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

REPORT ON THE RISKS IN THE BANKING SYSTEM OF THE REPUBLIC OF MACEDONIA IN 2013

April 2013

Contents

Summary

The overall stability of the Macedonian banking system strengthened in 2013. This was also registered by the statistical measure for its monitoring (Z-index), which at the end of the year reached its historically highest level for the last seven years analyzed. The Z-index measures the bank's "distance" from full depletion of its capital potential and is a measure of the banks' capacity to absorb losses. Higher levels of this index point to lower risk level and higher level of overall stability of the banks.

The macroeconomic environment in which the Macedonian banking system operated during 2013, indicated a gradual recovery of the domestic economic activity, but also uncertainty regarding the pace of recovery of the global economy. This had a corresponding impact on the growth of the banks' activities, especially the lending dynamics. Lending to the corporate sector, which slowed down in the last two years, accelerated in the last quarter of 2013. However, despite this movement, banks are still cautious when lending to the corporate sector, which comes as a result also of the conservative strategies of some major banking groups present in the Republic of Macedonia. The monetary measures of the National Bank, by which additional liquidity in the banking sector was provided, coupled with the macro-prudential measures with the same aim, also contributed to the revival of the domestic credit market, credit support to systemically important sectors and lending on a longer run.

Regarding the quality of the banks' loan portfolio, divergent movements were registered during the year, which correspond to the economic changes in the country, the global environment and the banks' perceptions of risk. The effects of the prolonged crisis further shape the loan portfolio quality by fast growth of non-performing loans to the corporate sector in the first six months of the year, which caused the overall rate of non-performing loans to reach its highest value of 12.4%, in July 2013. In the second half of the year, driven by the trend of reviving of the domestic economy and collection of non-performing claims, some banks took concerted effort to restructure the claims on those clients for which they estimated that an adjustment of the credit conditions to their current financial difficulties will be required. These activities of banks can be further encouraged by the new regulation of the National Bank for credit risk management, which encourages banks to perform timely restructuring of the claims, rather than "waiting" for them to get a non-performing status. However, these developments should be carefully analyzed, given that the restructuring will yield results in the medium or long run, but only if made in a timely manner and if the reduction of the credit burden really helps customers to overcome the current financial difficulties. All these activities, together with the higher lending activity of banks to the corporate sector, contributed the rate of non-performing loans at the end of 2013 to be on the lowest level annually (except in January) and equal 11.5%.

Stable and high liquidity is one of the main pillars of the banking system. In 2013, liquid assets continued to grow, but at somewhat slower pace, mainly due to the gradual acceleration of the lending activity in the second half of 2013, but also due to the increased banks' investments in long-term government securities (which, given their long maturity, are not included in the liquid assets). However, they still cover almost 60% of household deposits with banks.

Besides liquidity, high solvency of banks is also a pillar of the overall stability and resilience of the banking system. As of December 31, 2013, the capital adequacy ratio of the banking system recorded a small decline compared with the previous year, but it remains twice higher than the

legally prescribed minimum and amounts to 16.8%. The simple structure and dominance of the core capital are the main features of the banks' own funds, which will enable their easy adaptation to the new international capital standards (Basel 3). In 2013, in the absence of significant amounts of recapitalization, the banks were mainly oriented towards internal creating of capital i.e. reinvesting the generated profit. Recapitalizations will remain uncertain, especially in domestic banks owned by banks based in the EU that are faced with restructuring in their banking systems and increased supervisory and regulatory requirements. Thus, it is expected that also in 2014, profits will be the main source of increasing the capital, which highlights the importance of profitability for the stability of the banking system, which in 2013 has significantly improved. Profits increased by 58% compared to 2012, primarily due to the growth in net interest income. However, the growth in the net interest income results from lower interest expenses. Thus, the trends in banks' profitability, besides on the quality of the loan portfolio will depend also on the opportunities for maintenance and growth of the net interest income, in circumstances of limited opportunities for growth of the interest income due to the still moderate lending activity of the banks and reduced interest expense.

Improved expectations regarding the growth of the domestic economy and stabilization of the international environment in 2014 are expected to have a further positive impact on the banks' activities. The main challenges again refer to the effective revival of banks' lending activity, amid still financially fragile corporate sector, while maintaining banks' profitability, liquidity and capital stability.

Part 1
Risks in banking operations

I. Risks in banking operations

1. Credit Risk

The exposure of the banking system to credit risk registered divergent movements during 2013. In the first half of the year, the growth of non-performing loans was very fast, while in the second half of the year it slowed down significantly. This could be, to some extent, linked with the economic recovery during the year, with the collections of non-performing loans, but also with the enhanced efforts of some banks to restructure the claims i.e. to adjust the credit conditions to current financial difficulties of the customer in order to facilitate the fulfillment of their credit liabilities. Additional incentive may also be given by the new regulation for credit risk management, which began to be implemented on 1 December 2013, under which it is more beneficial for the banks (regarding the cost of allocating loan loss provisions) to try to restructure the customers' liabilities to the bank when they first see their financial difficulties, rather than wait for them to receive the non-performing status. But if the purpose for which the mentioned restructuring was made is not fulfilled (which is to reduce the credit burden, in order for the client to overcome current financial problems), non-performing loans may grow in a medium term. The effect would be similar if the restructuring is not set correctly, i.e. if it is a simple time delay in the recognition of expected credit risk losses. However, one should bear in mind that the analyses show that slightly more than half of the restructured exposures retain the performing status two years later, which points to good restructuring (assuming that the period of two years is enough to see the results of the restructuring). To a lesser extent, the new regulation may also contribute to limiting the growth of non-performing loans, due to the provision according to which all the collected non-performing claims, where the collection has been delayed for more than 31 days, are transferred back to the performing status (as opposed to the previous regulation, which required collection of every claim that is past due, even one day), allowing more realistic leaving of the non-performing status. The introduced materiality threshold for transition to a non-performing status may act in the same direction (more details are given in the text in the box).

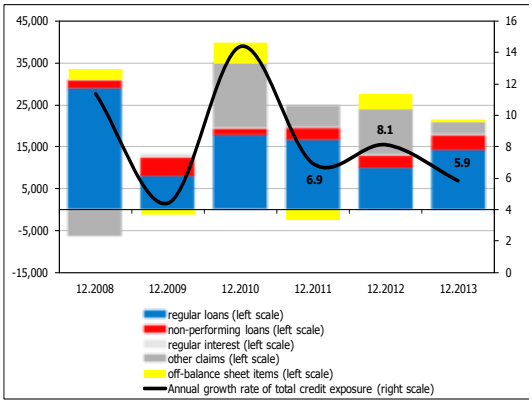
Considering the dynamics of non-performing loans, in circumstances when there are still risks and uncertainties in the environment that affect the banks' perception of risk and their behavior on the credit market, the share of non-performing loans to total loans at the end of 2013 increased by 1 percentage points compared to 2012. However, it is at the lowest level in the year (except January), having in mind the slower growth in the second half of the year. This is due to the continuous decrease of this share among households, but also the increased lending activity to the corporate sector. The slowdown in the annual growth of non-performing loans continued in the first months of 2014 and at the end of February it equaled 4.8%, while the share of non-performing loans to total loans amounted to 11.6%, registering a minimal change compared to December (11. 5%).

Non-performing loans are covered entirely by the total impairment, contributing to minimize the threat for banks' own funds from their possible full default. The own funds of the banking system are sufficient to absorb the risks of

the simulated extreme deterioration of the loan portfolio quality, which was concluded on the basis of the results of the stress test.

1.1. Banking system's loan portfolio quality

Chart 1
Annual growth of credit exposure, by items
in millions of denars and in %

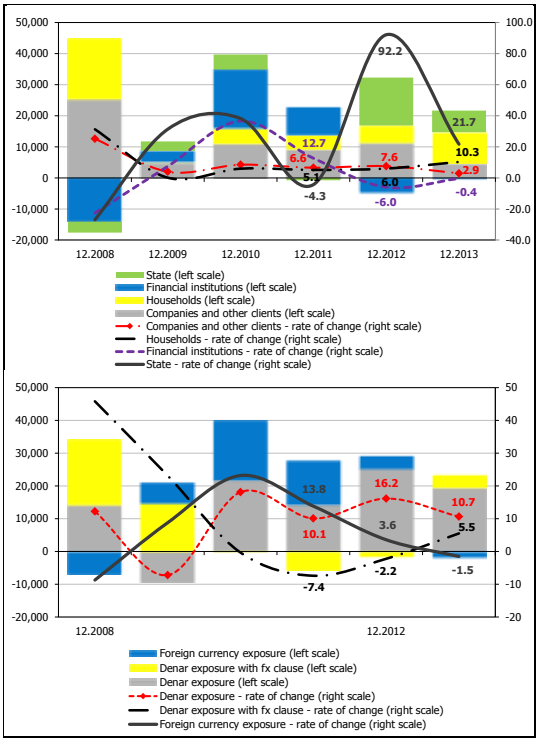


Source: NBRM's Credit Registry, based on data submitted by banks.
Other claims, besides fees, commissions etc., also include banks' investments in CB and treasury bills and government bonds.

As of December 31, 2013, the total credit exposure[1] of the banking system reached Denar 386,952 million and increased by Denar 21,391 million on annual basis. This is a 2.2 percentage points slower growth compared to the previous year, resulting from the downward movement of the credit exposure to financial institutions, and the slower growth of the credit exposure to non-financial entities. Exposure to financial institutions declined by Denar 271 million, or 0.4%, due to lower short-term funds on the accounts in foreign banks (correspondent accounts and short-term deposits) and investments in CB bills. Guided by the more attractive yields and wider offer of government securities, banks increased their credit exposure to the government (by Denar 6,984 million, or 21.7%) with the investments in Treasury bills and longer-term government bonds. In 2013, banks continued to support the non-financial sector, whereby the credit exposure to non-financial entities (excluding the exposure to the financial institutions and the government) registered an annual growth of Denar 14,677 million, or 5.7% (7.0% in 2012) and contributed with 68.6% to the growth of the total credit exposure. Two-thirds of this growth stem from the growth of the credit exposure to households (Denar 9,927 million or 10.3%) in the form of consumer loans and loans for the purchase and renovation of residential property, while the rest comes from the growth of the credit exposure to companies and other customers[2] (Denar 4,751 million, or 2.9%), especially in the activity "wholesale and retail trade" (Annex 18). Regarding the currency, during 2013, exposure in Denars registered markedly higher growth,

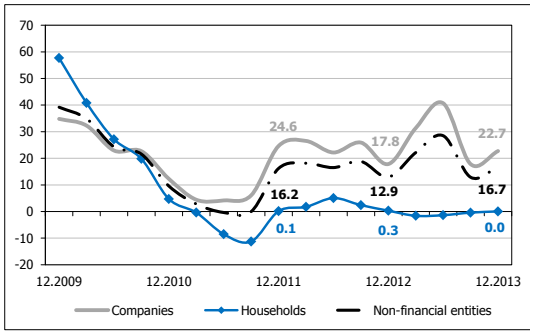
[1] The total credit exposure includes balance sheet (loans and deposits, financial leasing, payments made on the basis of given guarantees, letters of credit, warrants and other off-balance sheet positions, interest, fees and commissions, investment in securities and other financial instruments available for sale or held to maturity, etc.) and off-balance sheet claims (unused irrevocable credit lines, unused irrevocable credits based on overdrafts and on credit cards, letters of credit, guarantees and other contingent liabilities for the bank), which expose the bank to a credit risk.
[2] Hereinafter: companies.

Chart 2
Annual growth of credit exposure, by sector (up) and currency (down)
in millions of denars and in %



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

Chart 3
Annual growth rate of non-performing loans
in %



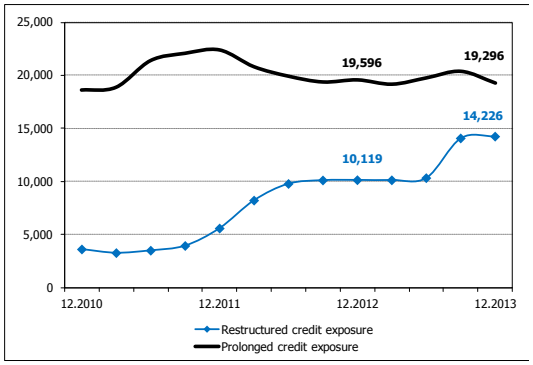
Source: NBRM, based on data submitted by banks.

compared with the exposure with foreign currency component, which reflects the faster growth of Denar loans and investments in Denar instruments. However, almost half of the credit exposure is still with currency component, which emphasizes the importance of currency risk in the credit exposure risk structure.

The deterioration of the loan portfolio quality continued in 2013, which was evident from the higher growth rate of non-performing loans by 3.8 percentage points compared to 2012. Considering the dynamics, the growth of non-performing loans was particularly pronounced in the first half of the year, but starting from July 2013 it began to slow down, and already in February 2014, it was reduced to only 4.8% annually. Their growth comes entirely from the credit exposure to companies, reflecting the deteriorating performance of some customers in "industry", "wholesale and retail trade", "construction" and "activities related to real estate." Non-performing loans to households remained at the same level, but within these frames a reduction was registered in the non-performing consumer and car loans, with simultaneous increase in non-performing residential loans. The analysis of the dynamics of non-performing loans should take into consideration the share of restructured and prolonged exposure to total credit exposure, which at the end of 2013 was 8.7%. In case they were not restructured or prolonged, part of these loans would probably receive a non-performing status, which would appropriately reflect in the movement of non-performing loans. However, one should not overlook the fact that the purpose of the restructuring is to ease the current credit burden on companies in order to overcome the current financial difficulties they are faced with. Even the new Decision on credit risk management, which began to be applied on December 01, 2013, gives an extra boost to banks for timely restructuring[3]. Also of particular

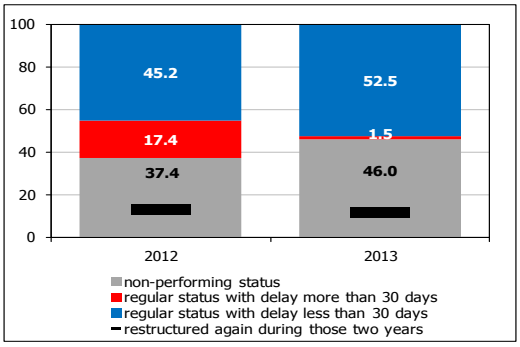
[3] According to the Decision, if the bank has made restructuring of a certain claim, it is required to classify that claim in risk category "C" (for at least six months) and during this period it may not generate income based on release of impairment that is not result of collection of the claim. If the claim already had a non-performing status prior to the restructuring, the bank will be obliged to set aside at least 30% impairment for the restructured claim for at least six

Chart 4
Restructured and prolonged exposure, by quarter
in millions of denars



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

Chart 5
Structure of exposure restructured two years ago, on corresponding date
in %



Source: NBRM, based on data submitted by banks.

importance for the banks is to properly use the opportunities for restructuring, i.e. the restructuring of the customers' credit liabilities should be realistically set, in order to avoid the risk of delaying only the time of recognition of credit losses. As of December 31, 2013, 8.2% (6.0% as of December 31, 2012) of the total credit exposure to companies were being restructured. However, in the medium run, if the purpose for which the restructuring was made is not fulfilled, non-performing loans may grow. The rise in the restructured exposure was followed by appropriate impairment growth, leading to an average risk of the restructured exposure of 39.7% (39.5%, as of December 31, 2012). Prolonged exposure declined, which was entirely due to several customers from the corporate sector whose exposures were restructured in 2013, as a result of their deteriorated financial condition.

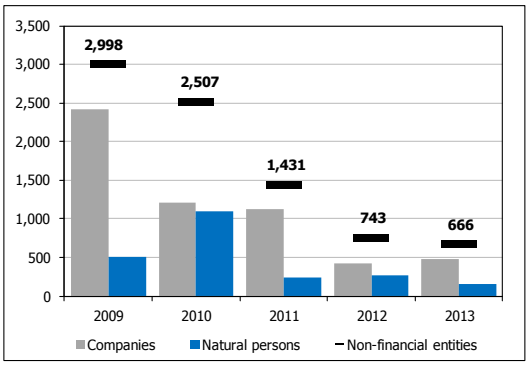
Monitoring of the changes in the quality of exposures that were restructured in 2011, in the following two years, showed that as of December 31, 2013, more than half (54.0%) of the exposures restructured in 2011[4] have a performing status two years after the performed restructuring, while the rest of 46.0% are with non-performing status. Exposures with performing status at the end of 2013 are considered successfully restructured exposures to customers who had current financial problems in 2011. Only 11.6% of the exposures restructured in 2011 were again restructured in the next two years.

The total amount of write-offs during 2013 is at the lowest level in five years. This

months. These provisions encourage the banks to take timely actions for restructuring of claims before they receive a non-performing status or before a higher percentage of impairment is set. In this case, the claim must be classified in risk category "C" (for at least six months), but it may have a performing status, for which at least 20% impairment will be allocated. Given that the restructured claim must be classified in risk category "C" for at least 6 months after the restructuring, it is long enough to assess whether the restructuring has given the expected effects on the financial standing of the customer or not, and to adequately allocate provisions.

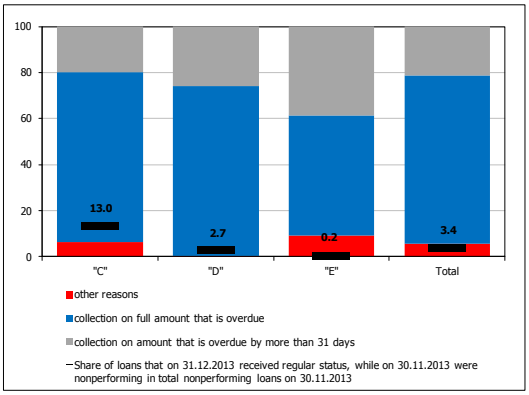
[4] The analysis is based on the amount as of December 31, 2013, of those exposures that were restructured in 2011. This covers only the exposure that is restructured in 2011 and that as of December 31, 2013 has a performing or non-performing status, and does not cover the restructured exposure that is out of the portfolio due to recovery or write-off, which is in a small amount, considering that as of December 31, 2011, most of this exposure had residual maturity longer than 2 years.

Chart 6
Written-off claims, by years
in millions of denars



Source: NBRM, based on data submitted by banks.

Chart 7
Structure of loans that on 31.12.2013 received regular status, while on 30.11.2013 were non-performing, by risk category
in %



Source: NBRM, based on data submitted by banks.

indicates that the write-offs do not have a significant impact on the slower growth of non-performing loans especially in the second half of the year. Thus, excluding the impact of write-offs, the annual growth rate of non-performing loans as of December 31, 2013 would increase by only 1.5 percentage points. Claims written off in 2013 are mostly (71.9%) related to companies, while in the overall recovery of already written off claims, most frequent are the collections from natural persons, with 75.0%.

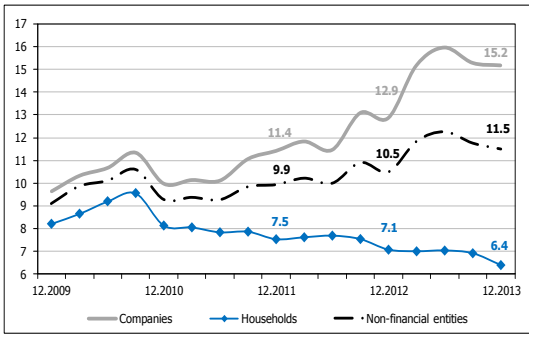
Of the total non-performing loans as of November 30, 2013, 3.4% received a performing status in the following month, i.e. at the end of the year. According to the characteristics of the risk categories, the highest percentage of shift from non-performing to performing status in one month is registered in the risk category "C" (13.0%). The main reason for the change in the status (to performing) was the collection of the entire amount due (which was the regulatory criteria for exclusion from the non-performing status until November 30, 2013). On December 1, 2013 the new Decision on credit risk management[5] started to be applied, according to which the criterion for exclusion from the non-performing status is the collection of claims that are past due for more than 31 days[6].

The growth of non-performing loans, although slower in the second half of the year, contributed to the increase in the share of non-performing loans to total loans by 1 percentage point on an annual level, which amounted to 11.5%[7] at the end of 2013.

The share of non-performing loans to companies in the total loans reached 15.2%. This stems from the faster increase in non-performing loans relative to the moderate increase in the credit support to companies. Considering the

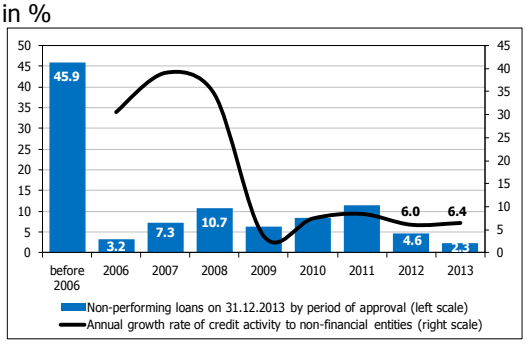
[5] "Official Gazette of the Republic of Macedonia" No. 50/13 and 157/13.
[6] Exposures classified in risk category "C" may be excluded from the category of non-performing claims, only if the bank collects the full amount that is past due for more than 31 days, while exposures in risk category "D" and "E" may be excluded from the category of non-performing claims, if the prerequisites for reclassification to a higher risk category are met and the bank collects the full amount that is past due for more than 31 days.
[7] In February 2014 the rate of non-performing loans amounted to 11.6%.

Chart 8
Share of non-performing loans to total loans of non-financial entities and by sectors
in %



Source: NBRM, based on data submitted by banks.

Chart 9
Distribution of non-performing loans as of December 31, 2013, by period of approval and dynamics of banks' lending activity
in %



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

dynamics, this indicator registered an upward movement in the first half of the year amid tepid lending activity of banks, especially to the corporate sector. In contrast, in the second half of the year the share of non-performing loans recorded a slowdown as a result of the restructurings in the third quarter and increased credit support to companies in the last quarter, but also the recovery of non-performing exposures, amid intensified activity of the corporate segment. The rate of non-performing loans to households decreased due to the faster growth of total loans, amid unchanged level of non-performing loans.

According to the approval period, 2.3% of total non-performing loans as of December 31, 2013 were approved during 2013. Most of the non-performing loans approved in 2013 were to the corporate sector[8] mainly to customers from "wholesale and retail trade" and "manufacturing". As of December 31, 2013, almost half of the non-performing loans had been approved until 2006.

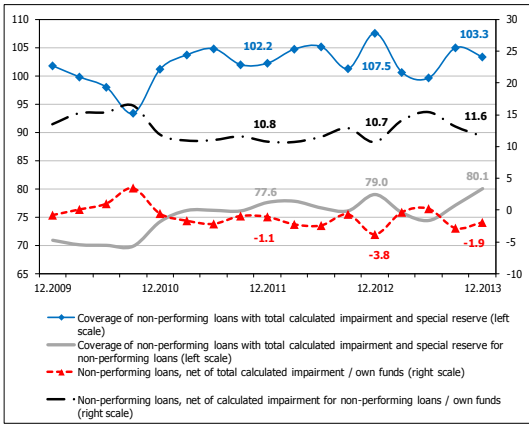
The growth of non-performing loans was accompanied by slower annual growth of banks' total impairment in the amount of Denar 2,778 million or 10.4%. Considering the dynamics, this growth stems entirely from the first half of the year, it slowed down in the third quarter, and in the last quarter of 2013, following the entry into force of the new Decision on the credit risk management on 1 December, it registered a downward movement[9]. Thus as of December 31, 2013, the total impairment decreased by Denar 569 million or 1.9% compared to November 30, 2013, as a result of the impairment in the activities "wholesale and retail trade", "chemical industry" and "activities related to real estate" in the corporate sector, and residential and consumer loans and credit cards in the household sector. The reduction of impairment arises in large part from the downward adjustment of the limits for determining impairment and special

[8] The average level of risk of these loans is 50.5%.
[9] According to the report on the effect of the application of the Decision on the credit risk management on the amount of impairment, impairment totaling Denar 28 million is released. Four banks had to increase the provisions, due to the application of the new Decision.

reserve for individual exposures in each risk category, according to the new Decision, and the collection and the reclassification of certain credit exposures to better risk category.

As of December 31, 2013, only 5.2% of the total credit exposure of the banking system was classified on a group basis, and only 0.7% of the total impairment and special reserve were determined on a group basis. At the end of 2012, almost three times as much, or 16.8% of total credit exposure and 2.1% of the total impairment and special reserve were classified and determined on a group basis. The regulation on the credit risk management, which was applied until the end of November 2013, did not contain detailed provisions on how to determine the impairment on a group basis. The new Decision (which is being applied as of December 1, 2013) prescribes the method of determining the impairment and special reserve (by using the rates of expected loss) for each loan portfolio. The non-compliance of banks' systems with the deadlines for the start of the application of the Decision or the higher amount of impairment that arises from the new provisions are likely explanations for leaving the possibility of making classifications on a group basis by some banks. Impairment on a group basis covers only 1.1% of the credit exposure classified on a group basis, while the average level of risk of the performing exposure classified on an individual basis is 2.2%.

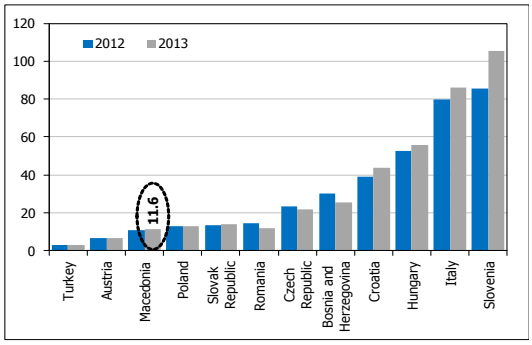
Chart 10
Coverage of non-performing loans and share of non-performing loans in banks' own funds
in %



Source: NBRM, based on data submitted by banks.

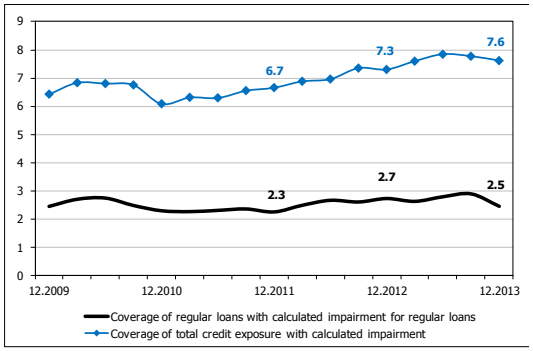
The faster growth of non-performing loans compared to the growth of impairment caused a reduction in the coverage of non-performing loans with total impairment, but it still exceeds 100%. In contrast, as of December 31, 2013 the coverage of non-performing loans only with their impairment increased to 80.1% (79.0% as of December 31, 2012). Beside the growth of non-performing loans, the increase in the impairment of non-performing loans was induced by the new rule for determining impairment of at least 30% for non-performing claims classified in risk category "C", which applies from December 1, 2013. Thus, as of December 31, 2013, the coverage of non-performing loans in the risk

Chart 11
Share of non-performing loans, net of their calculated impairment, in banks' own funds, by country
in %



Source: IMF's database on financial soundness indicators.

Chart 12
Average risk level for the total credit exposure and for regular loans
in %



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

category "C" only with their impairment reached 32.2% (28.3% as of December 31, 2012[10]).

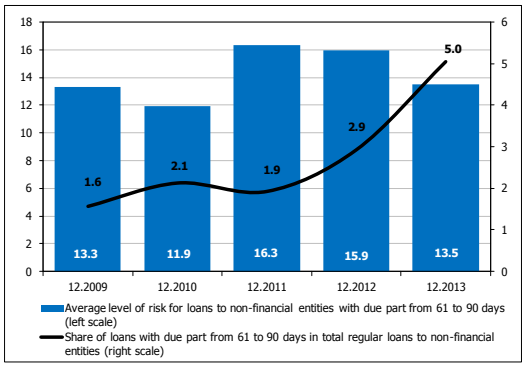
The share of the unprovisioned part of the non-performing loans to total own funds of the banking system increased, due to the minor downward movement of the own funds, but it is still low. Thus, in case of hypothetical complete default of non-performing loans, at the end of 2013, own funds would have decreased by 11.6% (0.9 percentage points more compared with the assumed reduction of 10.7% as of December 31, 2012).

Compared with some of our neighboring countries and beyond, this indicator for the banking system of the Republic of Macedonia is significantly more favorable (lower). The lowest level of this indicator was registered in Turkey, where the coverage of non-performing loans would require only 3.2% of the banking system's own funds. The unprovisioned part of the non-performing loans increased in most countries, and in some countries the unprovisioned part of the non-performing loans absorbs a significant portion of banks' own funds.

In 2013, as a result of the higher growth of the impairment compared to the growth of the total credit exposure, the average level of risk in the loan portfolio of the banking system increased by 0.3 percentage points. Given the lowered limits for impairment by individual risk categories, which were introduced with the new regulations from December 1, 2013, the average risk level of the banks' portfolio at the end of 2013, is in risk category "B" (risk category "A" under the previous legislation). The average risk of performing loans decreased because of the annual decline in their impairment (by Denar 299 million, or 4.6%), also as an effect of the lowered limit of impairment for individual risk categories.

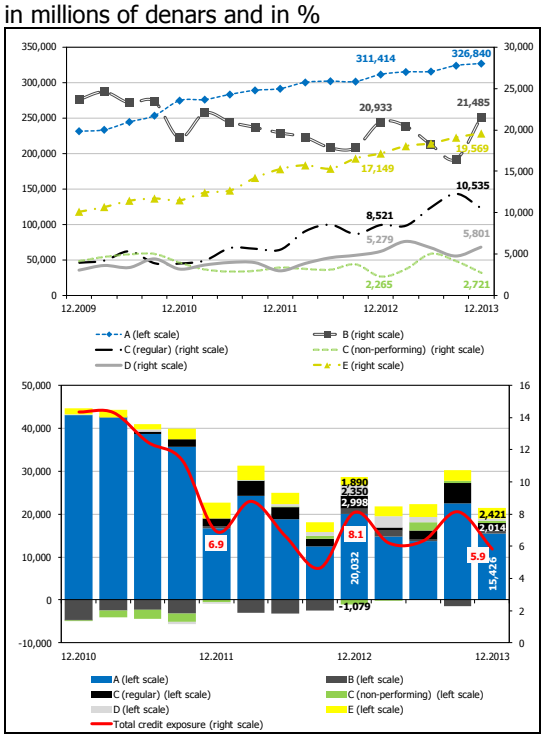
[10] The annual growth of non-performing loans in the risk category "C" equals 21,4%, while the established impairment of these loans grew by 38.1%.

Chart 13
Average risk level for loans with due part of 61 to 90 days
in %



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

Chart 14
Credit exposure, stock (up) and absolute annual growth (down), by risk category
in millions of denars and in %



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

Due loans with delayed repayment of 61 to 90 days, whose participation in the performing loans almost doubled, pose a potential risk for increase in the non-performing loans over the following month. Thus, if none of these loans is collected over the following month, 5.0% of the total performing loans as of December 31, 2013 would turn into non-performing. Only on this basis, non-performing loans would increase by Denar 10,269 million, or 38.6%. But the growth registered in the following month (January 2014) is significantly lower, and equals 0.5% or Denar 138 million.

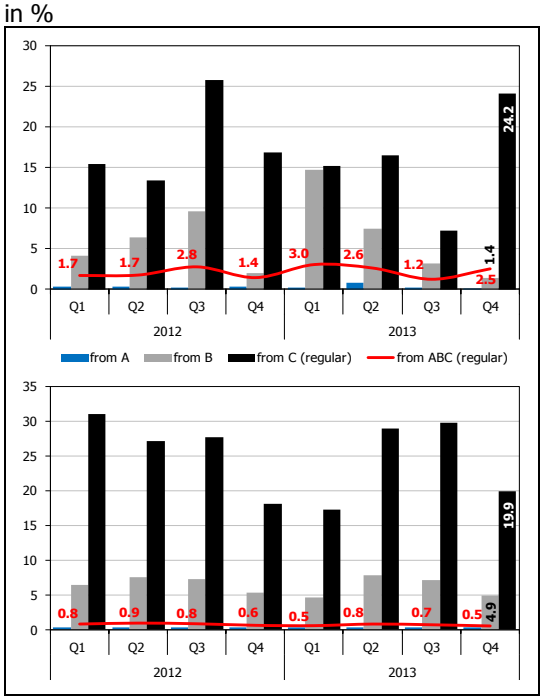
The annual growth of the credit exposure with performing status is mostly (85.7%) resulting from the exposure in the risk category "A"[11], while the increased credit exposure with a non-performing status is triggered by the increased exposure in risk category "D" (about Denar 2,421 million or 14.1%). The growth of the non-performing credit exposure in this risk category arises entirely from the companies. This growth is a result of the deteriorated quality of individual credit exposures, but also of the tightened criterion for classification of credit exposures with a delay of over 241 days (previously 270 days) in risk category "D", which was performed simultaneously with the lowering of the impairment threshold (which was reduced in all risk categories, while for risk category "D" it was reduced from 75% to 70%).

According to individual activities in the corporate sector, the credit risk is the highest in "industry" and "construction", while according to individual products of the household sector, it is the highest in credit cards and consumer loans (Annexes 24 and 25). According to the currency structure, the highest risk-bearing credit exposure is that in Denars with foreign exchange clause (Annex 23).

The percentage of credit exposure with performing status, which for a period of one

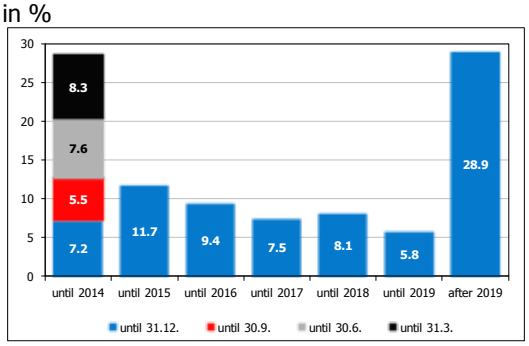
[11] This category of risk includes credit exposures with a delay of 31 days, as well as credit exposures that are settled with a delay of more than 31 days, if the total amount that is not recovered for more than 31 days is less than Denar 500 and the delay is not longer than 60 days.

Chart 15
Quarterly shift of credit exposure to companies (up) and natural persons (down) from regular to non-performing status
in %



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

Chart 16
Structure of credit exposure to non-financial entities, by maturity of principal
in %



Source: NBRM's Credit Registry, based on data submitted by banks.
Note: The analysis does not include exposures classified on a group basis.

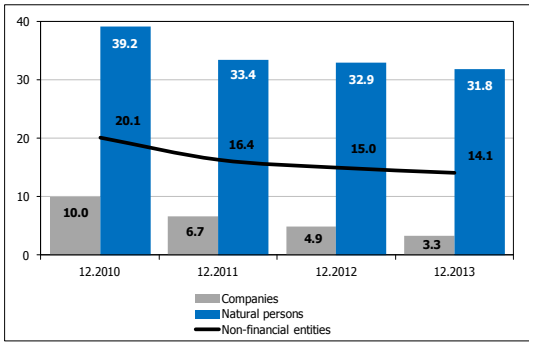
quarter receives a status of a non-performing exposure[12] increased at the end of 2013 (1.6% versus 1.1% at the end of 2012). Analyzed by individual sectors, 2.5% of the performing exposures to companies and 0.5% of these exposures to natural persons received a non-performing status in one quarter. In the last quarter of 2013, a significant increase was registered in the share of the credit exposures to companies in the category "C" performing, that within one quarter receive a non-performing status[13] (from 7.2% in the third quarter of 2013 to 24.2% in the last quarter).

The analysis of the credit exposure to non-financial entities according to the maturity of the principal, as of December 31, 2013, showed that 28.6% of the amount falls due by the end of 2014, and almost the same amount falls due after 2019. The exposure with an average risk level of up to 20% (categories "A" and "B") accounts for 95.7% of the total credit exposure which falls due by the end of 2014 and the largest proportion of which (74.4%) refers to companies, i.e. customers from the activities "wholesale and retail trade" and "industry", whose average risk level is in the risk category "B".

At the end of 2013, the share of the uncollateralized credit exposure[14] in the total credit exposure to non-financial entities, but also to individual sectors, decreased. This decline is most pronounced in the companies where the uncollateralized exposure reduced by 30.0% on an annual basis, which corresponds to the tightened credit conditions for the corporate sector in the first two quarters of 2013. The share of the uncollateralized exposure to natural persons was reduced to 14.5%, if the exposure

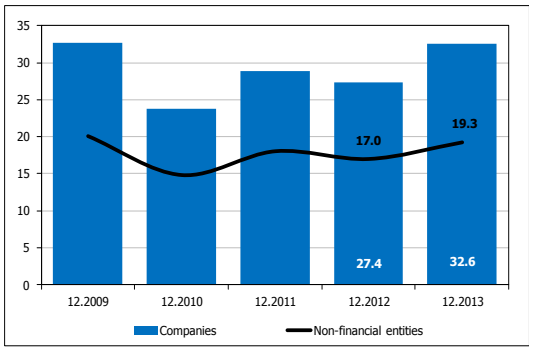
[12] The shift of a credit exposure with a performing status in an exposure with a non-performing status is calculated as the ratio between the credit exposure which received non-performing status at the end of the quarter and the credit exposure at the beginning of the analyzed quarter. The analysis does not include the credit exposure which was closed due to restructuring and prolonging and the credit exposure approved during the quarter.
[13] These exposures have the largest contribution to the growth of non-performing loans.
[14] Source: data provided by the banks for the Credit Registry of the National Bank.

Chart 17
Share of uncollateralized exposure in total credit exposure of non-financial entities and of sectors
in %



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

Chart 18
Share of bullet loans in total loans to non-financial entities and to companies
in %



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

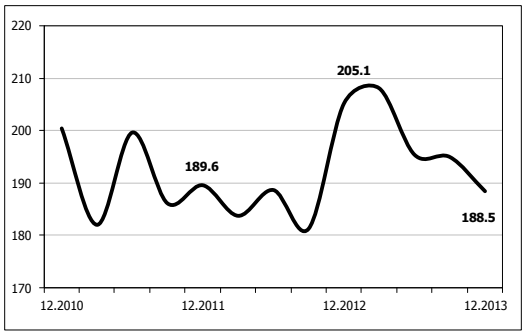
based on overdrafts on current accounts and credit cards[15] is excluded. The relatively high coverage of the credit portfolio with some form of collateral contributes to mitigate the level of credit risk that banks have assumed and it may also serve as a potential source for collection of the non-performing exposure. However, such credit policy of banks makes the access to loans difficult for the customers who do not have (adequate) security, and can also mean transforming of the credit risk into a risk of (in)ability to sell the foreclosed property.

The share of bullet loans in the total loans to non-financial entities increased, as a result of the significant growth of 20.4% of the bullet loans. Such structured loans were entirely granted to companies. Any extension of the growing banks' orientation toward approving bullet loans may be a sign of potential future credit risk, i.e. risk of possible underestimation of the current credit risk due to the delay of the appropriate allocation of impairment (in circumstances where the periodic repayments consist only of interest).

At the end of 2013, the credit risk concentration measured by the share of large exposures (including exposures to financial institutions)[16] in the banks' own funds decreased. Analyzed by bank, the share of large exposures in the own funds ranges between 10.5% and 729.1% and is within the maximum prescribed limit[17]. If the exposures of banks to financial institutions and placements in CB bills and government securities are excluded, the concentration is clearly lower, i.e. the share of large exposures to non-financial entities in the banks' own funds was 65.9%[18]. Analyzed by bank, the share of large exposures to non-financial entities in the own funds ranges from 10.5% to 188.4%. Moreover, about half of the large exposures at the system level account for one bank. Credit exposure to companies is mostly

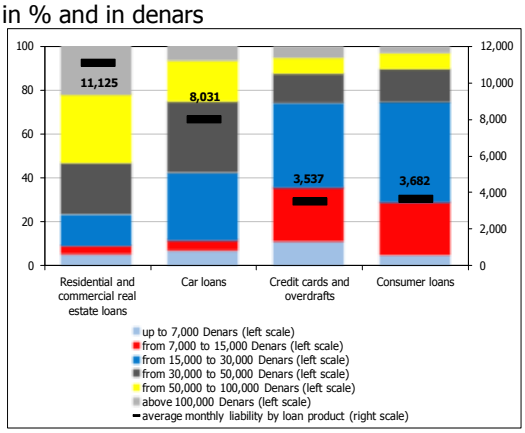
[15] Most collections of this credit exposure are covered by the monthly income of borrowers.
[16] Large exposure to a related person or persons is an exposure equal to or higher than 10% of bank's own funds.
[17] The total amount of large exposures must not exceed eight times the amount of bank's own funds.
[18] Six banks do not have large exposures to non-financial entities.

Chart 19
Share of large exposure in banks' own funds
in %



Source: NBRM, based on data submitted by banks.

Chart 20
Structure of credit exposure to individual credit products, by monthly income of borrowers (natural persons)
in % and in denars



Source: NBRM, based on data submitted by banks.

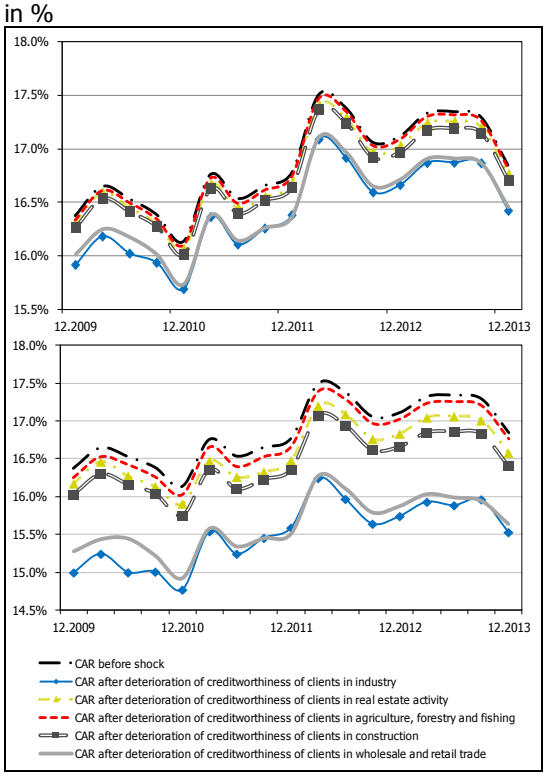
concentrated in the activities "industry" and "wholesale and retail trade" (which account for approximately one-third in the total exposure to the corporate sector), whereby the risk level of the credit exposure to these activities greatly influences the quality of the credit exposure to companies.

During 2013, banks directed a significant part of their credit support toward households, which increased the average debt per person (debtors only) from Denar 96 thousand to Denar 102 thousand, annually. As of December 31, 2013, the majority of the credit exposure accounts for persons with monthly income of up to Denar 30.000. They account for two-thirds of the total banks' exposure to natural persons and 72.5% of the total exposure intended for consumption (Annex 26), which in view of the average net salary in the Republic of Macedonia (Denar 21,146 in 2013) could be regarded as expected. Analyzed by individual persons, most indebted are natural persons with monthly income above Denar 100,000 (average debt of Denar 578 thousand per person), which is a result of the banks' adjustments of the amount of debt to the amount of the monthly income of natural persons. With these persons, the average debt per person has increased by nearly 50% compared to the end of 2012. Based on the data obtained from banks, in 2013 several banks eased the requirement for the ratio of the credit exposure to the amount of the monthly income of borrowers, which further explains the growth of loans to households. The average monthly liability per person, depending on the loan product ranges between Denar 3.5 thousand (for credit cards and overdrafts on current accounts) and Denar 11.1 thousand (for loans for purchasing and renovation of residential and commercial properties).

1.2. Stress-test simulation of the sensitivity of the banking system to increased credit risk

In order to examine the sensitivity of the banking system to deterioration of the quality of

Chart 21
Capital adequacy ratio, before and after first (up) and second (down) simulation, by activity
in %



Source: NBRM, based on data submitted by banks.

certain loan portfolio segments, regular stress-tests are conducted. They consist of simulations of hypothetical migration of 10% (first simulation) and 30% (second simulation) of credit exposure to companies (by activity) and households (by credit products), separately, and to the two sectors together, to the next two higher risk categories. The results of the simulations show that the resilience of the banking system to the simulated shocks is maintained. Compared with the previous year, there is certain deterioration in the results of individual banks. In both simulations for the different activities, the greatest reduction in the capital adequacy ratio is noticeable in the deterioration of the creditworthiness of the customers from "industry" and "wholesale and retail trade", followed by "construction".

The concentration of credit exposure measured by the Herfindahl index is the highest and above the acceptable limits[19] with "industry", which corresponds to the largest reduction in the capital adequacy ratio of the banking system during the simulations conducted for the customers in this activity. Capital adequacy ratio is also significantly reduced in the two simulations of customers in "construction". The importance of the credit exposure to this activity for the quality of the loan portfolio of the banking system is confirmed also by the high concentration of the credit exposure to this activity (which is also above the permitted level according to the Herfindahl index) and the fact that the construction sector is one of the drivers of growth of the domestic economy in 2013.

New regulations on credit risk management

In March 2013 a new Decision on Credit Risk Management was adopted, which came into force on December 1, 2013. The most significant novelties in the Decision are related to:

1. Changes in the classification of credit exposures on an individual basis. The Decision imposed an obligation for monthly classification of credit exposures in the appropriate risk category, replacing the previous quarterly classification. Banks are still required to perform the classification, taking into account the creditworthiness of the

[19] The level of concentration is considered to be acceptable when the index ranges from 1,000 to 1,800 units.

customer, the orderly settlement of liabilities and the type of security, with generally retained criteria for evaluation of these three elements. However, the Decision specifies the time when the banks perform the mandatory assessment of the customers' creditworthiness: (1) for customers - legal entities: at the time of approval of the credit exposure; at least once in six months or more often, due to the emergence of the general indicators of impairment and in the event of restructuring or refinancing of the claim/claims and (2) for customers - natural persons: at the time of approval of the credit exposure and in the event of restructuring or refinancing of the claim/claims.

Regarding the orderly settlement of liabilities, a change was made in the days of delay on the basis of which banks, among other things, perform classification of the claims in risk category "E". If the liabilities on the basis of certain exposure are settled with over 241 days of delay, that exposure is classified in the worst risk category ("E"). In the earlier Decision, this limit was 270 days. Appropriate reduction was made also in the ceiling for the days of delay in risk category "D".

The Decision specifies the types of collateral that can be taken into account in the classification of a particular exposure and when determining the impairment/special reserve. Only premium-quality collateral can be taken into account in the classification of a particular claim, i.e. that claim may be classified in risk category "A". All other types of collateral can not be taken into account in the classification of credit exposures. On the other hand, for the credit exposures classified in risk categories "D" and "E", the bank may consider the collateral value when determining the impairment/special reserve, if it is a first-class collateral, pledge of residential facility or business premises, or pledge of claims on the Republic of Macedonia. The Decision specifies the criteria that these forms of collateral need to meet and value under which they may be included in the discounting of cash flows.

2. Changes in the classification of credit exposures on a group basis. Previous regulations allowed banks to classify exposures on a group basis, but did not provide sufficiently clear guidance regarding the manner in which classification is performed, i.e. the impairment/special reserve is allocated. The new Decision specifies the method of determining the impairment, i.e. the special reserve for exposures that are part of the loan portfolio, by defining the rate of expected loss[20]. Also, it precisely defines the credit exposures that may be part of the loan portfolio[21] and increases the amount of the credit exposure that can be classified on a group basis (from 33% to 50% of bank's total credit exposure[22]).

[20] The rate of expected loss for a given portfolio of loans is a product of the probability of default (probability that the exposure of the portfolio will receive a non-performing status in a period of twelve months) and the rate of loss due to default in the exposures from the loan portfolio (average loss that the bank has made for non-performing and written off claims over a period of up to three years). When determining the rate of loss due to default, the bank is obliged to have historical data on realized losses from non-performing and written-off claims with similar characteristics, which received this status not more than five years before.

[21] The loan portfolio may include exposures that are part of the small loans portfolio in accordance with the Decision on the methodology for determining the capital adequacy or exposures that meet the criteria under the Decision on the methodology for determining capital adequacy for the claims covered by residential property.

[22] As of December 31, 2013, five banks used the opportunity to make the classification on a group basis.

3. Changes in the definition of non-performing claims. Any credit exposure which is classified in risk categories "D" and "E" and exposure classified in risk category "C", which on any basis is past due for more than 90 days from the date of maturity, remains to be considered a non-performing claim. However, the Decision provides an opportunity for banks to use the materiality threshold for transfer of credit exposures classified in risk category "C" into the category of non-performing claims[23]. The bank shall be required to regulate the application of the materiality threshold in its internal regulations, and to apply it to all exposures. The Decision also gives the bank the opportunity to exclude the claims for which the full amount that is past due for more than 31 days has been collected from the category of non-performing claims, unlike the previous requirement for full settlement of the amount due in order to be excluded from this category.

4. Changes within the impairment/special reserve limits for each risk category. With the Decision these limits were reduced as follows: 0% to 5% (risk category "A"), over 5% to 20% (risk category "B"), over 20% to 45% (risk category "C"), over 45% to 70% (risk category "D") and over 70% to 100% (risk category "E"). According to the previous regulation, limits by risk category pertained to 0% to 10%, over 10% to 25% over 25% to 50%, over 50% to 75% and over 75% to 100%, respectively. On the other hand, given that an exposure classified in risk category "C", despite performing, may also have a non-performing status (which is indicative of greater risk of that exposure), the Decision introduced an obligation to allocate at least 30% impairment/special reserve for non-performing claims classified in this category. For credit exposures classified in risk category "E" for which there is strong expectation that not even part of them can be collected, the Decision allows the bank to set aside impairment of at least 85%, if the exposure is secured by a pledge of factories and other similar manufacturing facilities, agricultural land and products whose price depends on the movements in the price of that product on world markets[24].

The Decision started to apply from 1 December 2013. According to the data submitted by banks on the effect of the initial application of the Decision, the majority of banks (12) have released the amount of the impairment, i.e. special reserve in the amount of Denar 328 million. On the other hand, four banks showed additional impairment/special reserve due to the provisions of the new Decision. However, at the level of the banking system, the overall effect of the requirements of the new Decision is releasing of impairment/special reserve in the amount of Denar 28 million. According to the Decision, released impairment can be used only to strengthen the capital of banks (covering losses from previous years or distribution in reserves or retained earnings).

2. Liquidity risk

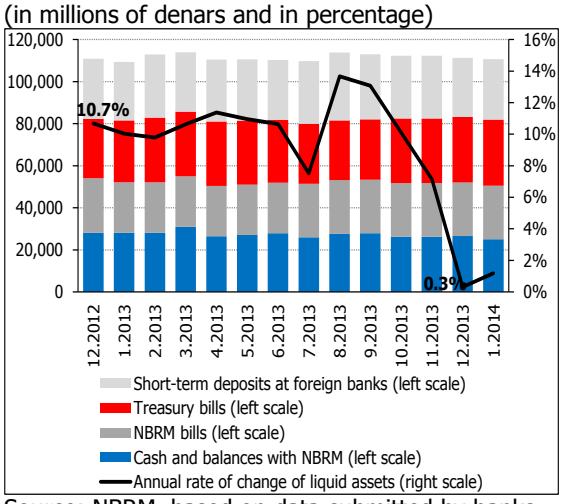
The liquidity of the banking system of the Republic of Macedonia was on a high and stable level during 2013, notwithstanding the slower growth of liquid assets. The lack of a more significant increase in liquid assets in 2013 was primarily

[23] The Bank has no obligation to transfer the exposure into non-performing claims if the uncollected amount that is past due for more than 90 days does not exceed: Denar 1,000 (for natural persons), Denar 3.000 (for small companies) and Denar 10.000 (for other legal entities). As of December 31, 2013, six banks used this opportunity.
[24] Without this security, the bank will have to set aside 100% impairment for such exposures.

resulting from the reduced liquidity in the second half of the year due to the gradual strengthening of lending, deleveraging of domestic banks to foreign parent entities and the growing preference to invest in long-term government securities. In 2013, a decrease of the used banks' funding sources from their parent entities was registered. Hence, deposits of non-financial entities were the main driver of the growth of the banks' funding sources. The restructuring of the maturity profile of the liabilities of the banks continued, in favor of increasing the long-term funding, which in turn contributed to the improvement of the liabilities structure according to their contractual residual maturity. Also the contractual residual maturity of bank assets increased, i.e. the share of assets with shorter maturities decreased. Stress-tests show that the banking system has maintained a satisfactory level of resilience to liquidity shocks. According to the latest data available, as at February 2014, liquid assets grew by 0.6% annually, the share of liquid assets to total assets is maintained at a high level, and the coverage of short-term liabilities and deposits of households with liquid assets also remains high.

2.1. Amount, composition and changes in the liquid assets

Chart 22
Structure of banks' liquid assets by financial instruments
(in millions of denars and in percentage)



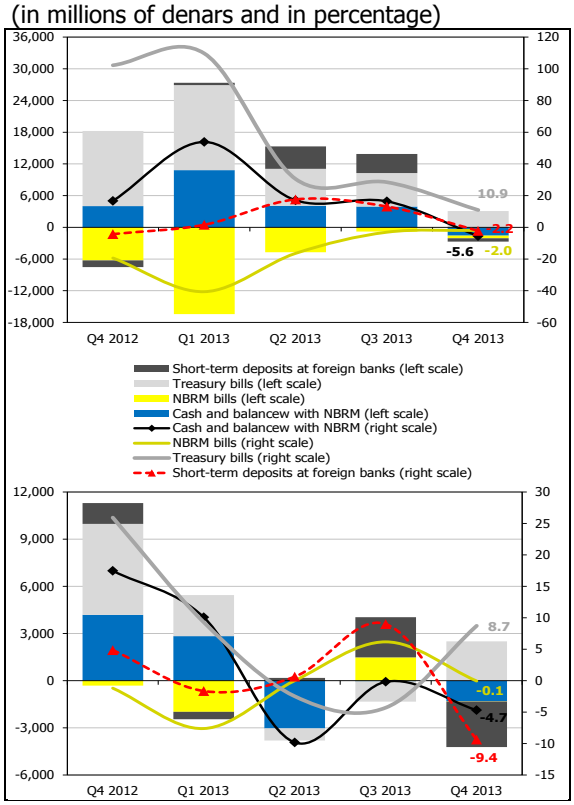
Source: NBRM, based on data submitted by banks

At the end of 2013, the liquid assets[25] of the banking system amounted to Denar 111,264 million, which is an increase of Denar 351 million, or 0.3% on an annual basis. The annual growth rate of liquid assets slowed significantly in the last quarter of 2013. The reason for this slowdown is the decline of liquid assets in this quarter, which coincided with the intensified credit activity of banks. In fact, in the last quarter of 2013, liquid assets decreased by Denar 1.719 million, or 1.5%, while loans to banks increased by Denar 6,843 million, or 3.1%.

In 2013, amid auctions of CB bills with quantitative restriction on the amount offered, where banks were unable to invest unlimitedly in this financial instrument, investments in CB bills declined by 2.0%. Also, in the last quarter of 2013, a new methodology in conducting CB bills auctions began to apply, according to which each bank determines the potential demand for this instrument. If at the time when the auctions are conducted it is determined that at the level of the banking system there is higher than the potential demand, the banks that auctioned amounts

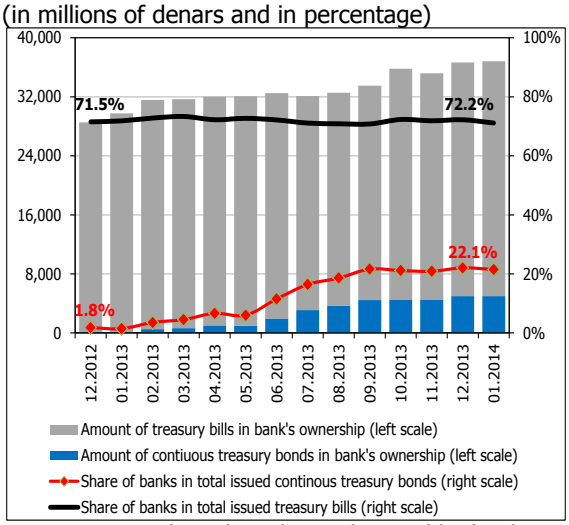
[25] Liquid assets include the following balance sheet categories: cash and balances on accounts with the National Bank, CB bills, correspondent accounts and short-term deposits with foreign banks and investments in short-term securities issued by the government. For the liquidity analyzing purposes, Denar assets and liabilities with FX clause are regarded as Denar assets and liabilities.

Chart 23
Annual (up) and quarterly (down) absolute and relative change of financial instruments that constitute liquid assets
(in millions of denars and in percentage)



Source: NBRM, based on data submitted by banks

Chart 24
Amount of banks' continuous government securities and share of banks in total issued continuous government securities
(in millions of denars and in percentage)



Source: NBRM, based on data submitted by banks

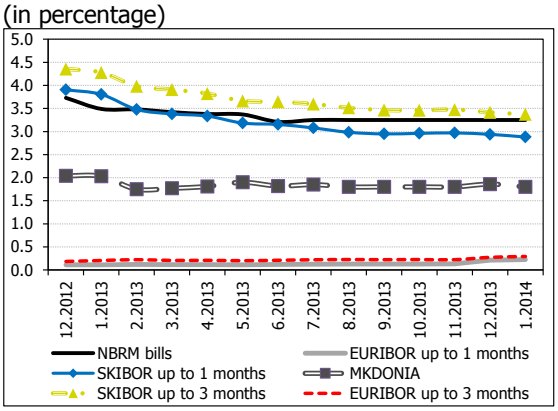
higher than their potential demand will be obliged to place the difference relative to the potential in seven-day deposits with the National Bank. Observed on a quarterly basis, only during the third quarter of 2013, CB bills registered an increase, in the first quarter they declined, while in the second and fourth quarters of the year, their change was negligible.

The wider offer of government securities contributed to greater participation of banks on the government securities market. Thus, at the end of 2013, Treasury bills were the only instrument in the liquid assets which registered an annual growth, of Denar 3,067 million, or 10.9%. During 2013, Treasury bills registered a more significant quarterly increase in the first and in the last quarter of the year. Macedonian banks have the dominant role on the Treasury bills market, with a share in the total amount of issued Treasury bills of over 70%.

During 2013, significant growth was registered also in banks' investments in government bonds[26]. Namely, at the end of 2013, banks had at their disposal government bonds in the amount of Denar 5,756 million, which represents 1.6% of the total assets, and they grow by Denar 3,928 million on an annual basis. According to the List of securities for conducting monetary operations[27], the National Bank accepts government bonds as a security instrument when conducting monetary operations, which increases their attractiveness as an investment alternative for banks. The share of banks in the total amount of outstanding continued government bonds during 2013 experienced an upward trend and it increased by around 20 percentage points on an annual basis.

[26] Government securities with maturities longer than one year are not included in liquid assets.
27 "Official Gazette of the Republic of Macedonia" no.126/11.

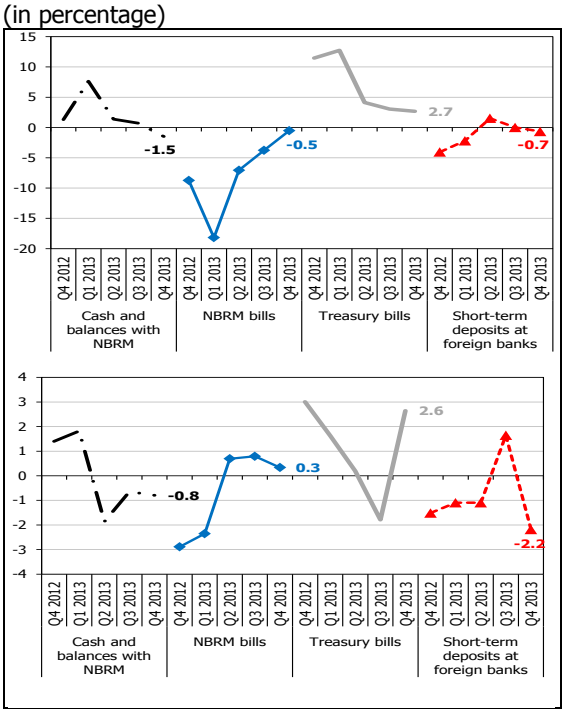
Chart 25
Movement of basic interest rates in denars and euros
(in percentage)



Source: NBRM, based on data submitted by banks

Although in 2013, short-term deposits placed with foreign banks experienced positive annual growth rates, at the end of the year they registered an annual decline of Denar 641 million, or 2.2%. This is primarily due to their dynamics in the fourth quarter of 2013, when they declined by 9.4%, i.e. Denar 2,901 million. Given that interest rates on the international financial markets are lower than the interest rates in the domestic economy, the dynamics of these funds indirectly contributes toward improving the banks' profitability.

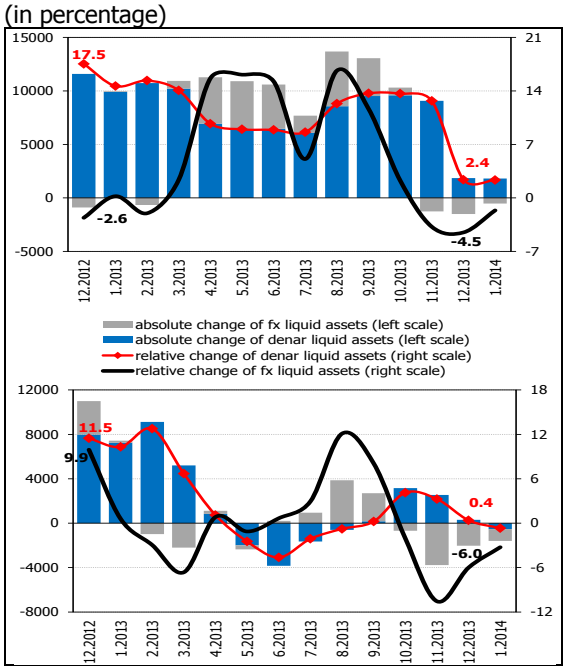
Chart 26
Movement of basic interest rates in denars and euros
(in percentage)



Source: NBRM, based on data submitted by banks

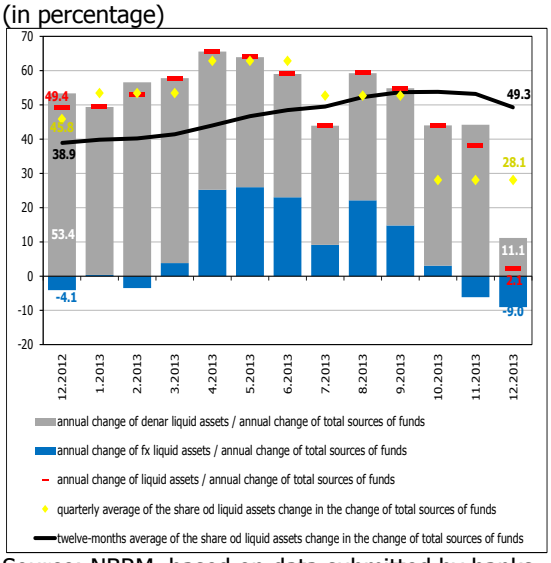
Changes in the individual components of liquid assets during 2013 also caused some shifts in their structure. Treasury bills increased their share in the structure of liquid assets by 2.7 percentage points annually. Particularly evident is the increase in the share of Treasury bills in the structure of liquid assets in the last quarter of 2013, by 2.6 percentage points. On the other hand, in 2013, the structural shares of other financial instruments reduced. As of December 31, 2013, the structure of liquid assets is relatively uniform. Treasury bills with a share of 28.0% are the most common financial instrument, and the share of other financial instruments ranges from 22.9% (CB bills) to 25.2% (short-term deposits in foreign banks).

Chart 27
Annual (up) and quarterly (down) absolute and relative change of liquid assets by currency
(in percentage)



Source: NBRM, based on data submitted by banks

Chart 28
Change of liquid assets by currency / change of total sources of funds
(in percentage)

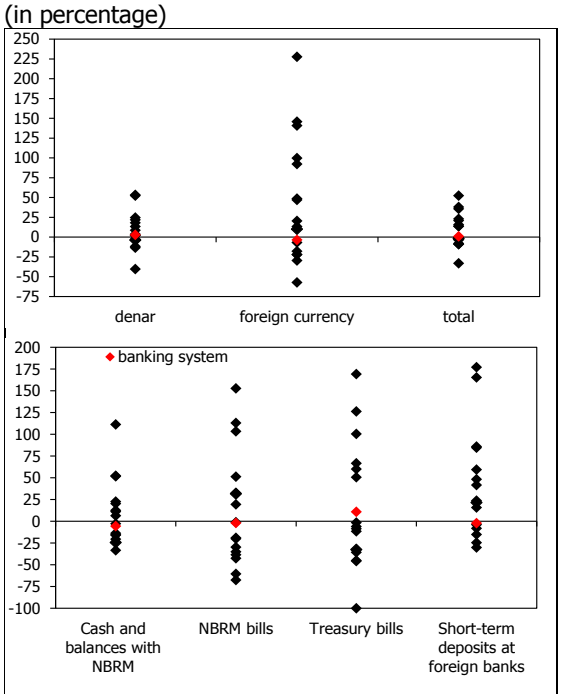


Source: NBRM, based on data submitted by banks

Due to the increased interest of banks in investing in government bonds, at the end of 2013, Denar liquid assets went up by 2.4%. Although during 2013 foreign currency liquid assets mainly experienced positive annual growth rates, at the end of 2013 they decreased by 4.5%. In fact, the aforementioned decrease in total liquid assets in the last quarter of 2013 almost entirely resulted from the decline in the foreign currency liquidity. Hence, at the end of 2013, the share of foreign currency liquid assets in the currency structure of liquid assets amounted to 28.5%, which was a decrease of 1.5 percentage points on an annual basis.

The gradual revival of the banks' lending activity in the second half of 2013, is evident also from the downward trend in the share of the annual and quarterly growth of liquid assets in the growth of total funding sources. Thus, if in the first three quarters of the year banks placed more than 50%, on average, of the new sources of funds in liquid financial instruments, in the last quarter of 2013, banks placed only 28.1% of the new sources of funds in liquid instruments. In addition, in the last quarter of 2013, the twelve-month moving average of this indicator decreased, which suggests that banks gradually increase their presence on the credit market and the propensity for taking new credit risk is growing. Confirmation of this is the higher annual growth rate of loans, compared with the annual growth rate of the liquid assets as of December 31, 2013, which amounted to 6.4% and 0.3%, respectively. During 2013, the change in the placements in Denar liquid instruments constantly had a larger share in the change in total funding sources, compared with the change in the foreign currency liquidity instruments.

Chart 29
Annual rate of change of liquid assets by banks, by currency (up) and by financial instruments (down)
(in percentage)



Source: NBRM, based on data submitted by banks

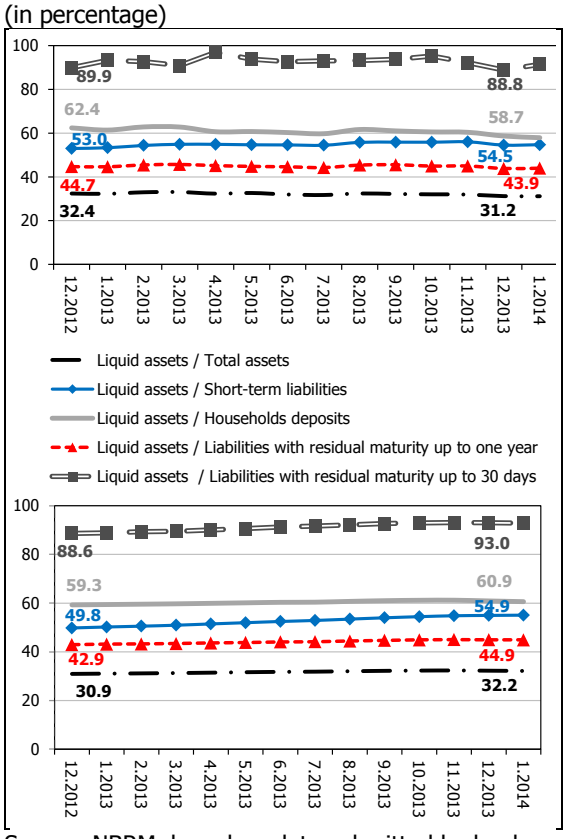
Analyzed by individual bank, as of December 31, 2013, compared to December 31, 2012, liquid assets decreased in eight banks, ranging from 0.5% to 33.5%.

2.2. Liquidity ratios

The dynamics of the liquidity ratios of the banking system[28] confirmed the stability of the banks' liquidity position. Confirmation of this comes not only from the level of the indicators during 2013, but also their twelve-month moving average. As of December 31, 2013, the coverage of short-term liabilities with liquid assets increased on an annual basis, while the other liquidity indicators show a moderate decline. Also, the twelve-month trend of the indicators shows an increase over 2013, which is especially evident in the coverage of short-term liabilities, reflecting the changes in the maturity profile of the banks' funding sources, for the purpose of greater participation of the long-term component of liabilities. In addition, the ratio of coverage of liabilities with different contractual residual maturity with liquid assets, also registered a relatively stable movement. Thus, at the end of

[28] The calculation of the banking system's liquidity does not include resident interbank assets and liabilities.

Chart 30
Liquidity rations of the banking system – level (up) and twelvemonths moving average (down)
(in percentage)

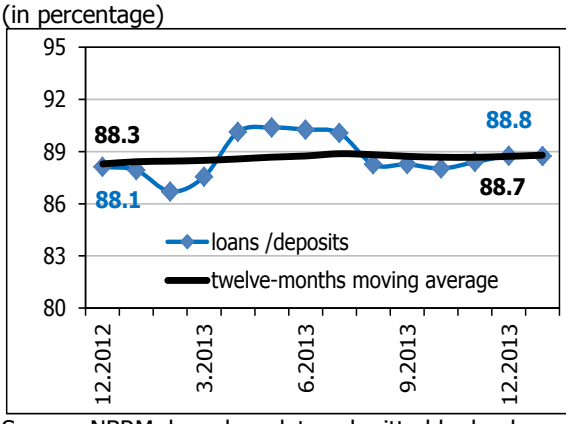


Source: NBRM, based on data submitted by banks

2013, liquid assets covered 44.0% of the liabilities with contractual residual maturity of up to one year. In the past twelve months of 2013, about 90% of the liabilities with contractual residual maturity of up to 30 days were covered by liquid assets. Liquidity ratios by groups of banks are shown in Annex 28.

During 2013, the loans to deposits ratio ranged in the interval from 86.7% to 90.4%, and by the end of 2013 it registered an annual increase of 0.7 percentage points. This is due to the slightly faster growth of loans in 2013 (6.4%), compared with the growth of deposits (5.7%). As of December 31, 2013, this indicator was above 100% in four banks with share in the total assets of the banking system of 14.6%, and its highest value is 128.3%.

Chart 31
Dynamics of loan/deposit ratio
(in percentage)

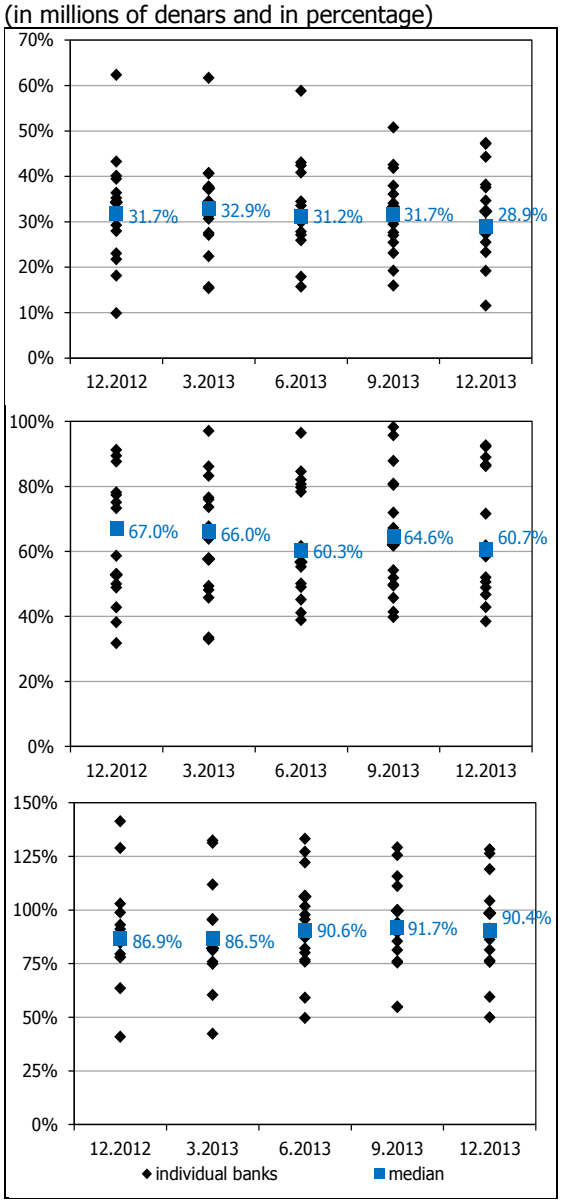


Source: NBRM, based on data submitted by banks

Analyzed by bank, at the end of 2013, the biggest difference is registered in the share of liquid assets to total assets, where the variation coefficient, expressed as the ratio between the standard deviation and the average value of the indicator for the relevant date is the highest. Thus in all liquidity ratios, the variation coefficient experienced a downward trend during 2013, which shows a decreased dispersion of the value of the ratios among individual banks.

Chart 32
Dynamics and distribution of liquidity ratios by banks
- liquid assets / total assets (up)
- liquid assets / short-term liabilities (middle)
- loans / deposits (down)

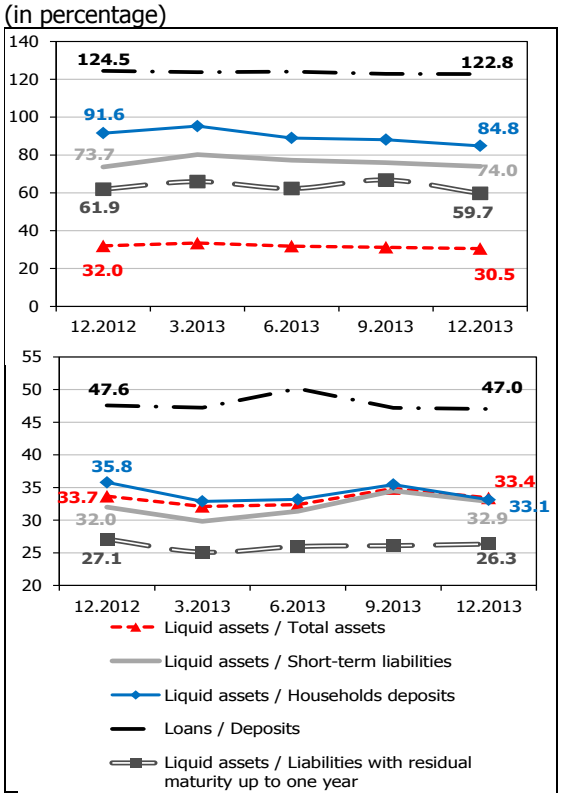
(in millions of denars and in percentage)



Source: NBRM, based on data submitted by banks

On the other hand, the interquartile difference is the biggest in the ratio of coverage of short-term liabilities with liquid assets, showing that in this ratio banks' deviations from the median value of the indicator are the largest. The share of liquid assets in total assets registered an annual reduction in eight banks, which at the end of 2013 accounted for 57.3% of total assets. Coverage of short-term liabilities with liquid assets registered an annual increase in nine banks, which accounted for 48.7% of the total assets of the banking system as of December 31, 2013. The loans to deposits ratio registered an annual increase in six banks with a share in the total assets of 19.7%, while the decrease in other banks ranged between 0.7 and 22.3 percentage points.

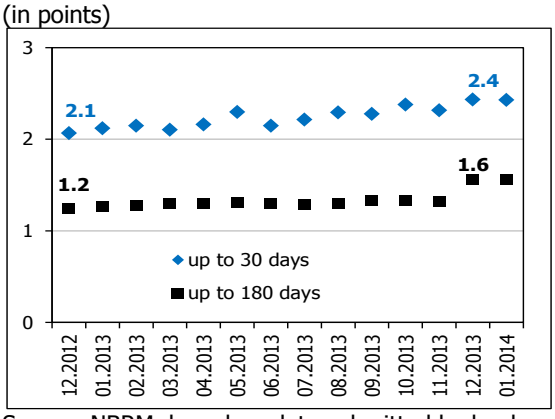
Chart 33
Liquidity ratios of the banking system by currency – denar (up) and foreign currency (down)
(in percentage)



Source: NBRM, based on data submitted by banks

The moderate growth in liquid assets during 2013 caused a decline in the liquidity indicators according to the currency structure. This phenomenon was most obvious in the coverage of the household Denar deposits with Denar liquid assets, but it is present also in other currency indicators of liquidity. The reduction of the loans to deposits ratio was slightly more pronounced in the Denar ratio, which is a consequence of the stronger propensity to save in Denars compared to foreign currency savings. It is notable that there is a significant difference in the coverage of liabilities with residual maturity up to one year with liquid assets by currency. Thus, the coverage of foreign liabilities with residual maturity of up to one year with foreign currency liquid assets is more than twice lower than the corresponding ratio in Denars.

Chart 34
Regulatory liquidity ratios of the banking system
(in points)



Source: NBRM, based on data submitted by banks

Regulatory liquidity ratios of the banking system[29], presented as a ratio between assets and liabilities that mature in the next 30 and 180 days registered a steady movement in 2013. In December 2013, the ratios increased, which was due to the start of the implementation of the changes in the methodology for their calculation. Namely, starting from December 2013, in determining the amount of the liabilities used to calculate the liquidity ratios, the percentage of inclusion of time deposits decreased from 80% to 60%, whereby the amount of liabilities that are taken into account in the calculation of liquidity ratios was actually reduced.

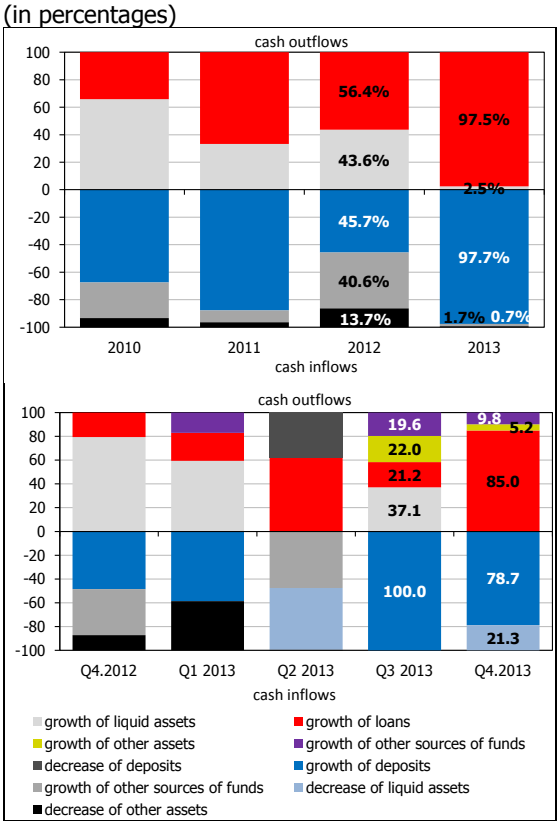
[29] Banks' liquidity ratios are regulated by the Decision on banks' liquidity risk management ("Official Gazette of the Republic of Macedonia" no. 126/11, 19/12 and 151/13).

2.3. Funding sources and maturity (mis)match between assets and liabilities

Unlike past few years, when the structure of banks' cash inflows and outflows was more diverse, in 2013, there was a high concentration of banks' cash flows[30]. Thus, prevailing inflows among the inflows of new funding sources are those based on deposits, while cash outflows were almost entirely determined by lending. The intensification of the credit activity was particularly evident in the last quarter of 2013, when outflows based on loans were predominant in the structure of the cash outflows with a share of 85.0%, while liquid assets reduced, which is a clear sign of decreased credit risk aversion of banks.

The growth of total sources of funding for banks in 2013 was driven by the growth of the deposits of non-financial entities, which generated about two-thirds of the growth of the sources of funding for banks in 2013. The maturity structure of the total sources of funding for banks registered an increased share of the long-term component. The long-term component in all individual financial instruments used to finance the activities of the banks had a predominant share in the annual growth. Approximately 88% of the total growth of the banks' funding sources in 2013 stemmed from the growth of the long-term component, with about 62% of this growth being due to the deposits of non-financial entities, and the rest is due to loans and deposits of financial institutions. Regarding the deposits of non-financial entities, 91.0% of the annual increase was due to the growth in long-term deposits, primarily due to the propensity of households to save in the long run. In 2013, short-term sources of funding decreased by 0.6%, resulting from the decline of short-term

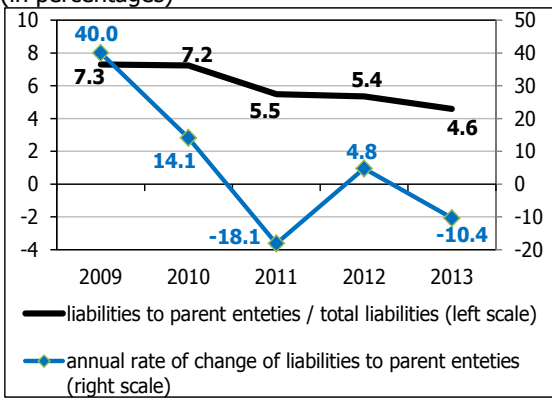
Chart 35
Structure of cash inflows and outflows of the banking system on annual basis (up) and quarterly basis (down)
(in percentages)



Source: NBRM, based on data submitted by banks
* The category of other assets includes assets that are not loans to nonfinancial enteties and are not included in the category of liquid assets (long-term loans in foreign and domestic banks, foreign exchange reserve requirement, foreclosures, fixed assets, etc.) as well as the decrease of impairment of financial and nonfinancial assets.
** The category of other sources of funds includes all sources of funding which are not deposits of nonfinancial enteties (equity and reserves, deposits of financial institutions, loans, subordinated instruments etc.) and the increase of impairment of financial and nonfinancial assets.

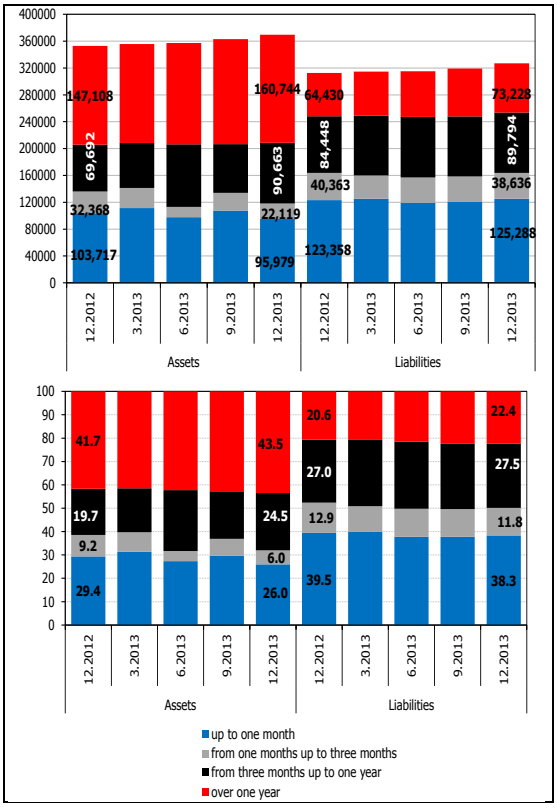
[30] Cash inflows and outflows of banks were obtained indirectly, i.e. by changing the balances of some accounts of the banks' balance sheets. The effect on the banks' cash flows arising from the expenses and income that do not represent cash outflow or inflow (e.g., loans write-off, revaluation of securities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

Chart 36
Change of used sources of funding from parent entities
(in percentages)



Source: NBRM, based on data submitted by banks

Chart 37
Banks' assets and liabilities by contractual residual maturity - absolute terms (up) and structure (down)
in millions of denars and in %



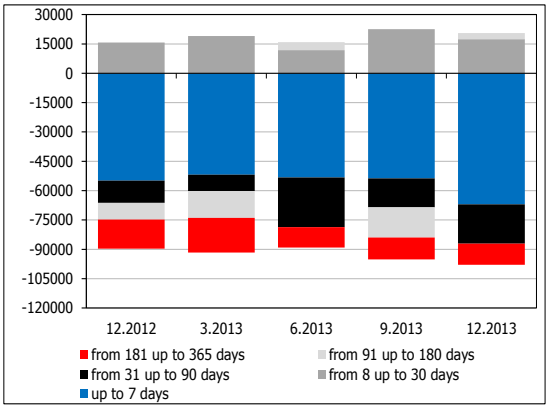
Source: NBRM, based on data submitted by banks.

loans from financial institutions, including short-term liabilities to parent entities.

At the end of 2013, the sources of funding for the banks in the Republic of Macedonia originating from their parent entities amounted to Denar 15,009 million, representing 4.6% of banks' total liabilities i.e. 4.1% of the total assets. On annual basis, the sources used from the parent entities decreased by Denar 1,735 million, or by 10.4%. The decline in these sources of funding was registered in the second half of 2013, when they dropped by Denar 3,328 million, mainly due to the lower short-term sources of funding. This means that in 2013, domestic banks were involved in activities of deleveraging toward their parent entities or their partial maturity transformation from short-term to long-term sources of funding. At the end of 2013, the share of the funding from parent entities from the European Union in the structure of the funding sources of banks from parent entities was 89.1% (87.9% as of December 31, 2012), while the share of the funding sources from parent entities with their headquarters based in the Euro area accounted for 75.1% (78.6% as of December 31, 2012).

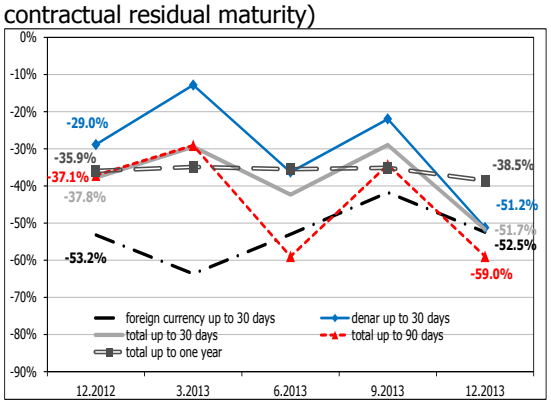
The changes in the maturity structure of the banks' sources of funding, in particular the increase in the long-term component, was the generator of the positive movements in the structure of banks' liabilities by the contractual residual maturity during 2013. The fastest growth in 2013 was registered in the liabilities with residual maturity of over one year, whose share in the structure of liabilities by the contractual residual maturity was 22.4% at the end of 2013. The major changes in the residual maturity of assets were a result of the decline in the liquid assets and changes in the maturity profile of the securities due to rising investments in government bonds. Hence, at the end of 2013, the assets with residual maturity of up to one month, and from one to three months declined, while the assets in the maturity segment of three months to one year surged. Thus, the largest rise of the share in the structure of assets according

Chart 38
Contractual residual maturity (mis)match between assets and liabilities, by maturity segments
in millions of denars



Source: NBRM, based on data submitted by banks.

Chart 39
Cumulative difference between banks' assets and liabilities according to the contractual residual maturity
(as percentage of cumulative assets with the same contractual residual maturity)



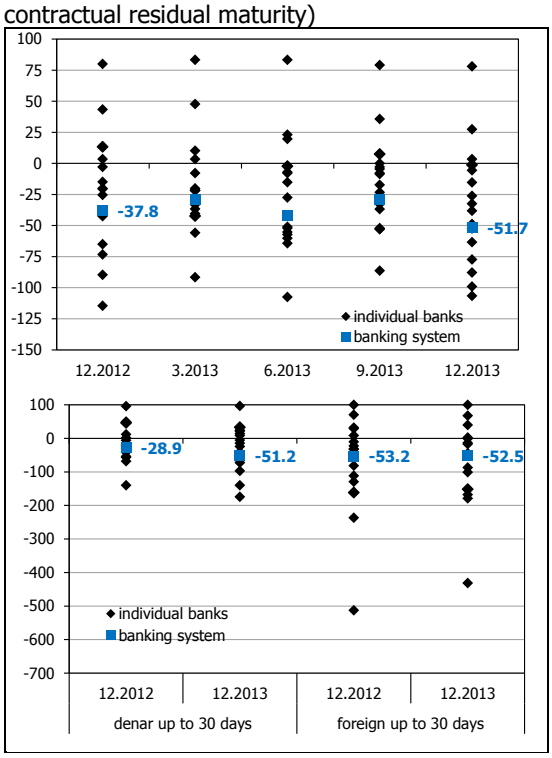
Source: NBRM, based on data submitted by banks.

to residual maturity was recorded in the assets with residual maturity of three months to one year.

At the end of 2013, positive difference between the contractual residual maturity of assets and liabilities of banks was registered in two maturity segments (Annex 29). Larger positive difference was registered in the maturity segment of 8 to 30 days, which mainly includes the most liquid financial instruments, and relatively few liabilities, while a moderate positive difference was registered in the maturity segment of three to six months, primarily due to the investments in government bonds during 2013. On annual basis, the negative maturity mismatch between assets and liabilities increased the most in the maturity segment with residual maturity of up to 7 days, due to the lack of more significant annual growth of liquid assets and inclusion of sight liabilities in this maturity segment.

The cumulative negative gap between assets and liabilities of banks according to their contractual residual maturity, expressed as a percentage of assets, oscillated during 2013 depending on the currency of the assets and the maturity segment, and at the end of the year it deepened.

Chart 40
Cumulative difference between banks' assets and liabilities according to the contractual residual maturity up to 30 days, total (up) and by currency as of 31.12.2013 (down)
(as percentage of cumulative assets with the same contractual residual maturity)



Source: NBRM, based on data submitted by banks.

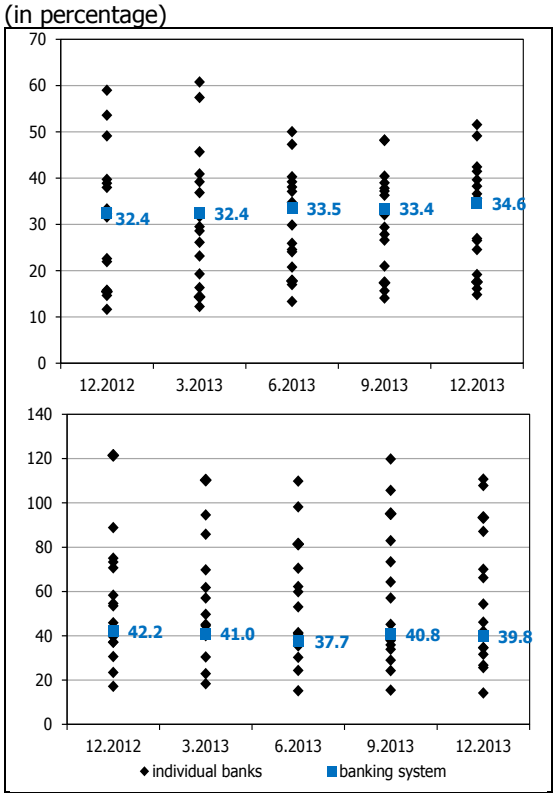
In the expected maturity between assets and liabilities of banks in all maturity segments, the cumulative difference was positive (Annex 30) throughout 2013. This means that the banks' expectations for stability of deposits as the main source of funding for their activities are being maintained continuously. Thus, according to banks' expectations, as of December 31, 2013, 83.0% of the deposits with residual maturity of up to three months would be stable and remain in the banks during the next three months, which is an identical level as that registered at the end of 2012. High level of expected stability for a period of three months is registered also in demand deposits (92.7%) and in time deposits (81.4%).

2.4. Stress-testing of the sensitivity of the banking system to increased liquidity risk

During 2013, the Macedonian banking system still had a sufficient level of resilience to simulated liquidity shocks. The relatively high volume of liquid assets, followed by a relatively simple structure of the funding sources are the key factors that allow solid capacity of banks for coping with potential outflows of funding sources. In the simulated withdrawal of deposits of the twenty largest depositors, compared with the simulated withdrawal of 20% of the household deposits, greater dispersion in the results of the stress test among the banks was registered. The share of liquid assets in the total assets during the simulated withdrawal of deposits of the twenty largest depositors decreased from 31.2% to 21.2%, while during the simulated withdrawal of 20% of the household deposits, the share of liquid assets in the total assets would equal 22.6%. The coverage of short-term liabilities[31] in these simulations is reduced by 10.6 and 12.6 percentage points, respectively, while the coverage of the total deposits with liquid assets plummeted from 42.9% to 33.0% and 31.2%, respectively.

[31] In the simulations it is assumed that deposits that flow out of the banks are of short-term nature and are part of the short-term liabilities.

Chart 41
Decrease of liquid assets after simulations for withdrawal of
- 20% of households' deposits (up) and
- deposits of twenty largest depositors (down)
(in percentage)



Source: NBRM, based on data submitted by banks.

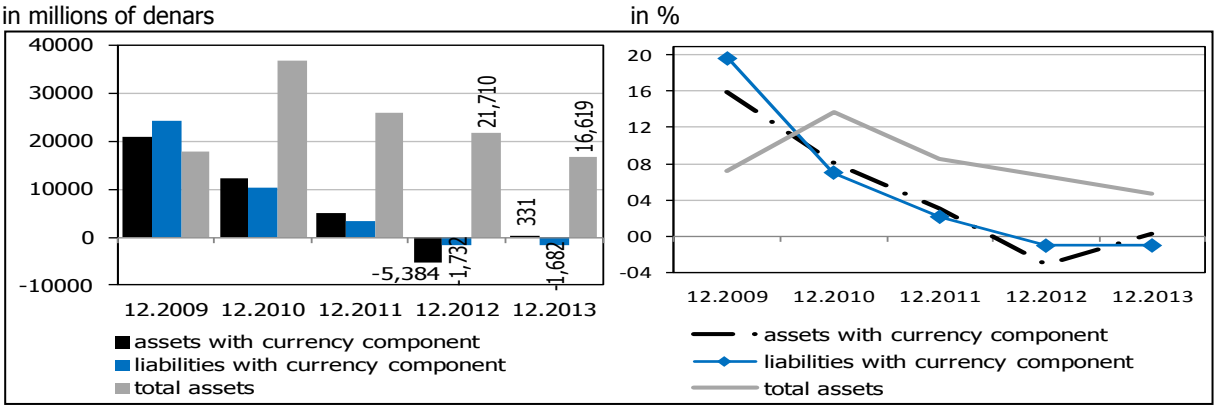
The stable liquidity position of Macedonian banks is confirmed through the simulation that involves outflow of the sources of funding that domestic banks used from their foreign parent banks[32]. The possible withdrawal of these sources of funding from parent entities would cause a decrease of the liquid assets of the banking system by 7.6%, whereby the share of liquid assets in the total assets would be lower by 1.7 percentage points. Analyzed by individual bank, liquid assets would decrease in an interval from 0.2% to 52.0%.

3. Currency risk

The banking system in the Republic of Macedonia has low exposure to currency risk. Despite the widened gap between assets and liabilities with a currency component, and its increased share in the own funds of the banking system, the aggregate currency position of all banks remains within the prescribed limit of 30%. Euro is the most common currency in the assets and liabilities with a currency component, wherefore amid the monetary strategy of maintaining a stable exchange rate of the Denar against the Euro, the currency risk still has little importance for the stability of the banking system.

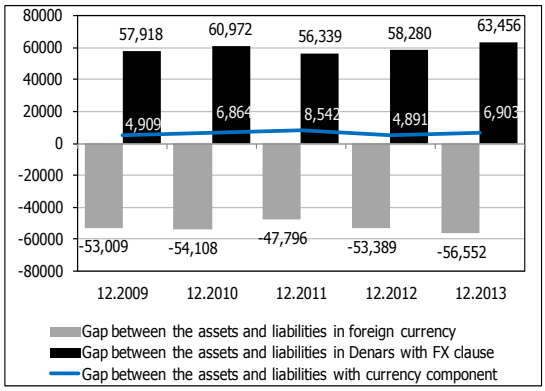
[32] Except subordinated and hybrid capital instruments whose payment is specifically regulated by the National Bank.

Chart 42
Annual change of assets and liabilities with currency component



Source: NBRM, based on data submitted by banks

Chart 43
Structure of the gap between assets and liabilities with currency component



Source: NBRM, based on data submitted by banks

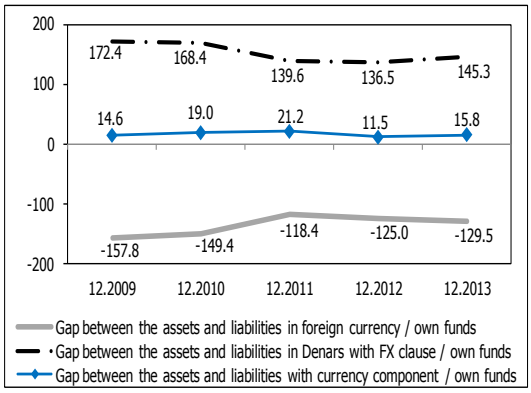
As of December 31, 2013, the gap between assets and liabilities with a currency component[33] amounted to Denar 6,903 million. Compared with the previous year, this gap widened by Denar 2,013 million, mainly due to the reduction of liabilities with a currency component by Denar 1.682 million. The reduction of liabilities with a currency component was mostly a result of the decline in the foreign currency deposits, which dropped by Denar 3,086 million[34], versus the growth of current accounts and other short-term liabilities of Denar 1,433 million[35]. The composition of assets and liabilities with a currency component is shown in Annexes 31 and 32.

[33] The gap between assets and liabilities with currency component is the difference between assets and liabilities with currency component as determined by the methodology for managing currency risk, where the assets with currency component are presented on a net basis, i.e. less the impairment of assets with currency component classified in C, D and E risk categories.

[34] The largest changes are observed in short-term deposits of private non-financial companies and deposits of non-residents which declined by Denar 2,956 and Denar 2,288 million, respectively, as opposed to the growth of deposits of natural persons of Denar 1,795 million. The decrease in deposits of non-residents is a result of the deleveraging of two banks to their parent entities.

[35] The largest increase was recorded in the natural persons' current accounts in foreign currency, which was in the amount of Denar 938 million. Changes in the remaining positions are smaller.

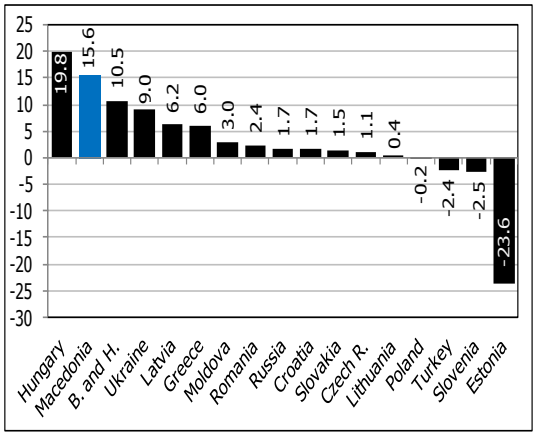
Chart 44
Share of the gap between assets and liabilities with a currency component in the banks' own funds
in %



Source: NBRM, based on data submitted by banks

Despite the increase in the share of the gap between assets and liabilities with a foreign currency component in banks' own funds (by 4.3 percentage points), this indicator still points to a low level of exposure of the banking system to currency risk. The increase stems from the much faster growth of the gap between assets and liabilities with a currency component, relative to the growth of banks' own funds.

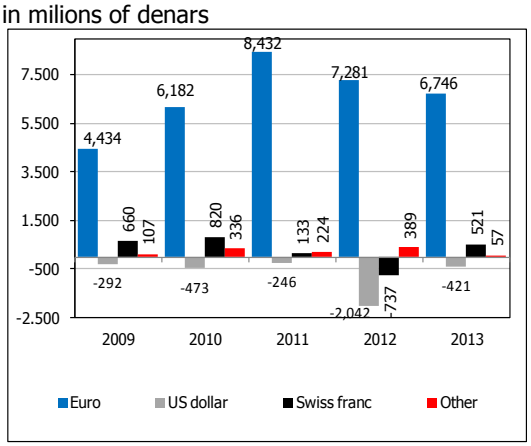
Chart 45
Currency position / own funds ratio, by country
in %



Source: NBRM, based on data submitted by banks

The banking system in the Republic of Macedonia has the highest value of the currency position to own funds ratio (except Hungary) compared with the countries included in this analysis. When making this comparative analysis it is very important to have in mind the differences in the applied exchange rate regime, and to some extent the regulatory limit on the open currency position, if any.

Chart 46
Dynamics of the gap between assets and liabilities with currency component, by currency
in milions of denars



Source: NBRM, based on data submitted by banks

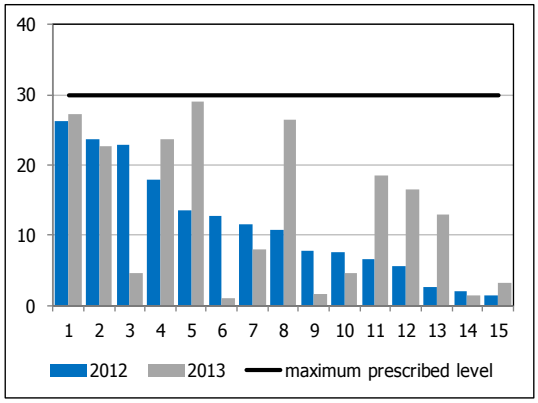
The Euro is the most common foreign currency in the structure of assets and liabilities with a currency component, accounting for 88.8% and 88.4%, respectively. However, despite the predominant presence of this currency, the Euro had little impact on widening the gap between assets and liabilities with a currency component. The largest contribution was that of the US Dollars, whose negative gap decreased by Denar 1,621 million and Swiss Francs whose negative gap turned into positive and as of December 31, 2013 it widened by Denar 1.259 million.

Table 1
Currency structure of assets and liabilities with currency component
in %

Currency	31.12.2012		31.12.2013	
	Assets	Liabilities	Assets	Liabilities
Euro	89.9	88.1	88.8	88.4
US dollar	6.1	7.6	6.8	7.3
Swiss franc	1.6	2.1	2.3	2.1
Other	2.4	2.2	2.2	2.2
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: NBRM, based on data submitted by banks

Chart 47
Aggregate currency position to own funds ratio, by individual bank
in %



Source: NBRM, based on data submitted by banks

As of December 31, 2013, all banks complied with the prescribed limit on the aggregate currency position (30% of the own funds), whereby this indicator remained within the prescribed limits in the beginning of 2014. Most of the banks maintain long open currency position.

Table 2
Distribution of banks by share of open foreign currency position, by currency in own funds

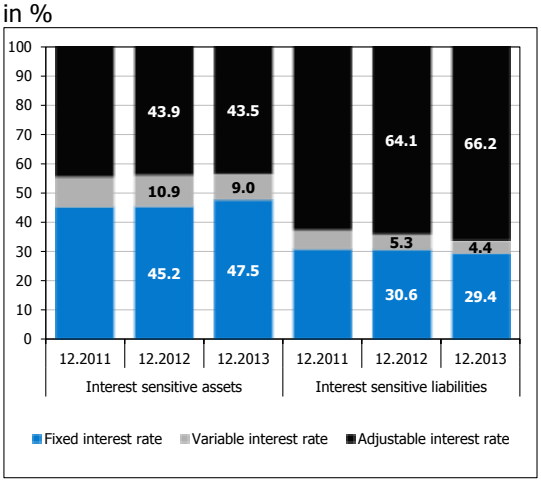
Open currency position by currency /own funds	Number of banks							
	Euro		US Dollar		Swiss franc		Other	
	Long	Short	Long	Short	Long	Short	Long	Short
under 5%	3	3	12	2	10	3	13	1
from 5% to 10%	1							
from 10% to 20%	3							
from 20% to 30%	5							
over 30%								

Source: NBRM, based on data submitted by banks

4. Interest rate risk in the banking book

Banks' exposure to interest rate risk in the banking book is small. The high share of adjustable interest rates, i.e. the banks' practice to adjust their interest rates[36] in accordance with their business policies are the reason why this risk maintained its moderate and limited impact on the banks' risk profile in 2013. In circumstances where the current legislation in this domain does not contain provisions regarding the use of the clauses for one-sided adjustability of the interest rates in the agreements that banks conclude with their customers, no changes which would cause increased levels of this risk for banks are expected. Banks transfer the risk of possible adverse changes in interest rates on their customers.

Chart 48
Structure of interest sensitive assets and liabilities, by type of interest rates
in %



Source: NBRM, based on data submitted by banks.

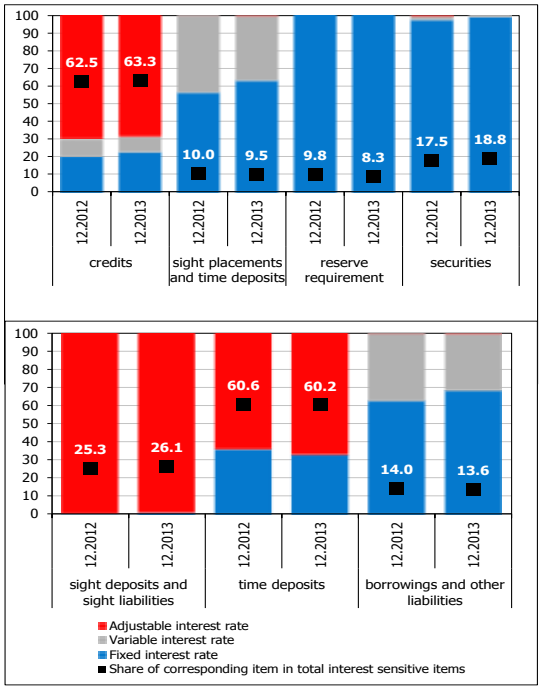
The share of positions with fixed interest rates (which amounted to 47.5% as of December 31, 2013) in the structure of interest-sensitive assets increased, whereby they further increased above the positions with adjustable interest rate, whose share accounted for 43.5%. This is due to the increase in the loans with fixed interest rate, and the more substantial increase in the banks' investments in government securities, which are with fixed interest rate. Fixed interest rates are prevailing in most items of the interest-sensitive assets: reserve requirement (100%), placements in securities (98.7%) and placements in deposits (95.1%). Despite the increase in the positions with fixed interest rate, with loans, as predominant financial instruments in the structure of interest-sensitive assets, adjustable interest rates still prevail. Loans with adjustable interest rate account for 68.6% of total loans, representing the entire assets with adjustable interest rates[37]. In this way, in the event of upward adjustments in interest rates on loans, the interest rate risk would be transferred to the banks' customers and would be transformed into credit risk. However, in circumstances of determined ceiling on the interest rate[38], reduced

[36] Interest rates are adjusted unilaterally, rather because of the changes in the bank's interest rate policy, than on the basis of a certain interest rate. The use of adjustable interest rates ensures more effective management, avoidance or transfer of assumed risks, and could serve as a liquidity and profitability management instrument.

[37] Loans with adjustable interest rate accounted for 99.9% of total interest sensitive assets that have adjustable interest rates.

[38] According to the Law on Obligations ("Official Gazette of the Republic of Macedonia" no. 18/2001, 78/2001 4/2002, 59/2002, 5/2003, 84/2008, 81/2009 and 161/2009), the contracting interest in trade relations in which at least one of the persons is not a trader can not be higher than the statutory default interest rate, while in commercial agreements and contracts between traders and persons of public law it can not be higher than the statutory default interest increased by no more than 50%. The penalty interest rate shall be determined for each half-year period, at the level of the reference rate increased by ten percentage points in trade agreements and contracts between traders and

Chart 49
Interest sensitive assets (up) and liabilities (down), by type of interest rates
in %



Source: NBRM, based on data submitted by banks.

interest rate of the CB bills and competition among banks, a significant increase in the interest rates should not be expected.

Interest-sensitive liabilities are more diversified according to the presence of the individual types of interest rates. Sight deposits are entirely with adjustable interest rates (100%), and these rates have the predominant share (67.0%) also in the most common financial instrument in the interest-sensitive liabilities - term deposits[39]. On the other hand, in the liabilities based on loans and other liabilities (subordinated instruments), positions with fixed interest rates have the most significant share (68.2%).

The gap between interest-sensitive assets and liabilities is positive in the positions with fixed and variable interest rate[40] and negative in the positions with adjustable interest rate[41]. In 2013, the gap in the positions with fixed interest rates widened, due to the more substantial increase in the loans and investments in government securities on the asset side, compared with the increase in the liabilities based on loans on the liabilities side. The gap between the positions with adjustable interest rates is also remarkably widened, mainly due to the more substantial increase in time deposits and sight liabilities on the liabilities side, as opposed to the growth of loans on the assets side. The gap narrowed only in the positions with variable interest rates. Positive gaps between interest-sensitive assets and liabilities of the banking system represent an exposure to a risk of upward (with fixed interest rates) or downward (with variable interest rates)

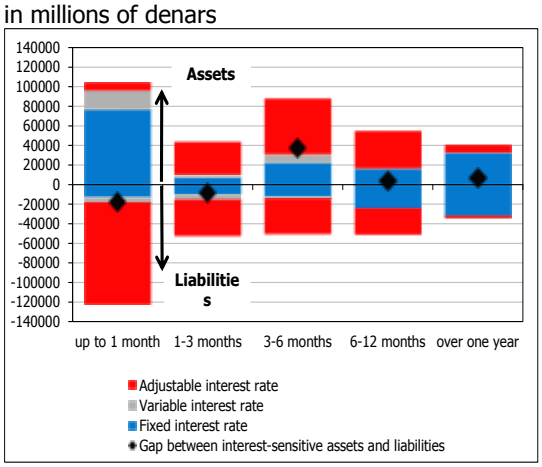
persons of public law, i.e. increased by eight percentage points in contracts in which at least one of the persons is not a trader. The reference rate for monetary liabilities in Denars is the rate of the main instrument of open market operations of the National Bank valid on the last day of the half-year period that preceded the current half-year period, while for the cash liabilities denominated or determined in foreign currency - the one-month EURIBOR for Euros, valid on the last day of the half-year period that preceded the current half-year period.

[39] Demand deposits and term deposits with an adjustable interest rate accounted for 5.1% and 60.9%, respectively, in the total interest sensitive liabilities that have adjustable interest rates.

[40] The positive gap of fixed interest rate positions arises from the fact that this type of interest rate prevails in most items of interest-sensitive assets: allocated reserve requirement, securities and banks' investments in deposits. The positive gap of positions with variable rate is a result of sight deposits which are mostly with variable interest rates.

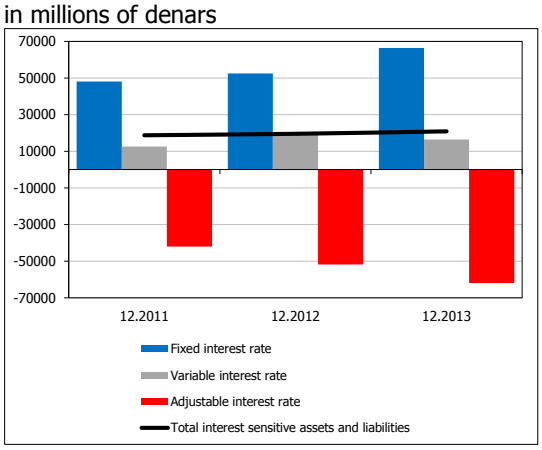
[41] The negative gap in the positions with adjustable interest rates stems from the fact that a significant portion of time deposits and almost all sight liabilities are with adjustable interest rates.

Chart 50
Interest sensitive assets and liabilities, by maturity and type of interest rate
in millions of denars



Source: NBRM, based on data submitted by banks.

Chart 51
Gap between interest sensitive assets and liabilities, by type of interest rate
in millions of denars

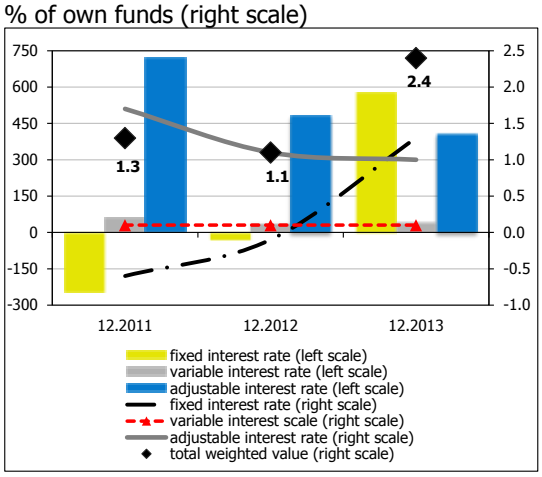


Source: NBRM, based on data submitted by banks.

changes in interest rates. However, the use of adjustable interest rates is a relatively efficient tool of banks for protection against this risk.

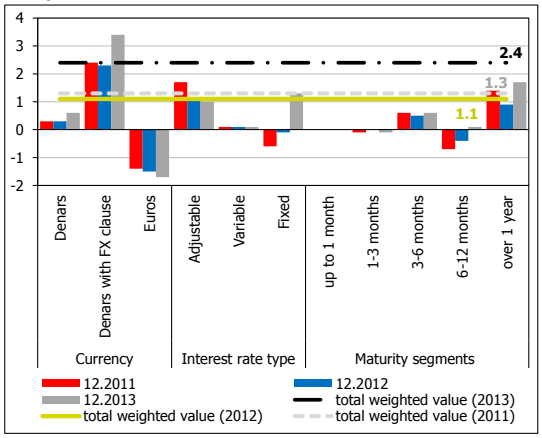
Adjustable interest rates take the lead in most maturity segments of interest-sensitive assets and liabilities, with the most pronounced share in interest-sensitive liabilities with shorter maturities, due to the sight deposits. Banks' exposure to the interest rate risk is the largest in the three to six months maturity segment (due to unequal presence of the positions with adjustable interest rates: the amount of loans on the assets side is greater than the amount of term deposits on the liabilities side, in this maturity segment). In the other maturity segments, there is a higher degree of equilibrium between total interest-sensitive assets and liabilities. However, the use of the adjustable interest rates in most of the asset and liabilities items provides an opportunity for banks to avoid the effects of possible adverse changes in interest rates, and thus to avoid the direct interest rate risk. Banks' expectations for the period until the next "adjustment" of the level of interest rates, represented by the maturity structure of the positions with adjustable interest rates, are from three to six months for assets with adjustable interest rates and up to one month for liabilities with adjustable interest rates.

Chart 52
Weighted value (left scale) and total weighted value of banking book to own assets ratio (right scale), by type of interest rate
in millions of denars (left scale)
% of own funds (right scale)



Source: NBRM, based on data submitted by banks.

Chart 53
Ratio between the total weighted value of the banking book and own funds, by the interest rate type, the currency and the maturity segments
in %



Source: NBRM, based on data submitted by banks.

In 2013, the ratio between the total weighted value of the banking book[42] and own funds is still low (2.4%), despite the increase of 1.3 percentage points (Annex 33). Most exposure to interest rate risk in the banking book arises from the higher positive net weighted value calculated for the positions with fixed interest rates and positions in Denars with FX clause with maturity of over one year. Compared to previous years, when the net weighted value of the positions with fixed interest rates had a negative value, in 2013, it was positive and reached Denar 575 million, thus exceeding the amount of the positive net weighted value of the positions with adjustable interest rates (Denar 457 million). This reflects the significantly increased balance sheet assets with fixed interest rates (especially loans and debt securities and other financial instruments available for sale, primarily government securities).

Analyzed by banks, the ratio between the total weighted value of the banking book and own funds ranges from 0.1% to 8.9%, with a median of 2.6% and the third quartile of 4.3%, with the highest ratio being registered with one bank that does not apply adjustable interest rates.

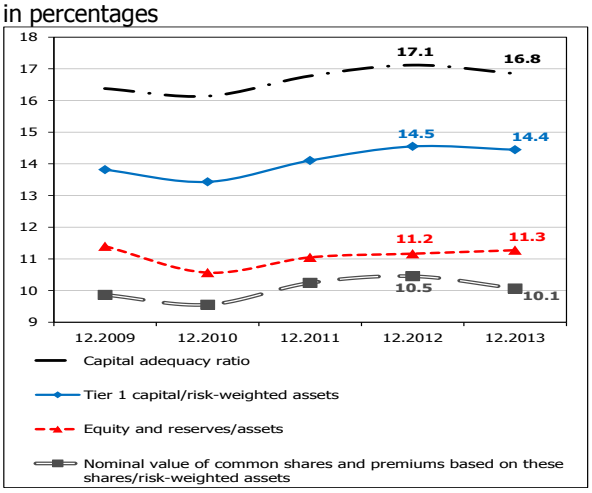
[42] The total weighted value of the banking book at the level of the banking system is obtained by aggregating the weighted values of the banking book of individual banks. For an individual bank, the ratio between the weighted value of the banking book and the bank's own funds may amount up to 20%.

5. Insolvency risk

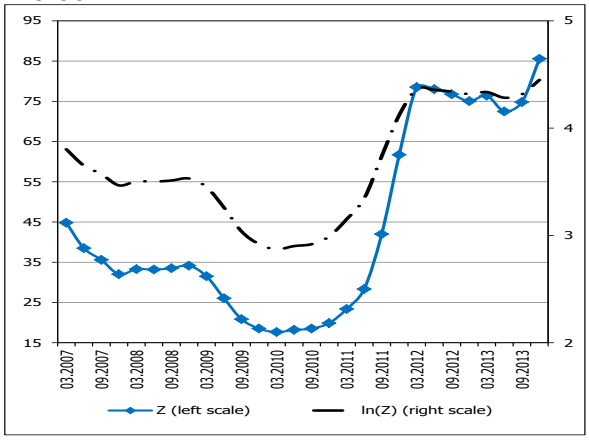
The capital adequacy ratio of the banking system registered some decline in 2013, but is still twice the legally prescribed minimum. The overall stability of the banking system, measured by the so-called Z-index increased, and at the end of 2013 it reached its historically highest level for the last seven analyzed years. In 2013, three banks issued new subordinated instruments, but the reinvested gain is the most important source of increasing the banking system's own funds. Capital requirements for credit risk, arising from the small loans portfolio, claims on other companies and partially, claims on banks, had the largest contribution to the growth of total capital requirements of the banking system. However, the slower growth of the risk-weighted assets, compared with the growth of total assets, suggests that banks are still cautious when taking risks. The results of the stress test conducted on December 31, 2013 are somewhat worse than at the end of 2012, but the banking system retained the resilience to hypothetical shocks.

Chart 54
Solvency ratios (up) and Z-index for the banking system (down)

in percentages



in levels in ln



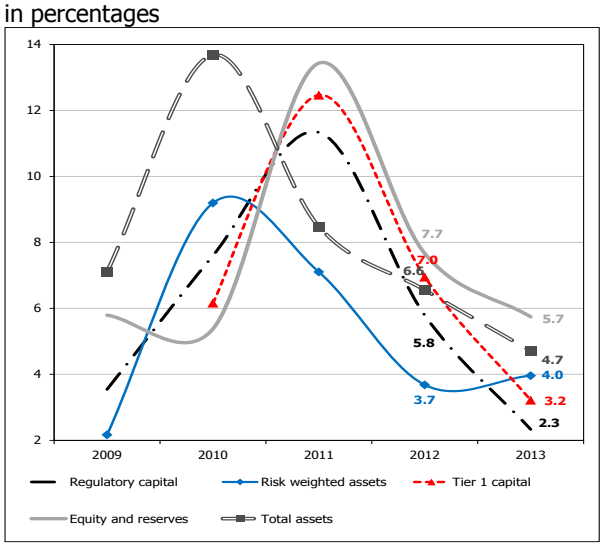
Source: NBRM, based on data submitted by banks.

5.1. Solvency and capitalization ratios of the banking system

The overall stability of the banking system, measured by the so-called Z-index[43] increased, and at the end of 2013, it reached its highest historical level for the last seven analyzed years. However, some indicators of the banking system' solvency registered some reduction on annual basis. The increase in the Z-index is a result of the increased share of capital and reserves in the total assets of the banking system and the increased rate of return on average assets, amid simultaneous reduction in its volatility (measured by the standard deviation). Among the solvency ratios, the capital adequacy ratio registered the largest downward change of

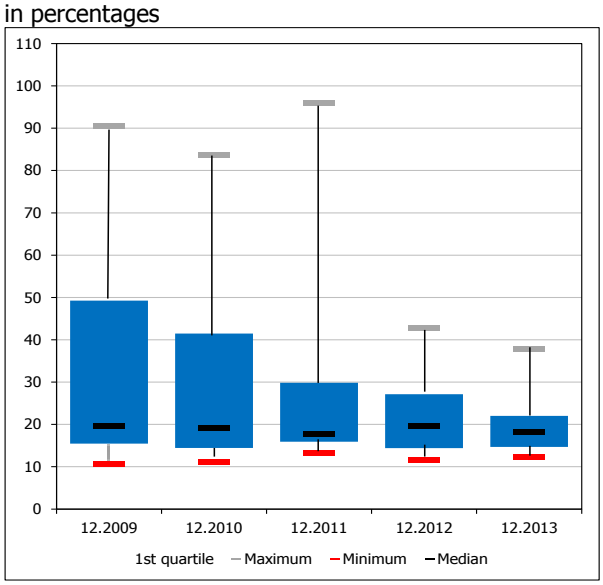
[43] The Z Index is calculated as follows: $\boldsymbol{Z = \frac{ROA+E/A}{\sigma(ROA)}}$, where ROA is the rate of return on assets, E is equity and reserves, A is assets and σ(ROA) is the standard deviation of the rate of return on assets, calculated for the last three years. The formula shows that this measure as such, combines several indicators: banks' performance indicator (ROA), bank risk indicator (σ (ROA)) and banks' soundness and solvency measure (E/A). Calculated as such, the Z Index measures the bank's "distance" from full depletion of its capital potential, expressed in number of standard deviations from the rate of return on assets and as such, it is a measure of the banks' capacity to absorb losses. Higher levels of this index indicate lower risk levels and higher overall stability of the banks. The Z Index is usually presented in a logarithmic form (natural logarithm of the previously given formula), but it is easier to interpret and more indicative when presented in levels.

Chart 55
Annual growth of solvency ratios' components
in percentages



Source: NBRM, based on data submitted by banks.

Chart 56
Statistical measures for capital adequacy ratio by separate bank
in percentages



Source: NBRM, based on data submitted by banks.

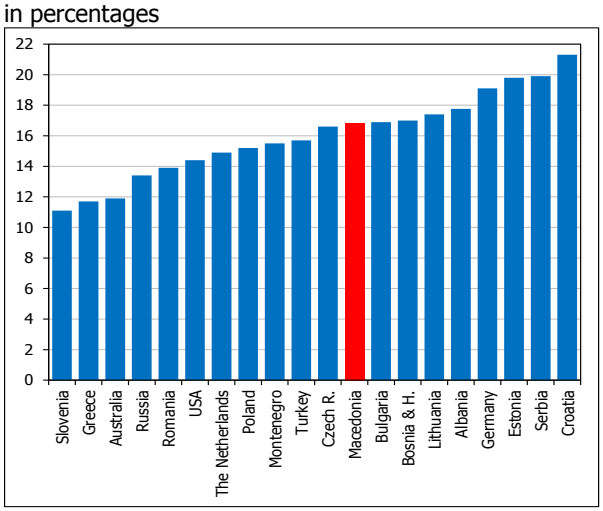
0.3 percentage points, but its level is more than twice the legally prescribed minimum. Other ratios of the banking system's solvency and capitalization recorded a minimum annual change of 0.1 percentage point.

With the exception of the risk weighted assets, the components of the banking system's solvency ratios registered slower annual growth. Despite some acceleration in the annual growth rate of risk-weighted assets (first after two years), it is still lower than the annual growth rate of the assets, which suggests further caution of banks in taking risks. In the capital positions of banks, there is a significant difference in the annual growth rate of capital and reserves (increase of 5.7%) versus the core capital (growth of only 3.2%), resulting entirely from the treatment of income for 2012 in one bank[44].

In 2013, the trend of convergence of domestic banks, according to the rate of capital adequacy, continued. Thus, in the analyzed period, the difference between the bank with the highest and the bank with the lowest capital adequacy ratio declined by about 5.5 percentage points, which is the same as the decline in the difference between the first and the third quartile of the capital adequacy ratios of individual banks. The lowest capital adequacy ratio registered in an individual bank rose, and as of December 31, 2013 it exceeded the level of 12% (11.5% as of December 31, 2012).

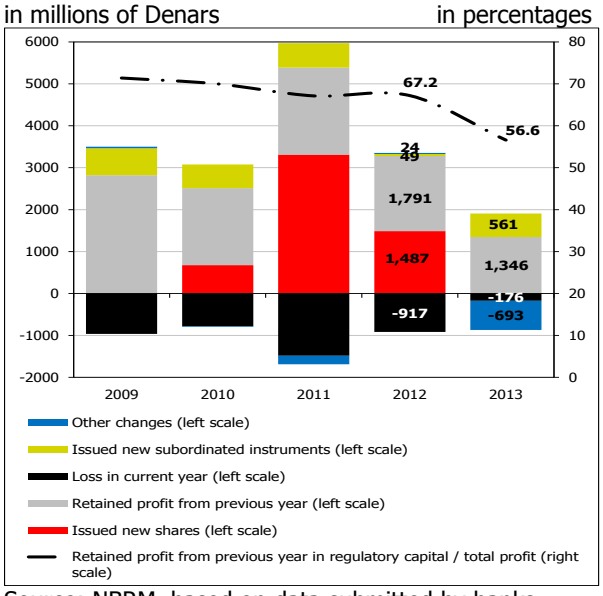
[44] One bank of the group of large banks decided to keep the profits from 2012 in the positions of capital and reserves, but as available for distribution to shareholders, which prevented its inclusion in bank's core capital and own funds.

Chart 57
Capital adequacy ratio, by country
in percentages



Source: NBRM, based on data submitted by banks, websites of IMF and central banks
Note: Data refer to as of 30.9.2013, except for Macedonia (31.12.2013) and Montenegro (30.6.2013)

Chart 58
Structure of annual changes of regulatory capital
in millions of Denars in percentages



Source: NBRM, based on data submitted by banks.

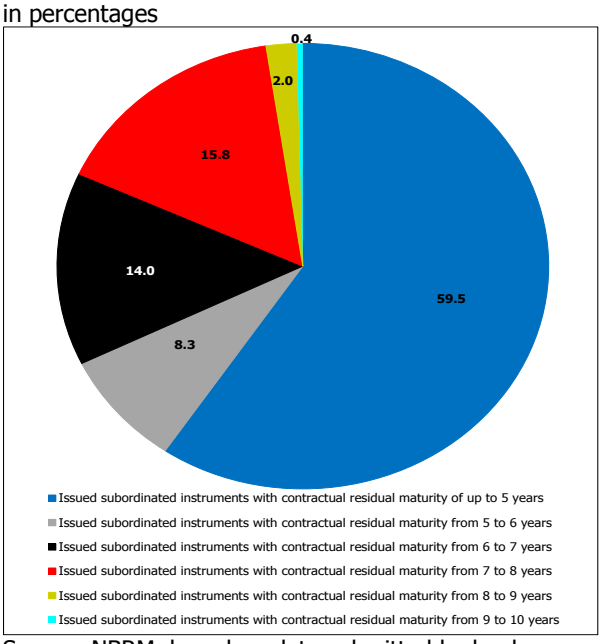
According to the capital adequacy ratio, the banking system of the Republic of Macedonia is located in the middle of the list of twenty analyzed countries. Banking systems of Greece and Slovenia have had lower capital adequacy for a longer period, while significantly higher capital adequacy ratios are specific to the banking systems of Croatia and Serbia. Capital adequacy of the banking system of the Republic of Macedonia is by 0.7 percentage points higher than the calculated mean value for the banking systems of all analyzed countries.

5.2. Movements and quality of own funds of the banking system

In 2013, the own funds (or regulatory capital) of the banking system rose by 1.038 million (or 2.3%), which is one of the more modest achievements in the last ten years. In the absence of more significant amounts of recapitalization, the banks were mainly oriented towards internal creating of capital. Reinvested earnings generated in 2012, are the most important source of increasing the own funds of the banking system in 2013 (amounting to Denar 1,346 million). Also, the current loss for 2013 (in the amount of Denar 176 million) is by about five times smaller than the loss incurred in 2012. In 2013, there was a complete absence of new issues of shares, but three banks[45] issued new subordinated instruments, totalling Denar 561 million. However, the permitted amount of subordinated instruments that are part of the own funds, fell by Denar 397 million, resulting from the inclusion of part of the subordinated instruments in the calculation of own funds at discounted value (due to entering of the instruments in the last five years to maturity)[46], and the early repayment of a subordinated instrument by one bank. Revaluation reserves contributed somewhat to the annual growth of the banking system's own funds (about 27%), which in 2013 were formed by the closed

[45] One bank from the group of medium banks and two banks from the group of small banks.
[46] As of December 31, 2013, the total banks' liabilities based on subordinated instruments amounted to Denar 7,696 million. Of these, Denar 6,103 million are included in the calculation of own funds.

Chart 59
Maturity structure of issued subordinated instruments
in percentages

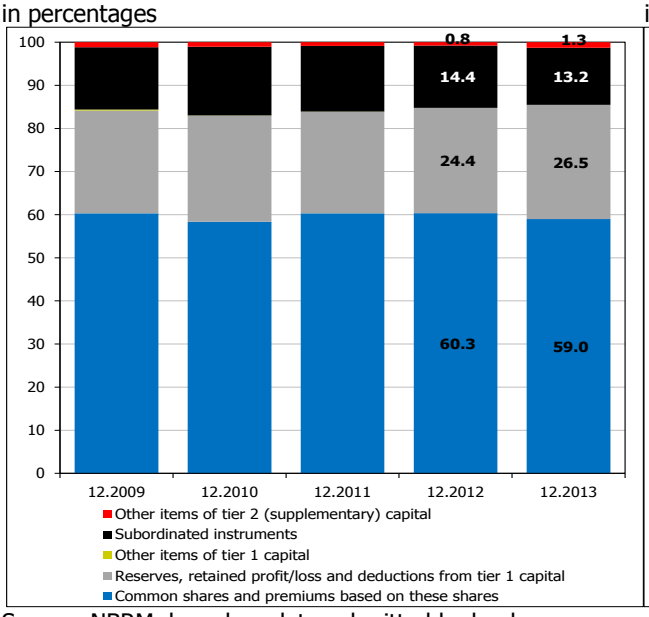


Source: NBRM, based on data submitted by banks.

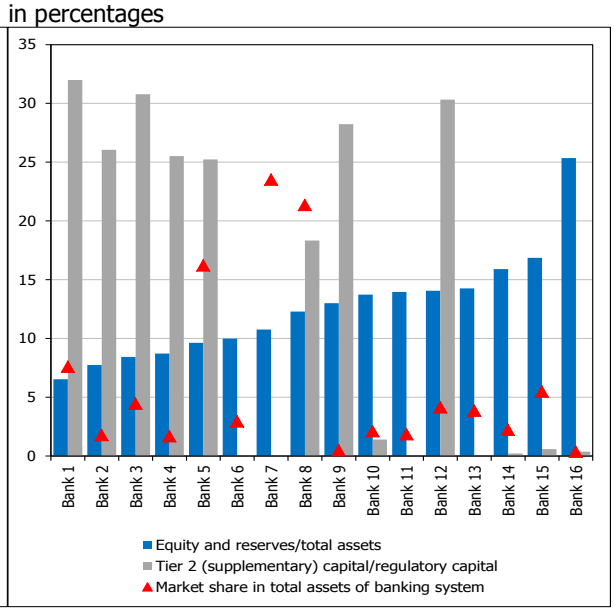
impairment of claims that were collected by foreclosure[47].

The structure of the banking system's own funds is of good quality, given that the core capital (or tier 1 capital) accounts for over 85% of total own funds. However, analyzed by individual banks, there is a more pronounced presence of supplementary capital in some banks (primarily in the form of subordinated liabilities), indicating slightly higher level of indebtedness among these banks.

Chart 60
Structure of regulatory capital before deductible items of tier 1 and tier 2 (supplementary) capital* (left); leverage ratio and share of tier 2 capital in regulatory capital by separate banks, as of 31.12.2013 (right)
in percentages



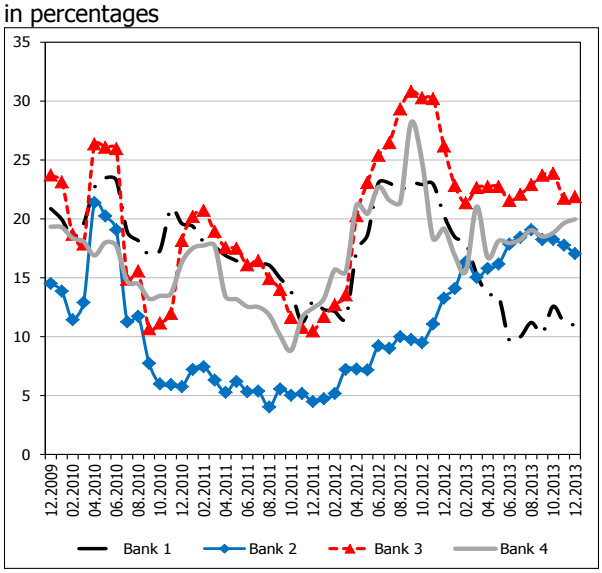
in percentages



Source: NBRM, based on data submitted by banks.
* Note: In analyzed period, deductible items of tier 1 and tier 2 capital do not exceed 1.4% of total regulatory capital.

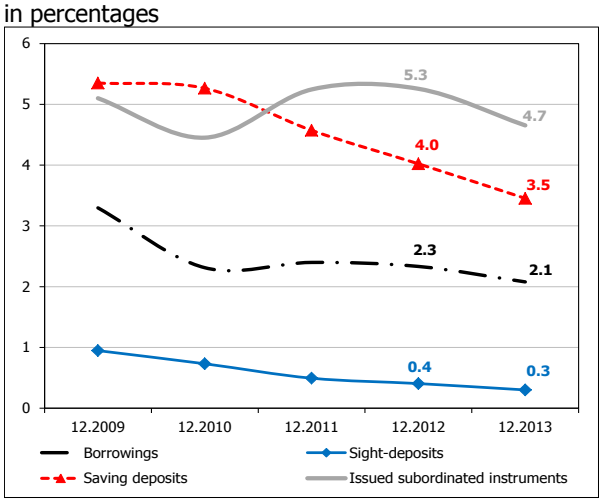
[47] In accordance with the Decision on the accounting and regulatory treatment of foreclosed assets ("Official Gazette of the Republic of Macedonia" no. 50/13), banks are obliged to recognize as revaluation reserve, the positive difference between the closed impairment/special reserve of the claim which was collected by foreclosure and impairment of the foreclosed asset. According to the Decision, this type of reserves could be reduced (excluded from the calculation of own funds) only in case of sale of the foreclosed asset for which revaluation reserve was allocated.

Chart 61
Cost (price) of capital* for the four largest banks in the system
in percentages



Source: NBRM, website of Macedonian stock exchange and websites of banks
* Note: Average of the estimates of cost of capital obtained using two/three different methods: Capital-Asset Pricing Model (CAPM), Earnings Yield and Dividend Discount Model (DDM). DDM is applicable for only one bank included in the analysis.

Chart 62
Interest expenses rate* for separate sources of funds
in percentages

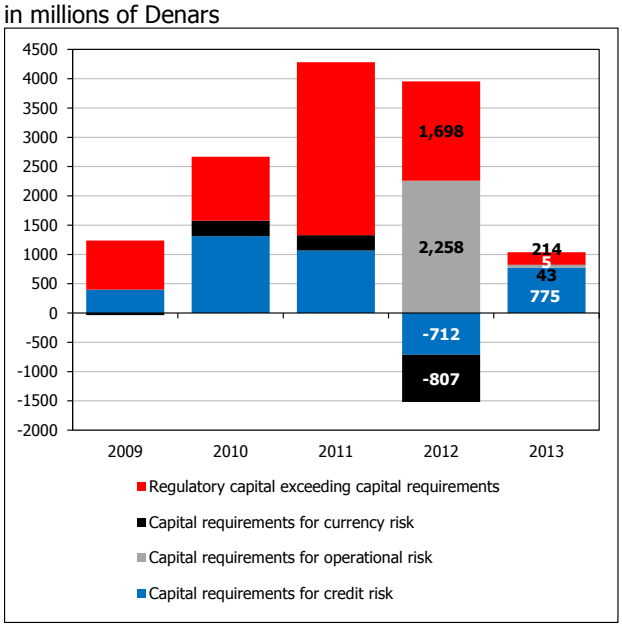


Source: NBRM, based on data submitted by banks.
*Note: The interest expenses rate is calculated as a ratio between the amount of interest expenses realized in the last four quarters (the cumulative flow of interest expenses realized in the last four quarters) and the average amount of sources of funds, calculated as an average of the their stock in the last five quarters.

It is expected that the relatively high earnings generated in 2013, will be the main source of increasing the own funds also in the coming 2014. Despite the reduced cost of capital of some of the banks, recapitalizations remain uncertain (particularly in the short run), especially among domestic banks owned by banks with their headquarters based in the EU (six banks with a total market share of 53.3%), which are faced with a debt crisis and restructuring in their banking systems, as well as increased supervisory and regulatory requirements. The fact that many of the subordinated instruments have already entered the last five years to maturity (and some of them enter in 2014 and 2015) can be considered as an additional limiting factor for future growth of own funds, and they are (will be) included in the calculation of own funds at discounted value. The latter requires possible refinancing of the liabilities based on subordinated instruments, which, in turn, could be a relatively expensive option for banks.

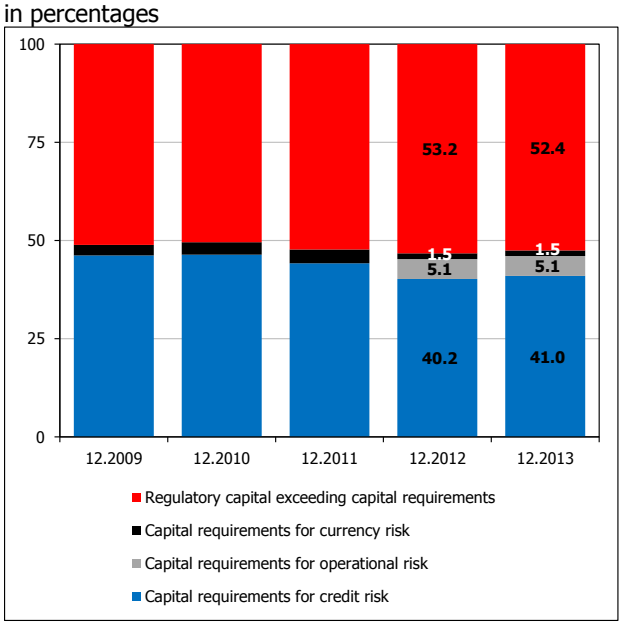
More details about the level of own funds of individual groups of banks are provided in Annex 34.

Chart 63
Structure of annual changes of regulatory capital according to usage for covering risks
in millions of Denars



Source: NBRM, based on data submitted by banks.

Chart 64
Structure of regulatory capital according to usage for covering risks
in percentages



Source: NBRM, based on data submitted by banks.

5.3. Movements and structure of capital requirements and the available capital of the banking system

In 2013, the regulatory capital required to cover the risks of the banking system (or capital requirements)[48] increased by Denar 823 million (or 4%). The capital requirement for credit risk had the largest contribution to the growth of total capital requirements of the banking system. The capital requirement for credit risk increased by Denar 775 million (or 4.3%), mostly as a result of the growth in the small loans portfolio and claims on other companies, but it is partly a result of the rising claims on banks. Capital requirement for currency risk increased by moderate Denar 5 million (or 0.8%)[49]. After the introduction of the requirement for operational risk, in 2012, when this capital requirement was set relatively high, during 2013, the amount of capital requirement for operational risk stabilized and grew by Denar 43 million (or 1.9%). Own funds above the minimum level necessary to cover the risks increased by Denar 214 million (or 0.9%), whereby the trend of accumulation of "free" capital in the banking system continued, although less intensively than in previous years.

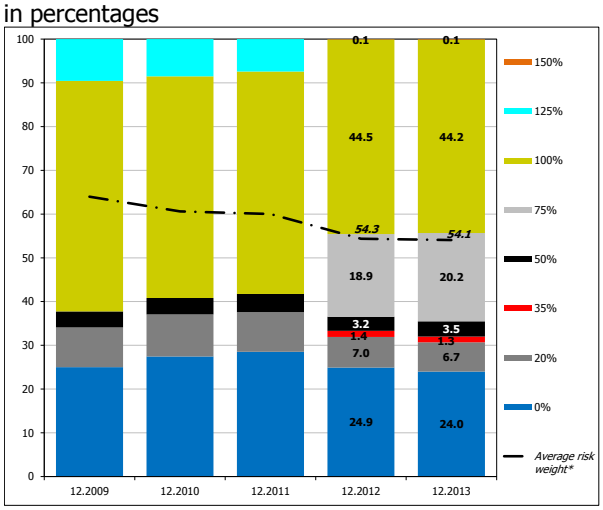
[48] Capital requirements are determined at the level of 8% of the risk-weighted assets.
[49] As of December 31, 2013, three banks from the group of small banks fulfilled the condition for allocating capital requirement for foreign exchange risk, as opposed to December 31, 2012, when these banks were obliged to allocate capital requirement for currency risk.

Table 3
Capital requirements for credit risk, by categories of exposure (activity)
in millions of Denars, unless stated otherwise

Capital requirements for credit risk arising from certain categories of exposure:	12.2012	12.2013	Annual change	
			in millions of Denars	in %
Claims on central banks and central governments	0.2	0.01	-0.2	-94.8%
Claims on local self-government and regional government	36	45	9	24.9%
Claims on public institutions	97	152	54	56.1%
Claims on multilateral development banks and international organizations	0	0	0	/
Claims on banks	1,063	1,124	61	5.8%
Claims on other companies	7,571	7,824	253	3.3%
Retail credit portfolio	5,079	5,745	667	13.1%
Claims secured by residential property	386	365	-21	-5.4%
Claims secured by commercial real estate	2,029	1,898	-130	-6.4%
Holdings in investment funds	1	1	0	9.7%
Other positions	1,622	1,504	-117	-7.2%
Total capital requirements for credit risk:	***17,883***	***18,658***	***775***	***4.3%***

Source: NBRM, based on data submitted by banks.

Chart 65
Structure of banks' total on-balance and off-balance sheet activities, by risk weights **
in percentages

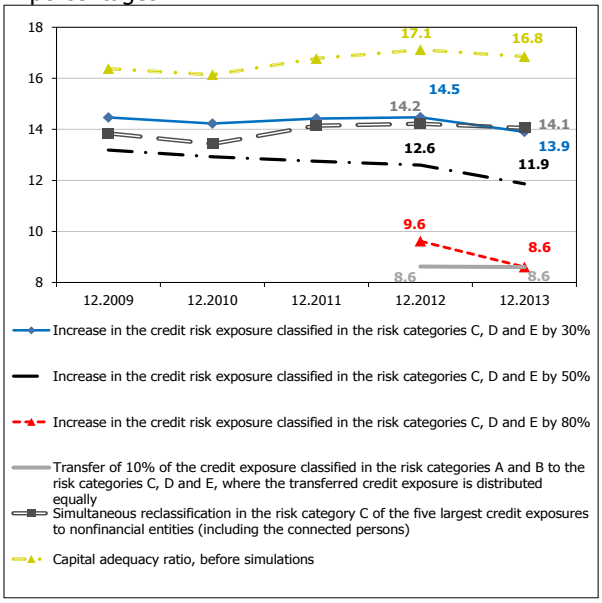


Source: NBRM, based on data submitted by banks.
Note: * The average risk weight is calculated as a ratio between credit risk weighted assets and total on-balance and off-balance sheet activities of banking system.
** Since 1.7.2012 new Decision on the methodology for determining capital adequacy ratio has been in force. Hence, the comparability of the presented structure of banks' activities, before and after 31.12.2012, is limited.

Faster annual growth in lending (to households, businesses and partly to banks), with simultaneous more significant slowdown of the growth of liquid assets of the banking system, caused certain changes in the structure of the overall balance sheet and off-balance sheet exposure, according to risk weights. Thus, the overall structural share of the items with higher risk weights, of 50%, 75% and 100% increased by 1.3 percentage points at the expense of the reduced share of the exposure with lower risk weights, of 0% 20% and 35% in the total balance sheet and off-balance sheet exposure of the banking system. This structural change indicates some reduction in the banks' credit risk aversion. However, the average risk weight of the total balance sheet and off-balance sheet exposure of the banking system, measured as the ratio between credit risk weighted assets and total balance sheet and off-balance sheet exposures, registers further, although minimal decrease of 0.2 percentage points, indicating that banks are still cautious in taking risks.

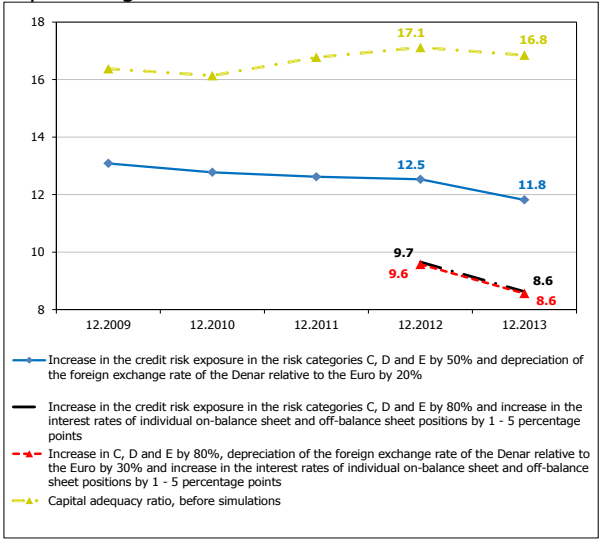
More details on capital requirements for covering risks and on the capital adequacy ratio, by groups of banks, are provided in Annex 35.

Chart 66
Capital adequacy ratio at the level of banking system, before and after simulations of credit shocks*
in percentages



Source: NBRM, based on data submitted by banks.
Note: * Results on part of the simulations are not available before 31.12.2012

Chart 67
Capital adequacy ratio at the level of banking system, before and after simulations of combined shocks*
in percentages



Source: NBRM, based on data submitted by banks.
Note: * Results on part of the simulations are not available before 31.12.2012

5.4. Stress testing of the resilience of the banking system to hypothetical shocks

Conducted testing of the resilience of the banking system and of individual banks in the Republic of Macedonia to simulated shocks indicates slightly weaker results compared with the end of 2012. Capital adequacy of the banking system does not go below 8% in any of the simulations, although individual banks reveal hypothetical need for recapitalization in the event of possible materialization of the simulated extreme shocks.

The hypothetical shocks on the part of the credit risk have the greatest impact on the stability of the banking system. In the most extreme simulations presented in this report (increased credit exposure in risk categories "C", "D" and "E" by 80% and migration of 10% of the credit exposure classified in each of the risk categories "A" and "B" to higher risk categories), the capital adequacy of the banking system is reduced to a level of 8.6% each, which is close, but is still above the statutory minimum of 8%. The simulations show that the reduction of the capital adequacy of the banking system to the statutory minimum level of 8% requires an increase of 85.2%[50] of the credit exposure with a higher risk level, i.e. migration of 10.6%[51] of the credit exposure classified in each of the risk categories "A" and "B" to higher risk categories (these simulations would lead to a doubling of the share of non-performing loans in total loans, from the current 10.9% to 21.9%).

Isolated shocks on the part of the currency risk and interest rate risk do not have a more significant impact on the level of capital adequacy. However, their materialization would cause shocks on the part of the credit risk, whose impact on the capital adequacy of the banking system was already presented above.

[50] The annual growth rate of the credit exposure with higher risk, for 2013, is lower by more than five times compared to the simulated growth rate.
[51] In the fourth quarter of 2013, about 99% of the credit exposure classified in risk categories "A" and "B" are retained in these categories.

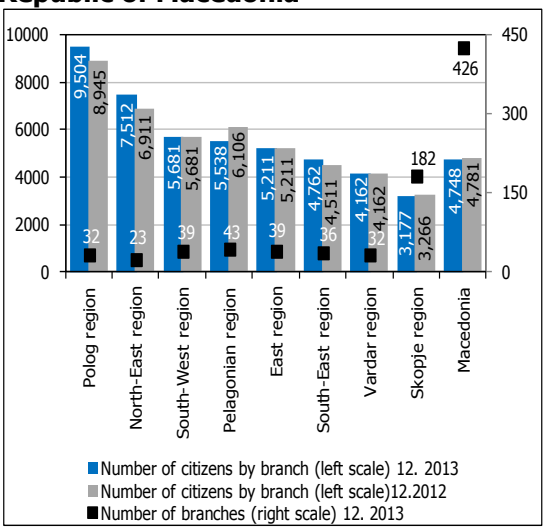
Part 2
Structural features, significant balance sheet changes and efficiency and profitability of the banking system in 2013

II. Structure of the banking system

1. Access to banking services

As of December 31, 2013, the banking system in the Republic of Macedonia consists of sixteen banks and four savings houses. The total number of banks remains unchanged compared to the previous year, while the number of savings houses declined by three[52]. Given the insignificant share of savings houses in the total banking system, they are not included in the analyses in this Report[53].

Chart 68
Bank branches* by region in the Republic of Macedonia



* The calculation does not include banks' windows.
Source: NBRM, based on data submitted by banks, State Statistical Office of the Republic of Macedonia according to official data of the 2002 census.

The banking network is comprised of 426 business units[54] that are spread across almost all cities in the Republic of Macedonia. The total number of business units increased by three (nine new business units were opened and six business units were closed). Five of the new business units are located in the Skopje region, while the remaining four are located in the region of Pelagonija. On the other hand, two business units were closed in each of the southeast and northeast parts of the country and in the Polog region. In the region of Skopje, where most business units are located, again there was a decline in the number of residents per business unit, which points to further improvement of the access to banking services[55] in the region. The four newly opened business units in the region of Pelagonija had much more significant contribution to the reduction in the number of residents per business unit[56], and thus to the improved access to banking services in this region. The closure of two business units in each of the southeastern and northeastern regions had

[52] Based on the Decision of the Governor of the National Bank of the Republic of Macedonia no. 17226 of May 14, 2013, no. 17227 of May 14, 2013, and no. 19413 of May 29, 2013 the savings houses "Stedilnica Mladinec" Ltd. Skopje, " Stedilnica Bavag" Ltd. Skopje and " Stedilnica Peon" Ltd. Strumica, were issued an approval to transform into a financial company without being subject to liquidation.
[53] The share of the savings houses is only 0.8% of the total assets of the banking system, 1.0% of the total loans and 0.4% of the total deposits of natural persons in Denars and in Denars with FX clause. A more detailed analysis of the savings houses is given in the reports on the financial stability in the Republic of Macedonia.
[54] The number of business units includes the headquarters of banks.
[55] This year the number of residents in the Skopje region who are served per one business unit decreased by 89 persons. This region registered an increase in the number of the business units (7 new) also last year, when the number of residents per business unit decreased by 135 persons.
[56] In the Pelagonija region, the number of residents per business unit decreased by 568 persons.

Table 4
Comparative indicators on number of residents per credit institution and per business unit of banks

Country	Number of citizens by bank	Country	Number of inhabitants per business unit by banks
Austria	11,254	Spain	1,225
Malta	15,049	France	1,710
Germany	43,084	Italy	1,835
Hungary	52,428	Austria	1,895
Sweden	54,295	Bulgaria	1,900
Poland	55,444	Germany	2,222
Montenegro	56,616	Poland	2,540
Netherlands	63,081	Belgum	2,922
Estonia	82,511	Slovenia	2,962
Italy	83,593	Hungary	2,976
Slovenia	89,514	Greece	3,048
France	102,627	Croatia	3,399
Belgum	108,365	Serbia	3,439
Macedonia	128,893	Romania	3,498
Croatia	137,488	Malta	3,938
Spain	148,815	**Macedonia**	4,841
Albania	176,374	Czech Republic	5,012
Czech Republic	187,788	Sweden	5,088
Slovakia	193,244	Slovakia	5,100
Greece	212,741	Albania	5,245
Bosnia and Herzegovina	213,091	Netherlands	6,804
Serbia	231,661	Estonia	7,501
Bulgaria	303,523	Montenegro	n.a.
Romania	513,335	Bosnia and Herzegovina	n.a.

Source: NBRM, State Statistical Office of the Republic of Macedonia, www.dbresearch.com, websites of European Union, Bank of Albania, (Supervision Annual Report 2012), Croatian national Bank, (Banks Bulletin), BSCEE Review 2012, National Bank of Serbia (Banking sector in Serbia-Third Quarter Report).
Note: Data for Macedonia refer to 31.12.2013, for Serbia 30.09.2013, while data for all other analyzed countries they are as of 2012.
Data on the number of residents in the Republic of Macedonia result from the monitoring and analysis of demographic changes carried out by the State Statistical Office of the Republic of Macedonia for 2012.

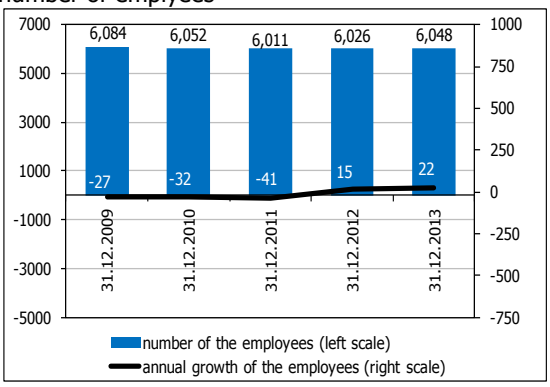
a significant contribution to the reduction of the access to banking services to the population of this region[57].

Banks in the Republic of Macedonia serve more residents per business unit in comparison with the countries that are included in the comparative analysis. According to the indicator of the number of residents served per bank, Macedonia is still in the middle of the list. However, the access to banking services in the country has improved compared to 2012. The comparative analysis of these indicators relative to the countries of the region[58] indicates that Macedonia is in the best position according to the number of residents per bank, while according to the number of residents per business unit, Macedonia is ranked worse than them, with the exception of Albania.

[57] In the northeast region the number of residents per business unit increased by 601 persons, while in the region of Polog the increase was by 559 persons. The rise in the southeast region is much smaller and amounts to 251 residents per business unit.
[58] Two countries of the region are not included in the analysis due to lack of data.

2. Employment in the banking system

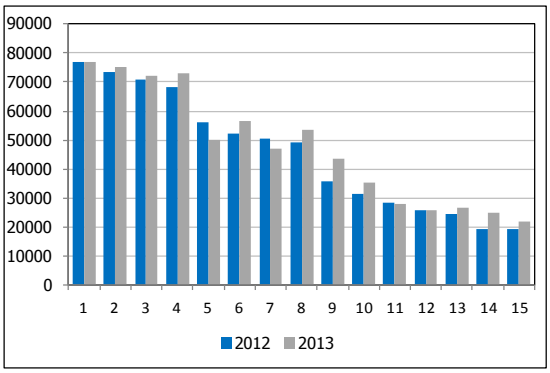
Chart 69
Employment in the banking system
number of emplyees



Source: NBRM, based on data submitted by banks.

In 2013, the number of employees in the banking system continued to increase. The largest increase was registered in one large bank (by 28 persons) and in one medium-size bank (by 20 persons), while in other two medium-size banks the growth is smaller (15 and 11 persons). Contrary to the increase in these banks, in one medium-size and in one large bank a decrease in the number of employees was registered, by 44 and 29 persons respectively[59].

Chart 70
Assets per emplyee*
in thousand of Denars



Source: NBRM, based on data submitted by banks.
*MBDP is not included in the analyses due to the specific character of the activities carried by this bank.

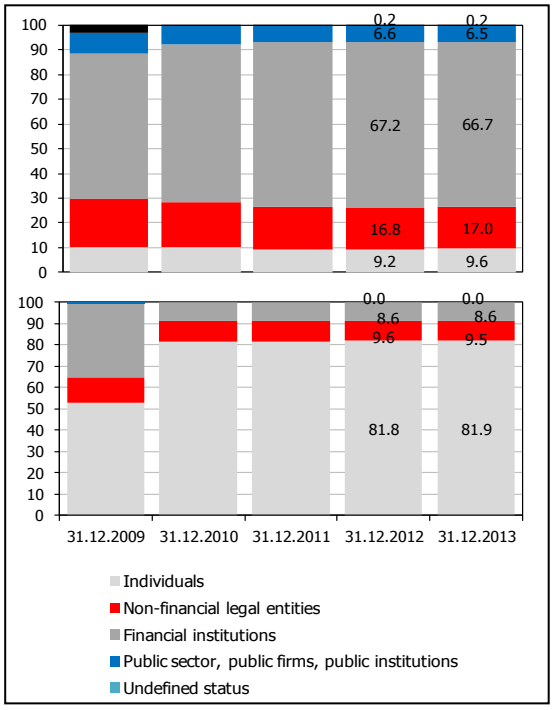
Productivity in banks, as measured by the amount of assets per employee has improved in eleven banks. In seven of them this is due to the faster growth of their assets compared to the growth in the number of employees. Three banks increased their productivity as a result of the reduced number of employees, and in one bank it is due to the simultaneous decrease in both the number of employees and its assets.

The qualification structure of the employees in the banking system has been constantly improving (Annex 4).

[59] With both banks, the reduction in the number of employees is due to the rationalization of operating costs.

3. Ownership structure of the banking system

Chart 71
Ownership structure of ordinary (up) and preference (down) shares in the banking system
in %

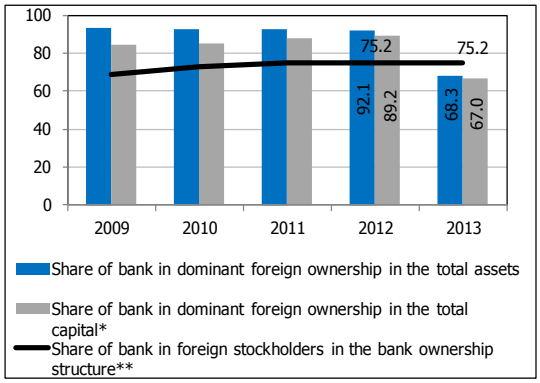


Source: NBRM, based on data submitted by banks.

In 2013, financial institutions still prevail in the structure of the common shares, while natural persons are still predominant in the structure of the preference shares. The participation of financial institutions in the structure of common shares fell by 0.5 percentage points[60]. The structure of the preference shares remained almost unchanged.

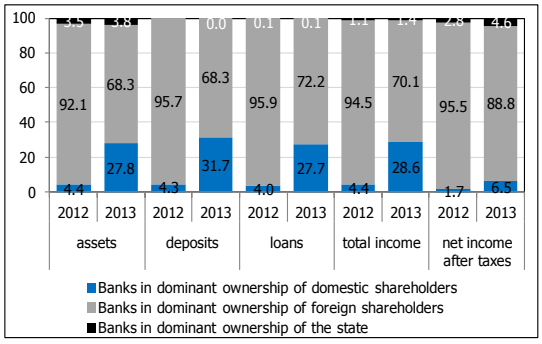
[60] This change was mostly due to two banks whose common shares in the nominal value of Denar 83 million were transferred from being owned by financial institutions to being owned by natural persons and non-financial legal entities.

Chart 72
Banks' market share in dominant foreign ownership and trend of foreign capital share in total capital
in %



Source: NBRM, based on data submitted by banks.
*Total capital includes equity capital, reserve fund, retained earnings (accumulated loss) and revaluation reserves.
**This capital refers to the face value of paid-in and subscribed common and cumulative preference shares.

Chart 73
Structure of major banks' balance sheet positions, by banks' majority ownership
in %



Source: NBRM, based on data submitted by banks.
*The share in the capital is presented in the figure 72.

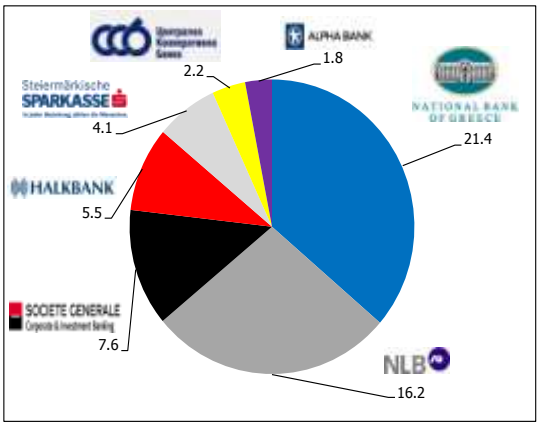
In 2013, the share of foreign capital in the total capital of the banking system remained unchanged and amounted to 75.2%.

The reduction in the number of banks that are mostly foreign owned (from twelve to eleven) occurred in June 2013, when one bank was transferred from predominantly foreign ownership to predominantly domestic ownership. This change reflected on the decline in the share of assets and capital of banks which are mostly foreign owned in the total assets and total capital of the banking system (by 23.8 and 22.2 percentage points, respectively).

Banks that are predominantly in foreign ownership still play the leading role in the major balance sheet items. The changes that are observed in this analysis derive from the aforementioned transfer of one predominantly foreign-owned bank into a bank with predominantly domestic ownership.

The individual market share (according to the assets) of banks that are mostly foreign owned ranges in the interval from 0.5% to 21.4%, while the total market share of these banks amounts to 68.3%.

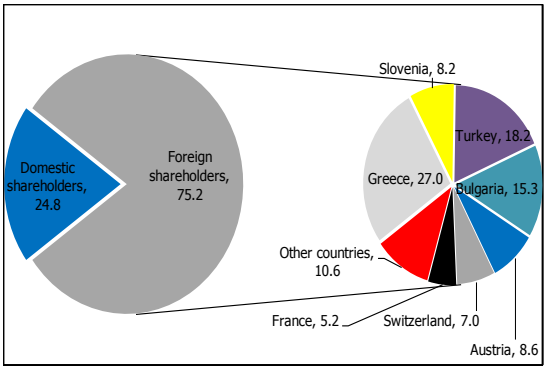
Chart 74
Foreign bank subsidiaries' share of assets in total assets
in %



Source: NBRM, based on data submitted by banks.

The number of branches of foreign banks is unchanged relative to December 31, 2012 and amounts to seven. Their share in the total assets of the banking system accounts for 58.8% and is slightly lower (by 0.5 percentage points) compared to 2012.

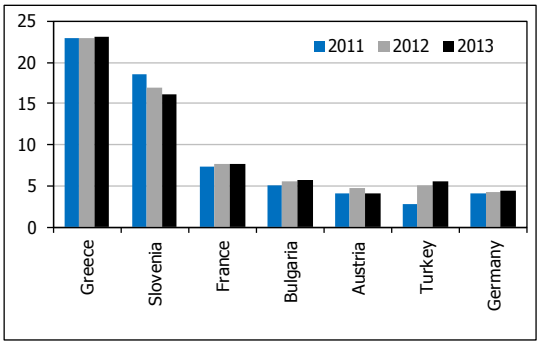
Chart 75
Banks' equity structure, by country
in %



Source: NBRM, based on data submitted by banks.

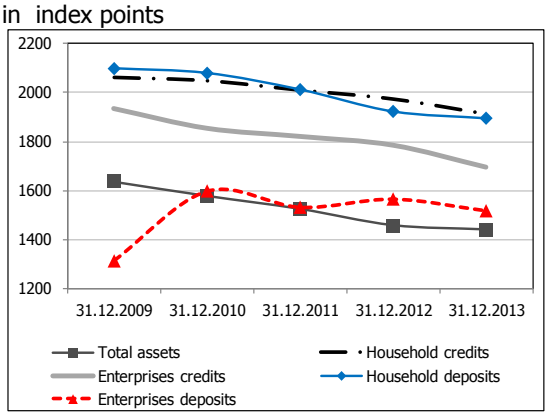
Capital owned by shareholders of the European Union Member States has the largest share in the total foreign capital and accounts for 71.8%. This share remained unchanged compared with the previous year, but certain changes are registered in the overall structure of foreign capital. The share of the capital originating from Austria fell by 2.1 percentage points, while the share of the capital from Turkey and Slovenia increased by 0.9 and 0.8 percentage points, respectively. Changes in the share of the capital from other countries are smaller.

Chart 76
Market share (assets) of banks, by domicile country of the major shareholder
in %



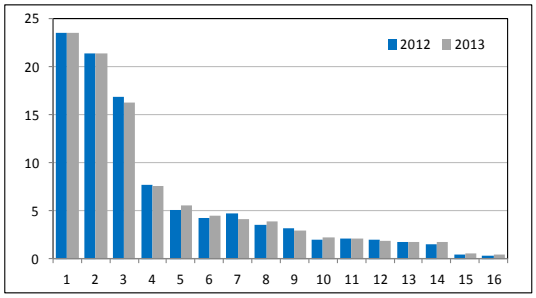
Source: NBRM, based on data submitted by banks.

Chart 77
Herfindahl index
in index points



Source: NBRM, based on data submitted by banks.

Chart 78
Market share of banks to total asset of the banking system
in %



Source: NBRM, based on data submitted by banks.

The concentration in the banking system is high, but downward in all segments of banking operations, except corporate deposits, whose concentration is variable. In the last four years, the Herfindahl index[61] for household loans and deposits registered a downward movement, but still the concentration in these categories is above the acceptable upper limit.

Shares of individual banks, as well as of the three and five banks with largest assets in the total assets also indicate a high concentration in the banking system. Three banks account for 61.1% of the total assets, while nine banks constitute less than 4%. The share of the top three i.e. five banks slightly decreases in all segments of banking operations. Exceptions are the loans to households where the share of the five banks with most intensive lending activity toward this sector has registered a small increase of 0.7 percentage points. The reduction in the concentration is mainly a result of the faster growth of banks that follow after the three i.e. five banks with the largest share for each segment.

[61] Herfindahl index is calculated according to the formula $HI = \sum_{j=1}^{n} (S_j)^2$, where S is the share of each bank in the total amount of the analyzed category (e.g., total assets, total deposits, etc.), while *n* is the total number of banks in the system. When the index ranges from 1,000 units to 1,800 units, the level of concentration in the banking system is considered to be acceptable.

III. Bank activities

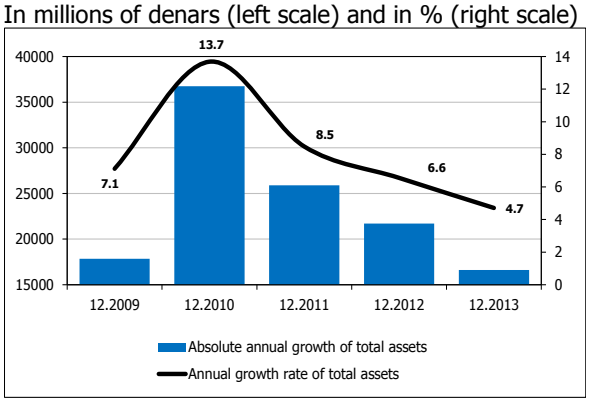
In 2013, the total assets of the banking system continued to grow but at a slower pace, which is evident from the slower growth in lending to the corporate sector. Deposit growth accelerated mainly as a result of household deposits and deposits in Denars. Banks are still increasingly interested in placing funds in low-risk liquid instruments, mainly government securities. However, in the last quarter of the year, lending accelerated significantly and was largely aimed at the corporate sector. These developments are a possible indication of a gradual stabilization of the banks' perceptions of risks, influenced by the positive performances in the domestic economy. In the next period it is expected that the economic recovery will further contribute to the growth of the banks' core deposits, and thus gradual strengthening of the lending activity aimed at the corporate sector. To this aim are also the macro-prudential measures and monetary measures of the National Bank, which are directed towards encouraging savings in domestic currency and in the long term, and lending, especially long-term lending, as well as inflows of foreign capital into the domestic economy. In 2013, liabilities on the basis of loans and deposits to financial institutions decreased, which in circumstances of rapid growth of deposits was the reason for the slower growth of assets. The denarization in banking activities continued, but at a slightly slower pace with assets compared to liabilities.

Table 5
Structure of the assets and liabilities of the banking system

Balance sheet	Amount in millions of denars		Structure (in percent)		Change 12.2013/12.2012	
	31.12.2012	31.12.2013	31.12.2012	31.12.2013	In millions of denars	In percent
Cash and balances with NBRM	41,149	38,783	11.7	10.5	-2,366	-5.7
Securities portfolio	57,219	63,767	16.2	17.3	6,548	11.4
Placements with banks and other financial institutions	43,141	44,442	12.2	12.0	1,301	3.0
Loans of nonfinancial entities (net)	190,867	201,835	54.1	54.6	10,968	5.7
Gross loans of nonfinancial entities	216,225	230,132	61.3	62.3	13,907	6.4
Accumulated amortization of loans of nonfinancial entities	-965	-935	0.0	0.0	30	-3.2
Impairment (provisions) of loans to nonfinancial entities	-24,393	-27,362	0.0	0.0	2,969	-12.2
Accrued interest and other assets	10,518	9,209	3.0	2.5	-1,309	-12.4
Fixed assets	9,992	11,469	2.8	3.1	1,477	14.8
Unallocated loan loss provisions	0	0	0.0	0.0	0	0.0
Total assets	**352,886**	**369,505**	**100.0**	**100.0**	**16,619**	**4.7**
Deposits from banks and other financial institutions	17,362	17,143	4.9	4.6	-219	-1.3
Deposits from nonfinancial entities	245,373	259,299	69.5	70.2	13,926	5.7
Borrowings (short-term and long-term)	34,637	34,910	9.8	9.4	273	0.8
Liability component of hybrid and subordinated instruments	7,723	7,991	2.2	2.2	268	3.5
Other liabilities	7,486	7,591	2.1	2.1	105	1.4
Provisions for off-balance sheet items	911	913	0.3	0.2	2	0.2
Capital and reserves	39,394	41,657	11.2	11.3	2,263	5.7
Total liabilities	**352,886**	**369,505**	**100.0**	**100.0**	**16,619**	**4.7**

Source: NBRM, based on the data submitted by banks.
Note: The position "placements with banks "of annex 1, is included in the position "Cash and balances with NBRM"in this table.
The market share of the most significant balance sheet items by groups of banks is given in annex 5.

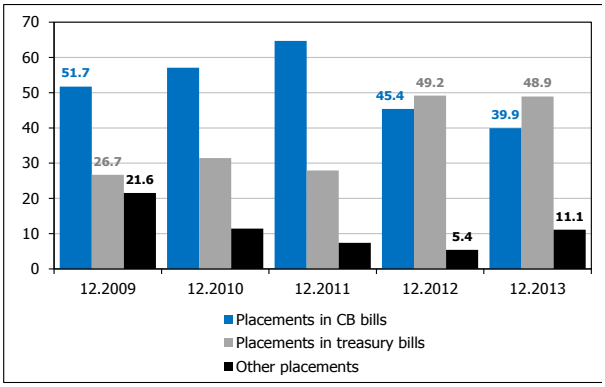
Chart 79
Annual change of assets of the banking system
In millions of denars (left scale) and in % (right scale)



Source: NBRM, based on data submitted by banks.

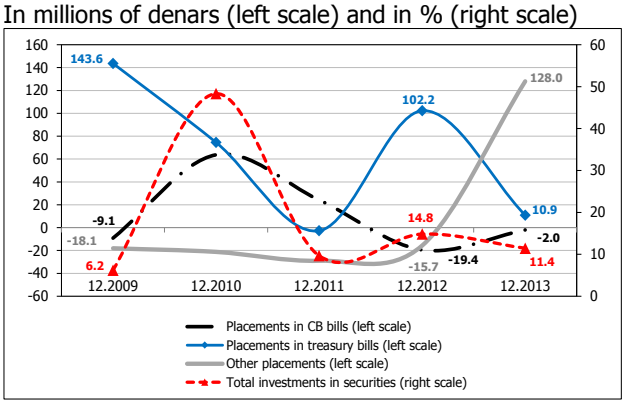
As of December 31, 2013, the total assets of the banking system amounted to Denar 369,505 million. The slowdown of their growth, which began in 2011, continued in the following years, and in 2013 they registered the lowest absolute and relative annual growth in the last twelve years. Generator of the growth of assets in 2013 are deposits of non-financial entities, whose movements are described in the text below. The slower growth of assets in circumstances of accelerated deposit activity stems from the decline in deposits from financial companies - non-residents and the minimal increase in the liabilities on the basis of loans compared to the growth registered in 2012. The most significant developments in the structure of assets during 2013 are: the growth of the investments in liquid securities and the growth in the placements with banks.

Chart 80
Structure of the securities portfolio
In %



Source: NBRM, based on data submitted by banks.

Chart 81
Annual change of the securities portfolio
In millions of denars (left scale) and in % (right scale)



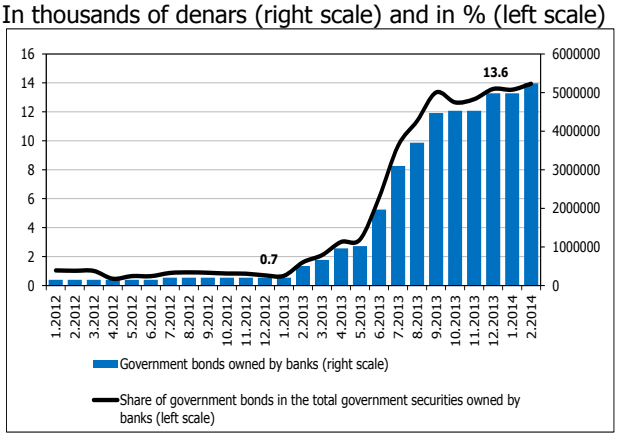
Source: NBRM, based on data submitted by banks.

The growth of the securities portfolio is based entirely on the increased banks' investment in government securities. During 2013, the portfolio of government securities increased by Denar 7,263 million, or 24.5%. Given the limited supply of CB bills (for the purpose of adequate distribution of the excess liquidity in the banking system to the private sector), banks' placements in CB bills reduced[62]. These developments contributed to a further increase in the share of

[62] In July 2013, the tender for conducting CB bills auctions was changed. A shift was made from a tender with a maximum interest rate to a tender with a limited amount of supply and a fixed interest rate, with the interest rate simultaneously being reduced from 3.50% to 3.25%.

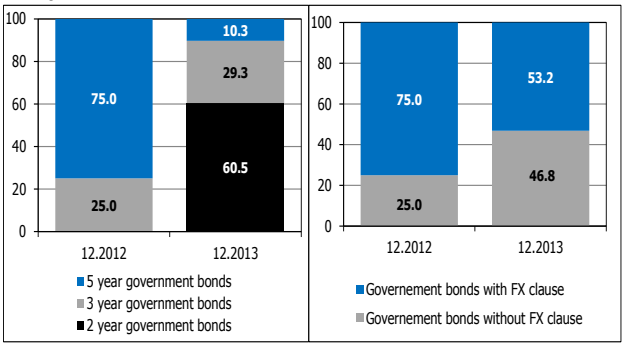
government securities in the banks' securities portfolio at the expense of the reduced share of CB bills. By type of instrument issued by the government, in 2013, banks showed more interest in investing in government bonds as instruments with longer maturity and with higher yield in comparison with the short-term Treasury bills. In 2013, the share of investments in government bonds in the government securities portfolio increased to 13.7%, from 0.7% at the end of 2012. Slightly more than half, or 54.3%, of the growth of investments in government bonds refers to the two-year government bonds without currency clause, which reached a share of over 60% within banks' investments in government bonds.

Chart 82
Government bonds owned by banks
In thousands of denars (right scale) and in % (left scale)



Source: NBRM, based on data submitted by banks.

Chart 83
Structure of government bonds owned by banks, by maturity (left) and by currency (right)
In %



Source: NBRM, based on data submitted by banks.

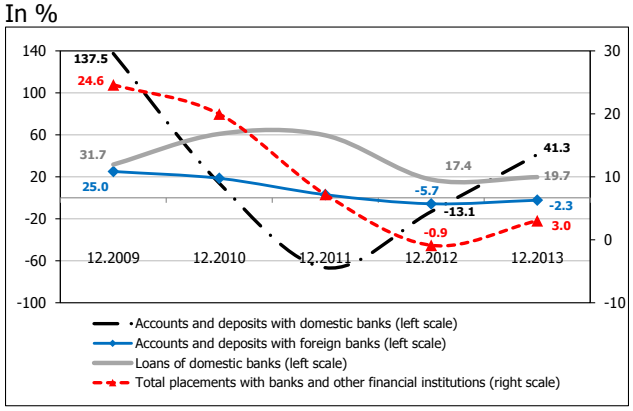
The growth of placements with banks resulted from the increase in the placements of "MBDP" AD with domestic banks[63], through the loan from the European Investment Bank. In the liabilities of the banking system, this borrowing and further placement of the credit line caused a concomitant increase in the liabilities (of MBDP) on the basis of loans to non-residents[64] and

[63] Loans to domestic banks increased by Denar 2,163 million, mainly due to increased long-term loans in foreign currency with "MBDP" ad Skopje. Growth was registered also in the assets on the accounts and deposits with domestic banks, primarily due to the growth of short-term foreign currency time deposits with domestic banks in the amount of Denar 285 million.

[64] The annual growth of liabilities based on loans to nonresidents is entirely due to the growth (of Denar 1,819 million) of the liabilities based on loans in foreign currency with "MBDP" ad Skopje, as a result of the used credit line from EIB.

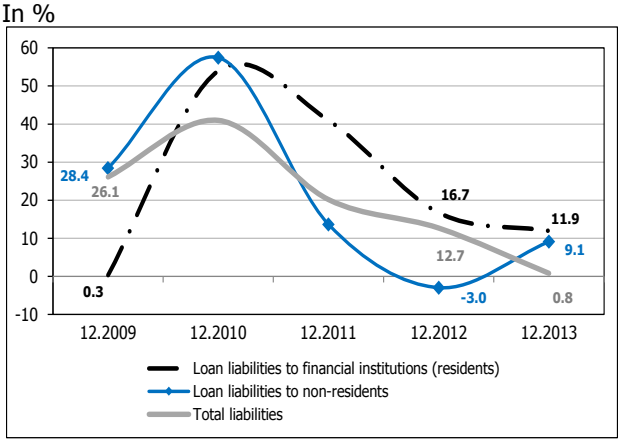
liabilities on the basis of long-term loans in foreign currency to MBDP (to domestic banks)[65].

Chart 84
Placements with banks and other financial institutions (annual change)
In %



Source: NBRM, based on data submitted by banks.

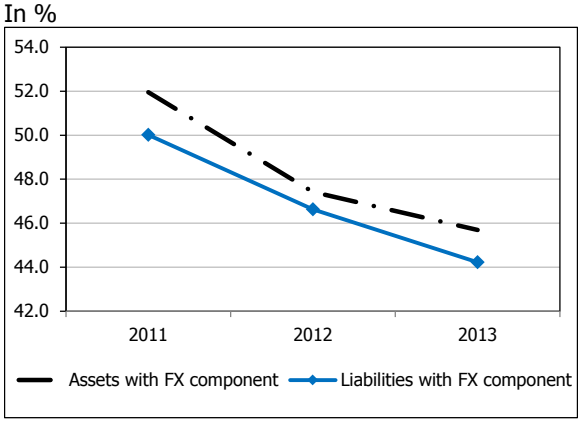
Chart 85
Loan liabilities (annual change)
In %



Source: NBRM, based on data submitted by banks.

On the liabilities side changes were less pronounced, with the exception of the growth of deposits of non-financial entities[66], which significantly (with 84%) contributed to the growth of total liabilities. The next more significant change is in the capital and reserves[67]. Deposits of banks and other financial institutions decreased (unlike in 2012 when they went up by 25.3%), entirely due to lower short-term foreign currency deposits of non-residents - financial companies (due to the return of the deposits of the parent entities of two banks). The growth of liabilities based on loans also slowed down, primarily due to the decline in the liabilities based on repo transactions with the National Bank.

Chart 86
Share of the assets and liabilities with a currency component* in the total assets of banks
In %

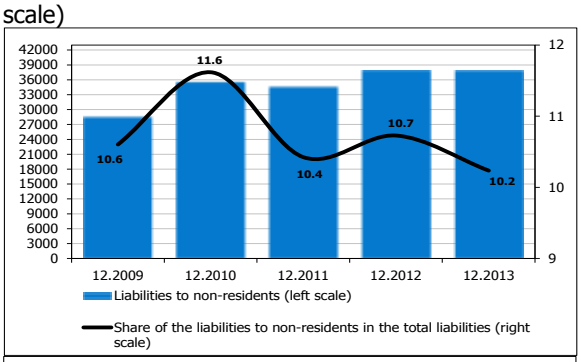


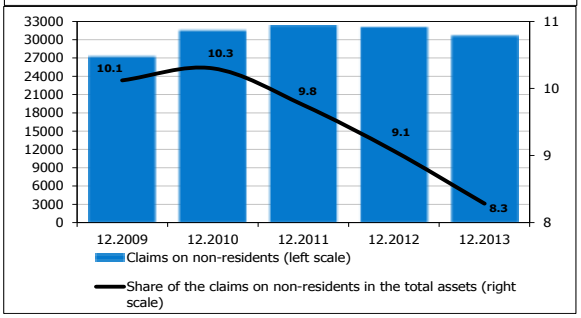
Source: NBRM, based on data submitted by banks.
*In the structure of the assets and liabilities with a currency component, loans and interest receivables are on a net basis (adjusted for impairment). "MBPR" AD Skopje is not included.

The denarization in banks' balance sheets, which accelerated in late 2011 as a result of the surge of adverse information about the (un)sustainability of the euro, continued in 2013, but at somewhat slower pace on the part of the assets, rather than on the part of the sources. The share of assets with a currency component to total assets fell by 1.7 percentage points (in

[65] The increase in liabilities based on long-term loans in foreign currency to domestic banks ("MBDP" ad Skopje) was Denar 1.784 million, and it was entirely the cause for the increase in the total liabilities based on loans to financial companies.
[66] See more detail in Section 1.2. Deposits of non-financial entities.
[67] See more detail in Section I.5. Insolvency Risk.

Chart 87
Liabilities (up) to and claims on nonresidents
In millions of denars (left scale) and in % (right scale)





Source: NBRM, based on data submitted by banks.
*In the structure of the assets and liabilities with a currency component, loans and interest receivables are on a net basis (adjusted for impairment). "MBPR" AD Skopje is not included.

2012 the decline was 4.5 percentage points), while the share of liabilities with a currency component in total liabilities decreased by 2.4 percentage points (in 2012, this share fell by 3.4 percentage points).

The banking system continues to have more liabilities than claims on non-residents. But banks' claims on and liabilities to non-residents are low, and in 2013 they further declined[68]. Macedonian banks perform most of their activities in the domestic market.

1. Loans to non-financial entities

Banks' lending to the non-financial sector[69] is constantly growing, but starting from 2012 the annual credit growth rate slowed down[70], which continued in 2013. Thus, at the end of 2013, total loans to non-financial entities increased by Denar 13,907 million, while the annual growth rate slowed by 0.4 percentage points and accounted for 6.4%. However, if the loans to the "government" sector[71] are excluded,

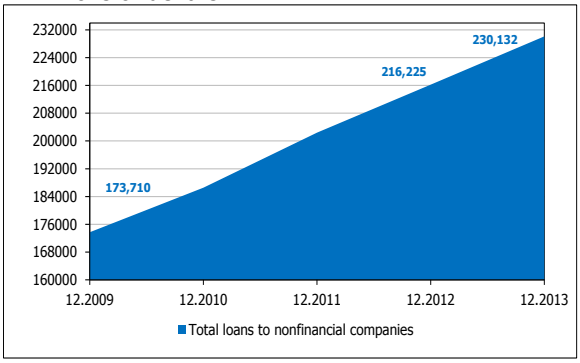
[68] Banks' liabilities to non-residents fell by Denar 39 million, or 0.1%. Claims on non-residents decreased by Denar 1,392 million (or 4.3%) due to the reduced placements with foreign banks by Denar 698 million and reduced repo transactions with non-residents - financial companies in foreign currency by Denar 639 million, by one medium-size bank.

[69] Loans to nonfinancial entities include the loans to nonfinancial persons - residents and non-residents, as follows: private and public non-financial companies (corporate loans), central government, local government, non-profit institutions serving households (loans to other clients), sole proprietors and natural persons (household loans).

[70] Analyzed by individual bank, loans registered an annual increase in twelve banks (the increase ranged from 2.4% to 71.4% by individual bank), while the other banks recorded an annual decline in loans (the reduction ranged from 0.2% to 13.1% by individual bank).

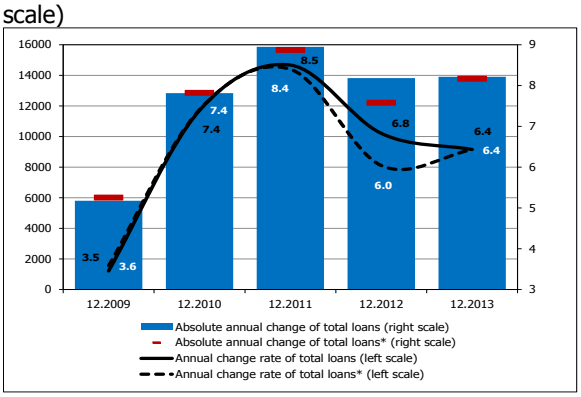
[71] Loans to the government are not loans for financing the needs of the government, but they arise from the contract for sale of real-estate by one bank to the government, with deferred payment.

Chart 88
Loans
In millions of denars



Source: NBRM, based on data submitted by banks.

Chart 89
Annual change of loans to nonfinancial companies
In millions of denars (left scale) and in % (right scale)



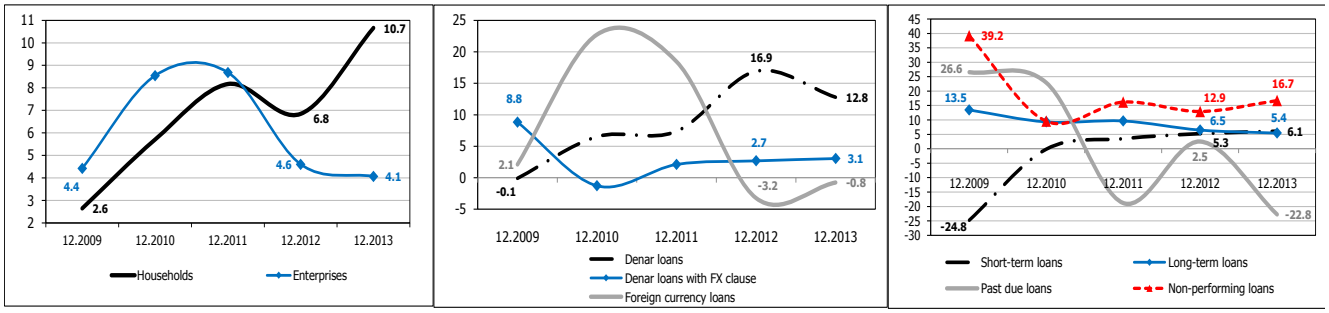
*Loans of sector "state" are excluded from total loans.
Source: NBRM, based on data submitted by banks.

lending to non-financial legal entities and natural persons accelerated by 0.4 percentage points. Lending accelerated in the second half of 2013, which also continued in 2014. The annual credit growth rate in January and February 2014 accelerated (by 0.5 and 0.3 percentage points respectively). Generators of the intensified lending activity of banks in the fourth quarter of 2013 were corporate loans. This may be related to the favorable economic developments, especially in the second half of 2013, and the stabilization of the banks' perceptions of the risks.

Analyzed by individual sectors, loans to households are drivers of the credit growth in 2013, contributing to the growth with 63.7%. Lending to households grew rapidly. It registered an annual increase of Denar 8,860 million, or 10.7% (Annex 6), with the consumer loans and loans for purchasing residential and commercial properties being the most used credit products in this segment (Annex 11). Loans to households were generators of the credit growth in January 2014 also, while in February this role was played by the loans to the corporate sector.

Lending to the corporate sector in 2013 registered an annual growth of Denar 5,282 million (4.1%), which contributed with 38.0% to the growth in the total lending activity (Annex 6). "Wholesale and retail trade" constitute most of the growth in corporate loans (Annex 11). However, compared to previous years, growth in corporate loans was still slow, but unlike 2012 when its annual growth rate almost halved compared to 2011, in 2013 the slowdown is more moderate (the growth rate decreased by only 0.5 percentage points). This more moderate slowdown was to a large extent due to the change in the strategy of one European banking group at the end of the year, which contributed to half of the monthly growth in the loans to the corporate sector in December (of Denar 3,201 million, or 2.4%). Annex 7 shows the structure of the loans to non-financial entities, by groups of banks.

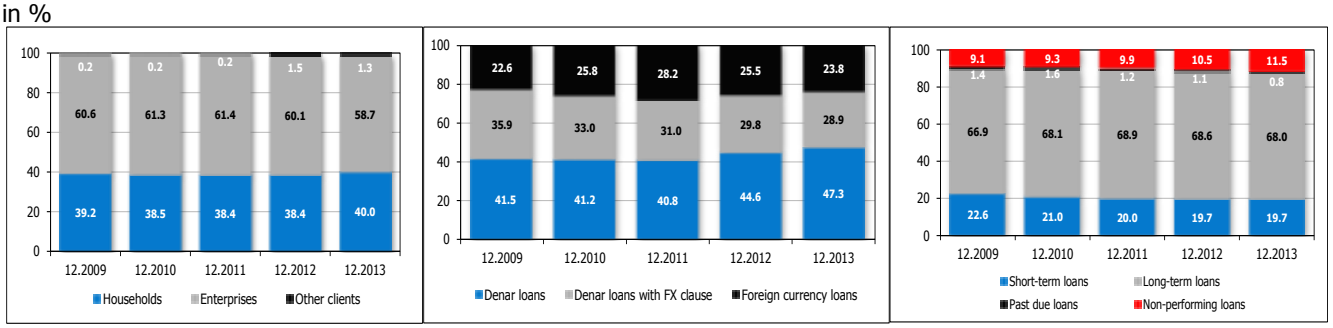
Chart 90
Annual change of loans by sector, currency and maturity
in %



Source: NBRM, based on data submitted by banks.

In 2013, most of the growth in the lending activity (88.8%) resulted from the increased lending in domestic currency. Denar loans registered a significant increase of Denar 12,352 million (or 12.8%), where the contribution of enterprises (63.7%) was higher than the contribution of households (36.5%). Denarization in the lending activity is closely related to the same process with deposits as the main source of funding of the banking activities. Denarization is perceived also through the slower growth of Denar loans with FX clause (Denar 1.970 million), which is based entirely on the "household" sector[72] and the reduction in the foreign currency loans (of Denar 416 million), which was most pronounced among households (Annex 8).

Chart 91
Structure of loans by sector, currency and maturity
in %



Source: NBRM, based on data submitted by banks.

Long-term lending prevails in the structure of loans to non-financial entities in 2013. The growth of long-term loans of Denar 8,071 million entirely stems from the "household" sector. The

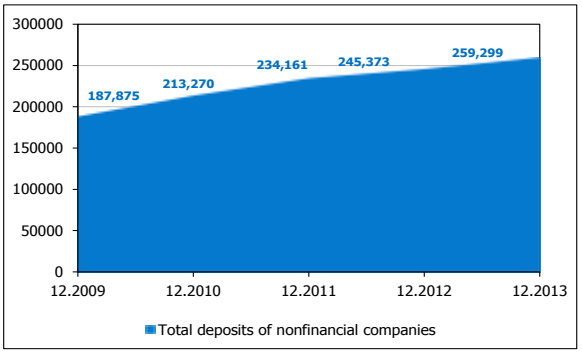
[72] Household Denar loans with FX clause increased by Denar 4,668 million, while those of companies declined by Denar 2,793 million.

macroprudential measure of the National Bank to facilitate the regulation on liquidity risk management[73] should, in the medium term, contribute to increase the room for long-term lending.

Changes in the non-performing loans are analyzed in section I.1 Credit Risk.

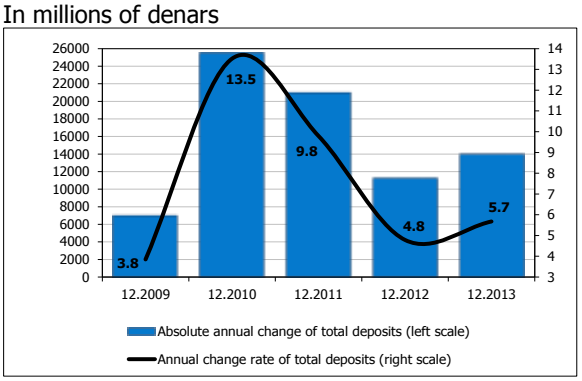
2. Deposits of non-financial entities

Chart 92
Deposits
In millions of denars



Source: NBRM, based on data submitted by banks.

Chart 93
Annual change of deposits of nonfinancial entities
In millions of denars



Source: NBRM, based on data submitted by banks.

In 2013, deposits of the non-financial sector grew rapidly. Deposits of non-financial entities registered an annual growth of Denar 13,927 million and acceleration of the growth rate by 0.9 percentage points (the annual deposit growth amounted to 5.7%). The growth in the banks' deposit potential continued in the first two months of 2014 (as of February 2014, the annual deposit growth rate accelerated and equaled 5.9%).

Generators of the deposit growth in 2013 were households, whose deposits increased by Denar 11,864 million on an annual basis and contributed with 85.2% to the growth in total deposits. Most of the growth (60.5%) of household deposits was a result of Denar long-term deposits, while a smaller portion (32.3%) came from the foreign currency long-term deposits (Annexes 12 and 14).

In contrast to the negative growth rate in the previous year, in 2013, corporate deposits increased by Denar 1,868 million, which was entirely due to the corporate Denar deposits[74].

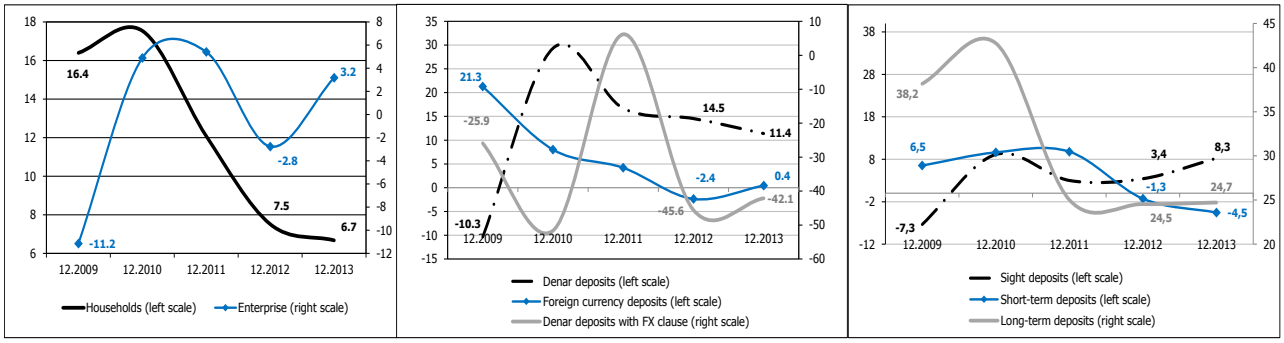
In 2013, Denar savings still had the largest share in the total deposit base of the banking system and its annual growth. Denar deposits registered a significant growth in the

[73] According to the amendments to the Decision on liquidity risk management, which have been applied since December 2013, in the calculation of the liquidity ratio up to 30 days and up 180 days, the percentage of term deposits which are assumed to flow out of the banks reduced (from 80% to 60%).

[74] Corporate Denar deposits registered a significant annual increase of Denar 5,489 million. Demand deposits contributed with 43.7%, short-term deposits with 32.0% and long-term deposits with 24.3% to this growth. Foreign currency corporate deposits decreased by Denar 2,576 million, while corporate Denar deposits with FX clause decreased by Denar 1,045 million.

amount of Denar 14,456 million, in which the contribution of households and companies was 61.8% and 38.0%, respectively. Foreign currency deposits increased by Denar 516 million, largely as a result of long-term foreign currency deposits of households. On the other hand, Denar deposits with foreign currency clause fell by Denar 1.045 million, for the most part (91.1%) due to lower corporate short-term Denar deposits with foreign currency clause with one bank.

Chart 94
Annual change of deposits by sector, currency and maturity
in %



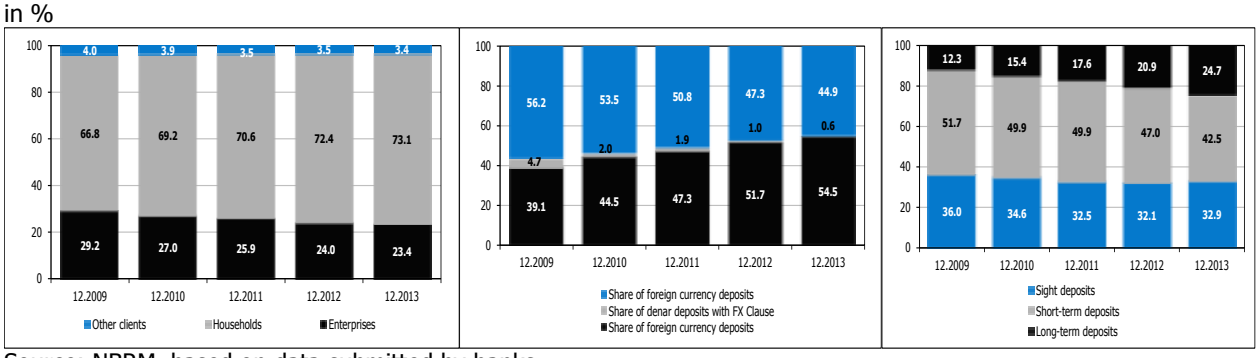
Source: NBRM, based on data submitted by banks.

The propensity of depositors to save in the long run was retained in 2013 and it was the driver of the growth in the total deposit base. Long-term household savings[75] in domestic currency had the largest contribution to the growth of long-term deposits. The setting of the reserve requirement ratios[76] and higher interest rates on term deposits also contributed to the increased saving in the long term and in local currency.

[75] Household Denar deposits contributed with 56.6%, while household foreign currency deposits with 30.2% to the growth of the total long-term deposits.

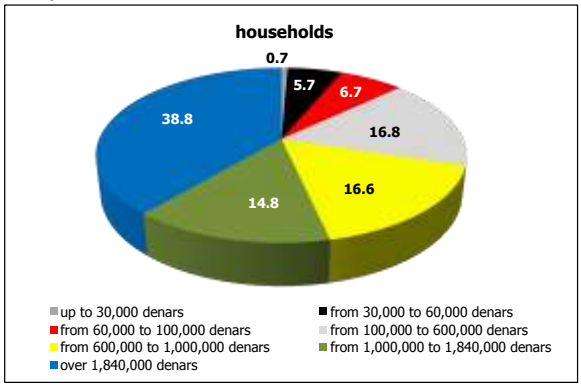
[76] The reserve requirement ratios are diversified by currency of denomination and amount to: 10% for the liabilities in domestic currency (8% as of August 1, 2013); 20% for the liabilities in domestic currency with FX clause; 13% for the liabilities in foreign currency (15% as of August 1, 2013, except liabilities to non-residents - financial institutions in foreign currency with contractual maturity of up to one year, for which the reserve requirement rate remained 13%). By exception, the reserve requirement ratio is 0% for: liabilities to natural persons in domestic currency, in domestic currency with FX clause and in foreign currency, with contractual maturity of over two years, provided they fulfill the prescribed conditions; liabilities based on repo transactions in domestic currency; liabilities based on debt securities issued in domestic currency and original maturity of at least two years, in the amount of the nominal value; (effective as of August 1, 2013) liabilities to non-residents - financial institutions in domestic currency, in domestic currency with FX clause and in foreign currency, with contractual maturity of over one year and liabilities to non-residents in domestic currency, in domestic currency with FX clause and in foreign currency, with contractual maturity of over two years.

Chart 95
Structure of deposits by sector, currency and maturity
in %



Source: NBRM, based on data submitted by banks.

Chart 96
Concentration of deposits of households according to the amount of deposits by person, as of 31.12.2013
In %



Source: NBRM, based on data submitted by banks.

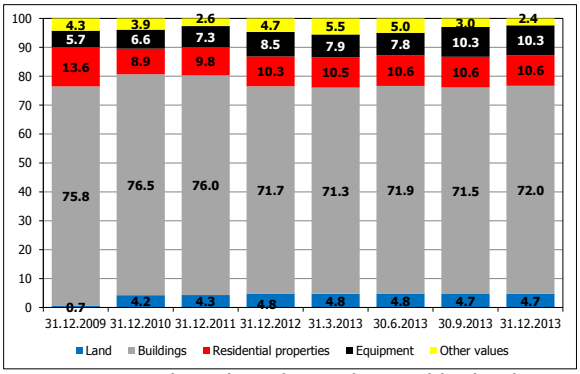
Sight deposits increased by Denar 6,495 million, of which 53.7% were due to household deposits and 42.8% to corporate deposits. In contrast, short-term deposits decreased by Denar 5,246 million, which almost entirely (94.7%) resulted from the lower short-term foreign currency deposits (the contribution of enterprises is 54.2%, while the contribution of households is 40.1%) (Annexes 12 and 14).

As of December 31, 2013, the majority (54.9%) of individual term deposits of households amounted to Denar 1,840 thousand, which is the amount up to which household deposits are insured in the Deposit Insurance Fund.

3. Foreclosures

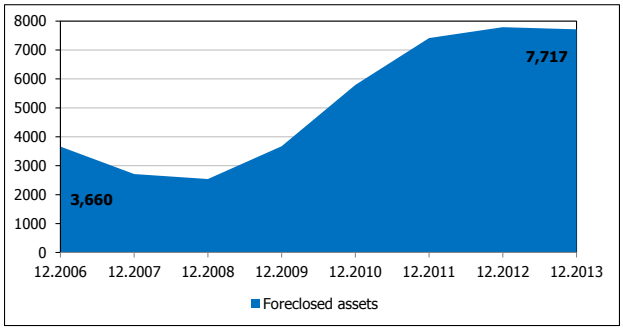
The amount of foreclosed assets in the banking system of the Republic of Macedonia is still small. As of December 31, 2013, the foreclosed assets less the impairment were 1.6% of total assets. However, the speed at which it has grown in the past (over a period of four years the amount has doubled) and the slow pace of sale of this foreclosed property were the reasons for the regulation of its treatment. The rules of the National Bank for the accounting and regulatory treatment of foreclosed assets, enable the banks to show foreclosures more realistically in their balance sheets and encourage them to sell foreclosed property more quickly. Also, this regulation allows avoiding the cyclical changes in the income statement due to presenting revenues (which are not realistic) when releasing the impairment of the uncollected claim which is closed with the foreclosure. Moreover, this regulation allows further strengthening of the banks' capital position, which besides creating more space for lending, also contributes to strengthening the stability and resilience of the banking system. The first data on the effects of the implementation of the new regulations show greater involvement of banks in selling the foreclosed assets.

Chart 97
Structure of the foreclosed assets
in %



Source: NBRM, based on data submitted by banks.
Note: The amount of the foreclosed assets refer to initial value on the date of acquisition.

Chart 98
Foreclosed assets
in millions of denars



Source: NBRM, based on data submitted by banks.
Note: The amount of the foreclosed assets refer to initial value on the date of acquisition.

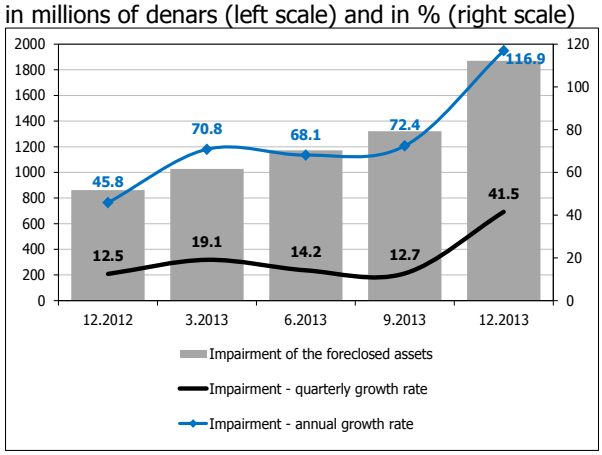
Closing the uncollected claims by foreclosed assets does not imply generation of actual cash inflows for the bank. True collection is achieved at the point of sale of the foreclosed asset, although accounting practices allow showing revenues in such closing of the uncollected claim. However, past practice has shown that the foreclosures are often kept in banks' balance sheets for a longer period of time before they are sold and before the actual collection occurs. Keeping the foreclosed assets burdens the banks' balance sheets with real estate and movable property, which are non-interest-earning assets and the bank should establish procedures for their evaluation and maintenance, as well as for their selling. Thus, with the foreclosure, the credit risk is converted into risks associated with its selling opportunities, taking into account the development of the market for that particular asset, changes in the market price and the like.

In 2006, a special regulation for the treatment of foreclosed assets was adopted for the first time. According to this regulation the banks were required to allocate a special reserve to cover potential losses arising from foreclosed assets. This regulation was subject to amendments in 2007, but the obligation for banks to recognize impairment loss if the appraised value[77] of the foreclosed asset is lower than its book value, reduced by the total amount of the impairment loss, remained. Moreover, if banks failed to sell the foreclosed asset over a period of five years after its takeover, they were obliged to bring down its value to zero (to perform a complete write-off).

In the period following the adoption of the Decision (2008 to 2012), the amount of foreclosed assets doubled. Although the foreclosed assets did not have a significant share in the total assets of banks (2.1% as of December 31, 2011), the speed at which it grew imposed a need for further changes in the

[77] Banks were required to assess the value of the foreclosed asset at the time of its assuming and at least once every twelve months.

Chart 99
Impairment of the foreclosed assets (movement and growth rates)
in millions of denars (left scale) and in % (right scale)



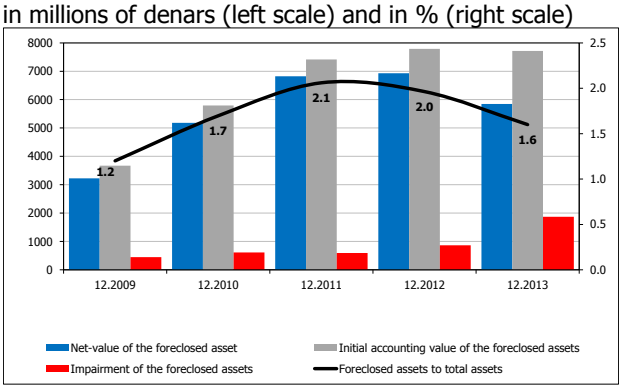
Source: NBRM, based on data submitted by banks.

relevant legislation that would allow more realistic presentation of the value of this assets in banks' balance sheets, but would also "encourage" banks to be more active in its selling. Therefore, in June 2012[78], and then again in March 2013[79] a requirement was introduced for mandatory annual impairment of the foreclosed assets of at least 20% of its book value[80]. Moreover, the regulation introduced an initial impairment of the foreclosed asset of at least 20% and an obligation to present the revaluation reserve as the difference between the amount of derecognized impairment/special reserve for the uncollected claim and the initial impairment of the foreclosed asset[81]. The purpose of all these new elements is to help banks make more realistic evaluations of the foreclosed assets in their balance sheets and avoid cyclical changes in the income statement due to presenting revenues (which are not realistic) when releasing the impairment of the uncollected claim. The requirement for mandatory annual presentation of the impairment loss of at least 20% of the net value of the foreclosed asset[82] should motivate banks to quickly "dispose of", i.e. sell the foreclosed property. Also, the obligation to present the revaluation reserve allows strengthening of the capital position. The revaluation reserve is part of the bank's supplementary capital (part of the bank's own funds) and can be excluded from the amount of the supplementary capital only if the foreclosed asset is sold or if the bank provides capital with higher quality than the quality of the revaluation reserve.

As of December 31, 2013, foreclosed assets amounted to Denar 7,717 million (initial value at acquisition date) or Denar 5,846 million if the initial value is reduced by the amount of

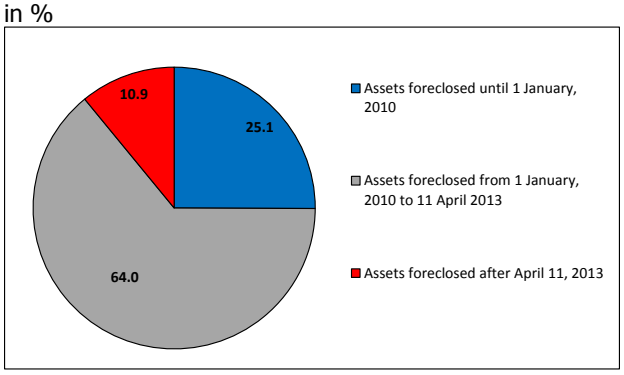
[78] Decision amending the Decision on the accounting and regulatory treatment of foreclosures based on outstanding claims ("Official Gazette of the Republic of Macedonia" no. 74/2012).
[79] Decision on the accounting and regulatory treatment of foreclosures based on outstanding claims ("Official Gazette of the Republic of Macedonia" no. 50/13).
[80] The requirement to bring the book value of the foreclosed asset to zero, if it is not sold by the end of the fifth year after the foreclosure, remained.
[81] Assets foreclosed before the new Decision entered into force (April 11, 2013), will be subject of certain dynamics for presenting impairment loss and reducing the value of the asset to zero.
[82] Net value of the foreclosed asset represents the initial book value less the total amount of impairment.

Chart 100
Foreclosed assets (initial value and net value) and their share in total assets
in millions of denars (left scale) and in % (right scale)



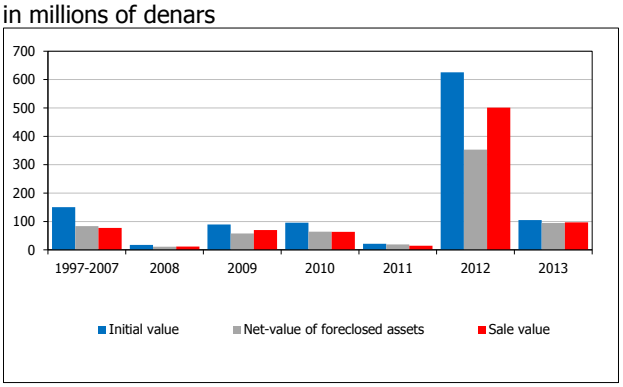
Source: NBRM, based on data submitted by banks.

Chart 101
Structure of the foreclosed assets according the acquisition date
in %



Source: NBRM, based on data submitted by banks.

Chart 102
Structure of the foreclosed assets sold in 2013, according the acquisition year
in millions of denars



Source: NBRM, based on data submitted by banks.

impairment. Most common in the structure of the foreclosed assets are buildings[83] (over 70%), while residential properties and equipment have almost equal share (about 10%).

In 2012 and 2013, the share of the foreclosed assets in the total assets of banks declined. This was primarily due to the decrease in net value of foreclosed assets as a result of the introduced requirement for mandatory impairment of foreclosed assets, which caused its considerable growth, especially evident from the quarterly and annual growth rates. Thus, only in 2013, this impairment was more than double the impairment at the end of 2012. As of December 31, 2013, the quarterly and annual growth of the impairment was due to the contribution (75.6% in the quarterly growth and 51.6% in the annual growth) of one bank.

Besides the impairment, the lower share of foreclosed assets in the total assets at the end of 2013 was due to the declining amount of foreclosed assets in the previous year. Such developments are certainly a result of the banks' activities for faster sale of foreclosed assets, suggesting that the regulatory changes in their accounting treatment already show appropriate effects.

According to the method of sale, 50.7% of the foreclosures were sold in cash, 29.5% were combinations of loan and cash and 15.9% were sold on the basis of loan, while other ways of selling have negligible participation. Of particular importance is the sale on the basis of loan to be structured properly, in order to avoid the impression of a delay of the impairment of foreclosed assets.

Almost two thirds of the foreclosed assets that were sold in 2013, were acquired in 2012 and 2013 (56% of the sold assets were acquired in 2012 and 9.5% in 2013). Such structure of sold assets by the date of their acquisition is a good indicator of banks' efforts to sell them

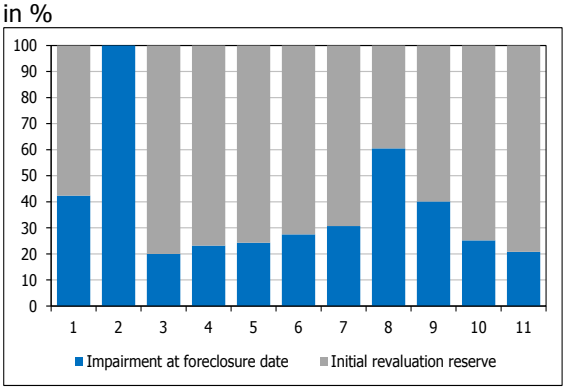
[83] Buildings do not include residential properties.

faster, given that the assets sold in 2013 were kept in the banks' balance sheets for approximately 2.6 years, on average.

In 2013, the rate of collection of all foreclosed assets acquired so far was 9.8%[84]. If only the assets that are taken and sold in 2013 are considered, the collection rate is 9.1% (calculated according to the initial value) i.e. 13.3% (calculated according to the net value of the foreclosed asset).

If a comparison is made between the initial value of foreclosed assets[85] and the value at which they were sold in 2013, it can be seen that the selling value of all assets sold in 2013 is by Denar 270.4 million (or 24.5%) lower than their initial book value. This difference justifies the requirement in the regulations for the proper impairment of the foreclosures in order to bring the book amount closer to their fair value.

Chart 103
Structure of the derecognized impairment / special reserve, by banks
in %



Source: NBRM, based on data submitted by banks.
Note: Five banks do not have foreclosed assets after April 11, 2013

As already pointed out, the regulation from March 2013 introduced a requirement for presenting revaluation reserve equal to the difference between the amount of the derecognized impairment/special reserve for the uncollected claim and the initial impairment of at least 20%. With the impairment of the foreclosed asset the banks may close even more than the minimum required 20% of the impairment/special reserve and the presented revaluation reserve will be lower by that amount. As of December 31, 2013, the revaluation reserve on this basis amounted to Denar 285.7 million, of which over 85% account for one bank. As of December 31, 2013, the revaluation reserve contributes with 27% to the growth of the banking system's own funds.

According to the reports submitted by banks, for the foreclosed assets acquired after

[84] This rate is calculated when the selling value of the assets sold in 2013 is divided by the "initial value" of foreclosed assets as of December 31, 2012.
[85] Initial accounting value shall be either the appraised value applicable on the date of acquisition or the purchase value of the foreclosed asset, whichever is lower (the value specified in the regulation passed by the competent authority, which stipulates the legal basis for the acquisition of the bank's right of ownership over the foreclosed asset).

April 11, 2013[86], 52.3% of the impairment/special reserve was used for impairment of the foreclosed asset, and 47.7% were recorded on the revaluation reserve account. By bank, this ratio ranges from 20% to 100% in favor of impairment at the time of acquisition. This means that some banks use the given opportunity to show impairment of the foreclosed asset in an amount greater than the minimum 20% of its initial value.

4. Profitability

The profitability of the banking system of the Republic of Macedonia has significantly improved. Profit after taxation achieved in 2013, in the amount of Denar 2,311 million, increased by Denar 849 million, or 58.1%, compared with the last year. The number of banks which registered profits increased from ten banks at the end of 2012 (with a market share of 92.0% in the assets) to thirteen banks (with a market share of 95.6% in the assets). Increased profits of the banking system are due to the increase in the net interest income of banks, which has increased due to the reduced interest expenses. Impairment released in the last quarter of 2013, due to the closure of non-performing claims, also contributed to the growth of the financial result of the banking system. However, the released impairment was largely used to cover the impairment made during the year, due to further deterioration of the loan portfolio. Future movement in the quality of the loan portfolio is one of the major risks for the profitable operations of banks in the future. Trends in bank profitability significantly depend also on the opportunities for maintenance and growth of net interest income, given the limited opportunities for growth of the interest income due to the still moderate lending activity of banks and for further reduction of the interest expenses. Higher profits contributed to the improvement in the banks' profitability indicators, and also the operational capability to generate revenues that cover costs of operation has increased.

4.1. Movement and structure of income and expenses of the banking system and profitability and efficiency indicators

In 2013, the total income of banks (total regular income[87] and extraordinary income) totaled Denar 18,462 million, which is by Denar

[86] The requirement for setting aside a revaluation reserve relates only to assets foreclosed after April 11, 2013, when the new Decision entered into force.

[87] Total regular income includes: net interest income, net commission income and other regular income (net trading income, net income from financial instruments carried at fair value, net income from exchange rate differentials, income from dividends and equity investments, net gains from sale of financial assets available for sale, capital gains from assets sales, release of provisions for off-balance sheet items, release of other provisions, income from other sources and income based on recovered claims previously written off).

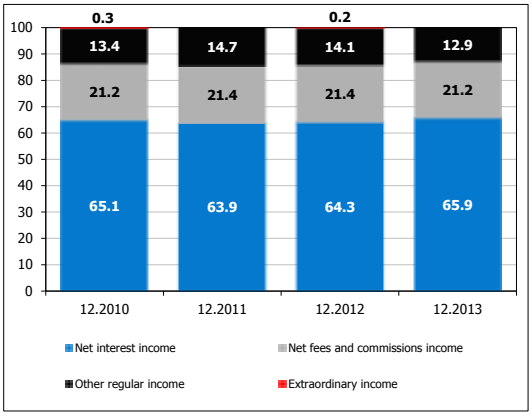
773.7 million, or 4.4%, more compared with the previous year. The main driver of the increase in banks' income is net interest income, which accounts for almost two thirds of the total banks' income. Increased net interest income (by Denar 788.6 million, or 6.9%) is solely due to the sharper annual decline in the interest expenses (Denar 792.7 million or 9.1%) compared to the slight drop in the interest income (Denar 4 million or 0.02%).

Table 6
Amount and annual change of major incomes and expenses
in millions of denars and in %

Income and expenses	Amount (in millions of Denars)			Annual change (in millions of Denars)			Annual change (in percent)		
	12.2011	12.2012	12.2013	12.2011	12.2012	12.2013	12.2011	12.2012	12.2013
Interest income	19,522	20,104	20,100	-14	582	-4	-0.1	3.0	-0.02
Interest expenses	9,120	8,734	7,942	-18	-386	-793	-0.2	-4.2	-9.1
Net interest income	10,401	11,370	12,158	4	969	789	0.0	9.3	6.9
Net fee and commission income	3,482	3,790	3,918	100	307	128	2.9	8.8	3.4
Other regular income	2,388	2,502	2,385	245	114	-117	11.4	4.8	-4.7
Extraordinary income	3	27	1	-42	24	-26	-93.9	872.9	-97.7
TOTAL INCOME	16,275	17,688	18,462	307	1,414	774	1.9	8.7	4.4
Operating expenses	11,026	11,168	11,191	453	142	23	4.3	1.3	0.2
Net impairment losses of financial and non-financial assets	3,990	5,003	4,808	945	1,013	-195	31.0	25.4	-3.9
Profit/loss before tax	1,218	1,504	2,350	-1,123	287	846	-48.0	23.5	56.2
Extraordinary expenses	40	13	113	31	-27	100	342.2	-67.0	752.1
TOTAL EXPENSES	16,275	17,688	18,462	307	1,414	774	1.9	8.7	4.4

Source: NBRM, based on data submitted by banks.

Chart 104
Structure of total income
in %



Source: NBRM, based on data submitted by banks.

The increase in the net income from commission (of Denar 128.4 million, or 3.4%) is twice lower than the increase recorded in the previous year, while other income components (other regular income and extraordinary income) decreased[88]. In line with such movements, only the share of net interest income increased in the structure of total income (by 1.6 percentage points), and it remains to be the largest.

The main reason for the minimally reduced total interest income is the declining interest income of non-financial companies and financial institutions. In circumstances of slower annual credit growth to the corporate sector, annual growth in non-performing loans for which interest income is not recognized, and reduced lending rates, the interest income from non-financial companies is lower by Denar 581.5 million (or 6.4%), compared with the previous year. The lower amount of interest income from financial

[88] Other regular income reduced by Denar 117.3 million, or 4.7% (primarily due to the reduction in the capital gains realized from the sale of assets in one bank in the country). The reduction of extraordinary income, by Denar 26 million, is also mostly due to the same bank.

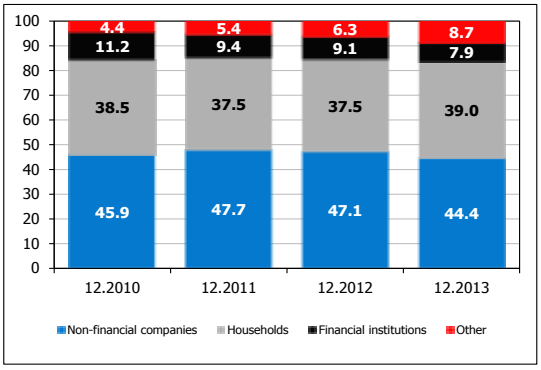
institutions by Denar 234.4 million, or 13.3%, is entirely due to the lower interest income of the Central Bank, because of the lower yields and lower banks' investments in CB bills[89] which banks have directed toward government securities that bear higher yield.

In contrast, amid rapid annual credit growth to the household sector (despite the lower interest rates on loans to households), interest income from this sector rose by Denar 263.2 million, or 3.6%. Particularly emphasized is the increase in the interest income from other entities, by Denar 460.5 million, or 37.7% (compared with the end of the last year), which primarily reflects the increased interest of banks to invest in government securities[90].

Analyzed by sector, an increase was registered in the interest income from other entities (by 2.4 percentage points) and households (by 1.5 percentage point), at the expense of the reduced share of interest income from non-financial companies (by 2,7 percentage points) and financial institutionss (by 1.2 percentage point).

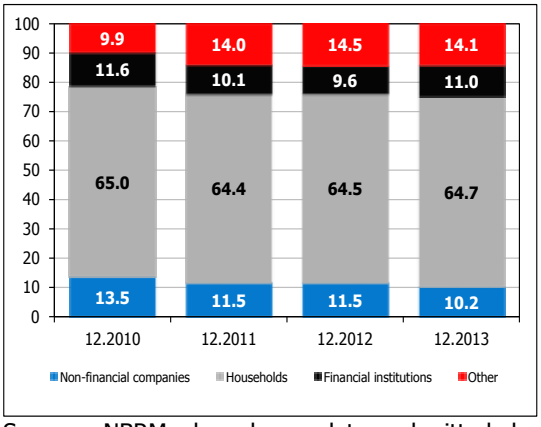
Banks' interest expenses to almost all sectors decreased. The interest expenses for term deposits of the household sector contributed the most (58.0%) to the decrease in the banks' total interest expenses. Given the decline in the interest rates on term Denar and foreign currency deposits of the household sector (by 0.8 and 0.7 percentage points, respectively)[91], the interest expenses to this sector decreased by Denar 492.9 million, or 8.8%. Also, a decline was registered in the interest expenses from non-financial

Chart 105
Sector structure of interest income
in %



Source: NBRM, based on data submitted by banks.

Chart 106
Sector structure of interest expenses
in %



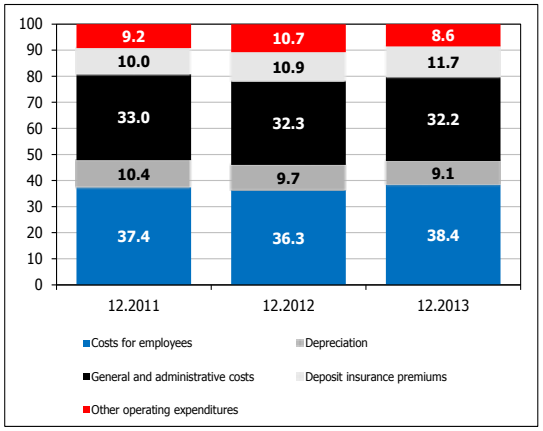
Source: NBRM, based on data submitted by banks.

[89] During 2013, the average monthly amount of the banks' investments in CB bills was lower by Denar 5,039 million, or 16.9% compared with the amount invested during 2012. Also, the weighted interest rate on CB bills continued to reduce, from 3.49% in January to 3.25% in December 2013.
[90] Interest income from investments in government securities, which is included in the category "interest income from other entities" increased by Denar 386.9 million, or 44.3% in 2013. The average monthly amount of banks' investments in Treasury bills during 2013, increased by Denar 9,343 million, or 45.2% compared to the average monthly amount invested in 2012. Investments in government bonds also increased significantly in 2013.
[91] Most significant decline was registered in the interest rates on short-term time Denar deposits with FX clause (by 2.2 percentage points), but the amount of these deposits is very small.

companies[92] of Denar 191.3 million, or 19.1%, which is consistent with the most pronounced lowering of the interest rates on long-term time Denar deposits of non-financial companies. Interest expenses to other entities made an additional contribution (of 18.2%) to the decline in the interest expenses. They decreased by Denar 144.2 million, or 11.4%[93] on an annual basis.

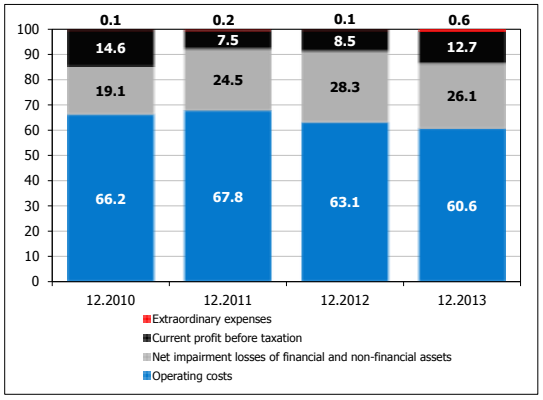
In 2013, banks' operating costs[94] registered a slight increase (of Denar 22.9 million, or 0.2%) relative to the previous year. In these frames, the largest increase in absolute amounts was recorded in the expenses for employees (by Denar 245.7 million), amid a small increase in the number of employees, while more pronounced annual increase of Denar 88.5 million or 7.2% was registered in deposit insurance premiums[95]. On the other hand, a decline was registered in the depreciation (by Denar 71.4 million, or 6.6%) and in the general and administrative expenses (by 8.2 million, or 0.2%). For several years there has been a significant change in the category "other operating costs"[96], which by default should not register significant fluctuations. In fact, during 2012, expenditures on other basis, which are part of the category "other operating costs", increased by Denar 243 million, or 59.5%, as a result of one bank in the country, while in 2013, these costs fell by Denar 331 million, or 50.8%, respectively, i.e. they were reduced close to the level of 2011. If the effect of this is excluded, other operating costs of the banking system at the end of 2013 would register a significant increase as a result of the growth of the special reserve for off-balance sheet exposure by Denar 33.9 million, or 6.4%, and of the five-time

Chart 107
Structure of operating costs
in %



Source: NBRM, based on data submitted by banks.

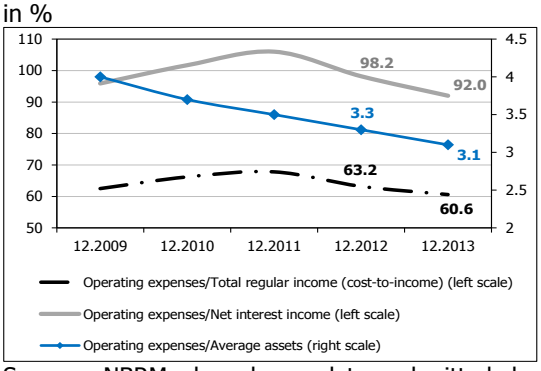
Chart 108
Usage of total income
in %



Source: NBRM, based on data submitted by banks.

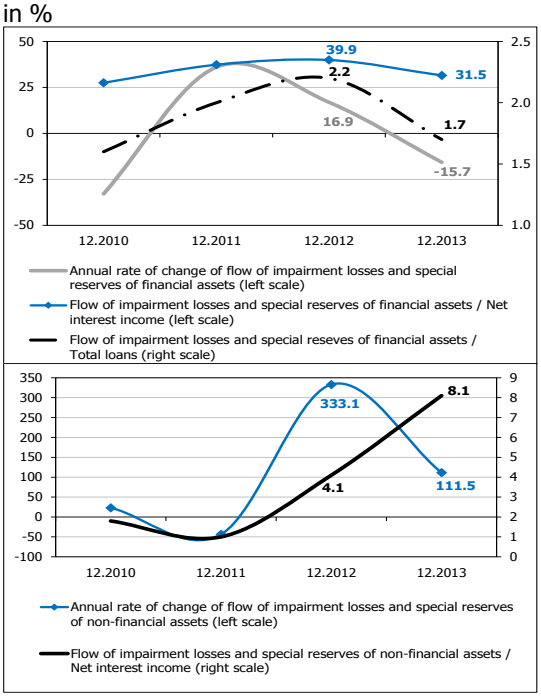
[92] The reduction in the interest expenses from non-financial companies contributed with 24.1% to the reduction of the total interest expenses.
[93] Mostly due to the reduction in the interest expenses of non-residents, primarily non-residents - financial companies, based on a subordinated debt, term deposits and in a small part on the basis of borrowings.
[94] Banks' operating costs include: staff costs, depreciation, general and administrative expenses, deposit insurance premiums and other operating costs, except extraordinary expenses.
[95] In circumstances when banks' deposits grow by 5.7% annually.
[96] Other operating costs include: special reserve for off-balance sheet exposure, other provisions and expenses on other grounds (expenses from previous years, income taxes and contributions, expenses for fines, fees and court decisions and other costs). In 2013, these costs decreased by Denar 231.7 million, or 19.3%.

Chart 109
Efficiency indicators of banks
in %



Source: NBRM, based on data submitted by banks.

Chart 110
Relative importance and growth rate of impairment losses and special reserve of financial assets (up) and non-financial assets (down)
in %



Source: NBRM, based on data submitted by banks.

increase in other provisions by Denar 65.4 million[97].

The share of banks' total income spent to cover operating costs is the largest, despite its decrease by 2.5 percentage points (due to the more pronounced increase in total income compared to the increase in the operating costs). The share of impairment in the income of banks has also reduced (by 2.2 percentage points). At the expense of that, an increase was registered in the profit margin, i.e. the share of profits in the total income by 4.2 percentage points.

The lower amount of total regular income that is spent to cover operating costs is an indicator of the improved operational efficiency of the banking system. All efficiency indicators of banks have improved. Apart from the portion of the total banks' income spent to cover the costs for employees, which are rising, all other indicators of the ratio between the different types of costs and total regular income decrease, which confirms the improved operational efficiency of banks.

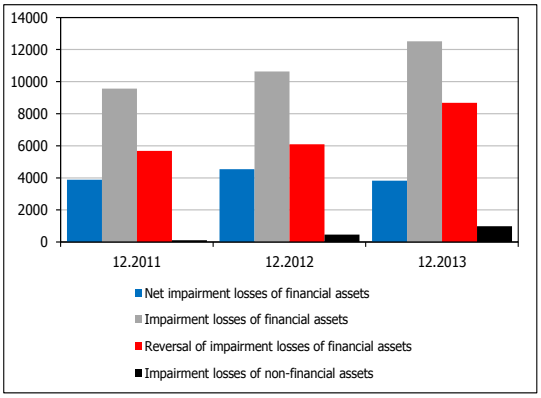
In 2013, the uptrend in the net impairment of financial assets was terminated. Being in the amount of Denar 3,828 million, the net impairment which banks recognize for the financial assets was lower by Denar 711.4 million, or 15.7%[98]. Hence, in 2013, a reduction was registered in the share of the net interest income which is spent to cover the impairment of financial assets, and in the ratio of the impairment of financial assets and gross loans to non-financial entities.

The main driver of the decrease in the impairment of financial assets is the significant amount of released impairment generated in the fourth quarter of 2013. The released impairment of financial assets of the banking system

[97] Most of the increase in the remaining provisions results from the additional provisions for potential liabilities arising from litigation in one bank and additional provisions for pension and other employee benefits in two banks in the country.

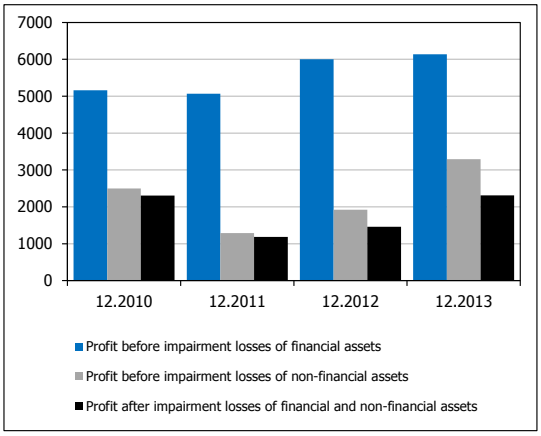
[98] For comparison, at the end of 2012, net impairment of financial assets (loans and similar claims), increased by 16.9%, on an annual basis.

Chart 111
Impairment losses of financial and non-financial assets
in millions of denars



Source: NBRM, based on data submitted by banks.

Chart 112
Effect of impairment losses of financial assets on profit
in millions of denars



Source: NBRM, based on data submitted by banks.

registered an annual increase of Denar 2,585 million, or 42.4%, which is almost entirely (83.8%) due to one bank in the country (mainly due to the closure of non-performing claims). But, as the same bank also stands behind the increase in the impairment of financial assets of the banking system (by Denar 1,873 million, or 17.6%, compared with the previous year), the net effect of that bank on the reduced net impairment of financial assets of the banking system is only partial. Several other banks in the country also contribute to the reduction of the impairment of financial assets.

Impairment of non-financial assets (foreclosed property) continues to grow and at the end of 2013 it was twice higher (Denar 980.2 million) than the level achieved at the end of 2012 (Denar 463.5 million). This growth was also a result of the novelties in the regulation on the regulatory and accounting treatment of foreclosures.

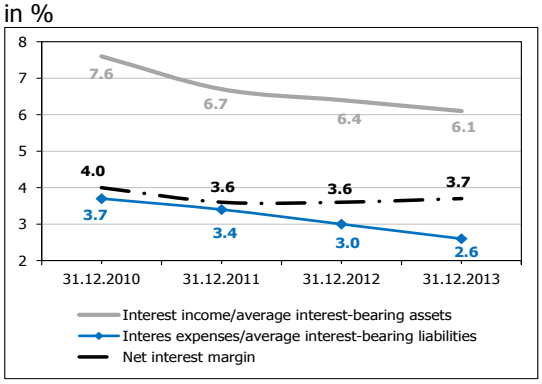
Accelerated growth of profits in 2013 caused an improvement in the basic profitability indicators of the banking system, with the rates of return on assets and return on equity being increased by 0.2 and 1.9 percentage points, respectively.

Table 7
Profitability and efficiency ratios of the banking system
in %

	12.2012	12.2013
Rate of return on average assets (ROAA)	0.4	0.6
Rate of return on average equity (ROAE)	3.8	5.7
Cost-to-income ratio	63.2	60.6
Non-interest expenses/Total regular income	69.3	66.6
Labor costs /Total regular income	22.9	23.3
Labor costs /Operating expenses	36.3	38.4
Impairment losses of financial and non-financial assets /Net interest income	44.0	39.5
Net interest income /Average assets	3.3	3.4
Net interest income /Total regular income	64.4	65.9
Net interest income /Non-interest expenses	92.8	99.0
Non-interest income/Total regular income	35.6	40.1
Financial result/Total regular income	8.3	12.5
Number of employees	6,026	6,048
Financial results per employee (in millions of Denars)	0.2	0.4
Total income per employee (in millions of Denars)	2.9	3.1
Operating costs per employee (in millions of Denars)	1.9	1.9

Source: NBRM, based on data submitted by banks.

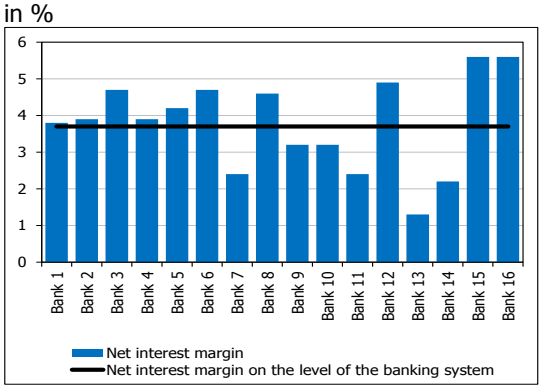
Chart 113
Net interest margin
in %



Source: NBRM, based on data submitted by banks.

In 2013, productivity in the banking system also improved, indicating better utilization of resources. Profit per employee has doubled, and an increase was registered also in the total income per employee (4.0%). The only operating costs per employee remained unchanged compared to the previous year.

Chart 114
Net interest margin, by banks
in %

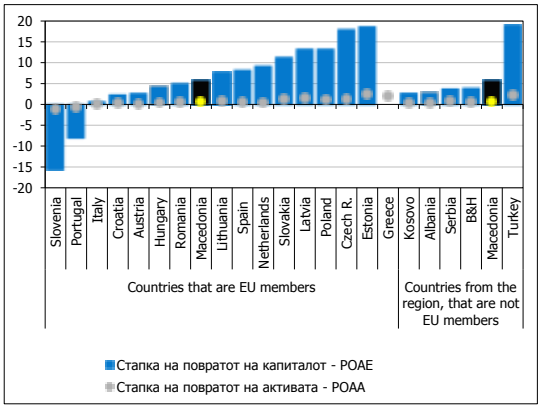


Source: NBRM, based on data submitted by banks.

Annual increase was recorded also in the net interest margin[99] (by 0.1 percentage point compared to 2012), reflecting the more pronounced annual growth in the net interest income (by 6.9%) than the growth in the average interest-bearing assets (by 5.9%). In fact, the main cause for the increase in the interest margin is the reduction in interest expenses. In contrast, the prudence of banks in taking risks, and the lower lending rates, caused further downtrend in interest income per unit of interest-bearing assets (by 0.3 percentage points). At the same time, annual decrease was registered also in the expenses per unit of interest-bearing liabilities (by 0.4 percentage points) due to the divergent movements of both components - reduction of interest expenses and increase in the average interest-bearing liabilities of banks.

[99] Net interest margin is calculated as the ratio between net interest income and average interest-bearing assets. Average interest-bearing assets are calculated as an arithmetic mean of the amounts of interest-bearing assets at the end of the current and at the end of the previous year.

Chart 115
Return on assets and return on equity, by seperate countries
in %



Source: NBRM, based on data submitted by banks.
Note: The data on the analyzed countries refer to September 2013, except Macedonia, Croatia, Estonia (December 2013) and Italy, Spain, Poland and Albania (June 2013). There is no data for ROAE for Greece.

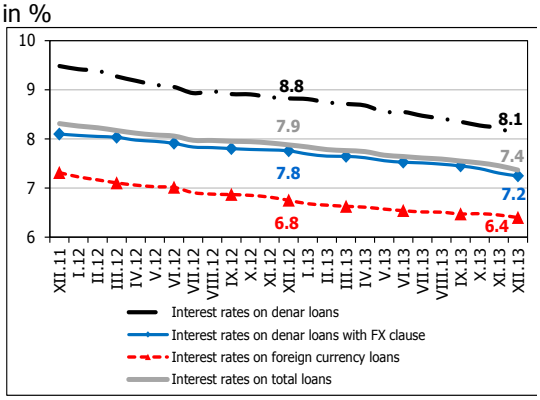
Ten out of sixteen banks reported higher net interest margin compared to the net interest margin of the banking system, which is an improvement of one bank, compared with 2012.

Improved profitability and efficiency of banks in 2013 brought banks in the Republic of Macedonia closer to the banks of the region and of certain EU Member States. With realized rate of return on assets of 0.6% and rate of return on equity of 5.7% at the end of 2013, the banking system of the Republic of Macedonia was positioned in the middle part of the group of analyzed countries. However, there is a considerable room for further improvement of the performance of the banking system of the Republic of Macedonia, including its profitability potential, especially if the banks which showed a negative financial result are successful, in the next period, in reaching the level of activity that would be appropriate for achieving better financial results.

4.2. Movements in interest rates and the interest rate spread

The trend of downward movement in the banks' interest rates continued throughout 2013, amid relaxed monetary conditions and reduced key interest rate of the National Bank[100], despite the modest upward movement of the one-month EURIBOR at the end of 2013 and in the beginning of 2014, as a result of the expectations for gradual normalization of the money market in the euro zone.

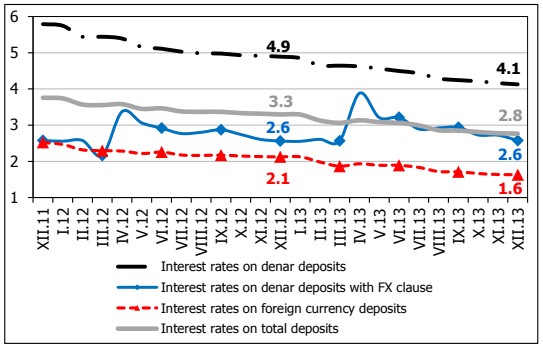
Chart 116
Lending interest rates
in %



Source: NBRM, based on data submitted by banks.

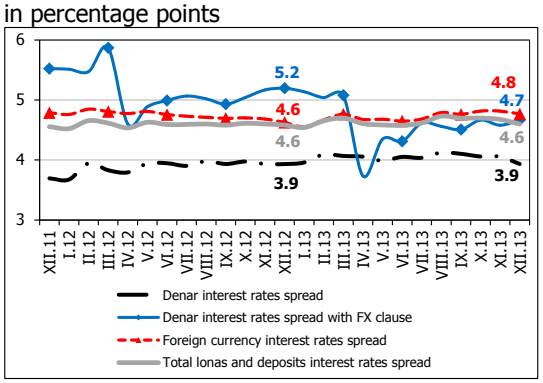
[100] During 2013, the key interest rate of the National Bank was reduced by 0.25 percentage points in January (from 3.75% to 3.50%) and by additional 0.25 percentage points in July (from 3.50% to 3.25%).

Chart 117
Deposit interest rates
in %



Source: NBRM, based on data submitted by banks.

Chart 118
Interest rates spread, by currency
in percentage points



Source: NBRM, based on data submitted by banks.

Compared to December last year, the most significant is the reduction in interest rates on Denar deposits (by 0.8 percentage points), followed by Denar loans (by 0.7 percentage points), Denar loans with FX clause (by 0.6 percentage points), foreign currency deposits (by 0.5 percentage points) and foreign currency loans (by 0.4 percentage points). Only the interest rate on Denar deposits with FX clause remained unchanged.

During the first half of 2013, greater variability in interest rate spreads was registered, despite their more stable level during the second half of the year. Interest rate spreads in Denars and in foreign currency remained stable (they are at approximately the same level as in December last year), mainly due to the relatively harmonious movements in interest rates on Denar and foreign currency loans and deposits. In contrast, the narrowing of the spread in Denars with FX clause (by 0.5 percentage points), was due to the reduction in the interest rates on Denar loans with FX clause.

Breakdown (decomposition) of the rate of return on equity - ROAE

The rate of return on equity - ROAE is a widespread measure of banks' profitability. It shows how effectively the bank's management uses the funds that are made available by the shareholders and is an indicator of the return that they generate as compensation for investing their capital in that particular bank. This indicator is inevitably linked with the ultimate goal of the bank and shows how successful the bank management is in maximizing shareholders' profits.

One way of decomposition of the rate of return on equity - ROAE is through its presentation as a product of four rates, including: profit margin, efficiency, indebtedness and the propensity for risk taking. Represented by an equation, the decomposition looks like this:

$$\mathrm{ROAE} = \frac{\mathrm{P}}{\mathrm{S}} \times \frac{\mathrm{S}}{\mathrm{RWA}} \times \frac{\mathrm{A}}{\mathrm{CR}} \times \frac{\mathrm{RWA}}{\mathrm{A}} = \mathrm{PM} \times \mathrm{RWAturnover} \times \mathrm{L} \times \mathrm{RBAratio},:$$

where:

ROAE = rate of return on equity, P = profit after taxation, CR = average amount of capital and reserves, S = total regular income, A = average assets, RWA = risk-weighted assets, PM =

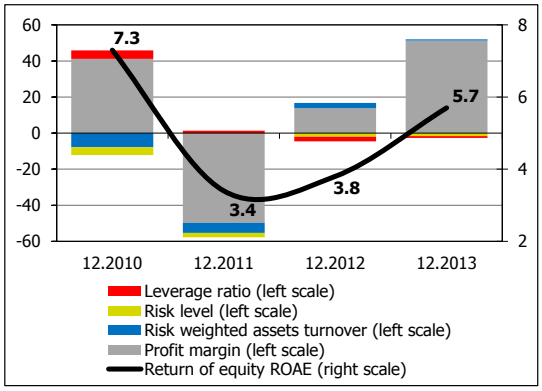
profit margin, RWAturnover = risk-weighted assets turnover, L = debt ratio (leverage), RBAratio = indicator of the level of risk assumed.

Table 8
Breakdown (decomposition) of the rate of return on equity - ROAE

Indicator	Description	Financial stability implications
Profit margin	Measures the difference between income and expenses	Effect of rise: positive
Risk weighted assets turnover	Measure the level of income discounting for risk	Effect of rise: positive
Risk level	Measures risk appetite (it refers to a bank's credit risk level)	Effect of rise: negative
Leverage ratio	Measures the impact of debt	Effect of rise: negative

The higher value of the rate of return on equity generally shows higher profitability and efficiency while generating profits from each unit of capital. However, this rate should be interpreted with great caution, especially considering the fact that its changes are sometimes associated with not only profits, but also other factors such as debt, the turnover of risk-weighted assets or the levels of assumed risk. In such a case, the increase in the rate of return on equity does not necessarily imply improvement of the financial strength of the banking system. Thus, the increase in the rate of return on equity that is due to the positive uptrend in the profit margin (greater difference between income and expenditures) or the turnover of risk-weighted assets (higher efficiency), is an indicator of increased stability of the bank. On the other hand, the increase in the rate of return on equity as a result of the increase in the debt ratio (increased debt and/or decreased capital and, consequently, higher bank exposure to risk) or of the increased levels of assumed risk (taking high-risk activities) means weakening the financial strength of banks.

Chart 119
Return on assets and return on equity, by separate countries
in %



Source: NBRM, based on data submitted by banks.

The rate of return on equity in the banking system of the Republic of Macedonia in the past few years, has been largely determined by the movements of the profit margin. After the fall of the profit margin, and hence halving the rate of return on equity in 2011, there was a period of gradual increase of this ratio. Thus, in 2013, the ratio of return on equity greatly increased. The decomposition of this ratio shows that the increased profit margin has the largest contribution to its increase (4.2 percentage points). The reduced overall level of risk of the banks (by 1.3 percentage points) had an additional positive effect on the level of ROAE indicator, while the lower debt ratio had a minimal impact.

ANNEX