obligatory pension funds



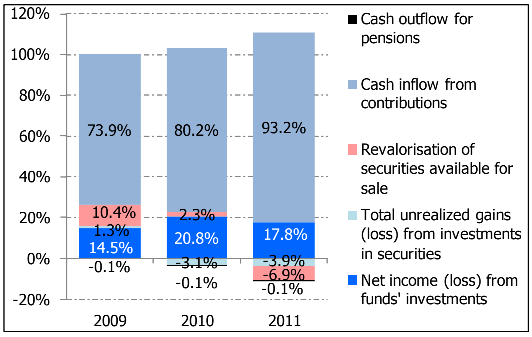
Source: Supervision Agency for Fully Funded Pension Insurance.

Figure 113 Annual change of the net assets and balance of the paid contributions of the members and fees for pension funds management companies



Source: Fully Funded Pension Insurance Agency.

Figure 114 Structure of the increase in the net assets of the obligatory pension funds



Source: Revised financial statements of the mandatory pension funds for 2011.

4.2.1. Mandatory fully funded pension funds

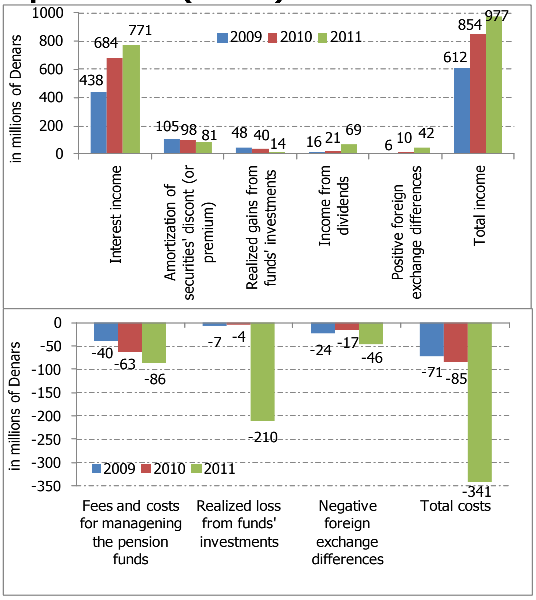
The number of members of the obligatory pension funds continued to mount. In 2011, the mandatory funded pension funds increased by 28,969 new members (in 2010: 28,906 persons), which contributed towards membership growth of 14.6%, compared to 2010. The annual growth rates show certain deceleration in the increase in the number of members (increase of 17.1% in 2010). On the other hand, the number of employable population declined by 1.6%, so the coverage of the employable household with the mandatory fully funded pension insurance increased by 3.4 percentage points and at the end of the year it equals 24.2%[98].

The increase in the net assets[99] of the pension funds is almost fully due to the paid contributions, which incremented by Denar 364 million, or 11.1%. However, in 2011, their growth slowed down, which is exclusively due to the effects of the funds' asset investment (negative revaluation of the securities available for sale and downward movement of the net investments gain), while the cash outflow based on paid retirements remained almost unchanged, which is a result of the still small number of pensioners having been paid pension compensation[100].

The revaluation of the securities available for sale in 2011 is negative and it equals Denar 247 million (in 2010 it was positive and equaled Denar 84 million). Its negative amount is mostly due to the revaluation of the investments of both funds in the Euro bonds of the Republic Macedonia.

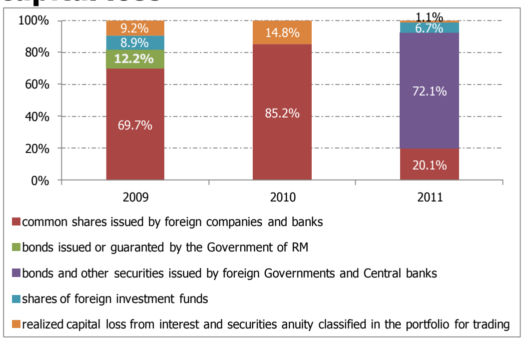
[98] The coverage of the employable natural persons with mandatory and the voluntary fully funded pension insurance, jointly equals 31.6%.
[99] Pursuant to Article 83 of the Law on Mandatory Fully Funded Pension Insurance ("Official Gazette of RM no. 29/2002, 85/2003, 40/2004, 113/2005, 29/2007, 88/2008, 48/2009, 81/2009, 50/2010, 171/2010 and 36/2011), the net assets of the pension fund are determined as a difference between the pension fund's asset value and the liabilities of the pension fund, except the liabilities to the members of the pension fund.
[100] The largest number of persons being members of the mandatory pension funds are at age of 27 (men and women), while the average age of the members is 30 (men) and 31 (women).

Figure 115 Income (above) and expenditures (below) from investments



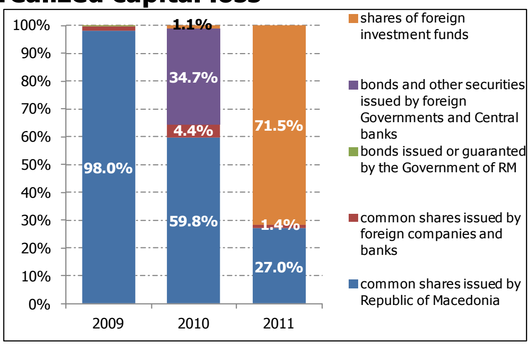
Source: Revised financial statements of the mandatory pension funds for 2011.

Figure 116 Structure of the realized capital loss



Source: Revised financial statements of the mandatory pension funds for 2011.

Figure 117 Structure of the non-realized capital loss



Source: Revised financial statements of the mandatory pension funds for 2011.

The decrease in the net investment gain in 2011 equals Denar 133 million, or 17.4% and it is **a result of the substantial increase in the realized capital loss** (of Denar 206 million). The realized capital loss is almost fully due to the loss arising from the sale of the government bonds of three EU member states (72%)[101] and the shares issued by foreign issuers and stakes in foreign open investment funds (26.8%)[102]. Although the investments in the foreign government bonds at the end of 2010 participate with less than 3% in the total investments of the mandatory pension funds, their sale almost fully determined the decrease in the net gain in 2011. Namely, the total expenditures of the funds registered more than triple increase i.e. Denar 257 million, while the total investment income[103] augmented by Denar 123 million, or 14.4%.

The funds' net assets are decreasing also because of the net nonrealized loss from securities investment, which augmented by Denar 25 million, i.e. 21.9%. The nonrealized loss mostly arises from the investments in stakes in foreign open investment funds (over 70%) and investments in domestic common shares (27%). The non-realized loss with the domestic common shares corresponds to the decrease in the Macedonian stock exchange index of 13.3% registered in 2011.

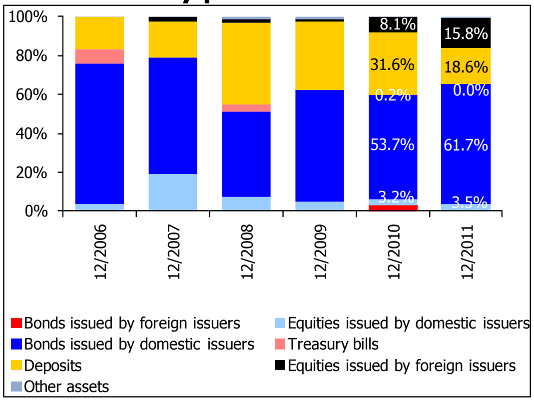
All these changes also contributed towards decrease of the funds' net gain (including also the net nonrealized loss) of Denar 159 million, or 24.2%. **Thus, on December 31,2011, the net gain (together with the net nonrealized gain/loss) of the mandatory pension funds equaled Denar 497 million (in 2010 it equaled Denar 655 million).**

[101] Almost 63% of this loss arises from the sale of the government bonds of Greece.

[102] The loss based on the foreign common shares is mostly a result of the shares traded on the Frankfurt Stock Exchange (60% of the realized loss from the sale of the foreign shares), which is corresponding to the decrease in the German stock exchange index in 2011 (the severest drop of this index was registered in August 2011).

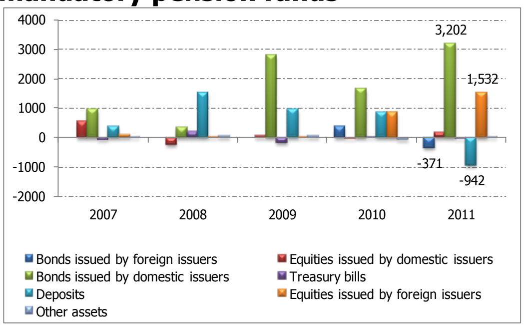
[103] The increase in the total income mostly arises from the rise in the interest income, participating with almost 80% in the total income structure.

Figure 118 Structure of the assets of the mandatory pension funds



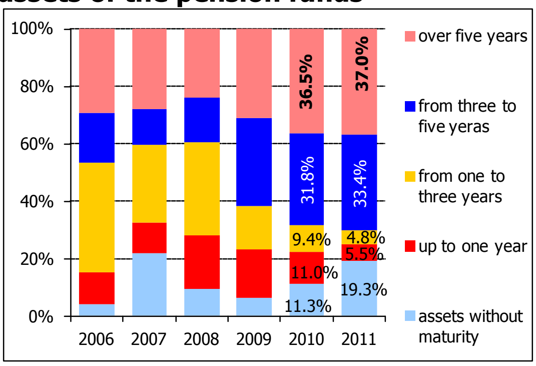
Source: Agency for Supervision of Fully Funded Pension Insurance.

Figure 119 Annual absolute change of individual asset categories of the mandatory pension funds



Source: Agency for Supervision of Fully Funded Pension Insurance.

Figure 120 Maturity structure of the assets of the pension funds



Source: Agency for Supervision of Fully Funded Pension Insurance.

As a result of the sale of part of the pension funds portfolio and the investments in new instruments, on December 31, 20100 certain changes in the assets structure of the mandatory pension funds are registered. The investments in bonds issued by the Government of the Republic of Macedonia, which are still the largest part of the funds' assets, increased by Denar 3,202 million, or 47.9%. As a result of the sale of bonds issued by the governments of the European Union member states, this type of investments is no longer present in the pension funds' asset structure.

However, further intensification in the ownership securities investments by foreign issuers (for more than two and a half times) was registered, given the simultaneous decrease in the investments in deposits, which is in line with the amendments to the Law on Mandatory Fully Funded Pension Insurance in 2010[104]. The increase in the foreign ownership securities was mostly influenced by the investments in stakes in foreign investment funds[105], which are fully held for trading. The intensified investments of the pension funds in securities is adverse to the investment funds trend, which compared to the pension funds, in 2011 implemented more conservative investment policy.

The increase in the investments in bonds issued by the Government of the Republic of Macedonia and in foreign ownership **securities, caused changes also in both the maturity and currency structure of the funds' assets.** The share of the investments in assets with no defined maturity (stakes in investment funds and shares) increased by 8.1 percentage points, compared to the decrease in the assets with one-year maturity (deposits, cash and receivables) and assets

[104] The amendments allow lower percentage of the pension funds assets that can be deposited as bank deposits (from 60% to 30%).

[105] 90.3% of the total investments in foreign ownership securities are invested in stakes in foreign investment funds. Dominant share of these investments are invested in ISHARES funds in different countries, which are managed and are part of the BlackRock, USA. The investment policy of these funds is such that yield realized from the invested funds replicate the yield that would be realized on certain stock exchange indices.

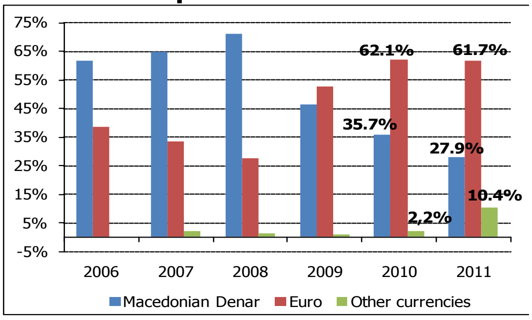
with maturity of one-to-three years (deposits) of 5.5 and 4.6 percentage points, respectively.

As for the currency structure of the pension funds' assets, further decrease in the share of the Denar assets was registered (of 7.8 percentage points), for the account of the larger share of the Dollar investments[106] (investments in stakes in the investment funds). Despite the certain decrease in the Euro investments, they remain dominant in the currency structure (48% of the total funds' investments in Euros are in the Eurobonds of the Republic of Macedonia).

The downward movements on the international markets influenced also on the yield of the pension funds investments. The realized annual nominal yield rate continued to decrease and at the end of the year it equaled 1.9%[107].

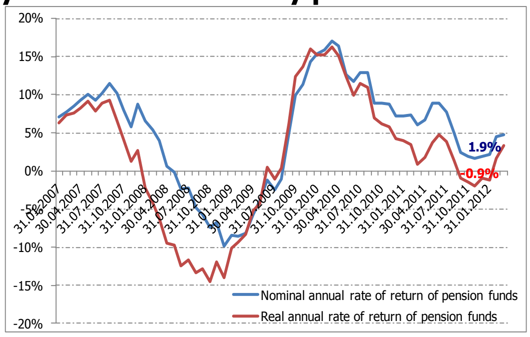
On the other hand, the three-year yield rates[108] move upwards. On December 31,2011, the five-year nominal yield rate (covering the period from the commencement of the reformed pension system until the end of 2011) equals 4.1%.

Figure 121 Currency structure of the assets of the pension funds



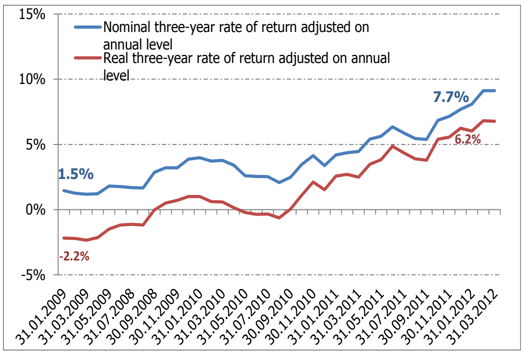
Source: Agency for Supervision of Fully Funded Pension Insurance.

Figure 122 Annual nominal and real yield of the mandatory pension funds



Source: NBRM, based on data submitted by the Agency for Supervision of Fully Funded Pension Insurance.

Figure 123 Three-year nominal and real yield of the mandatory pension funds



Source: NBRM, based on data submitted by the Agency for Supervision of Fully Funded Pension Insurance.

[106] The total investments in US Dollars (shares and stakes in investment funds) take 13.7% of the total investments in foreign currency.

[107] The yield of the mandatory pension fund is percentage change between the value of the accounting unit on the last day of the month and the value of the unit on the last day of the month preceding the 12, 24 or 36-month period, depending on the specific case.

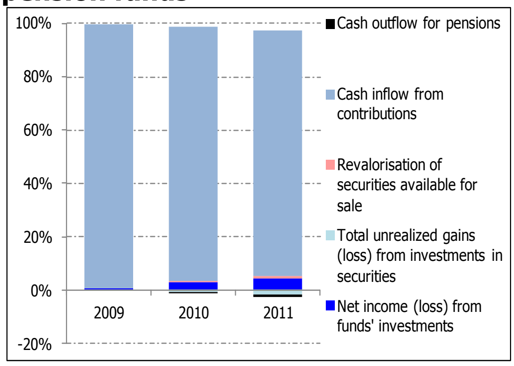
[108] The annual, three-annual and the five-annual nominal yield rate is calculated on the basis of weighting of yield rates of individual pension funds with their net assets. The real yield rate of the pension funds for certain period is obtained as a difference between the nominal yield rate and the inflation rate for the respective period.

4.2.2. Voluntary fully funded pension funds

The voluntary fully funded pension funds are still at the beginning of their development[109]. In 2011, they continued to grow, although with smaller intensity compared to the previous year. Having in mind that these funds are still at the beginning of their development, the number of their members register high growth rate (increase of more than 76% or 5,287 new persons in 2011) and at the end of 2011 it reached 12,195. However, the increase is slower in comparison with 2010, when the number of members of these funds incremented by 6,908 persons. The structure of the members of the voluntary pension funds changed, i.e. the participation of the members in the pension scheme with occupational account increased (from 64.1% on December 31,2010 to 74.4% on December 31,2011), at the expense of the reduced share of the members with voluntary individual account (from 35.9% on December 31,2010 to 25.6% on December 31, 2011). The average age of the members of the voluntary pension funds is low, but higher than in the mandatory pension funds and it equals 38 years of age.

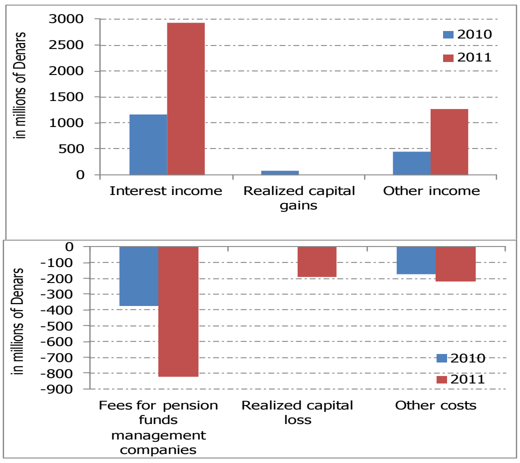
At the end of 2011, the net assets of the voluntary pension funds equaled Denar 112 million. They continued to mount, although less intensively compared to the preceding year. This growth dynamics is a result of the slower increase in the cash inflows based on paid contributions. The inflow based on paid contributions equals Denar 66 million, fully determining the increase in the net assets of the voluntary pension funds. Due to the relatively young age structure of the members of the voluntary pension funds, the amount of the cash outflows based on paid pensions is very low, as well as in the obligatory pension funds.

Figure 124 Structure of the increase in the net assets of the voluntary pension funds



Source: Revised financial statements of the voluntary pension funds for 2011.

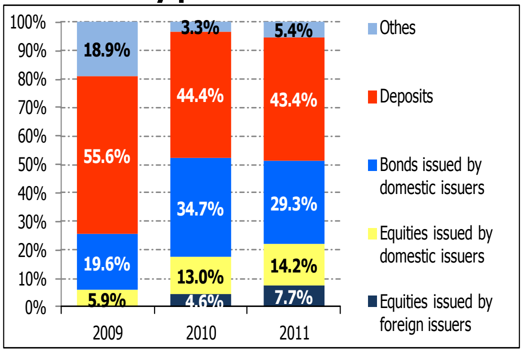
Figure 125 Total income (above) and total expenditures (below) from investments



Source: Revised financial statements of the voluntary pension funds for 2011.

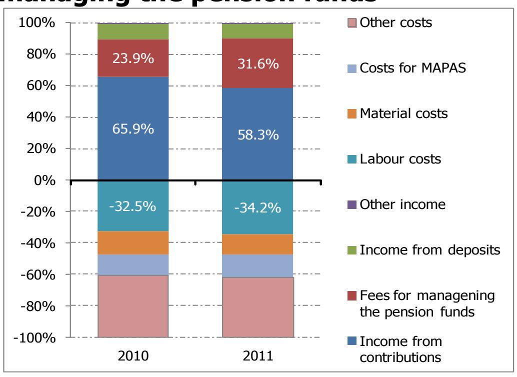
[109] The voluntary pension funds were established in the second half of 2009.

Figure 126 Structure of the assets of the voluntary pension funds



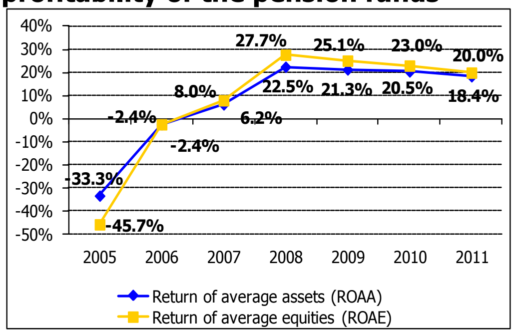
Source: Revised financial statements of the voluntary pension funds for 2011.

Figure 127 Structure of the income and expenditure of the companies managing the pension funds



Source: Revised financial statements of the voluntary pension funds for 2011.

Figure 128 Indicators for the profitability of the pension funds



Source: Revised financial statements of the voluntary pension funds for 2011.

The net gain from investment of the voluntary pension funds increased by Denar 1.8 million (or more than twice) and reached Denar 3 million. The increase in the net investment gain is almost fully due to the increase in the interest income (that increased by Denar 1.7 million). At the end of 2011, the voluntary pension funds showed realized capital loss in the amount of Denar 193 thousand. Although the realized loss in 2011 is not significant amount, however, having in mind that the development of the voluntary pension funds is in nascency, when they still have relatively small assets, this loss has relatively significant participation in the funds' total expenditures (its participation is higher than 19%). The realized loss arises from the investments in stakes in foreign investment funds (57.2%) and in common shares issued by foreign issuers (42.8%).

The net nonrealized loss of the voluntary pension funds is just over Denar 1 million, and arises from the placements in domestic common shares, and then from the stakes in foreign open investment funds.

The investments in deposits and bonds from domestic issuers still prevail in the structure of the investments of the voluntary pension funds. These two investment types register also the largest increase compared to 2010 (Denar 29, i.e. 17 million, respectively). However, also the voluntary pension funds, like the mandatory ones, increased the investments in ownership securities (shares and stakes in investment funds) by 125.3%. The largest part of this increase (60%) accounts for the investments in shares of domestic joint stock companies. The increase in these investments was also caused by the changes in the structure of the voluntary pension funds.

4.2.3. Profitability of the pension funds management companies

On December 31,2011, the net gain of the pension funds management companies increased by Denar 3 million, or by 4.2% and at the end of the year it equaled Denar 78 million. The increased net gain of the companies is a result, from one part, of the fees for managing the pension funds [110] (of Denar 23 million, or by 36.4%) and from the other part, to the reduced material costs (by Denar 19 million, or 66.7%). The net gain was also influenced by the income reduced for contributions (by Denar 15 millions, or 8.6%) due to the downturn of this compensation amount. In conditions of larger net gain growth deceleration compared to the capital and total assets deceleration, the companies realized lower rates of return on equity and return on assets.

Amendments to the Law on Mandatory Fully Funded Pension Insurance Funds

In March 2011, Law on Amendments to the Law on Fully Funded Pension Insurance Funds was adopted, enlarging the possibilities for investment of the mandatory pension funds' assets, having in mind that the assets are continuously mounting, and the permitted investment instruments on the domestic market are relatively limited and mostly used by the pension funds. The introduction of the possibility to invest in instruments that quote on the regular market of the Macedonian Stock Exchange, as well as in stakes of private investment funds investing in small and medium-size trade companies, have positive influence on the economy of the Republic of Macedonia and the development of the capital market. Also, the amendments to the Law specifies the investment funds with main office in some of the EU and OECD member states, where the funds of the mandatory pension funds can be invested in. The assets of the mandatory pension funds can be invested in investment funds, the investment policy of which permits use of derivative instruments maximum to 20% of the assets of the investment fund, only for the purposes of protection of the assets and liabilities of those investment funds.

Also, the amendments to the Law introduce the possibility to invest the pension funds' assets in documents for stakes and shares of investment funds maximum to 10% of the total number of stakes and shares of the individual investment fund. The amendments of the Law define also the limitations for investments in private investment funds, i.e. totally in private investment funds and individually, by private investment fund.[111].

However, the bigger possibilities for investment the higher risk of the pension funds, having in mind that the widened investment possibilities refer to financial segments which are not regulated enough.

Amendments to the Law on Voluntary Fully Funded Pension Insurance

In February 2011, Law on Amending the Law on Voluntary Fully Funded Pension Insurance was adopted. The most important changes refer to the possibility enabling the voluntary pension funds to invest assets also in bonds issued by the local government units of the Republic of Macedonia and the domestic joint stock companies (other than banks). The amendments to the Law determined the investment percentage of each issue of bonds and other debt securities issued by the

[110] The fees for managing the pension funds is calculated as a percentage of net assets of the mandatory, i.e. voluntary pension fund.

[111] Maximum 2.5% of the value of the assets of the mandatory pension fund can be invested in stakes and shares of open and closed investment funds issued by the same management company from the Republic of Macedonia, with maximum 1% of the value of the mandatory pension fund may be invested in. Maximum 1.25% of the value of the assets of the mandatory pension fund may be invested, with maximum of 0.5% of the asset value of the mandatory pension funds the individual investment funds may be invested in.

local government units of the Republic of Macedonia and the domestic joint stock companies in the Republic of Macedonia, that is 20%[112]. This solution is aimed at stimulating the issuance of corporate bonds – an instrument that is important for diversification of the pension funds assets. The assets of the voluntary pension fund can not be invested in more than 40% of the total issued bonds of the local government unit, except the bonds and other securities issued by or guaranteed by the Republic of Macedonia or some of the EU or OECD member states, in which can be invested without limitation.

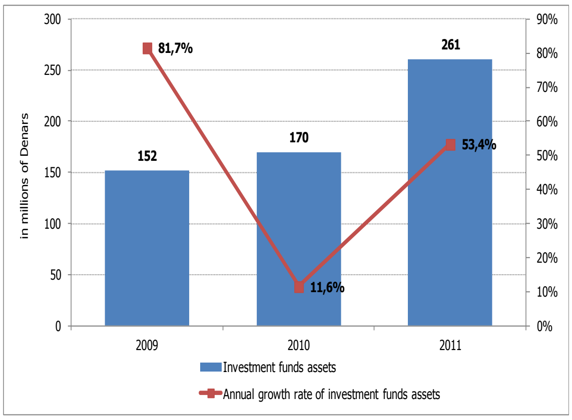
The amendments to the Law enables investment in stakes and shares of investment funds of EU and OECD member states maximum to 15% of the assets of the voluntary pension fund in investment funds managed by same company, while maximum 5% of the value of the assets of the voluntary pension fund can be invested in individual pension fund.

Also, the amendments to the Law increase the possibilities for investing the assets of the voluntary pension fund in deposits and deposit certificates, from the current 7.5%, to 15%.

4.3. Investment funds in the Republic of Macedonia

In 2011, the inflows from net sale of stake documents registered an increase and conditioned an increase in the assets of the open investment funds. Parallel to the structural changes in the assets of the investment funds, which were towards investment portfolio creation mainly from the financial instruments on the domestic market, registered also decrease in the share of the foreign entities in the total issued stake documents. The operating loss with the companies managing investment funds indicate that this segment of the financial markets is still underdeveloped in the Republic of Macedonia, as a result of the poor interest of the investors for making investments. The widened regulatory framework for providing higher transparency and better control over the private investment funds operating and management in the Republic of Macedonia would contribute positively on the attractiveness of this investment type.

Figure 129 Assets of the open investment funds



Source: Securities and Exchange Commission.

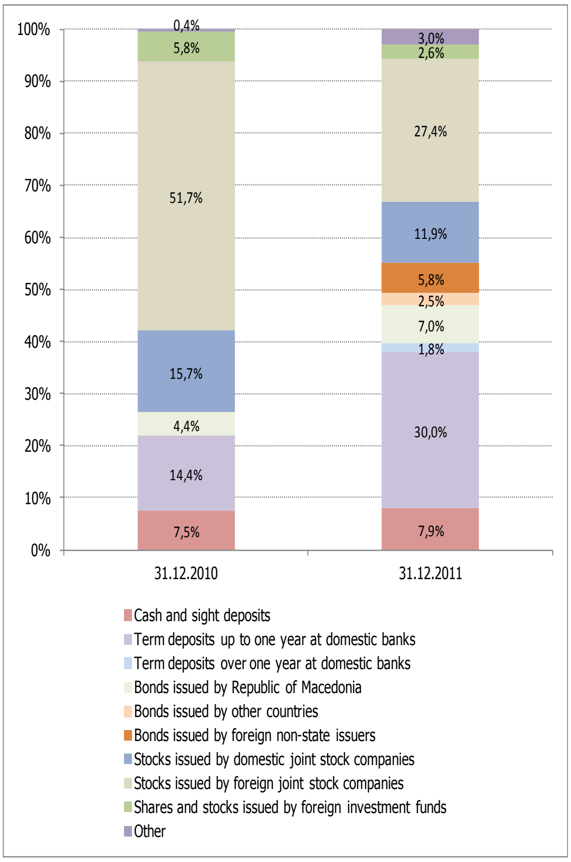
In 2011, the assets of the open investment funds increased by Denar 91 million, or 53.4%, which is growth acceleration compared to the previous year. This is result of the increase in the number of open investment funds from six in 2010 to eight in 2011, with the number and the composition of the companies for managing open investment funds remaining unchanged.[113] On the other hand, in 2010, compared to 2009, two open investment funds were liquidated. In 2011, eight companies for managing private funds that managed with thirteen private investment funds were functioning[114].

[112] The limitation of the investment of the voluntary pension fund assets in instruments of all other issuers is still 10% of the nominal value of the individual security issued by the same issuer.

[113] In 2011, four companies for open investment funds management were functioning.

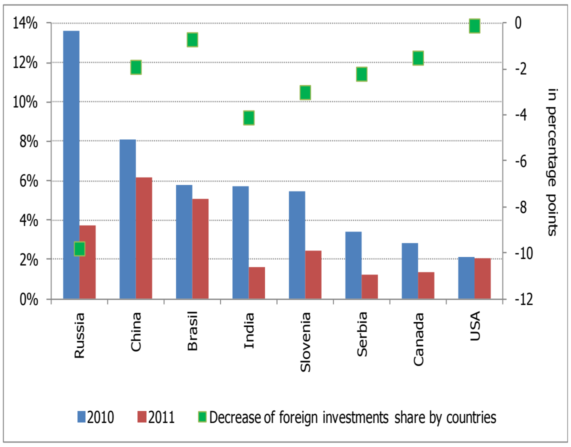
[114] The analysis in this part of the report does not include the private investment funds, nor the private funds management companies, having in mind that pursuant to the Law on Investment Funds ("Official Gazette of the Republic of Macedonia" no. 12/2009, 67/2010 and 24/2011), in the Republic of Macedonia no supervision on the operations of the private funds is envisaged, i.e. of the authorized companies for management with private funds, nor obligation for submitting regular reports to competent body.

Figure 130 Structure of the assets of the investment funds



Source: Securities and Exchange Commission

Figure 131 Share of the investments by countries



Source: Web site of the open investment funds

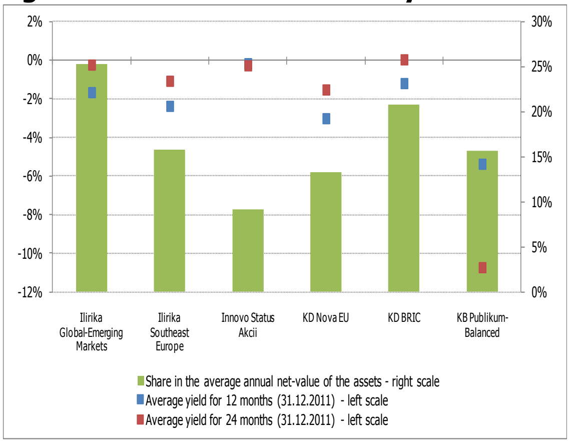
In 2011, there was larger variety of securities issued by foreign issuers the funds' assets were placed in[115]. However, **lower share of the placements in securities issued by foreign issuers was evidenced, which** additionally accelerated in 2011 (decrease of 19.2 percentage points, compared to 2010, when the decrease equaled 3.9 percentage points). The smaller investment in foreign securities is mostly conditioned by the smaller placements in shares issued by foreign joint stock companies (by 24.3 percentage points). In accordance with such movements, the share of the placements in securities issued by foreign issuers reduced to 38.3% of the total investment funds investments, compared to 2010 when these investments dominated the structure of the investment funds investments, with a share of 57.5%.

Such movements in the structure of the investment funds assets point to **larger caution in deciding on outward investment of assets, which** corresponds to the vagueness characteristic of the foreign financial markets.

Among the countries having share in the total investments of the open investment funds over 2%, the most significant annual share drop of 9.8 percentage points was registered in the investments in Russia.

[115] Contrary to 2010, when the investment of the funds abroad consisted only of shares issued by foreign joint stock companies (share of 51.7%) and stakes and shares from foreign investment funds (share of 5.8%), in 2011 the funds' investments abroad also include the placements in bonds issued by other countries, as well as bonds issued by foreign non-government issuers in the total amount of Denar 22 million (8.3% of the total assets of investment funds).

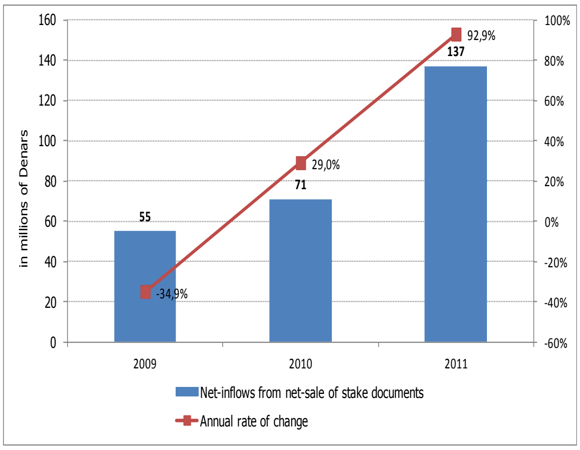
Figure 132 Investment funds yield



Source: Web site of the companies for investment funds management

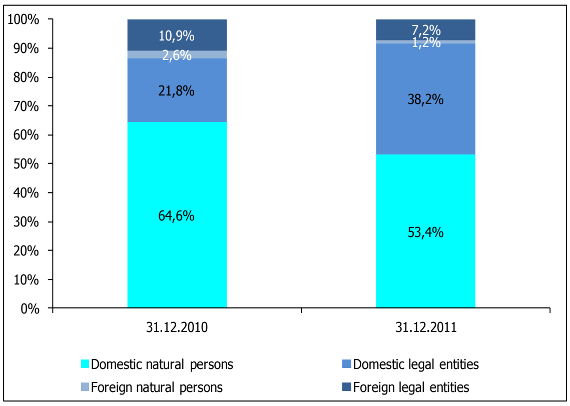
Note: Data could not be provided for two funds registered in the Open Investment Funds Registry during 2011.

Figure 133 Net inflows based on net sale of stake documents



Source: Securities and Exchange Commission

Figure 134 Ownership structure of issued stake documents



Source: Securities and Exchange Commission

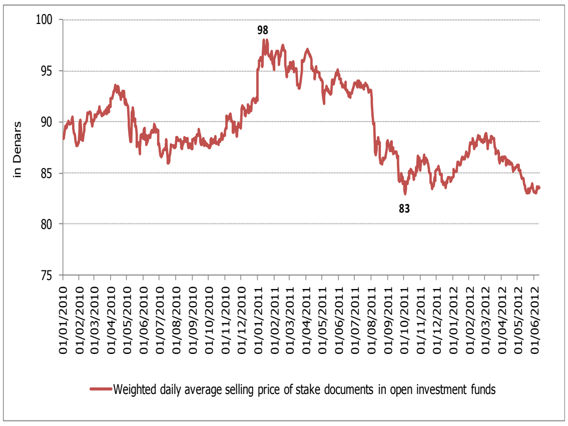
A course of **assets investment on shorter run and in highly regulated segments on the domestic market has also been evidenced, which conditioned a decrease in the average yield rate from the funds' investment.** Thus from the aspect of the investments in the country, accompanied with the lack of available investment alternatives, the time funds with one-year maturity with banks dominate (30% of the total investments of the investment funds), registering the highest increase compared to the preceding year (of 15.7 percentage points).

Also, in 2011, the share of the investments in domestic equities reduced to 11.9% (15.7% in 2010), while the investments in government bonds registered an increase and reached the share of 7% in the total investment funds' assets (4.4% in 2010).

In 2011, the inflows based on net sale of stake documents in the open investment funds increase by twice compared to the previous year and equaled Denar 137 (increase of 92.9%). Compared to 2010, when the domestic natural persons defined the increase in the net inflows in investment funds with 76.5%, in 2011, the largest contribution was given by the domestic legal entities with 53.5%, while the domestic natural persons participated with 33.2%.

Such movements conditioned lower share of the domestic natural persons in the ownership structure of the issued stake documents by 11.2 percentage points, and increase in the share of the domestic legal entities by 16.4 percentage points. However, the domestic natural persons are still the largest investors in the open investment funds with a share of 53.4%.

Figure 135 Movement of the weighted daily average selling price of the open investment funds stake documents



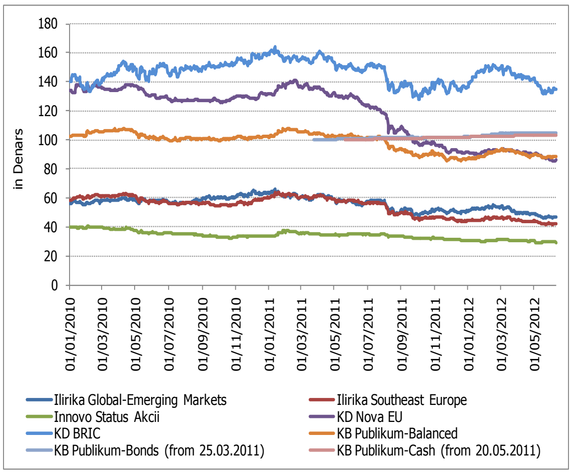
Source: Web site of the Macedonian Stock Exchange Securities and Exchange Commission and NBRM calculations.

Note: 1.The weighted daily average selling price of the stake documents in the open funds is calculated by weighting the daily average selling price of the stake documents of the individual companies with their shares in the average annual net value of the funds' assets 2. The calculation for 2010 does not take into the consideration the stake prices of Sava Invest Balansiracki Fond and Sava Invest Rastecki Fond that were functioning until January 14,2010.

In 2011, the net outflow of funds with foreign natural persons continued, thus reducing the share of the foreign entities in the ownership structure of the open investment funds to 8.4%.

Despite the substantial increase in the inflows based on net sale of stake documents in open investment funds, **the investment funds management companies, at the end of 2011, registered loss of Denar 22 million**[116], which is lower by Denar 2 million compared to 2010. Such unattractive profitability position points to the still insufficient level of development with this segment of the financial market in the Republic of Macedonia, as a result of the insufficient interest of the market segment for this type of investment.

Figure 136 Movement of the daily selling price of the stake documents in the open investment funds



Source: Securities and Exchange Commission

As opposed to the substantial increase in the **average daily weighted price of the stake documents in the open investment funds** from the second half of 2010 (maximal value of Denar 98 on January 12, 2011), in 2011 it dropped and in October it reached the minimal value of Denar 83 (October 4, 2011). The unequal movement of the average daily weighted price of the stake documents continued also in 2012.

[116] All companies dealing with open investment funds management were loss making.

4.4. Leasing sector

The leasing sector has very small participation in the financial system of the Republic of Macedonia. The credit risk, i.e. the foreclosure risk is the main risk related to the operations of this sector, especialy if taking into account the impeded collection of claims evidenced in 2011, as well. The deteriorated collection contributed for further unprofitable operating of this sector. The small connection of this sector with the banking system and its minor role in the entire financial sector, limits its influence on the financial stability of the country. In 2011, certain regulatory improvements in the supervisory function over this sector were made (within licensing and reporting domain), which should be upgraded in the disrect supervision of the leasing companies.

4.4.1. Depth and activity of the leasing market

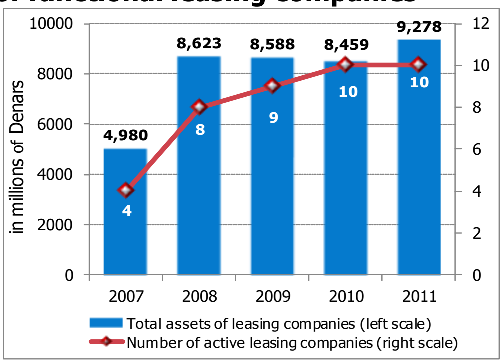
The leasing sector has still small importance for the domestic economic activity. In 2011, the share of the assets of this sector in the total assets of the financial system equals 2.5% (unchnaged condition relative to 2010).

After the two-year decrease, the leasing sector assets registered increase in 2011. They went up by Denar 820 million in conditions when the number of leasing companies remained unchnaged. But the claims of the companies based on financial leasing, as basic activity of these companies, registered a decrease of 32.3%.

In comparison with the regional countries, as well as with some European Union Member states, the leasing sector in the Republic of Macedonia is underdeveoped. The share of the value of the newly concluded leasing agreements in GDP[117] in 2011 remained unchanged and it equals only 0.4%.

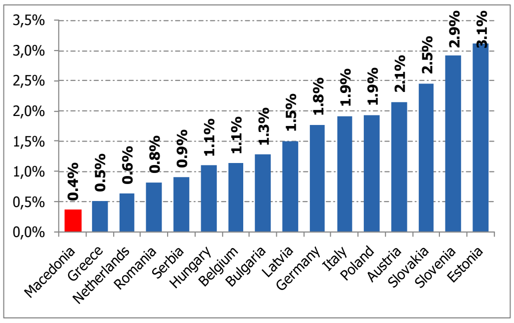
In 2011, the leasing companies still face with difficulties in the collection of the claims based on provided services. Regarding the leasing companies, the value of terminated agreements increased (in 2011, total of 328 agreements in the amount of Denar 421 million were terminated, which by 86 total agreements more compared to the previous

Figure 137 Total assets and number of functional leasing companies



Source: Ministry of Finance.

Figure 138 Share of the value of the newly concluded leasing agreements in GDP



Source: Ministry of Finance, web site of the Federation of the National Leasing Associations in Europe. The data refer to 2010, except for Macedonia which refer to 2011.

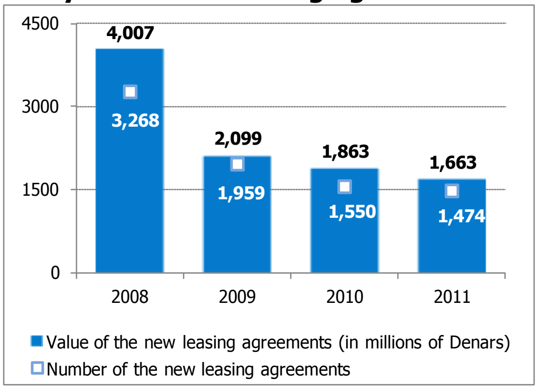
[117] The amount of the gross domestic product is estimated data for 2011.

year, in the total amount of Denar 137 million).

4.4.2. Value and structure of the financial leasing agreements

The number and the value of the newly concluded leasing agreements continued its downward trend also in 2011. The decrease is almost at the same level as in the previous year, and it is a result of the larger decline in the value of the concluded leasing agreements with legal entities, compared to the decrease with the natural persons. Despite such changes with the newly concluded leasing agreements, the legal entities preserved the dominant position in the structure also of the newly concluded and active leasing agreements, with 70.0% and 65.9% respectively.

Figure 139 Number and value of the newly concluded leasing agreements



Source: Ministry of Finance.

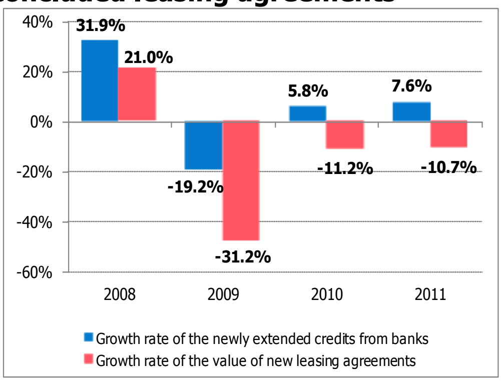
Table 31 Structure and change in the value of the newly concluded and active leasing agreements, by client type

Year	Value of the **new** leasing agreements in millions of Denars	Annual change in the value of **new** leasing agreements		Value of the **active** leasing agreements in millions of Denars	Annual change in the value of **active** leasing agreements	
		in millions of Denars	**in %**		**in millions of Denars**	**in %**
Legal entities						
2008	2.781	624	28,9%	6.243	1.842	41,9%
2009	1.386	-1.395	-50,2%	6.242	-1	0,0%
2010	1.354	-32	-2,3%	6.968	726	11,6%
2011	1.164	-191	-14,1%	6.264	-704	-10,1%
Natural persons						
2008	1.225	115	10,4%	3.876	312	8,8%
2009	713	-512	-41,8%	3.812	-64	-1,7%
2010	509	-204	-28,6%	3.634	-178	-4,7%
2011	499	-10	-1,9%	3.245	-388	-10,7%

Source: Ministry of Finance.

Such movements with the leasing sector are contrary to the movements with the banks, where the newly approved credits continued to mount, to both the legal entities (5.8%), and natural persons (17.1%).

Figure 140 Growth rate of the newly approved bank credits and newly concluded leasing agreements



Source: Ministry of Finance.

Table 32 Average maturity of the active leasing agreements by leasing subjects and client type (by the number of agreements) on December 31,2011

Type of client	**Natural persons**			**Legal entities**						
Type of leasing agreement	**Leasing agreements on real estate**	**Leasing agreements on movables**		**Leasing agreements on real estate**			**Leasing agreements on movables**			
Type of property	Residential real estate	Light vehicle	Other	Residential real estate	Commercial real estate	Lend	Equipment	Freight transport vehicle	Light vehicle	Other
up to 5 years	2	1.705	119	1	1	1	241	522	1.767	21
from 5-10 years		2.319	73		1		31	124	556	11
Total	**2**	**4.024**	**192**	**1**	**2**	**1**	**272**	**646**	**2.323**	**32**

Source: Ministry of Finance.

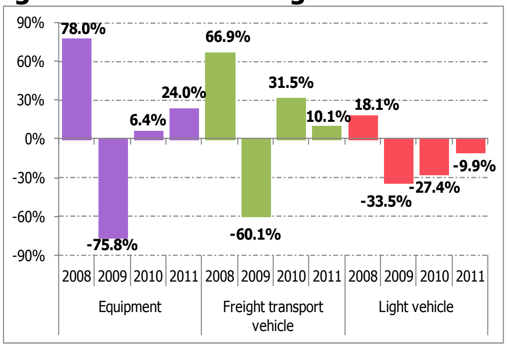
In 2011, the agreements with five-year repayment period still dominate. However, compared to the preceding year, the share of these agreements in the total agreements reduced by 2.1 percentage points, compared to the higher share of the agreements with maturity of 5 to 10 years.

Table 33 Structure of the leasing agreements of movables (by the number of agreements)

Type of leasing agreement	**Equipment**				**Freight transport vehicle**				**Light vehicle**				**Other**			
	2008	**2009**	**2010**	**2011**	**2008**	**2009**	**2010**	**2011**	**2008**	**2009**	**2010**	**2011**	**2008**	**2009**	**2010**	**2011**
Number of new leasing agreements	194	47	50	62	414	165	217	239	2.554	1.698	1.232	1.110	110	49	49	63
Number of active leasing agreements	338	276	326	411	902	554	743	664	7.828	8.696	7.699	6.301	367	236	160	406

Source: Ministry of Finance.

Figure 141 Rates of change in the number of concluded leasing agreements for leasing of movables



Source: Ministry of Finance.

There is almost no interest for leasing of real estate. In 2011, no new leasing agreements for real estate were concluded, while there are only 6 active agreements. Beside the unfavorable tax regulation[118], there is another unfavorability related to the active leasing agreements of real estate. Namely, their value increased by Denar 21 million, as a result of the change in the value of the Swiss frank (three out of six agreements are concluded in Swiss franks).

The agreements for movables prevail in the total structure of the leasing agreements (97.8%).

[118] According to the regulations, the turnover tax with these agreements is paid twice: by the leasing company when purchasing the subject of the leasing, and by the leasing beneficiary after the expiration of the leasing agreement and when transferring the property ownership..

4.4.3. Structure of the balance sheets and the basic indicators for the performances of the leasing companies

Although in 2011 the liabilities of the leasing companies based on credits reduced, these companies continue registering quite high indebtedness. The borrowings from foreign entities are the main source of financing of the leasing companies. In 2011, the structure of the borrowings from foreign entities changed, increasing the debiting with foreign banks, for the account of the decrease in the borrowings from the companies' founders. Beside the reduced claims based on leasing, this sector also registers an increase of the other assets[119].

Table 34 Structure of the total borrowings of the leasing companies

Borrowings' provider	share in %	
	31.12.2010	31.12.2011
Domestic entities	**1,9%**	**3,7%**
Founders	0,2%	0,8%
Banks	1,5%	1,5%
Other financial institutions		
Nonfinancial legal entities	0,2%	0,6%
Other	0,0%	0,7%
Foreign entities	**98,1%**	**96,3%**
Founders	80,5%	44,8%
Banks	1,1%	39,7%
Other financial institutions	16,6%	11,8%
Nonfinancial legal entities	0,0%	0,0%
Total borrowings	**100,0%**	**100,0%**

Source: Ministry of Finance.

The deposits of the leasing companies with the domestic banks increased by 70.8% and it equaled Denar 260 million. The significance of these deposits not only for the banking sector, but for the leasing companies as well, is minor. Namely, their share in the total deposits of the banking system equals only 0.1%, while in the total assets of the leasing companies representing only 2.8%.

[119] Having in mind that this report has been prepared on the basis of non-audited reports of the leasing companies, no information on the reasons for these changes are available.

Table 35 Balance sheet of the leasing companies

ASSETS	In millions of Denars		Change in 2011 in millions of Denars	Structure in %		LIABILITIES	In millions of Denars		Change in 2011 in millions of Denars	Structure in %	
	2010	2011		2010	2011		2010	2011		2010	2011
Cash, cash balances and deposit	278	278	0	3,3%	3,0%	Borrowings	7.970	7.138	-832	94,2%	76,9%
Claims for financial leasing and short-term receivables	5.604	5.173	-430	66,2%	55,8%						
Prepaid expenses	0,3	140	140	0,0%	1,5%	Accounts payable	191	243	52	2,3%	2,6%
Inventory	204	102	-102	2,4%	1,1%	Provisions for employees	1	4	3	0,0%	0,0%
Investments available for sale	9	9	0	0,1%	0,1%	Accrued expenses	52	677	625	0,6%	7,3%
Investments under rent	1.300	1.229	-71	15,4%	13,2%						
Property and equipment available for sale	56	30	-26	0,7%	0,3%	Other liabilities	112	1.093	981	1,3%	11,8%
Property, plants and equipment	857	1.056	199	10,1%	11,4%						
Intangible assets	53	43	-10	0,6%	0,5%						
Operating lease	24	0	-24	0,3%	0,0%	Equity and reserves	132	122	-9	1,6%	1,3%
Other assets	73	1.218	1.145	0,9%	13,1%						
TOTAL ASSETS	**8.458**	**9.278**	**820**	**100,0%**	**100,0%**	**TOTAL LIABILITIE**	**8.459**	**9.278**	**820**	**100,0%**	**100,0%**

Source: Ministry of Finance.

Also the capital investments of the banking sector in the leasing companies are insignificant (0.3% share of the founding capital of the leasing sector and insignificant share in the banks' assets).

Such structure of the balance sheets of the leasing companies, together with the small volume of their assets, point to the small weight of this sector for the stability of the financial system of the Republic of Macedonia.

The leasing companies continud with their loss-making trend, which in 2011 equals Denar 22.6 million (Denar 141 million in 2010). The reason for the nonprofitable operating of the leasing companies are the bad placements of the leasing companies. The possible further decrease in the volume of the activities of this sector may result in further deterioration of their performances. This risk is accompained with the still poor oversight over this financial system segment, which at the same time characterizes with lower transparency level.

It should be mentioned, however, that in 2011, certain regulatory improvements of the supervisory function over this sector were made (within licensing and reporting system), which still faces with weaknesses in the supervision of the companies.

Amendments to the legal framework referring to the leasing companies

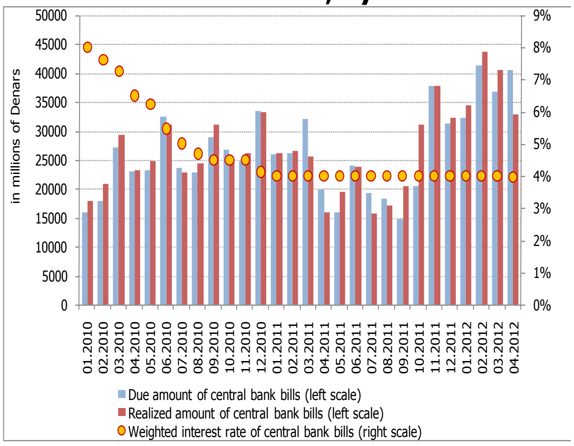
In March and April 2011, amendments to the Law on Leasing were adopted. The amendments strengthened the supervisory standards for founding and operating of financial leasing providers in the Republic of Macedonia, i.e. the terms and the procedure for founding of the financial leasing companies were determined. The amendments to the Law prescribe the basic principal and of the financial leasing provider, which may not be lower than Denar 6 million, prescribing also the documentation and the information on the providing license. The amendments to the Law stipulated that the members of the managing bodies should be professional and competent, requiring prior approval from the minister of finance for their change. The amendments to the Law contains provisions limiting the volume of the total financing of the leasing users, up to the ten-time amount of the basic principal of the financial leasing provider. Also, they specified the manner of keeping the accounting record and preparation of financial statements and regular submission of reports to the Ministry of Finance, as well as the manner of performing oversight and undertaking measures against the companies for elimination of the determined violations purposes.

5. Domestic financial markets

5.1. Money market

The development degree of the individual money market segments, the representation of the trade instruments, as well as the activity of the market participants, are still limiting the influence of this market in the creation of the financial flows in the Republic of Macedonia. The traditional market segment - interbank market of non-collateralized deposits continue its dominance in the total trading. In 2012, the National Bank began applying the operational framework for monetary policy conduct in order to support the banks' longer-term placements and more flexible management of the banking system liquidity. The changes in the monetary policy, inter alia, are also directed towards further development of the money and short-term securities market, through creation of monetary instruments that would stimulate the trading between the market participants.

Figure 142 Due and realized amount and interest rates on CB bills, by months

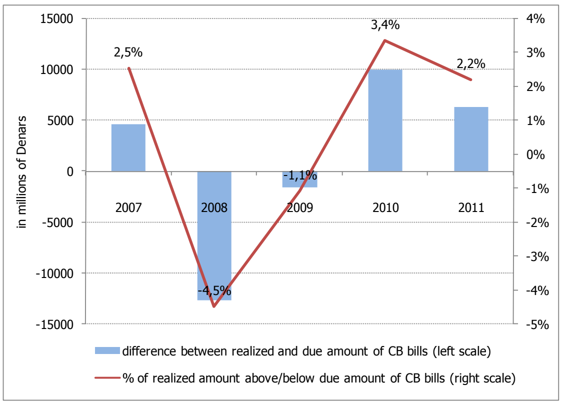


Source: National Bank

The CB bills are one of the main instruments on the primary money market in the Republic of Macedonia, representing also the main monetary instrument within the open market operations for realization of the monetary policy of the National Bank.[120]

[120] According to the new operational monetary policy framework from April 2012, the National Bank changed the type of tender for conducting CB bills auctions, i.e. from tender with unlimited amount and fixed interest rate, it began implementing a tender with limited amount and determined maximal interest rate through which the National Bank signalize the monetary policy direction. This change enables the banks to influence on the market creation of the auction interest rate. By limiting the CB bills bid, as well as the auction frequency (once within the reserve requirement period), larger activity on the interbank market and active implementation of repo operations is expected.

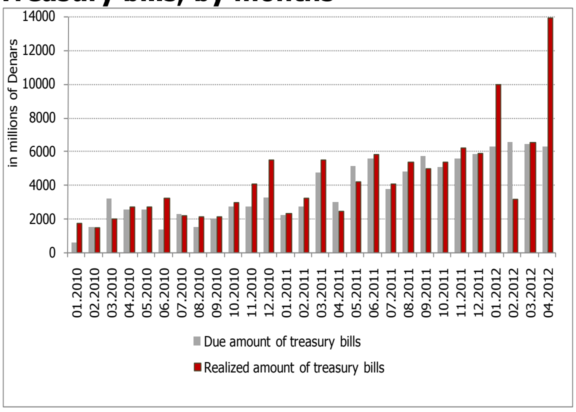
Figure 143 Realized amount over/below the due amount of the CB bills, on annual basis



Source: National Bank

The banks interest to invest in this instrument of the National Bank maintained high, in conditions of mild willingness for taking credit risk because of the uncertainty related to the debt crisis in the Euro area. The banks orientation for maintaining highly liquid Denar position in form of CB bills was influenced by the favorable flows on the foreign exchange market which, from their part, conditioned the National Bank interventions towards net purchase of foreign exchange.

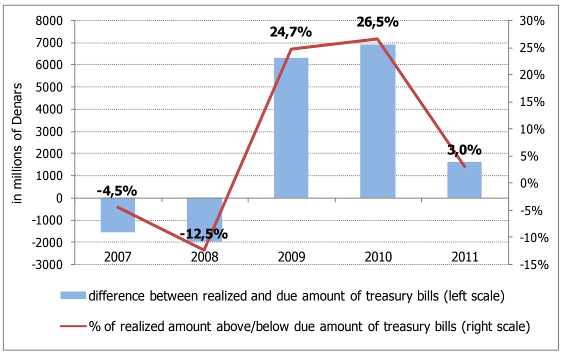
Figure 144 Due and realized amount of Treasury bills, by months



Source: National Bank

However, in 2011, the difference between the realized and the due amount of CB bills is smaller compared to 2010, which, to certain extent, depends also on change in the manner of calculation of the minimal liquidity rates prescribed by the National Bank[121], as well as on the lower interest rate of this instrument compared to 2010.

Figure 145 Realized amount over/below the due amount of Treasury bills on annual basis

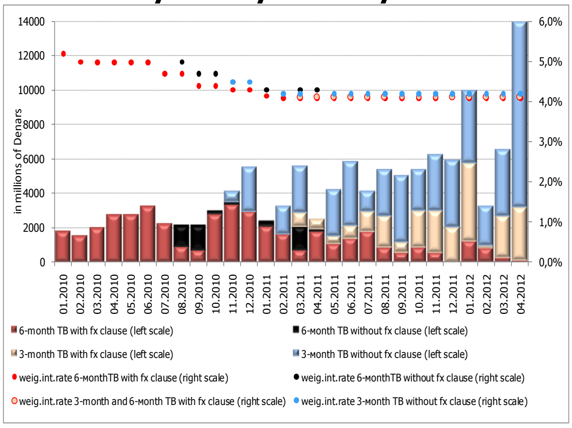


Source: National Bank

In 2011, the difference between the realized and the due amount of Treasury bills (as the second important instrument on the primary money market), is on significantly lower level compared to the two preceding years.

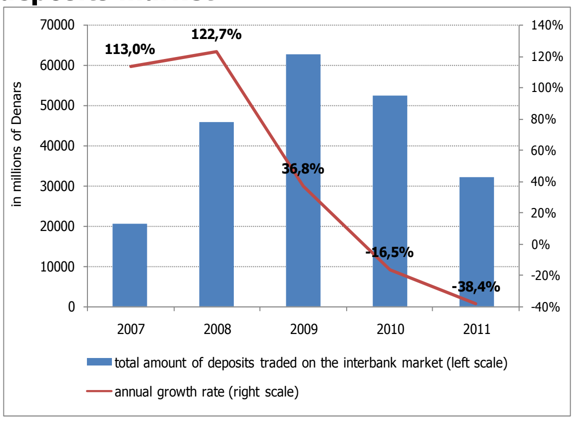
[2] According to the Decision on amending the Decision on the banks' liquidity management ("Official Gazette of RM" no.14/2011), adopted in February 2011, only the bills of six-month deposits with the National Bank could have been taken into consideration by the banks in the choice whether to use them in the calculation of the liquidity ratio in Denars or in the calculation of the liquidity ratio in foreign exchange (before this amendment to the Decision, such a possibility referred only to the CB bills). Since October 2011, single liquidity ratio from the aspect of the currency has been determined.

Figure 146 Structure and interest rates on the Treasury bills by maturity



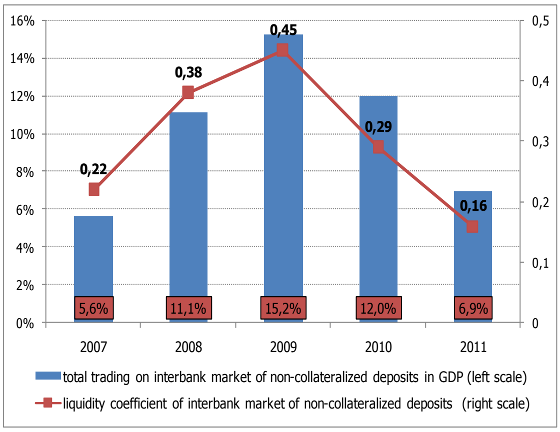
Source: National Bank

Figure 147 Trade volume on the interbank deposits market



Source: National Bank

Figure 148 Liquidity coefficient of the market of non-collateralized deposits and share in GDP



Source: National Bank

Compared to 2010, when the six-month bills with incorporated clause dominated the structure of the total issued Treasury bills, in 2011, the short-run investments without FX clause prevail in the Treasury bills structure. Thus dominant share of 73.2% accounts for the Treasury bills with 3-month maturity, 68.6% of which are without FX clause. The interest rate on the Treasury bills fell compared to 2010 and it reduced to the level of 4.1-4.3% depending on the maturity and the currency component.

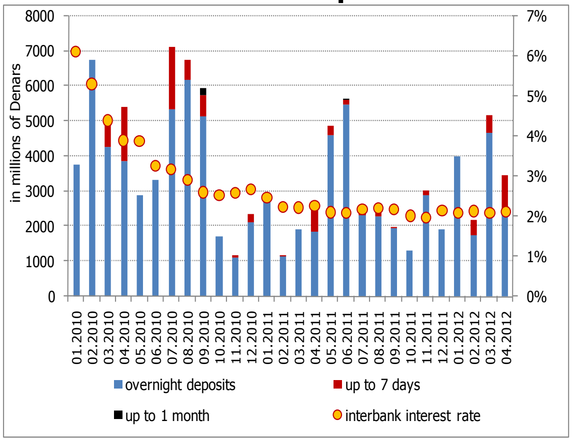
The importance of the money market in the Republic of Macedonia for the market agents financing is still moderate. However, substantial decrease in the excess of liquid assets over the reserve requirement from 8.3% in 2007 to 2% in 2011 has been registered, which indicates improved management of the liquidity fluctuations by the banks through more active inclusion on the money market.

The market of the non-collateralized interbank deposits is still the most significant component on the secondary money market in the Republic of Macedonia although in 2010 and 2011 negative annual rates of the trading volume on this market were registered.

The decrease in the trade volume, despite the absolute amount is proved also through the market liquidity coefficient[122], as well as through the share of the market of uncollateralized deposits in the total economic activity of the country[123].

[122] Correlation between the average turnover on the interbank market of non-collateralized deposits and the average balance on the bank accounts with the National Bank.
[123] The GDP amount for 2011 is on the basis of the estimated value.

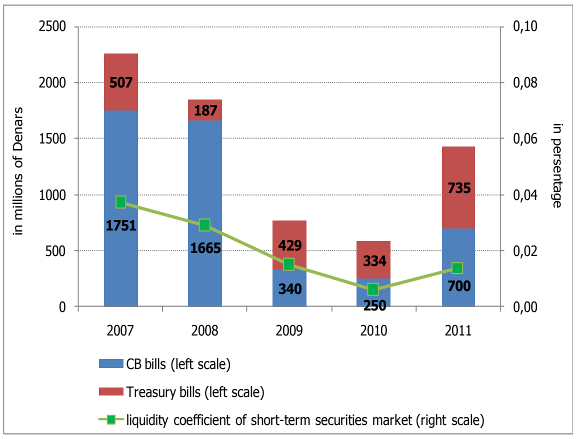
Figure 149 Maturity structure and interest rates on the interbank deposits market



Source: National Bank

The realized turnover also in 2011 is due to the overnight maturity deposits (share of 95.1%), which indicates banks' further inclination for liquidity management on a daily basis.

Figure 150 Trade volume of short-term securities market



Source: National Bank

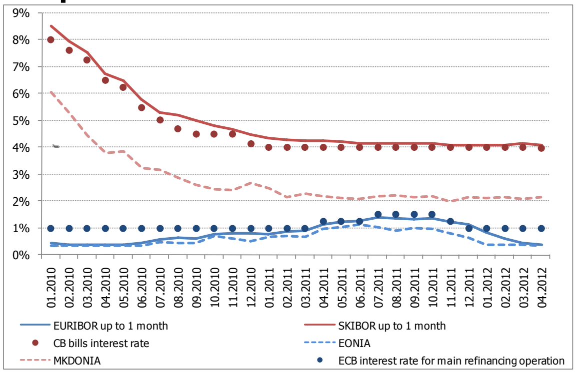
The trade in CB bills and Treasury bills on the secondary money market is minor. It is evident through the absolute amount, as well as through the market liquidity coefficient[124], which is below 0.02% in the last three years. However, in 2011, the trade volume of the short-term securities on the over the counter market compared to the last two years increased. Also, 76.9% of the total realized turnover with Treasury bills on the over the counter market is due to the Treasury bills with residual maturity of one-month, 20.4% account to the trading of Treasury bills with residual maturity of one to three months, and only 2.7% to the trade of Treasury bills with residual maturity of three to six months.

The market of collateralized deposits (repo market) in 2011 and the first months of 2012 registered mild recovery. With the introduction of the regular auctions with 7-day repo transactions, according to the new operational framework for functioning of the monetary instruments of the National Bank[125], bigger use of repo operations in case of short-term lack of liquid assets is expected.

[124] Correlation between the average daily turnover on the over the counter market and the average balance on the CB bills and Treasury bills.

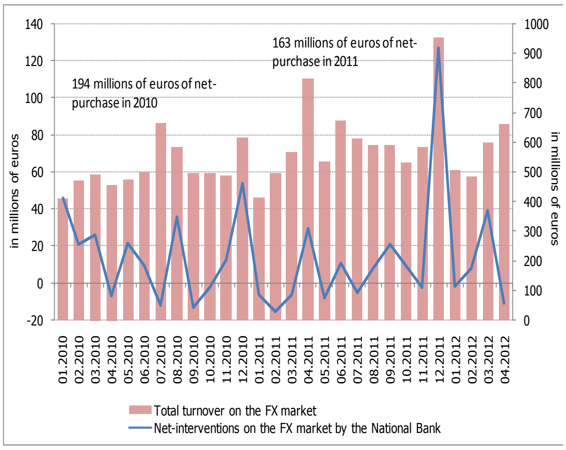
[125] In 2011, on an initiative of the National Bank, repo transactions auctions in three occasions (July and September) were organized, aimed at providing liquid assets in the banking system. These operations are not regular and their characteristics (tender type, frequency, deadline, interest rate) have not been predetermined. In accordance with the amendments to the operational monetary policy framework, providing introduction of regular seven-day repo operations, in May 2012, three transactions with the National Bank in the amount of Denar 2,745 million, at interest rate of 3.71% have been concluded. Also, in May 2012, repo transaction in the amount of Denar 9.9 million between market agents was recorded, which was the first of this type since 2005, after the initiation of the National Bank project for repo market development.

Figure 151 Interest rates on the money market in the Republic of Macedonia and European Union



Source: National Bank

Figure 152 Total turnover on the foreign exchange market and net-interventions on the foreign exchange market by the National Bank



Source: National Bank
Note: Net interventions on the foreign exchange market by the National Bank encompasses the net interventions with the market makers and ministries.

When maintaining unchanged key interest rate of the National Bank, during a period when the key refinance rate of the European Central Bank (ECB) registered cyclical movement, the interest rate spread between the interest rates of the National Bank and the ECB also moved cyclically. Within July - October 2011 period, this interest rate spread reduced to 2.5 percentage points, while because of the decrease in the key interest rate for refinancing of ECB to 1%, at the end of 2011 the interest rate spread increased to 3 percentage points. The movements of the key interest rates of ECB and the National Bank had transmission effects also on the interest rates on the interbank markets EURIBOR[126] and EONIA[127], i.e. SKIBOR[128] and MKDONIA[129], as reference interest rates in the creation of interest rate policies and decisions on market participants' investments. Thus the difference between the rate of the average monthly SKIBOR and the rate of the average monthly EURIBOR, after certain oscillations, at the end of 2011 reduced to 3.0 percentage points, while the difference between MKDONIA and EONIA reduced to 1.5 percentage points.

In 2011, the total turnover on the **foreign exchange market** equals Euro 7,361 million[130], which is annual increase of Euro 1,214 million, or 19.7%, as a result of the net foreign exchange inflows in the country[131]. In 2011, the turnover on the

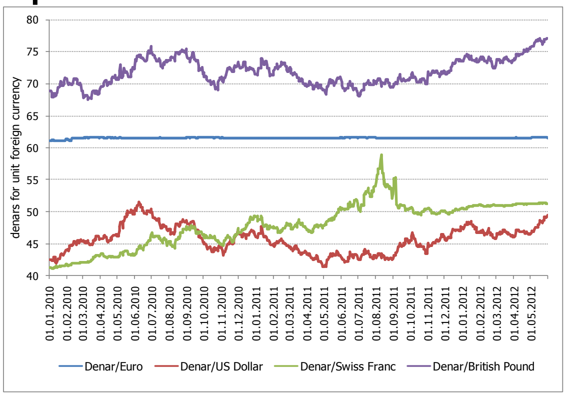
[126] EURIBOR (Euro Interbank Offered Rate) - interest rate at which one reference bank on the EU money market is ready to sell the deposits to another reference bank and it is calculated on the basis of indicative interest rates.
[127] EONIA (Euro OverNight Index Average) - effective interest rate on the EU money market calculated as a weighted value of all overnight transactions where the reference bank is deposit seller. The interbank interest rate EONIA fluctuate within the interest rates of the available credit and the overnight deposit, which are determined at the level of 1.75%, i.e. 0.25%, respectively by the ECB from December 14,2011.
[128] SKIBOR (Skopje Interbank Offer Rate) - interbank indicative interest rate introduced in July 2007 for selling noncollateralized Denar deposits, calculated as arithmetic mean of the quotations of reference banks, for the following standard maturities: overnight, one week, one month, three months, six months, nine months and twelve months (the last three maturities were introduced in 2011).
[129] MKDONIA - its calculation began on October 15, 2008, as weighted average interest rate of already concluded overnight deposits, with reference banks emerging as sellers of non collateralized Denar deposits. Opposite to SKIBOR which is indicative interest rate, MKDONIA is based on concluded transactions, with the reference banks the transactions of which MKDONIA is calculated are the same reference banks that quote on the interbank interest rates SKIBOR.
[130] The total turnover on the foreign exchange market encompasses the banks' transactions with the enterprises, the interbank transactions, including the transactions of the National Bank with the market makers and the transactions of the National Bank with the ministries.
[131] More details are provided in I.2 Domestic environment.

foreign exchange market equals 97.7% compared to GDP[132], which is by 10.6 percentage points more compared to the preceding year.

In 2011, the National Bank interventions were in direction of net purchase of foreign exchange.

The implementation of the strategy for nominal exchange rate targeting of the Denar relative to the Euro means direct dependence of the changes in the intercurrency relations of the Denar with other currencies on the movement in the Euro value on the international foreign exchange markets. During the analyzed period, as a result of the crisis in the Euro area, depreciation pressures for the Euro, and thus the foreign exchange rate of the domestic currency relative to the other currencies, were evidenced. The Denar depreciated compared to the Swiss frank, which reached its peak in August 2011 (Denar 58.8501 per CHF 1). The movement of the value of the Denar relative to the US Dollar and the British pound registers almost identical trend in both the direction and the intensity.

Figure 153 Movement of the official spot exchange rate of the Denar for some more important currencies



Source: National Bank

5.2. Capital market

The capital market in the Republic of Macedonia characterizes with poor choice of financial instruments issued and traded on the Macedonian stock exchange.

5.2.1. Primary capital market

The enterprises are more oriented toward obtaining financial support from the banks, relating generating capital through new issue on the capital market. The total value of the registered new issues of long-term securities by the private sector remained almost unchanged compared to the preceding year. In comparison with 2010, in 2011 the enterprises failed to register any new issue of shares, which was compensated with three new issues of shares by the banks, which

[132] The GDP amount for 2011 is estimated value.

participated with 61.6% in the total value of the realized issues of long-term securities[133].

Table 36 Structure of the realized issues of long-term securities

in millions of Denars

Realized issues of long-term securities	2009	2010	2011
Amount of realized issues of long-term government securities	**1.423**	**1.848**	**1.845**
1. two-years continous government bonds	10	0	0
2. three-years continous government bonds	0	0	0
2. five-years continous government bonds	0	0	1.168
3. Denationalization bonds	1.413	1.848	677
Amount of realized issues of long-term, non-government securities	**5.395**	**3.327**	**3.531**
1. Corporate bonds	0	0	0
2. Shares	5.395	3.327	3.531
- Issued by banks	*0*	*414*	*3.314*
- Issued by other financial institutions	*226*	*17*	*217*
- Issued by non-financial legal entities	*5.170*	*2.897*	*0*
Total amount of realized issues of long-term securities	**6.818**	**5.175**	**5.376**

Source: Securities and Exchange Commission, web site of the Ministry of Finance and National Bank calculations

However, the most active issuers of long-term securities on the capital market were the other financial companies having seven new issues of shares, although their value is far lower than the value of the issues of shares of the banks. The total value of the realized issues of long-term securities in 2011 remained unchanged comparing to the previous year, by compensation of the lower value of the issues of government denationalization bonds[134] with four issues of five-year continuous bonds[135].

5.2.2. Secondary capital market

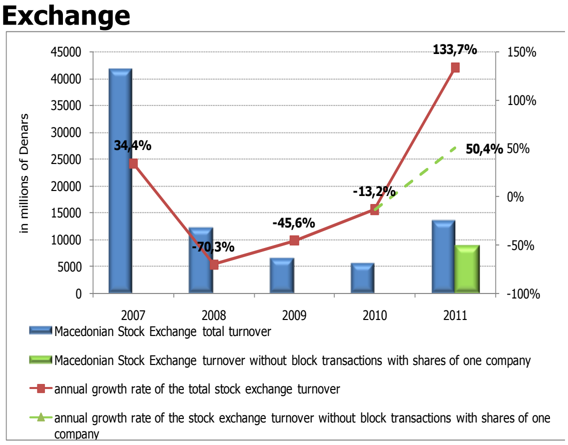
In 2011, the turnover on the Macedonian stock exchange registered an increase, which can be a sign for positive movements of the stock exchange trading. The domestic legal entities remained the only net buyers of

[133] During the year, the Securities and Exchange Commission of the Republic of Macedonia issued 11 approvals for issuance of long-term securities in the total amount of Denar 3,655 million (decrease of 15.3% compared to the preceding year), 8 issues of which were through private offer of shares and 3 issues through public bid of shares. The issues of securities were realized with 96.6% (all approved issues register success of 100%, except two public offers of securities, one of which was realized with success of 85%, while the realization of the other in 2011 was not completed). In the first quarter of 2012, the total amount of issued approvals for securities issue equals Denar 1,400 million.

[134] On March 30,2011, the Ministry of Finance realized the tenth issue of denationalization bond, in the total value of Euro 11 million.

[135] In September 2011, the Ministry of Finance commenced issuing five-year continuous bonds. In September and December 2011, total of four issues of five-year continuous bonds in the total amount of Denar 1,168 million (67.5% in Denars and 32.5% in Denars with FX clause) was realized.

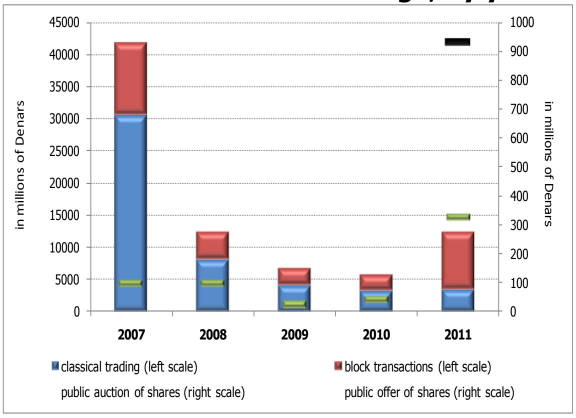
Figure 154 Annual growth rate of the total turnover on the Macedonian Stock Exchange



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

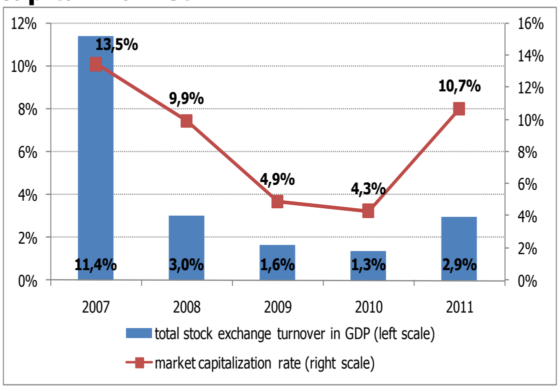
securities thus strengthening the position of main generator of the long-term investment on the capital market in the Republic of Macedonia. However, the composition of the most active market entities and the most traded securities on the Macedonian stock exchange remained unchanged. The downward movement of the stock exchange indices MBI-10 and MBID, as well as the market capitalization of the listed companies on the official market of the Macedonian Stock Exchange continued also in 2011, although with slower dynamics compared to the preceding year. Opposite to 2010, in 2011 two public offers of securities on the Macedonian stock exchange were realized, but generally there is no interest with the joint stock companies for public offer of securities because of the shareholders and managers resistance for possible entry of new shareholders, from the one hand, and the long and more complicated procedure for their implementation compared to the private offers, on the other. The future behavior of the investors will depend, to great extent, on the degree of stabilization of the financial standing of the economies of the main Macedonian economic partners, as well as on the deciding of the open issues which are condition for the membership of the Republic of Macedonia in the Euro Atlantic organizations. The future existence of the secondary capital markets in the region and their further development should be sought in their regional bonding. The new operational monetary policy framework of the National Bank offers more investment alternatives, as well as larger flow of liquid assets in the financial system, which is substantial support to the market entities in deciding on the long-term investment through the capital market.

Figure 155 Structure of the turnover on the Macedonian Stock Exchange, by years



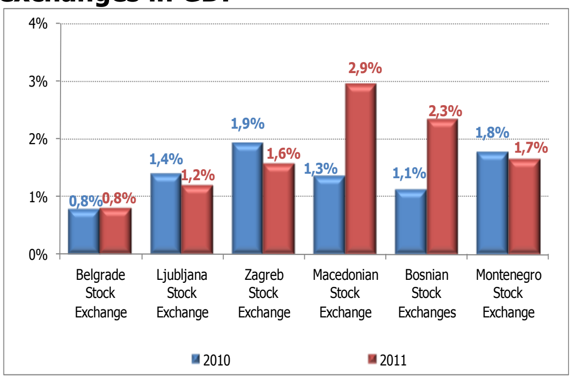
Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Figure 156 Liquidity Indicators of the capital market



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Figure 157 Turnover on the regional stock exchanges in GDP



Source: Web sites of regional stock exchanges, IMF, Macedonian Stock Exchange and National Bank calculations

In 2011, the total turnover on the Macedonian Stock Exchange equaled Denar 13,656 million, registering annual increase of Denar 7,813 million, or 133.7%. Most of the increase is due to the block transaction of shares of one entity, but even excluding the effect of this transaction, the increase in the turnover on the Macedonian stock exchange is evident (50.4%). This indicates termination of the downward trend of the total stock exchange turnover, registered in the last three years.

The realized **block transactions and public offers of securities**[136] in 2011 had the **largest contribution** (82.3% and 11.9%, respectively) to the increase in the total stock exchange turnover. As a result, the realized block transactions dominate in the total stock exchange turnover in 2011 with 65.6%, while the classical trading participates with 25.2%.

The enlarged trade volume, i.e. **increased liquidity on the securities market** is evident also through the relative indicators – share of the total market trade in the total economic activity of the country and the market capitalization rate[137]. However, the higher trade volume arises primarily from the block transactions which are incidental and are not indicators for the market liquidity, and not from the regular trading, which normally means fast and simple purchase or sale of securities, with low transaction costs.

In 2011, the Macedonian Stock Exchange registered the highest share of the total turnover in GDP, relative to the analyzed regional stock exchanges, which is an increase of 1.6 percentage points compared to previous year.

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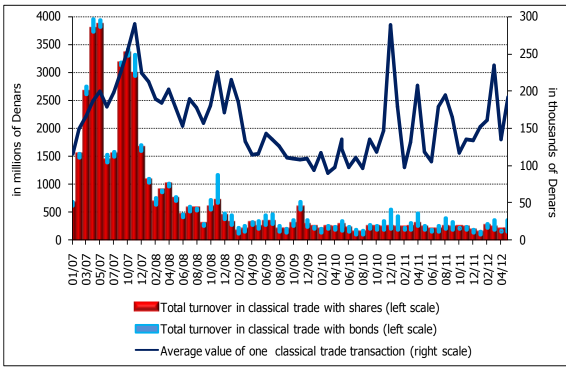
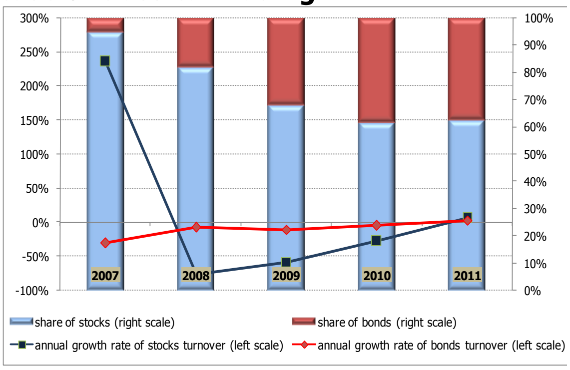
[136] In 2011, two public offers of securities in the total amount of Denar 930.7 million on the Macedonian Stock Exchange were realized, 99.7% of which referred to the public offer of shares of Komercijalna Banka AD Skopje (February, 2011).
[137] Correlation between the total trading and market capitalization.

Figure 158 Monthly turnover in case of classical trading and average monthly value of one transaction



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Figure 159 Structure and annual changes in the turnover of shares and bonds in case of classical trading



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

The turnover based on classical trading[138] **equals Denar 3,439 million, which is annual increase of Denar 170 million, or 5.2%.** As a result of the intensified turnover in 2011 from one hand, and the reduced number of transaction on the other, the average value of one transaction in case of classical trading increased by Denar 20.4 thousand.

In 2011, the structural share of the shares and bonds in the stock exchange turnover in case of classical trading remained unchanged. However, compared to the previous years when the movements in the turnover were almost fully conditioned by the shares turnover (over 90%), in 2011, the shares turnover contributed towards rise in the stock exchange turnover with 76.5%. For the first time in four years, the turnover of shares and bonds registered positive annual growth rates, i.e. increase of 6.4% and 3.3%, respectively.

Table 37 Structure of the total turnover on the stock exchange by the type of investor

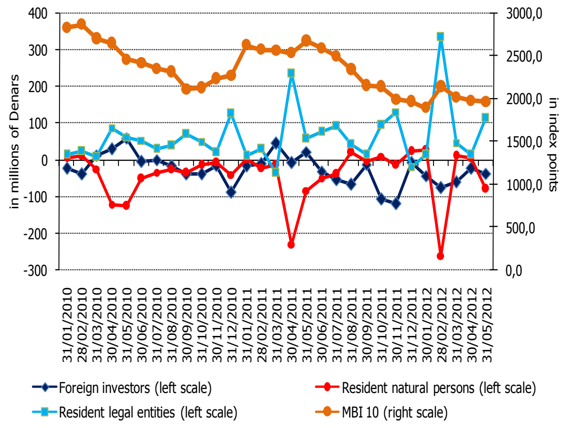
Type of investor	Purchase side of the stock exchange			Selling side of the stock exchange		
	2009	2010	2011	2009	2010	2011
Average share of foreign investors	15,6%	23,1%	18,7%	26,2%	27,9%	26,5%
Average share of resident legal entities	39,2%	40,2%	51,8%	27,0%	24,1%	35,5%
Average share of resident natural persons	45,3%	36,7%	29,5%	46,9%	48,0%	38,0%

Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Note: The calculation of the percentages of the average share does not take into consideration the individual block transactions with the shares of certain companies, as well as the public offer of shares of Komercijalna Banka AD Skopje, according to the releases on the web site of the Macedonian Stock Exchange.

[138] The turnover realized based on classical trading fails to include the block transactions, the turnover realized on the public stock exchange auctions, as well as the public offers of securities. .

Figure 160 Net effect of the trading of individual investor types and MBI-10



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Note: The calculation of the net effect of the total stock exchange trading does not take into consideration the individual block transactions with the shares of certain companies, as well as the public offer of shares of Komercijalna Banka AD Skopje, according to the releases on the web site of the Macedonian Stock Exchange.

In comparison with the previous year, the average share of the resident legal entities increased by approximately 11 percentage points, on both the purchase and selling side of the total stock exchange turnover. In 2011, the resident legal entities preserved the role of single net purchasers of securities, registering net purchase in the total amount of Denar 742 million (24.2% more compared to the previous year). Thus the domestic legal entities strengthened their position of the main the long-term investment generators on the capital market in the Republic of Macedonia.

In 2011, decrease in the average share of the resident natural persons and foreign investors on both purchasing and selling side of the stock exchange turnover was registered. These persons registered a net sale of securities in the total amount of Denar 386 million and Denar 357 million, respectively.

The insufficient presence of the foreign investors, conditioned by the smaller interest for investment in domestic securities is closely connected to the higher uncertainty related to the debt crisis in the Euro area and the general price level on the market, primarily evident through the downward movement of the value of the basic stock exchange index MBI10. The new operational framework of the monetary policy of the National Bank, inter alia, gives support to the capital market through ensuring larger flow of funds for meeting short-term liquidity needs of the market participants in case of long-term investment.

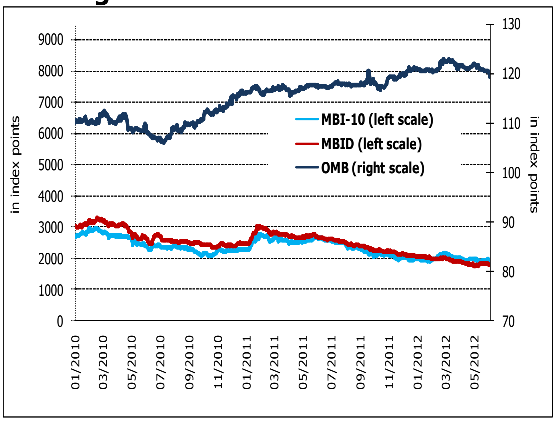
Table 38 Indicators for the concentration degree on the secondary capital market in the Republic of Macedonia

Concentration indicators	2009	2010	2011
CR3 for the total stock exchange members' turnover	39,3%	65,0%	81,3%
CR5 for the total stock exchange members' turnover	59,1%	74,3%	88,7%
CR5 for the total stock exchange turnover in classical trading	52,1%	62,6%	63,6%
Turnover with the five most traded securities/total turnover	74,3%	81,5%	80,2%
Turnover with the ten most traded securities/total turnover	91,9%	93,0%	93,9%
Share of the five shares with the largest market capitalization in the total market capitalization	56,3%	61,9%	62,3%
Share of the ten shares with the largest market capitalization in the total market capitalization	75,1%	80,0%	80,4%

Source: Web site of the Macedonian Stock Exchange and National Bank calculations
Note: In the determining of the CR3 and CR5 indicators for the total stock exchange turnover and the total turnover based on classical trading of the members, the turnover of the brokerage houses which ceased to be members of the Macedonian Stock Exchange in 2011 is also included.

In 2011, further decrease in the number of members of the Macedonian Stock Exchange is evidenced[139]. However, the decrease in the total assets of the brokerage houses (Denar 56 million, or 12.1%), registers slower dynamics compared to the previous year (fall of Denar 286 million, or 37.9%). In 2011, the brokerage houses registered operating loss of Denar 11 million, which is lower by 51.7% than the realized loss in 2010[140].

Figure 161 Movement of the basic stock exchange indices



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

The concentration relative to the total stock exchange turnover of the members is high and additionally increased compared to the preceding year, as a result of the larger volume of concluded block transactions, realized public offers of securities as well as higher amount of public stock exchange auctions, the largest share of which was concentrated with the most active members of the Macedonian Stock Exchange[141]. On the other hand, the other indicators for the concentration remained almost unchanged. No changes were registered with the most active market entities, as well as the most traded securities on the Macedonian stock exchange, which are

[139] The turnover in 2011 was realized by 20 members, which is by 4 members less compared to the previous year. At the end of 2011, 18 authorized participants performing activities with securities on the Macedonian Stock Exchange were registered (12 brokerage houses and 6 banks licensed for securities operations), which is by 2 members less compared to the end of 2010 (in 2011, the Securities and Exchange Commission adopted decisions for permanent revocation of the operating license of two brokerage houses – Auktor BrokerAD Skopje and Novi Triglav AD Skopje).
[140] Skopje: The Securities and Exchange Commission and National Bank calculations.
[141] The data taken into consideration in the calculation of the turnover of the Macedonian Stock Exchange members are based on double calculation (at both, purchasing and selling) in order to cover also the activity in the crossed transactions, except the data on government securities trade that refer only on the purchase.

taken into consideration in the calculation of the indicators.

In 2011, the downward trend of the basic stock exchange index MBI-10 and the publically owned company index MBID continued, although with slower dynamics relative to the preceding year. Thus after the certain upward movement only in the first months of the year, the stock exchange indices MBI-10 and MBID registered downward correction (by 13.3% and 15.2%, respectively on annual basis). Contrary to the downward movements of these stock exchange indices, **the bond index OMB increased by 4.3%**. The movement of the OMB index in 2011 is defined by the denationalization bonds issued by the Republic of Macedonia.

In 2011, no trade with government bonds on the over the counter market[142], was registered.

In 2011 the trading of the shares of the listed companies of MBI-10, as main indicator for the price levels of the most liquid listed companies on the official market of the Macedonian Stock Exchange **participated with 87.3% in the total trading of shares of the listed companies on the Macedonian Stock Exchange**, which is a decrease in the share relative to 2010 and 2009 (92.6%, i.e. 92.2%, respectively).

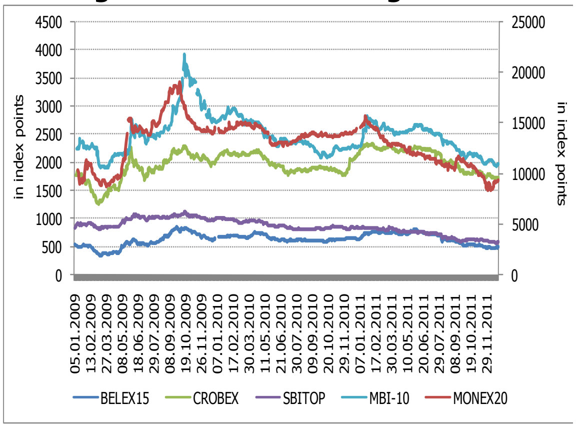
Table 39 Correlation coefficient of the movements of MBI-10 with the movements of the main indices of the stock exchanges in the region

Stock exchange index	BELEX15	MONEX20	CROBEX	SBITOP	MBI-10
BELEX15	-	77,1%	97,4%	89,2%	97,3%
MONEX20	77,1%	-	83,4%	90,4%	80,0%
CROBEX	97,4%	83,4%	-	94,2%	96,7%
SBITOP	89,2%	90,4%	94,2%	-	88,5%
MBI-10	97,3%	80,0%	96,7%	88,5%	-

Source: Web sites of regional stock exchanges and National Bank calculations

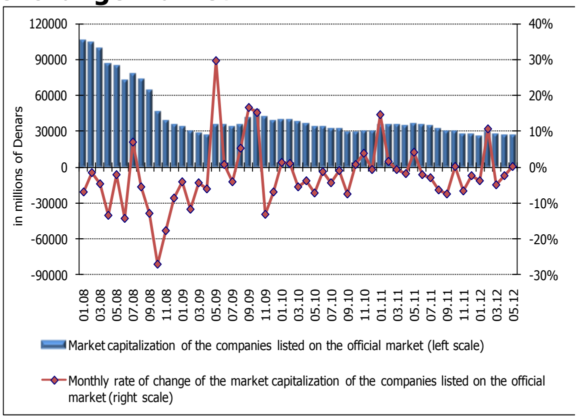
[142] The over the counter market organized by the National Bank, in cooperation with the Ministry of Finance where beside purchase and sale of short-term securities and realization of repo agreements, purchase and sale of government bonds, other than bonds issued for payment of the deposited foreign exchange deposits of the households and denationalization bonds, is performed. The last trade of the government bonds on the over the counter market has been performed in March 2009.

Figure 162 Movement of MBI-10 and stock exchange indices from the region



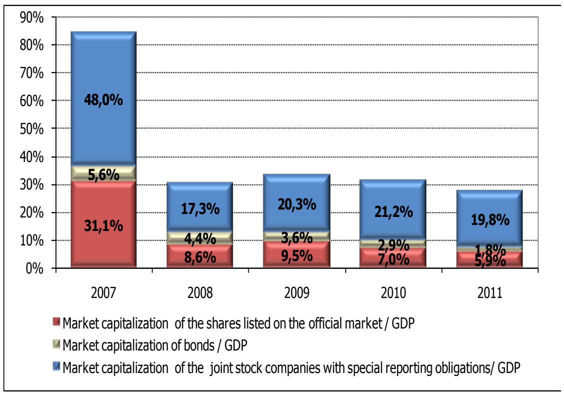
Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Figure 163 Market capitalization of the listed companies on the official stock exchange market



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Figure 164 Market capitalization by markets relative to GDP



Source: Web site of the Macedonian Stock Exchange and National Bank calculations

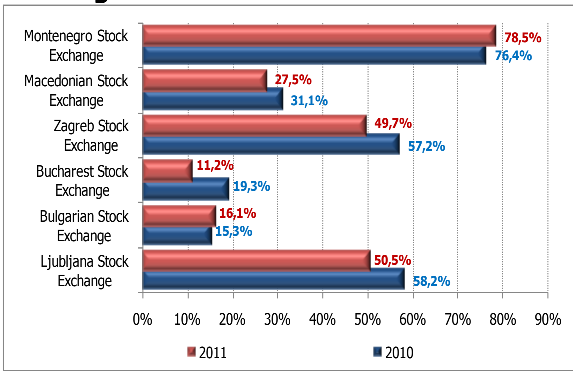
The movement of the basic stock exchange index of the Macedonian Stock Exchange showed high degree of correlation with the movements of the stock exchange indices of the regional stock exchanges in the previous period. The correlation coefficient of MBI-10 with the main indices of the Belgrade, Montenegro and Zagreb stock exchanges are increased compared to the previous year, while the correlation coefficient with the main index of the Ljubljana Stock Exchange reduced from 90.6% to 88.5%. The movements of all analyzed stock exchanges in 2011 were conditioned by the pessimism and the caution of the investors for risk-taking, as a result of the uncertainty in the Euro area debt crisis. The positive movements on the stock exchanges in the region will depend on the undertaken measures for stabilization and recovery of part of the European countries.

The market capitalization registered a decrease in 2011, due to the downward correction of the prices on the capital market. The market capitalization of the shares of the 32 companies listed on the Macedonian Stock Exchange equals Denar 27,300 million and registered a decrease (of 10.3%), although with slower dynamics compared to the previous year (21.7%). The market capitalization of the bonds equaled Denar 8,563 million and dropped by 31.6%, but with intensified dynamics compared to the previous year (15.9%).

As a result of the decrease in the market capitalization, its share in the GDP declined from 31.1% (at the end of 2010) to 27.5% (at the end of 2011).

The decrease in the share of the market capitalization in GDP was evidenced also on the Zagreb Stock Exchange, Bucharest Stock Exchange and Ljubljana Stock Exchange, while the Montenegro and Bulgarian Stock Exchanges registered an increase in the share of the market capitalization in GDP of 2.1, i.e. 0.8 percentage points, respectively.

Figure 165 Share of the market capitalization of the regional stock exchanges in GDP



Source: Web sites of the regional stock exchanges, IMF, Macedonian Stock Exchange and National Bank calculations

ANNEX