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**National Bank of the Republic of Macedonia**

Supervision, Banking Regulation and Financial Stability Sector

Financial Stability and Banking Regulations Department



***FINANCIAL STABILITY REPORT FOR THE REPUBLIC OF  
MACEDONIA IN 2015***

July 2016



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*The financial stability represents the state of unrestricted functioning of all segments of the financial system, i.e. of the financial intermediaries, financial markets and financial infrastructure, therefore enabling efficient allocation of financial resources, even in conditions of imbalances or shocks. It creates confidence with economic agents that have unrestricted access to financial services, according to their needs.*

*According to the Law on the National Bank of the Republic of Macedonia, besides the primary objective of the National Bank to achieve and to maintain price stability, it has a statutory objective to contribute to the maintenance of a stable, competitive and market-based financial system. The National Bank achieves this objective by monitoring the developments in the financial system and its environment and, if necessary, by taking (macro-prudential) measures for prevention or reduction in the risks that affect the maintenance of the financial stability.*

*The financial stability reports are an important link in the achievement of the first aspect of this objective of the National Bank which, starting from 2006, are being made on an annual basis. These reports identify systemic risks which may undermine the functioning of part or the entire financial system, which ultimately could affect negatively on the entire domestic economy. In this way, the awareness of the financial industry, the supervising authorities and the different policymakers, as well as of the general public for present risks in the financial system, increases. It has a corresponding impact on the achievement of the second aspect of this objective of the National Bank - taking timely measures for prevention or limitation of the systemic risk growth.*



## Summary

**The Macedonian financial system was stable in 2015, despite external and internal events that tested its resilience.**

**Globally**, in 2015, macroeconomic risks increased as a result of the weaker performance and downward expectations for the global economic growth and inflation, mainly related to the crisis in the emerging economies, especially the Chinese economy, and the developments of world prices of energy and food products. Due to the increased risks of non-economic nature in the EU, as well as the debate over the future of Greece in the euro area and the increased uncertainty about the ability of this country for implementation of the assistance programme, the challenges to monetary policy conduct of the European Central Bank, but also for implementation of the fiscal and structural reforms in individual Member States, increased. For adequate dealing with these risks, the European Central Bank further reduced the interest rates and expanded the quantitative easing program, but to a lesser extent than market expectations. On the other hand, in December 2015, the Federal Reserve System of the United States increased the interest rates, in line with growth of the gross domestic product of this country. This divergence in the policies of the major world economies is an additional risk to global financial stability. Also, it is expected that the decision about exit of Great Britain from the European Union on the referendum in June 2016 will have a significant impact on the European economy, especially on the functioning of the financial markets.

**Domestically**, in 2015, the risks of non-economic nature were strongly highlighted, both because of the domestic political turmoil that continued in 2016, and also because of the refugee crisis. In such conditions, the sound economic fundamentals have come to the fore, without the presence of major imbalances in the Macedonian economy, which continued to grow, whereby most industries have seen positive performances. Under the influence of the employment growth policies and for attracting foreign capital, as well as under the influence of the growth of household lending, private consumption and exports made the largest contribution to the growth of the domestic economy. However, deteriorating expectations of economic agents, primarily of households, caused by the unstable political situation in the country and the growing uncertainty about its rapid resolution led to an increased demand for foreign currency and caused pressures on banks' deposit base in the second quarter of 2016. In response to these developments, in May 2016, the National Bank increased the interest rate on CB bills by 0.75 percentage points, and for further encouraging the process of denarization of deposits, made change in the reserve requirement (increased the rate for banks' liabilities in denars with foreign exchange clause from 20% to 50%). Recent data show significant stabilization in the expectations and the confidence of the economic agents, and the assessments for soundness of the economic fundamentals remained positive.

The value added of **the non-financial corporate sector** increased for the third consecutive year, which led to growth in its productivity. Total revenues of this sector registered faster growth, although more than one third of the corporate sector entities showed a loss. The improved performance of the domestic corporate sector contributed to a reduction of the growth of non-performing loans, although the credit risk arising from this sector remains the most important factor that affects the loan portfolio quality of the banking system. The debt of the domestic corporate sector reached two thirds of the gross domestic product, and the liabilities to non-residents made a larger contribution to the growth of the debt. The increase in



net external debt of the corporate sector increased the currency risk this sector is exposed to, but also the significance of the risks arising from developments in the international financial markets.

Despite the improvement of the labor market, the growth of the debt of **households**, especially of the debt based on housing and consumer loans, was faster than the growth of financial assets of this sector. This contributed to an increase in the indebtedness of the sector, although indicators show that the possibilities of further growth of the debt of households are not yet depleted. Also, the quality indicators of this debt suggest low risks to household creditors. However, the significant increase in the exposure based on consumer loans with longer maturity imposed the need for an adequate response by the National Bank. At the end of 2015, the National Bank increased the capital requirements for banks to cover the risks that may arise from such a rapid growth of long-term consumer loans. The monitoring of this risk, as well as the monitoring of the risks associated with credit exposure with FX component and with weaker collateral is essential to the stability of the banking system. The significance of households for the banking system arises from their share in total sources of financing of banks, which especially has come to the fore in the middle of 2015 (as a result of the effects of the debt crisis in Greece) in the second quarter of 2016 (as a result of the impact of the current political situation in the country). As a result of the cautious behavior of banks and holding high amount of liquid assets, and by using the measures taken by the National Bank, the banks could adequately respond to these challenges, without causing major shocks to the banking and financial system.

In 2015, the total assets of **the financial system** reached Denar 494 billion and grew by 7.1% compared to the previous year. The main features of the financial system remain: its simple structure, weak cross-sectoral links and the absence of complex financial instruments and services. In recent years, there were activities for combining insurance and banking products, but the scope of these activities is still small. Such setup and development of the domestic financial system are the main factors for minimizing the possibilities of disturbing its stability, through the spillover of the risks from one to another institutional segment. The most important contagion channel between individual institutional segments are the deposits invested in banks. Although the deposits of non-banking financial institutions are almost insignificant for the banks (3.4% of their total deposit base), they account for only 65.3% in the assets of brokerage houses, 39.5% in investments of investment funds and 29.6 % in the assets of insurance companies.

Because of the highest share in the financial system, **banks** are the most important factor for maintaining its stability and the stability of other institutional segments, as well as the two key non-financial sectors - companies and households. Solvency and liquidity of this sector are the main factors for its stability and resilience to external and internal shocks. The conducted stress-tests, by applying two adverse macroeconomic scenarios (hypothetical and historical), indicate that the banking system as a whole has a sufficient level of own funds to cover the losses of the assumed shocks, without reducing the capital adequacy below 8%. Individual banks showed little vulnerability to the assumed shocks and hypothetical need for recapitalization or liquidity support, which accounted for just 0.4% of the gross domestic product for 2015. Also, the designed contagion matrix, which examines the possible spillover of problems from one bank to another and from the banking system to the insurance and pension sector, points to a relatively low risk of mutual contagion. In the most extreme case of spillover of risks from banks to



insurance companies and pension funds, all insurance companies would have solvency over regulatory capital, and pension funds would lose only 1.5% of their value.

The main risk to the banking system comes from its lending activity, which had slower growth in 2015. However, the significant slowdown of the growth of non-performing loans caused a decrease in their share in the total loans to banks to 10.8%. The risks that come from the level of non-performing loans were further reduced due to the high coverage of these loans with impairment allocated for them (86.7%), thus limiting the negative effects on the solvency of the banking system. In 2015, the banks' profitability improved by more than 47%, which is mainly due to lower interest expenses.

Although smaller in scale, **pension funds** become increasingly important for the financial stability, primarily because of the significant share in the financial assets of households. In 2015, the pension funds' assets grew, registering growth rate of over 20% for several consecutive years. Over two-thirds of their investments are in debt securities, primarily in domestic government securities and in deposits with domestic banks, indicating a high degree of concentration of the investments of pension funds.

**The insurance sector** grew in 2015, with higher annual rate compared to 2014 (8.5% versus 6.1%). The growth is much higher in life insurance companies, which still penetrate on the insurance market. Also, compared to the previous year, profitability grew by 48.2% in insurance companies, as a result of the slower growth in claims and increased premiums. Solvency position of this sector is extremely high, which is based on the high capital of the sector which covers the solvency margin (capital requirement) by 4.5 times. Nearly two-thirds of the assets of the insurance companies are liquid assets, which, in turn, fully cover the gross technical reserves. Banking insurance, i.e. cooperation between banks and insurance companies based on an agreement for representation in insurance is low. In 2015, gross premiums written through banks represented only 0.8% of total premiums (2.8% of total premiums for life insurance). Hence, only the traditional channel for spillover of the risks from the banking to the insurance sector remains, through the deposits of insurance companies placed with the banks.

**Other financial institutions** (savings houses, investment funds, leasing companies and financial companies) had an almost insignificant share in the total assets of the financial system, and thus on its stability. In addition, some of these segments constantly reduce its share in the total assets of the financial system. The biggest risk associated with these institutions is their (in)ability to provide sufficient income whereby their further survival would be put in question.

The both segments of the domestic financial market - **the money and short-term securities market and capital market**, for a longer period of time, have been functioning without significant impact on financial flows in the country and the conditions under which the real sector is financed. In 2015, both the market of non-collateralized deposits and the collateralized deposits market (repo market) decreased in turnover, while on the short-term securities market, the issuing and trading in CB bills and treasury bills was dominant. Despite the constant reduction of euroisation in the economy in recent years, however, the level of debt of households and the corporate sector with FX component is still significant, and therefore the foreign exchange market is the most important segment of the financial market. In 2015, this market had the highest turnover of nearly 90% of GDP. Maintaining a stable exchange rate of the denar against the euro, despite having a key role in maintaining macroeconomic balance, is





extremely important for the sustainability of the debt of households and the corporate sector, and hence the maintenance of financial stability.

In 2015, the capital market developments are similar to those of the money and short-term securities market, i.e. this market declined in both the new issues of long-term securities (39% compared to 2014) and the trading in these instruments (17.6% compared to the previous year). Most active issuer of long-term securities remains the government, while companies hardly use market funding. Domestic financial institutions are main investors in government bonds, and banks in government bonds in denars (almost 60%), and other financial institutions in government bonds with FX clause (almost 99%). Such structure of the capital market further enhances the importance of the government to the overall financial stability. The restraint and pessimism of potential investors prevailed in the secondary capital market, which is also confirmed by mainly downward movements of the Macedonian MBI-10. However, the regional connection of the Macedonian, Croatian and Bulgarian Stock Exchange should represent the basis for greater trading volume and more investment alternatives for domestic investors abroad and foreign investors in the Republic of Macedonia.

In such an environment and conditions of functioning of the financial system, the following main sources of risks could have an adverse effect on its stability in the next period.

***The uncertainty associated with the domestic political developments is still present.*** The uncertain political environment has already had an impact on the developments in the banking system through the outflow of deposits in the second quarter of 2016. In April 2016, the banks' deposit base registered a decline of 2.2% on a monthly basis, almost equally distributed between corporate deposits and household deposits. After the measures taken by the National Bank from the end of May and June, there was a stabilization of the deposit base. However, the possible prolonged duration of the political crisis and its intensification can have negative effects on the deposit growth, especially if taking into account the constant reduction of deposit interest rates. In such conditions, the banks face a strong challenge to maintain the existing and attract new deposits, and thus the challenge to further increase lending and maintain profitability.

In addition, due to ***the uncertainty associated with the possibilities of achieving the planned growth of the domestic economy, the ability of the corporate sector to provide sufficient positive cash flows from operations may be limited, as well as to reduce household disposable income.*** Considering that the non-financial sector is the most significant debtor of the banking system, any reduction in its debt repayment ability is an increased opportunity for achieving credit risk and serious deterioration in the banks' operations. At the same time, the reduction of available funds of companies and households would decrease their opportunities to invest in products and services offered by banks and other financial institutions in the country.

***Amid limited space for changes in the interest policy of banks, there is uncertainty in relation to their ability to maintain adequate profitability position.*** For several years, retained earnings in equity funds of banks are the most stable source of increase of own funds. In the absence of more significant amounts of recapitalization, the banks were mainly oriented towards internal strengthening of the capital position, and accordingly, the reduction in the ability to maintain an appropriate level of profitable operations would have negative effects on





both their stability and on the opportunities for expansion of their activities, and thus for growth of the financial system. This limitation can be particularly important in the complete introduction of the new capital standards contained in the so-called Basel 3 and prescribed in the relevant European directive and regulation (CRDIV / CRR). These capital standards strengthen the quality of capital positions that can be included in the determination of banks' own funds and introducing the obligation to dispose of appropriate levels of protective layers of capital. As a result of these requirements, and in order to maintain and meet the planned strategic objectives, some of the domestic banks may be required to increase their capital position.

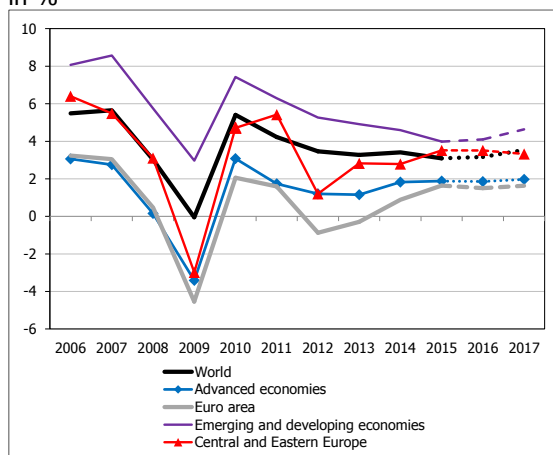
From this aspect, the established supervisory and regulatory framework, which largely monitors the international standards and practices, and particularly the provisions of the relevant European directives and regulations, is an important factor for the stability of the financial system. However, there are some differences in the degree of regulation of the individual institutional segments of the financial system, ***which could create conditions for their uneven treatment and transfer of activities from the more regulated to the less regulated segments***. Although the current practice in the Republic of Macedonia does not show such tendencies, this risk should be taken into account in the further regulation of the financial system and establishing equal working conditions of all its segments.

# I. Macroeconomic environment

## 1. International environment

In 2015, the risks that affected the global financial stability increased<sup>1</sup>. Risks to the global growth and the growth in the euro area related to geopolitical developments and conditions in the markets of oil and natural gas. Low inflation is also a risk that is present versus the steadily expansionary monetary policy in the euro area and additional non-standard measures of the ECB. Hence, taking structural reforms to ensure higher growth and financial stability by the appropriate monetary and fiscal authorities is the main challenge to maintain the global financial stability in 2016.

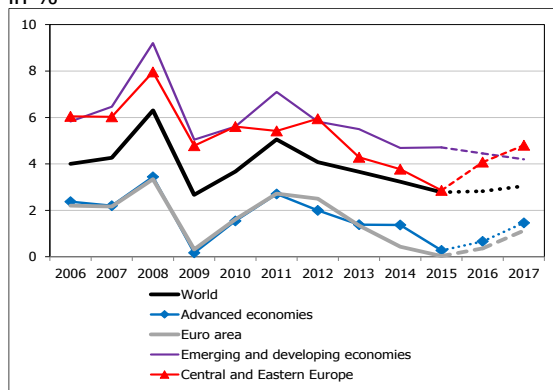
Chart 1  
Growth and GDP growth projection  
in %



Source: World Economic Outlook, April 2016.

During 2015, at global level, macroeconomic risks increased as a consequence of the weaker economic performance and downward expectations for the global growth and inflation. In 2015, at global level, the growth rate amounted to 3.1%<sup>2</sup>, which is a moderate slowdown compared to the previous year, and also the lowest rate after 2009. Prospects of the global economic growth and trade deteriorated, primarily as a result of the crisis in the emerging economies, as well as of the change in the drivers of growth of the Chinese economy (diversion of the drivers of exports and production toward consumption and services).

Chart 2  
Inflation  
in %



Source: World Economic Outlook, April 2016.

Inflation continued decelerating globally, mainly reflecting the fall in world energy prices and primary food commodities. Global inflation equaled 2.6% in 2015, compared to 3.2% last year.

<sup>1</sup> Source: Global Financial Stability Report, IMF, April 2016, World Economic Outlook, IMF, April 2016, European Economic Forecast, European Commission, spring 2016.

<sup>2</sup> It is expected that the growth rate globally will reach 3.5% in 2016 and 3.7% in 2017.



Risks in the emerging countries have intensified with the normalization of the Fed's monetary policy. Amid solid performance of the US economy, in December 2015, the Fed increased the target for the interest rate on the money market from 0.25% to 0.50%, and undertook other changes due to the normalization of the monetary policy according to the economic performances and expectations. These changes had an unfavorable influence upon the economies of emerging countries, so they were reflected through slower growth, depreciation of domestic currencies and capital outflows. Tighter financial conditions made more difficult the access to the international capital markets and increased the burden on financing, particularly for countries where the dollar component of debt prevails.

**The slower growth of China** made a significant contribution to the weaker economic performance of the group emerging countries, which given the size and importance of the Chinese economy to global demand, was transferred globally (through trade channels, falling world prices of some primary commodities, decreased confidence and increased volatility in the financial markets). Medium-term expectations for the Chinese economy envisage a further moderate slowdown of growth, which is considered a potential risk to the global economy. Given the small direct exposure of the Republic of Macedonia to China<sup>3</sup> through the trade channel, the direct effects of the developments in the Chinese economy on the external position of the country are small<sup>4</sup>. However, **there is a structural vulnerability in one of the traditional sectors**, due to the concentration of exports in China on one type of product from the metal processing sector<sup>5</sup>. The potential negative effects on the new companies with foreign capital of the slowdown in the Chinese economy due to the inclusion of Macedonia in the global value chain, could be mitigated by the more growing contribution of private consumption to the growth in China, which would be positively reflected on the global automotive industry. The effects of the economic performance of China on the world prices of primary products are also a channel through which developments in the Chinese economy are felt in the domestic economy, given that changes in these prices alter the domestic terms of trade.

**The euro area remains the most important for the Republic of Macedonia, given the largest trade connection, as well as the monetary policy of the ECB, as an anchor economy. The recovery of the economy in the euro area continued in 2015**, as a result of the lower oil prices, the depreciation of the euro and the monetary easing of the European Central Bank (ECB). By signing the Third bailout package for Greece toward mid-2015, the situation in this country stabilized, whereby the uncertainty and pressure in the euro area decreased. Such circumstances have encouraged private consumption and exports, while investment activity, despite the favorable financial conditions, lags behind due to the economic and political uncertainty. The inflation rate in the euro area stood at 0.0%, and is projected at 0.4% in 2016 and 1.1% in 2017. Hence, the risk of low inflation (or deflation) is still present, despite the implementation of expansionary monetary policy (by increasing the scope and

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<sup>3</sup> For more details see Box 3, Quarterly Report, May 2016.

<sup>4</sup> The share of the total foreign trade of the RM with China is relatively low, and for the period 2010 - 2015 was 4.8% of GDP, on average. The trade is dominated by the import component, with an average share for the same period of 5.6% in the total imports and a share in GDP which averaged 3.6%. Despite the fact that China, on the export side, is among the ten most important export partners of the Republic of Macedonia, the importance of the Chinese economy as export partner is very low. The average share of the exports to China in the total Macedonian exports for the period 2010-2015 totaled 2.8%, while the average share of GDP for the same period was 1.2%.

<sup>5</sup> Namely, exports to China is dominated by products from the metal processing sector, i.e. even 94% of the exports to China is exports of ferronickel, thus making this economy one of the most important markets for the Macedonian metal industry. On average, for the period 2010-2015, the Chinese market absorbed 13.4% of the Macedonian exports of iron and steel, and in 2015, this share reached 21%.

amount of securities purchased by the ECB existing programs<sup>6</sup>) and the application of the additional non-standard measures<sup>7</sup>. Also, the risks that derive from the economic situation in Russia, Brazil, Turkey and China have a corresponding negative impact on the conditions for growth in the euro area. Therefore, the economic growth in the euro area is again expected to slow down<sup>8</sup> and relatively low inflation rate, and accordingly, the ECB announced that it will continue with the application of the quantitative easing program by mid-2017, which should have positive effects on the competitiveness of the economy in the euro area.

**In addition, in 2015, the political uncertainty was emphasized due to the increased risks of non-economic nature** (geopolitical conflicts, political conflicts, terrorism, refugee flows<sup>9</sup>, or the emergence of global epidemics in some countries and regions), which can have significant adverse consequences on the global economic activity and the movement of financial markets. The decision Great Britain to exit from the European Union, on the referendum held in June 2016, caused strong turbulences in the financial markets, thus expecting more significant impact on the future prospects of the economy in the euro zone.

**This environment further hampered the role of intermediation of the banks in the euro area, which thus were faced with hereditary problems and new challenges.** In recent years, banks have become safer and more resilient to credit and liquidity shocks thanks to the amendments to the regulations which require increasing amount and quality of capital, strengthening liquidity standards and reducing maturity mismatch of the sources of financing. Despite these improvements, as a result of the back problems of the post-crisis recovery (the high levels of non-performing loans<sup>10</sup> and the weak adjustment of the new business models) and the market environment, the banks' profitability continued to decrease, which is a serious challenge to maintain and strengthen the resilience of banks.

These problems became more pronounced at the end of 2015 and in the beginning of 2016, when there was a sharp reduction in the share prices of banks and growth of risk premiums, whereby the risks associated with financing increased. Despite the improvement in the value of the shares of banks after taking additional measures by the ECB in March 2016<sup>11</sup>, most of the problems remained.

<sup>6</sup> CBPP3-Covered Bond Purchase Programme and ABSPP-Asset-Backed Securities Purchase Programme.

<sup>7</sup> In January 2015, in order to encourage lending activity, the ECB adopted a new package of stimulating measures, which started to be applied in March 2015. In addition to the extended scope and increased amount of securities purchased through the existing programs (CBPP3-Covered Bond Purchase Programme and ABSPP-Asset-Backed Securities Purchase Programme), it reduced the cost of liquidity of banks for funds provided through the Targeted Long Term Refinancing Operations, and at the end of the year, it reduced the interest rate on deposit operations from -0.2% to -0.3%.

<sup>8</sup> It is expected that the real GDP growth in the euro area will increase from 1.6% in 2015 to 1.8% in 2016 and 1.9% in 2017. In the EU, it is expected that growth will increase from 1.9% in 2015 to 2.0% in 2016 and 2.1% in 2017.

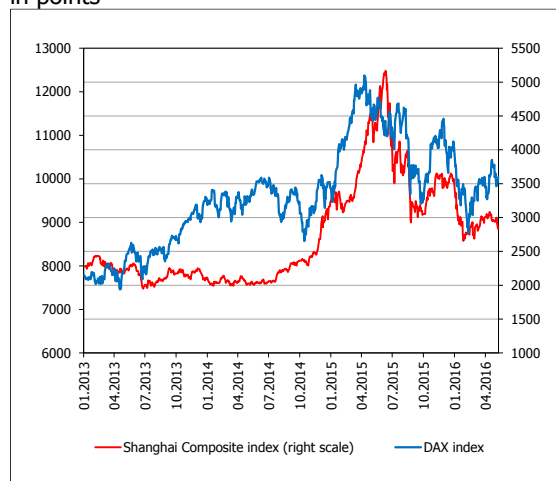
<sup>9</sup> The refugee crisis conditioned restrictions in the form of increased border controls in certain countries from Europe, which contributed to obstacles in transport and the risk of adverse impacts on exports.

<sup>10</sup> At the end of June 2015, non-performing loans to banks from the euro area amounted to Euro 900 billion, or 5.5% of banks' assets.

<sup>11</sup> The new package of measures, from March 2016, contributes to the further easing of the financial conditions in the euro area and includes several changes: 1) Reduction in: the interest rate on the main refinancing operations from 0.05% to 0.00%, the interest rate on the deposit facility from -0.30% to -0.40% and the interest rate on the marginal lending facility from 0.30% to 0.25%; 2) Increase of the monthly purchase of bonds under the quantitative easing program (from Euro 60 to Euro 80 billion) starting from April 2016, involving the purchase of non-financial corporate debt securities from the euro area with an appropriate investment grade rating; 3) Introduction of additional four Targeted Longer-Term Refinancing Operations (TLTRO II) with maturity of four years, starting from June 2016, with an interest rate at the level of the policy rate of the ECB. For more details about the measures taken see the Press Release published by the ECB on 10 March 2016, [www.ecb.europa.eu](http://www.ecb.europa.eu).



Chart 3  
Movement of share indices  
in points



Source: Bloomberg

**The growing risks of the low inflation and low economic growth rates,** as well as the application of the negative interest rates by the central banks (despite the macroeconomic benefits from the increased monetary easing), further reduced profitability, which increases the difficulties to cover the risks arising from non-performing loans. Amid low profitability, the EU banks face the challenge for finding new sources of capital for further adjustment to the requirements on the amount of own funds and the protective layers of capital<sup>12</sup>. Meeting the requirements of the Bank Recovery and Resolution Directive is an additional challenge<sup>13</sup>, under which, the EU banks should form instruments that, if necessary, they will be able to transform them into capital and to strengthen their solvency

position. **There is an increasing need the banks in the euro area to apply a comprehensive strategy and structural reforms to resolve the long-term hereditary problems, for protection against recurrence of the systemic crisis.** Also, it is necessary to establish a banking union and to form a common scheme for deposit insurance in Europe, as soon as possible, to consolidate the financial system.

<sup>12</sup> Under the European Directive 2013/36 and European Regulation 575/2013 (Capital Requirements Directive and Regulation).

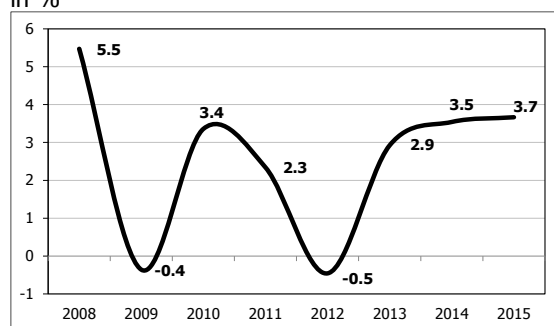
<sup>13</sup> The European Directive 2014/59 (Bank Recovery and Resolution Directive), which, among other things, prescribes the obligation for banks to have minimum requirements for own funds and eligible liabilities.



## 2. Domestic environment

In 2015, the domestic macroeconomic environment<sup>14</sup> provided conditions for unrestricted functioning of financial institutions which contributed to the maintenance of the financial stability in the country. In 2015, the Macedonian economy faced risks highlighted by non-economic nature, primarily the domestic political turmoil (which continued in 2016), the refugee crisis and the debt crisis in Greece, which brought in a considerable dose of uncertainty. Amid these strongly highlighted risks and uncertainties during the year, the sound foundations of the Macedonian economy came to the fore, which enabled maintaining solid economic growth. However, this situation imposed additional challenges in the monetary policy conduct, which responded with appropriate changes in May 2016 (an increase of the interest rate on the main instrument of the National Bank), in order to achieve the main objectives: maintaining price stability and contribution to the maintenance of a stable, competitive and market-based financial system.

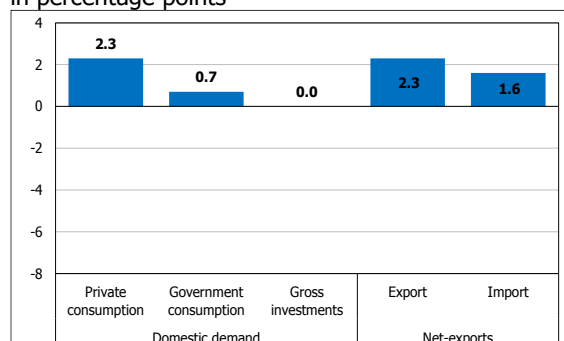
Chart 4  
Annual GDP growth rate  
in %



Source: State Statistical Office.

Note: GDP data for 2014 are preliminary, and data for 2015 are estimated.

Chart 5  
Contributions of the expenditure components to the annual real growth of GDP in 2014  
in percentage points



Source: SSO and NBRM calculations.

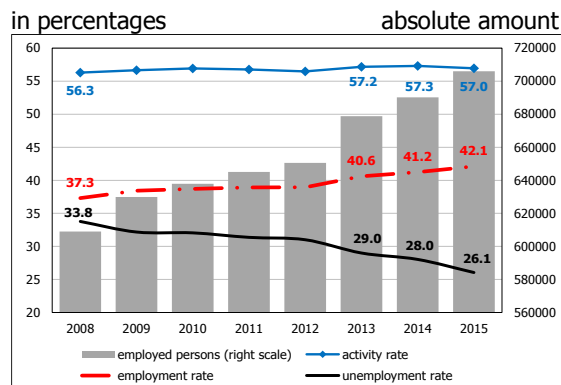
In 2015, the growth trend of the Macedonian economy continued (3.7%), versus the risks of the external and domestic environment. Economic growth has proceeded amid slow recovery of the economies of the main trading partners and uncertainty associated with the developments in Greece and domestic political developments. The growth mainly resulted from domestic consumption (consumer spending had the largest contribution, which is a result of the employment growth, real wages, as well as the growth of lending to the household sector) and exports, which is due to the activity of the new companies with foreign capital. Consequently, several activities registered positive performance, whereby the largest contribution was made by construction, trade, transport and catering. In 2016, according to the projections of the National Bank, further growth of the activities can be expected, which will be strongly influenced by the existing risks of the domestic (mainly non-economic) and external environment.

In 2015, the number of employees increased by 2.3%, which corresponds to the predominantly favorable performances in most economic sectors. Certainly, contribution was made by the activities of the new companies with foreign capital, as well as the fiscal policy through

<sup>14</sup> More information on the domestic macroeconomic environment is given in the "Annual Report for 2015" of April 2016.



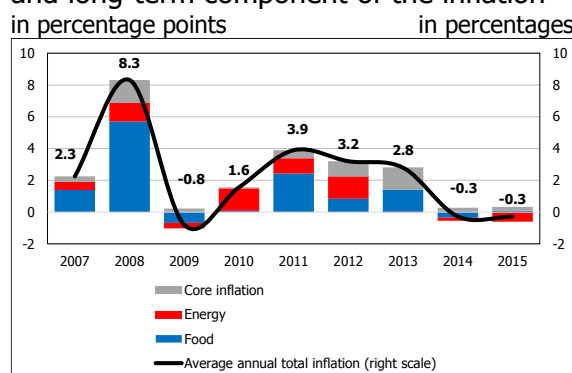
Chart 6  
Labor market indicators  
in percentages



Source: SSO and NBRM calculations.

Note: all categories in the chart are average values.

Chart 7  
Average annual inflation and contribution  
of variable components (food and energy)  
and long-term component of the inflation  
in percentage points



Source: SSO and NBRM calculations.

active employment measures<sup>15</sup>, publicly funded infrastructure projects, policies of subsidizing agricultural production, and credit lines provided by the European Investment Bank for small and medium enterprises. **Consequently, in 2015, the average unemployment rate decreased by 2 percentage points, while the employment rate increased by 0.9 percentage points.**

**Inflation in 2015 remained at the same level (-0.3%),** which was mainly due to the lower fuel prices, in line with the downward movements in the world markets. The average core inflation (which excludes the variable categories of food and energy) remained moderately positive (0.5%), indicating solid domestic demand.

**The current account deficit slightly expanded, but it has been ranging around 2% of GDP for six years in a row.** In 2015, there was narrowing of the trade deficit, mainly due to the contribution of the new companies with foreign capital, as well as the positive price effect on energy imports, with relatively stable private transfers. In 2015, the financial account of the balance of payments was characterized by net outflows of 1% of GDP, registering moderate inflow of foreign direct investment, outflow from the repayment of external government liabilities, and outflows from the private sector.

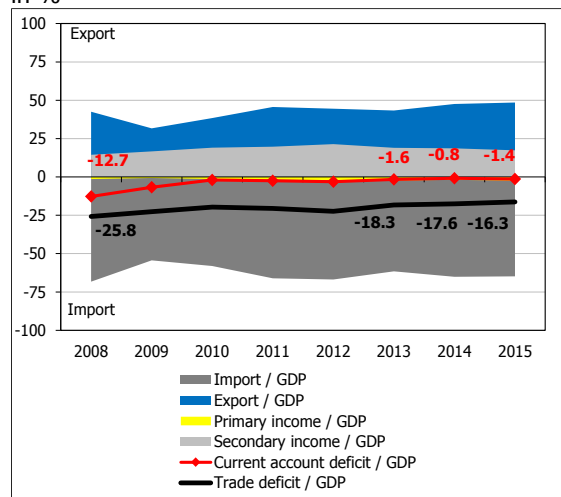
**In such conditions, foreign reserves registered a moderate decline, yet remaining at an appropriate level, with all indicators on the adequacy of the reserves being consistently favorable, indicating a sufficient level to absorb any adverse shocks. During 2015, the foreign exchange market was predominantly stable,** and the NBRM intervened to overcome the occasional

<sup>15</sup> These measures include: self-employment programs that were expanded and included youth up to 29 years, financial support to micro and small enterprises and craftsmen for opening new jobs, subsidized employment programs, work-readiness programs, community service programs and pilot-programs for establishing businesses in multiethnic communities, trainings for energy-efficient constructions, trainings in the field of tourism, incubators for craftsmen etc.



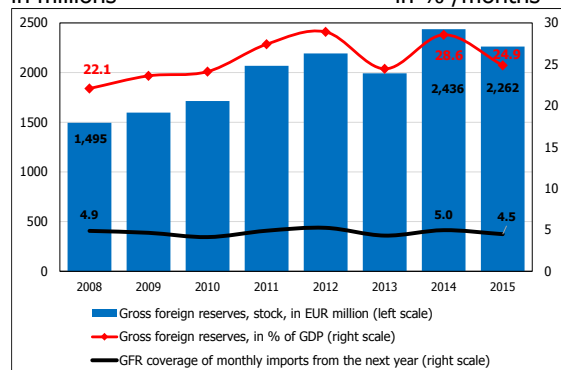


Chart 8  
Significance of import and export of goods, trade balance and current account balance for the Republic of Macedonia in %



Source: SSO and NBRM calculations.

Chart 9  
Gross foreign reserves and indicators for their adequacy  
in millions in % /months



Source: NBRM.

mismatch between supply of and demand for foreign currency. **The exchange rate of the domestic currency remained stable**, which is critical for the stability of the real sector and for the maintenance of the confidence of households<sup>16</sup>, and all this is for the maintenance of price and financial stability of the country.

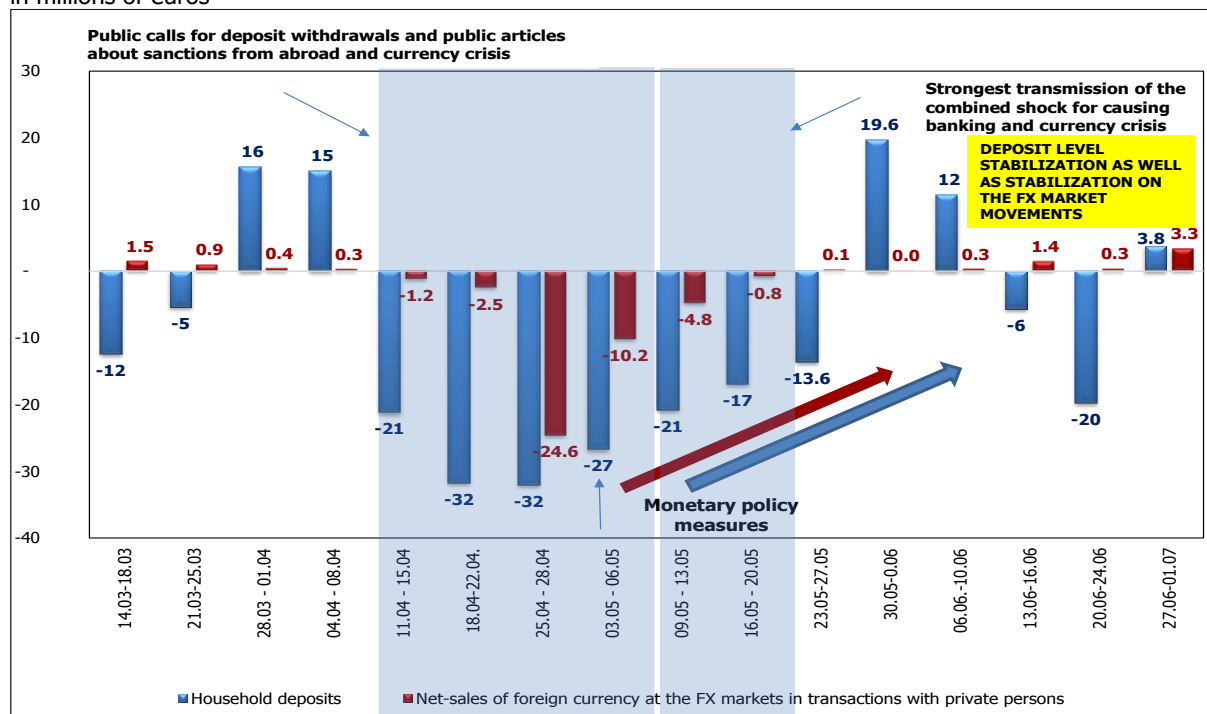
However, during the second quarter of 2015, there was faster movement in the foreign exchange market, due to the increased propensity of households for foreign currency, under the influence of the increased domestic political risks and the escalation of the crisis in Greece. In this period, the National Bank interventions increased (higher net sale of foreign currency), while the cumulative interventions in the remaining months were a net purchase of foreign currency. The total net sale of foreign currency throughout the year was around Euro 34 million, which are insignificant 1.5% of the total available foreign reserves, and therefore, demonstration of the limited nature of the effects of risks, but also of the solid amount of foreign currency in the banking system, sufficient to cover the needs for foreign currency in the economy.

<sup>16</sup> A significant portion (of over 45%) of the debt of households and companies to banks is in foreign currency or is denominated in foreign currency (with a currency clause, mainly Euro).



Chart 10

Net sale in the foreign exchange market with natural persons and movements of household deposits in the period from March to June 2016  
in millions of euros



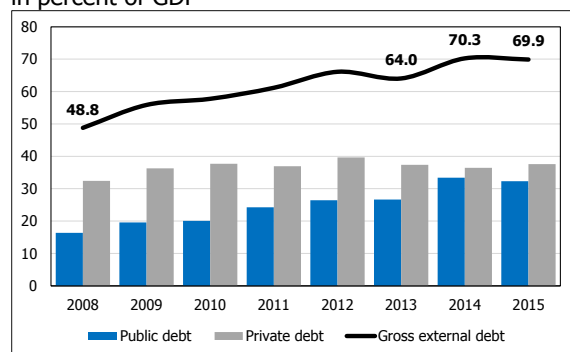
Source: NBRM.

Also, during April 2016, amid increased uncertainty associated with the political situation in the country (followed by speculations about the stability of the banking system and the devaluation of the denar exchange rate), the propensity of economic agents for holding foreign currency increased. Natural persons significantly increased the demand for foreign currency, which created pressure on the foreign exchange market (reflected by converting Denar deposits in foreign currency and their withdrawal from banks) and pressure on the currency exchange market of banks (reflecting high sale of banks of foreign currency to natural persons, amid the inability of exchange offices to meet the high demand for foreign currency, due to the reduced purchase of foreign currency). Having in mind these developments on the foreign exchange market, in April 2016, the National Bank provided banks with the necessary foreign currency liquidity amounting to Euro 77 million. Since the beginning of May 2016, by undertaking monetary policy measures<sup>17</sup>, there is a stabilization of the demand for foreign currency on the foreign exchange market (entering to the zone of net purchase of foreign currency), which caused reduced interventions for sale of foreign currency by the National Bank, as well as stabilization of the level of household deposits.

<sup>17</sup> After the increase in the interest rate from 3.25% to 4% in the beginning of May, in response to the increased demand for foreign currency and pressures on banks' deposit base due to non-economic reasons, the National Bank also adopted additional measures that strengthen the expected effect of the change in the policy rate. Namely, for the purpose of further fostering of the process of denarization of deposits in the domestic banking system, the reserve requirement ratio for banks' liabilities in domestic currency with FX clause increased. In order to maintain and increase deposits in the domestic banking system, since mid-May 2016, the banks will be able to place foreign currency deposits at the central bank at higher interest rates compared to current negative interest rates prevailing in the international financial markets. It is expected that this measure will contribute to reduce the cost of domestic banks, which consequently should contribute to higher interest rates on the deposits of their clients, domestic legal and natural persons.



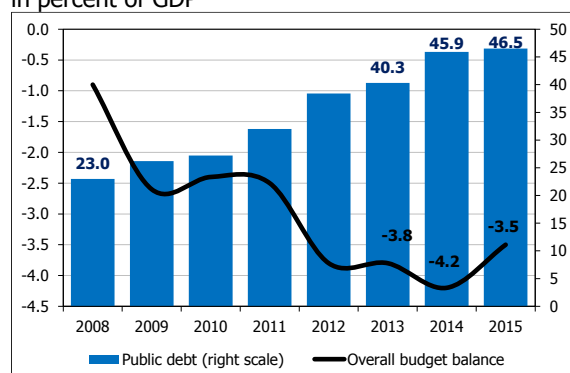
Chart 11  
Gross external debt, by debtor  
in percent of GDP



Source: NBRM.

Note: Excluding repo transactions from the debt of monetary authority.

Chart 12  
Public debt and total budget balance  
in percent of GDP



Source: Ministry of Finance of the Republic of Macedonia and NBRM calculations.

**In 2015, the share of gross external debt to GDP decreased by 0.4 percentage points compared to 2014.** The fall in gross external debt mostly arises from the decrease in the public debt<sup>18</sup> (primarily due to the repayment of the PCL to the IMF in February 2015 and the servicing of the due Eurobond in December 2015), despite the higher debt level of the private sector<sup>19</sup>. At the end of 2015, the only indicator which classifies the economy in the group of highly indebted countries is the gross external debt to GDP ratio<sup>20</sup>.

**In 2015, the budget deficit was 3.5% of GDP, which is by 0.7 percentage points lower in comparison with the previous year.** Amid increased budget expenditures, the narrowing of the deficit is a result of the growth of total revenues, which is in line with the abolition of the exemptions in profit tax<sup>21</sup>.

**In 2015, the budget deficit was funded through domestic net borrowing and assets of the government on the accounts with the NBRM.** At the end of 2015, funds were withdrawn by issuing the fourth Eurobond of Euro 270 million<sup>22</sup>, but the external

<sup>18</sup> At the same time, the debt of public enterprises increased due to the growing long-term debt to support road infrastructure.

<sup>19</sup> In the private sector, there was a slight annual increase in the debt due to the higher liabilities to foreign investors amid moderate reduction in the remaining debt (including the debt of the banking system).

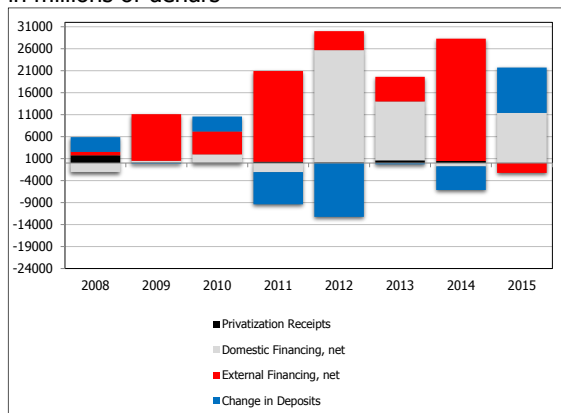
<sup>20</sup> For more details on the external debt indicators in the Annual Report for 2015, from April 2016.

<sup>21</sup> From the beginning of 2015, the anti-crisis measure for exemption of undistributed earnings of companies from taxation became void, which caused significant increase in income tax revenues. Also, in early 2015, amendments to the Value Added Tax (Official Gazette of the Republic of Macedonia No. 130/2014) came into force, decreasing the threshold for registration as a taxpayer for natural persons and legal entities from Denar 2 to Denar1 million, as well as amendments to the Excise Duties (Official Gazette of the Republic of Macedonia No. 188/2014), increasing excise taxes on cigarettes.

<sup>22</sup> The maturity is by 2020, with an interest rate of 4.875%, i.e. rate of return of 5.125%.

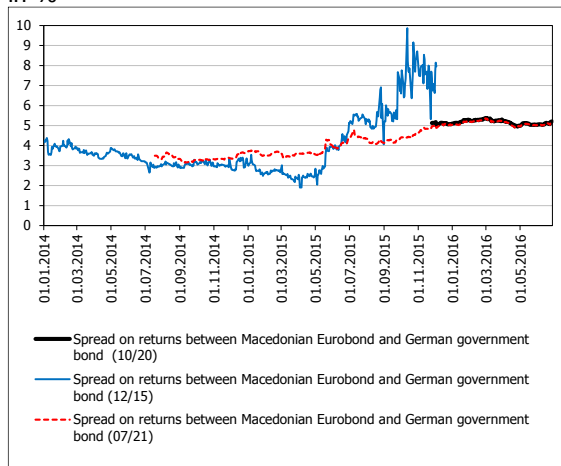


Chart 13  
Budget balance financing structure  
in millions of denars



Source: Ministry of Finance of the Republic of Macedonia and NBRM calculations.

Chart 14  
Spread of returns on Eurobonds issued by  
the RM and on the comparable German  
government bonds  
in %



Source: "Bloomberg".

Note: The figures in the parenthesis of the legend refer to the month and year of maturity of bonds.

debt (net) was negative, given the regular servicing of the government liabilities<sup>23</sup>.

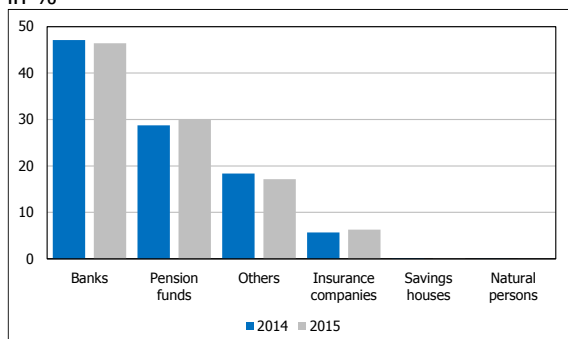
Because of internal political turmoil in the Republic of Macedonia and the uncertainty about the Greek developments, the risk perceptions taken by foreign entities when investing in securities issued by the Republic of Macedonia exacerbated. Thus, during May 2015, there was a widening of the spreads of returns on Eurobonds issued by the Republic of Macedonia and the comparable German bonds, while in August 2015, developments contributed to a moderate downward correction, influenced by positive market expectations about the debt crisis in Greece. By the end of the year, the spreads of returns rose again, but since March 2016, they began to narrow and to stabilize.

**During 2015, the government withdrew less funds at the domestic primary market of government securities, whereby their share in GDP fell by 1.2 percentage points compared to the previous year, amounting to 9.2%. However, in 2015, the stock of government securities increased significantly.** About half of the growth is explained by the government long-term borrowing, by issuing longer-term government bonds, and unlike the previous year, in 2015, shorter-term borrowing played a significant role in the total funding.

<sup>23</sup> In 2015, an early repayment was made of the debt to the IMF based on the PCL, and during December 2015, an early repayment was made of the due Eurobond, issued in 2005, in the amount of Euro 150 million.



Chart 15  
Ownership structure of government securities  
in %



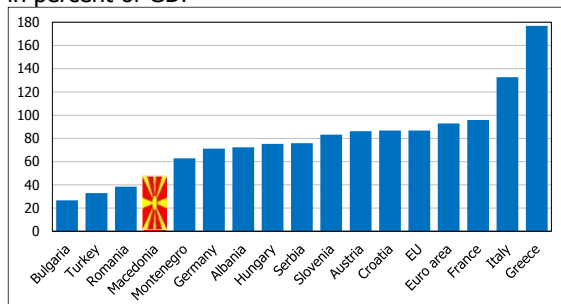
Source: Ministry of Finance

Note: Savings houses and natural persons have less than 1% share in the structure.

The Deposit Insurance Fund is within the "other"

**According to the ownership, banks still have the largest share (46.3%) in the structure of government securities,** followed by pension funds (28.8%) and the Deposit Insurance Fund (16.6%). In the absence of other liquid market instruments, and negative or very low returns on the international financial markets, financial institutions directed most of their "free" assets towards the offered securities<sup>24</sup>. This shows that there is a concentration of investments in the larger segments of the financial system of one creditor, the government, although these investments are usually treated as risk free.

Chart 16  
Public debt, by country  
in percent of GDP



Source: European Economic Forecast, EU, spring 2016

**At the end of 2015, the share of total public debt<sup>25</sup> to GDP ratio increased by 0.5 percentage points, amounting to 46.5% of GDP (Chart 12).** The increase of 0.5 percentage points was largely due to the growth of external guaranteed debt of public enterprises and joint stock companies in state ownership as a result of increased borrowing intended for infrastructure projects, as opposed to the lower government debt<sup>26</sup>. Consequently, the share of government debt in total public debt decreased to 81.7% (83.2% in 2014), despite increasingly higher share of guaranteed debt of public enterprises (from 16.8% to 18.3%). External public debt prevails in the total public debt (with 67.3%). Its share in GDP decreased by 0.7 percentage points, amounting to 31.3% at the end of 2015, while the share of the domestic public debt to GDP ratio increased by 1.2 percentage points and amounted to 15.2%. A comparison with selected sample of countries (including the aggregate data for the member states of the EU and the euro area) shows **that the Republic of Macedonia is**

<sup>24</sup> Compared to the end of 2014, banks' investments in government securities increased by Denar 5,220 million, or 16.8%. Pension funds had the highest absolute annual growth of investment in these securities, and insurance companies registered the fastest annual relative growth of 30.9%. The increased interest is associated with the higher interest rates, the renewed supply of securities with shorter maturity periods, as well as the supply of FX clause which facilitates the management of the currency risk.

<sup>25</sup> The public debt is the sum of the government debt and the debt of public enterprises established by the state or municipalities, municipalities within the city of Skopje and the city of Skopje, and companies that are entirely or predominantly owned by the state or by the municipalities, the municipalities within the city of Skopje and the city of Skopje, for which the Government has issued a state guarantee.

<sup>26</sup> Government debt is the sum of debt of the central and the local government.

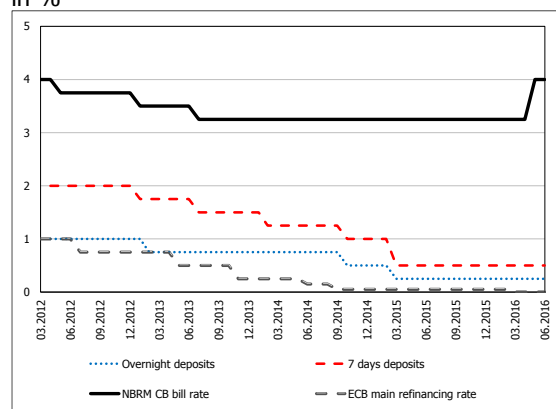


**moderately indebted country, but the speed of public debt growth should be carefully monitored, in order not to jeopardize the long-term sustainability of the debt level of the country.** External government debt, i.e. the interest costs for its repayment are sensitive to changes in interest rates, due to the relative high share of debt with variable interest rates<sup>27</sup>. The possible unfavorable movements of the exchange rates of the other currencies against the Euro will not cause a significant increase in the costs of repayment because of the fact that most of the external public debt is denominated in euros. Also, due to application of a de facto fixed nominal exchange rate of the Denar against the Euro, this risk is minimized, i.e. the sensitivity of public debt portfolio is lower.

**In 2015, the credit rating** of the country was confirmed by Fitch (BB+, by lowering the outlook of the country from stable to negative) and Standard & Poor's (BB-, confirming the stable outlook of the country). The confirmed credit rating is based on the moderate level of public and government debt, low inflation, low interest expenses, macroeconomic stability and good capitalization and liquidity of the banking system. Amid unfavorable non-economic conditions, **the stable credit rating of the Republic of Macedonia** is a very important signal for foreign investors and positively influenced the interest rate at which the country borrows on the international capital market, as well as the overall economic and political reputation of the country.

In 2015, due to low inflation, solid balance of payments position and consequently, stable foreign exchange market developments, **the interest rate on the main monetary instrument remained unchanged (3.25%)**. In the first quarter of the year, the interest rates on the deposit facility further reduced, remaining at that level until the second quarter of 2016. The importance of the non-standard monetary policy measure aimed at supporting lending to

Chart 17  
Interest rates of the NBRM  
in %



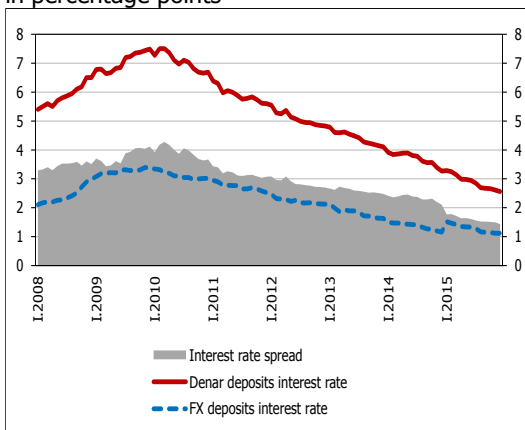
Source: NBRM.

Note: \*With the exception of deposits placed pursuant to Article 5, paragraph 3 of the Decision on deposit facility (Official Gazette of the Republic of Macedonia No. 49/12, 18/13, 50/13 and 166/13), at which, starting from 10 September 2014 and as of 10 March 2015, the interest rate was 0%.

<sup>27</sup> For more details on the analysis in the Economic Reform Programme for 2016, on the website of the Ministry of Finance, Sensitivity analysis of public debt.

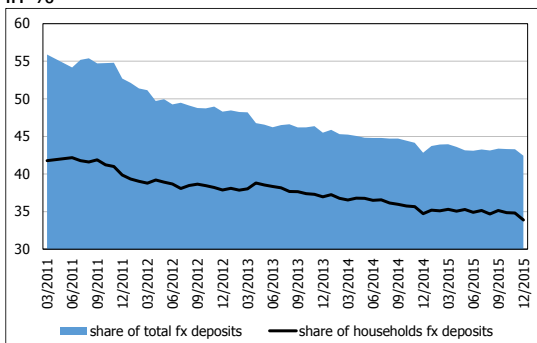


Chart 18  
Interest spread  
in percentage points



Source: NBRM.

Chart 19  
Euroisation level, share of foreign  
currency deposits in total deposits of  
non-financial entities  
in %



Source: NBRM.

export and energy sector was prolonged<sup>28</sup>, and by the end of the year, precautionary measures were taken to facilitate the credit standards for the corporate sector<sup>29</sup>. Preventive measures were adopted to protect against potential risks to the financial stability and macroeconomic imbalances, due to the growth of the indebtedness of natural persons with long-term consumer loans.

In contrast, in response to the increased demand for foreign currency and pressures on banks' deposit base, which were entirely due to the deteriorating expectations of economic agents, caused by the unstable political situation in the country, **at the beginning of May 2016, it was decided to tighten the monetary policy, whereby the interest rate on CB bills increased by 0.75 percentage points.**

The risks and uncertainties of the environment, coupled with declining interest rates, influenced the propensity of households to save. The increase in total deposits slowed down, and the multiyear trend of denarization of savings stagnated. The National Bank reacted through changes in the reserve requirement, just in order to stimulate household savings in domestic currency in the longer term. In mid-2015, the National Bank introduced temporary protective measures (in duration of 6 months), to prevent the threat of significant disturbance to the equilibrium in the balance of payments and the stability of the financial system, amid any significant outflows of capital from the Republic of Macedonia to Greece.

<sup>28</sup> This measure reduces the reserve requirement base of banks for the amount of newly approved loans to net exporters and domestic producers of electricity and banks' investments in debt securities denominated in national currency without currency clause issued by net exporters and domestic producers of electricity. The measure was introduced in late 2012, and its application was extended twice, by the end of 2017.

<sup>29</sup> For more details on the macro-prudential measures of the NBRM see in the section of this report which refers to the banking system, as well as in the section 10.1 of the Annual Report of the NBRM, April 2015.





## **II. NON-FINANCIAL SECTOR**

### **1. Household sector**

Households are the most important creditor of the banking and the entire financial system, because it proved that their cyclical behavior is important for the financial stability, especially in 2015 and 2016. The continuation of the internal political crisis in the country increased the uncertainty and uncertainty among citizens, which in certain months resulted in outflows of deposits of citizens outside the banking system. These outflows were less pronounced in 2015, but in the second quarter of 2016, they intensified. During April and May 2016, the citizens withdrew part of their savings from banks, which was accompanied by significant currency conversion, exposing themselves to unnecessary costs due to lost interest based on savings, and negative exchange rate differences. Due to the cautious behavior of banks and holding historically backwards high liquidity, these outflows caused no major shocks to the banking system. However, the continuation of the volatile environment could pose a risk to the stability of the banking system and consequently to the financial system as a whole.

Households become increasingly important as debtor of the banking system. Namely, due to the lower risk of lending to households, compared to the corporate sector, in recent years, banks intensified their lending activities to this sector. Amid high demand for bank loans, mainly housing and consumer loans, household debt continues to grow. This led to certain deterioration of some indebtedness indicators of the sector, amid decelerated growth of disposable income and financial assets. Also, the indicators show an increase in the vulnerability of the sector, due to the decline of its solvency and liquidity position.

The concentration of debt among households with lower income and continued growth of indebtedness with a simultaneous increase in the maturity, caused a need for closer monitoring of risks from possible high indebtedness of certain segments of this sector, primarily in conditions of faster growth and eased terms of lending, with currency component and weaker collateral. However, according to the indicators, the possibilities for further growth of household debt have not yet been depleted, and all indicators showed good quality, i.e. low risks to creditors of this sector.

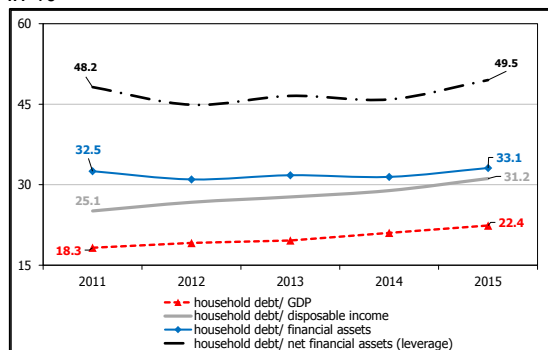
The high percentage of household debt with currency component, despite their denar earnings / wages, exposes this sector to currency risk. The possible volatility of the exchange rate can significantly affect the creditworthiness of households, and accordingly, the importance of the monetary policy grows.

In 2015, households registered a higher positive savings rate due to the improved pace of growth of disposable income compared to consumer spending. However, disposable income and generally financial assets of the household sector registered slower annual growth as a consequence of developments in the country and the environment.



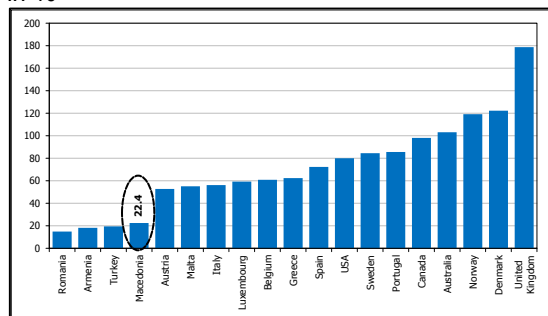
## 1.1. Level of indebtedness and vulnerability of the household sector

Chart 20  
Indicators for household debt  
in %



Source: NBRM, based on data submitted by banks and savings houses, MF, CSD, MAPAS, SEC, ISA and SSO.

Chart 21  
Household debt to GDP ratio, by country  
in %



Source: NBRM, based on data submitted by banks and savings houses, SSO, MF and the latest available data for other countries published on the IMF's portal.

### Household debt has grown steadily.

Its growth rate in 2015 was 13.5%, and was higher by 1.2 percentage points compared to 2014. However, the solid creditworthiness of the sector, as well as the volume of its financial assets, leave room for its further borrowing. The comparative analysis shows that the level of household debt in the Republic of Macedonia, measured by the share of debt to GDP, is among the lower, not taking into account the differences in the standard of living, per capita GDP and the like.

However, the growth of household debt has led to a certain deterioration of indicators for monitoring the indebtedness of this sector. In 2015, the vulnerability of the sector increased, due to certain deterioration of its liquidity position and solvency. The faster debt increase compared to the increase of financial assets<sup>30</sup> and disposable income<sup>31</sup> caused deterioration in the liquidity position<sup>32</sup>. Also, the increased share of debt in net financial assets<sup>33</sup> contributes to deterioration in the solvency position<sup>34</sup>. In contrast, the share of cost of funds received as debt (interest repayments) in the average debt for the last four years is still less than the average growth of disposable income for the same period (so-called snowball effect risk<sup>35</sup>). In fact, the indicator for snowball effect risk still has negative value<sup>36</sup>, indicating that so far no major risks are derived from the household debt. However, the upward movement of the average of the analyzed indicators of liquidity risk, insolvency risk and the

<sup>30</sup> Financial assets of households grew annually by 7.8% (13.4% in 2014), due to growth in the area of life insurance, deposits and the funds in the mandatory pension funds.

<sup>31</sup> The growth of disposable income also decelerated, i.e. it was reduced to 5.3% versus 7.7% in 2014.

<sup>32</sup> Liquidity risk indicator<sub>t</sub> =  $0,5 * \frac{Debt_t}{Disposable\ income_t} + 0,5 * \frac{Отплата\ на\ камата_t}{Disposable\ income_t}$ . A higher value of the indicator denotes a higher ratio of debt to household disposable income.

<sup>33</sup> Net financial assets represent the difference between financial assets and household debt.

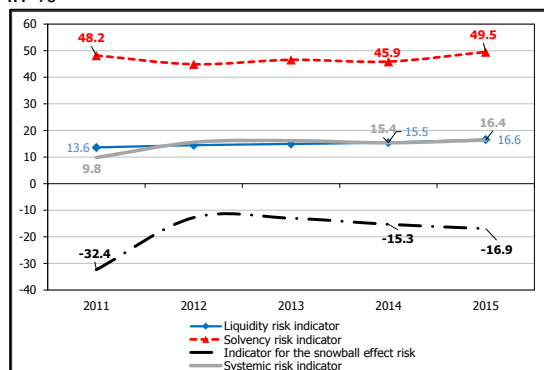
<sup>34</sup> Solvency risk indicator =  $\frac{Debt_t}{Net\ financial\ assets_t}$

<sup>35</sup> Snowball effect risk ratio =  $\frac{Interest\ payment}{Debt_t + Debt_{t-1} + Debt_{t-2} + Debt_{t-3}} - \left( \frac{Disposable\ income\ P_t}{Disposable\ income_{t-4}} - 1 \right)$

<sup>36</sup> The negative indicator for the "snowball" effect does not represent a risk, in fact shows that disposable income is higher than debt.



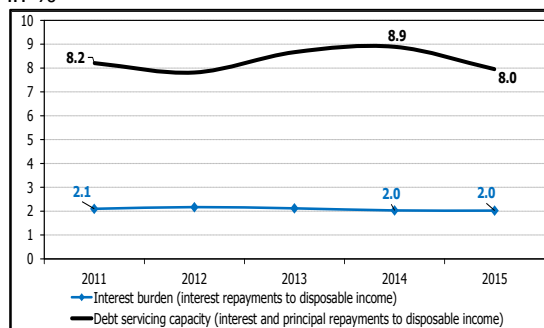
Chart 22  
Household Vulnerability Indicators  
in %



Source: NBRM, based on data submitted by banks and savings houses, MF, CSD, MAPAS, SEC, ISA and SSO.

\* The increase of indicators means higher risks.

Chart 23  
Household debt repayment indicators  
in %



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

"snowball" effect risk, presented as an aggregate indicator of systemic risk, indicates growth of household vulnerability.

On the other hand, in 2015, the indicator which measures the ability of households to repay debt (interest and principal) registered an improvement. Thus, the share of the repaid principal<sup>37</sup> and interest in household disposable income fell by 0.9 percentage points, primarily due to the annual growth of disposable income by 5.3%, and the reduced repayment of principal (by 8.9%)<sup>38</sup>, due to growth in lending to households with a simultaneous extension of their maturity.

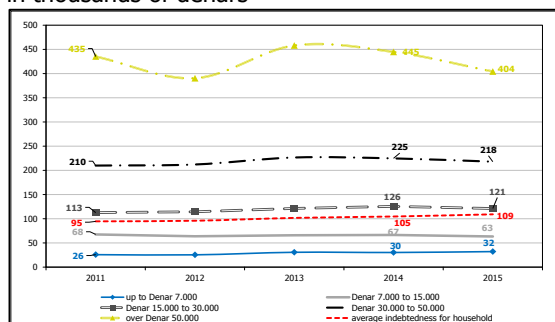
Although the possibilities of further growth of the indebtedness of households are not exhaustive, yet, one should not overlook the risks of a possible high indebtedness of households with lower incomes. The majority of the total household debt to banks is concentrated with households with a net wage to Denar 30,000. Given the fact that households are a significant debtor to banks and other financial institutions, maintaining their debt repayment ability is crucial for the overall financial stability. At the end of 2015, 56.1% of household debt to banks or 75.3% of consumer

<sup>37</sup> Repayment of principal is calculated as the sum of the balance of the loans at an earlier date and the amount of new loans in the relevant year, reduced by the balance of the loans at the date to which the analysis refers, written-off loans during the year and accounting closed loans by the means of foreclosure.

<sup>38</sup> The indicator "repayment of principal and interest / disposable income" for the household sector moves in the following values: in Portugal 2.3%, in Sweden 3.6%, in Australia 8.6%, in Italy 9.7%, in Romania 14.4% etc.



Chart 24  
Average debt by person and by monthly income  
in thousands of denars

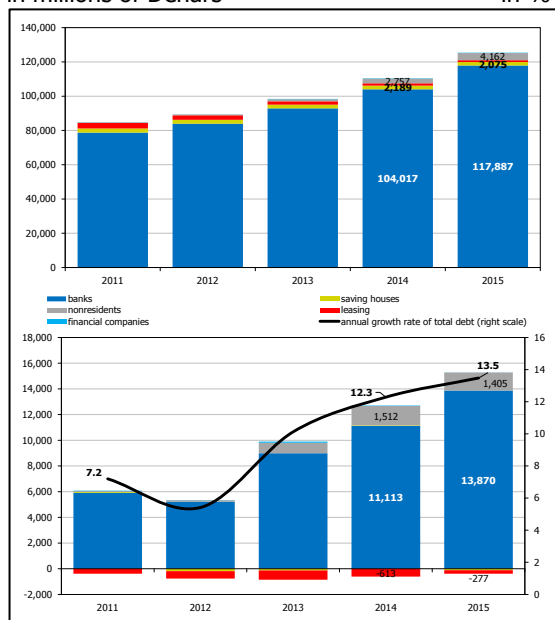


Source: NBRM, based on the data submitted by banks.

debt are persons with monthly income of up to Denar 30,000 (this level of monthly income is well above the average in the economy, especially in the corporate sector). However, given the downward movement of the level of cost of living by 0.3%, and real growth of the average paid net wages of 2.7%, the part of household assets for debt repayment remains relatively stable.

## 1.2. Structure and quality of household debt

Chart 25  
Household debt (up) and annual growth (down)  
in millions of Denars



Source: Credit Registry of the National Bank.

In 2015, household debt recorded the highest growth rate in the past five years, due to the further strengthening of credit support from the banking system. Banks remain the most significant creditor of households, accounting for 94% of household debt. Also, in 2015, debt to banks increased the most (by 13.3%), while debt to leasing companies and savings houses decreased.

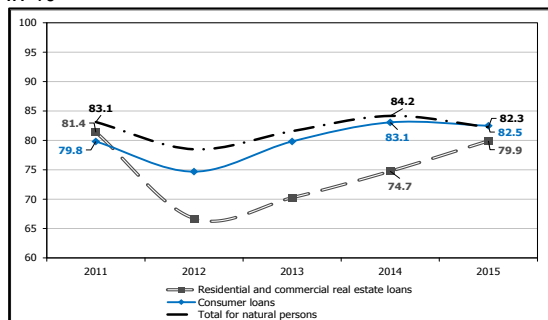
Due to perceptions of increased risks from the corporate sector, over the past few years, banks increasingly direct their credit strategies to households as less risky sector for lending, and also more yield-bearing. **However, banks kept caution in lending to this sector**, reflected through reduced acceptance of credit requirements from natural persons (reduction in the ratio between the total received and accepted loan applications). Households demanded<sup>39</sup> consumer loans the most, which can be seen from the high annual growth of received loan applications (about 57.6%). With housing loans, the ratio between received and accepted loan applications increased, suggesting eased terms of housing lending. In 2015, housing loans increased by 16.1%, amid lower interest rates by

<sup>39</sup> According to the Bank Lending Survey, at the end of 2015, households registered two times higher net increase in credit demand compared to expectations.



Chart 26

Share of accepted in received loan applications of households in %

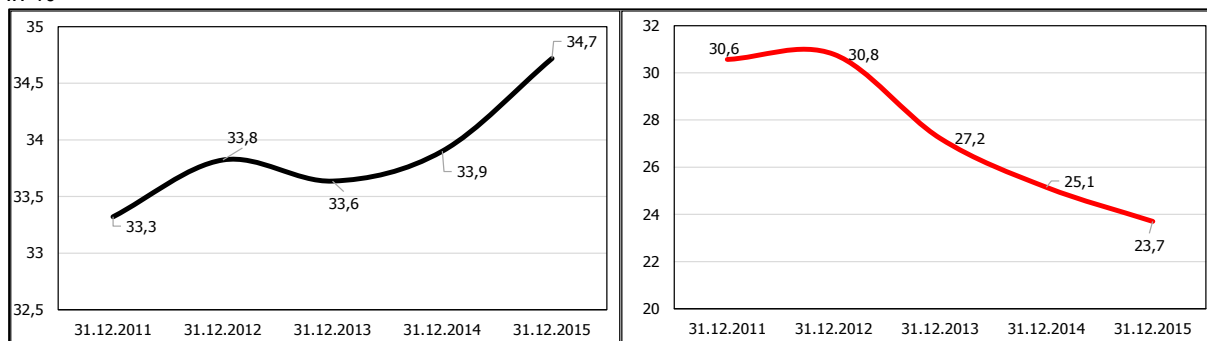


Source: NBRM, based on the data submitted by banks.

0.9 percentage points, as well as lower average price per square meter. This does not cause growing risks for banks for now, primarily because of their coverage with quality provision, which is relatively easily sold amid possible default of the housing loan.

Chart 27

Share of mortgage loans in the total loans to natural persons (left) and average price per m<sup>2</sup> in the R. Macedonia / disposable income per capita (right) in %



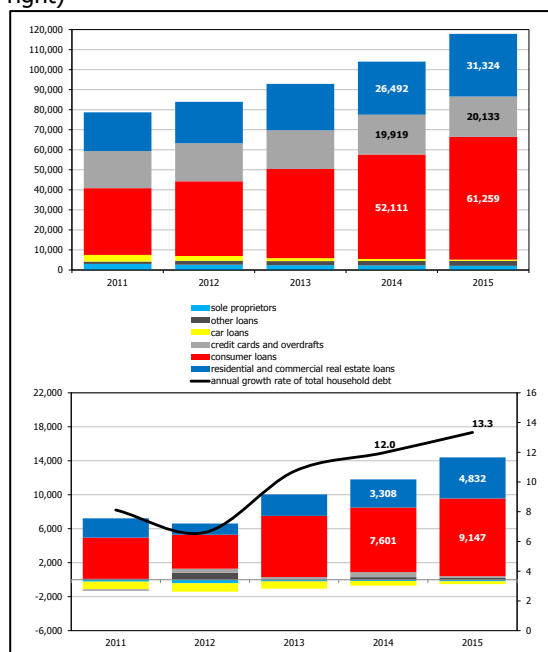
Source: NBRM's Credit Registry, based on data submitted by banks and National Bank calculations, based on data from SSO.

By type of debt, consumer and housing loans recorded the highest annual growth and conditioned the growth of household debt to banks. Debt for consumption dominates the structure of debt to banks with 71.7% (72.3% in 2014).



Chart 28

Household debt to banks by type of loan product (up) and annual growth (down) in millions of Denars and in percentage (down, right)

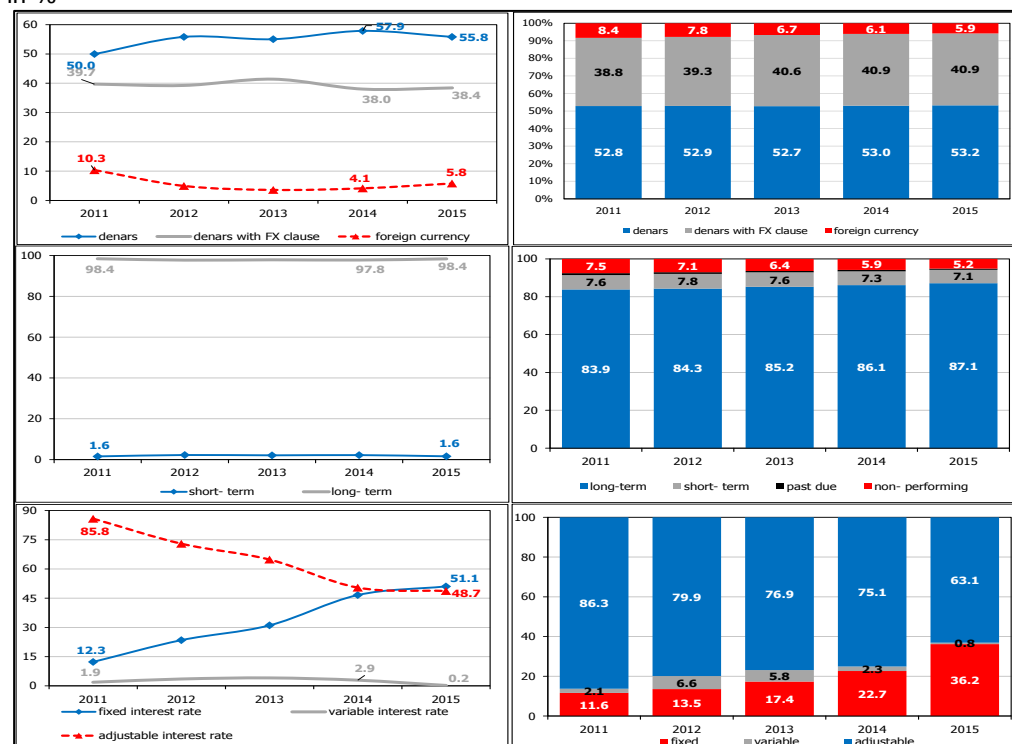


Source: Credit Registry of the National Bank.

**In 2015, credit growth analyzed through new loans was more in the long run and in denars.** However, in 2015, the share of Denar loans in total newly approved loans decreased, reflecting the euroisation which started in the deposit base under the influence of the political crisis in the country despite the higher Denar deposit interest rates. Due to the significant share of the debt with currency component, the sector is exposed to currency risk, taking into account that household incomes are mainly in denars.

Chart 29

Structure of newly approved loans (left) and household debt (right) in %

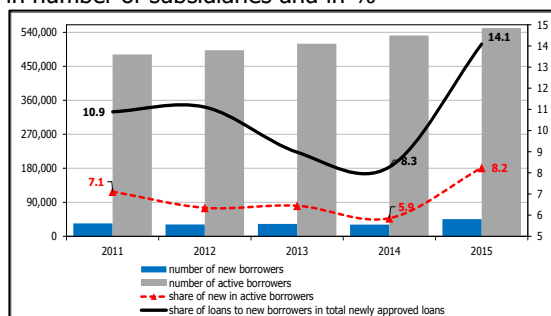


Source: NBRM's Credit Registry, based on data submitted by banks.



Chart 30

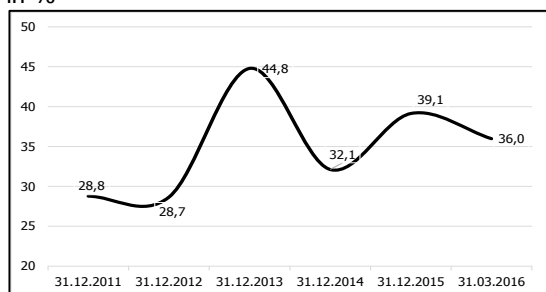
New borrowers of the household sector and share of loans to these clients in total newly approved loans to this sector in number of subsidiaries and in %



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

Chart 31

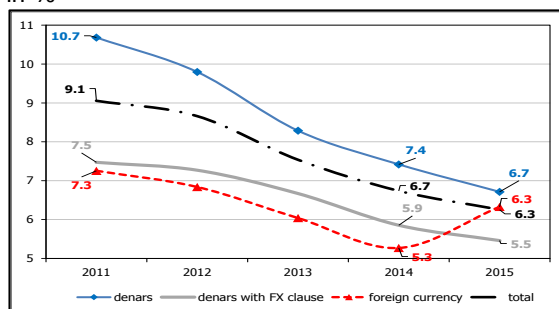
Annual change rate of consumer loans with maturity equal to or greater than eight years in %



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

Chart 32

Average interest rate of newly extended loans to households, by currency in %



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

This structure emphasizes the importance of monetary policy, because possible exchange rate volatility can significantly affect the creditworthiness of debtors. Basically, the greatest risks to the banking system which arise from households come from consumer loans in the long term, with currency component and poor collateral.

Observing **maturity**, new loans are almost entirely (98.4%) long-term. Those are mainly housing loans, although in the previous period, banks significantly approved long-term consumer loans, and not only by approving new loans, but also by extending the maturity, mainly of loans to existing clients of the banking system.

This practice can be indicative of easing of the lending conditions by banks due to the higher debt of existing clients. The rising demand for long-term consumer loans indicates increased financial needs of households mainly amid unchanged financial power, which could be met only in the longer term of repayment of the existing and new debt. Moreover, in 2015, the growth of consumer loans with maturity equal to or greater than eight years accelerated, so they occupied 26% of total loans to households (or 50.0% of total consumer loans). In order to limit the potential risks of the rapid growth of long-term consumer loans, at the end of 2015, the National Bank introduced a higher capital requirement for consumer loans with a maturity of eight or more years. The objective of the measure is to influence preventively on signals for potential future growing risks of these loans, and not only on the risks to the quality of banks' loan portfolio, but also for the level of indebtedness of the population, taking into account that the indebtedness of the existing borrowers, and less of the new borrowers, grows<sup>40</sup>.

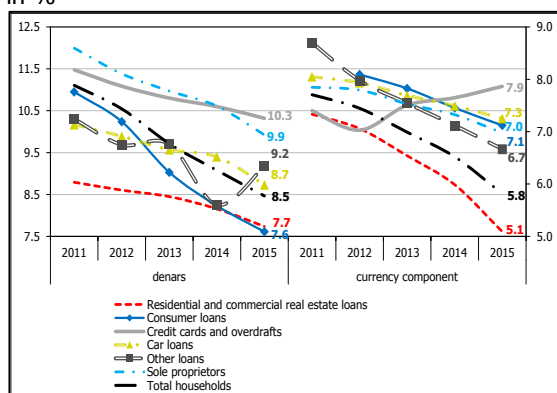
<sup>40</sup> The Decision amending the Decision on the methodology for determining the capital adequacy (Official Gazette of the Republic of Macedonia No. 223/15) is aimed only at newly approved consumer loans with maturity equal to or longer than eight years approved after 1 January 2016. In order to prevent the possibility this measure to cause diversion of borrowing to credit cards and overdraft bank accounts (which have quite stable and moderate growth), a higher capital requirement was introduced for the growth of overdraft bank accounts and credit cards realized in relation to 31 December 2015.





Chart 33

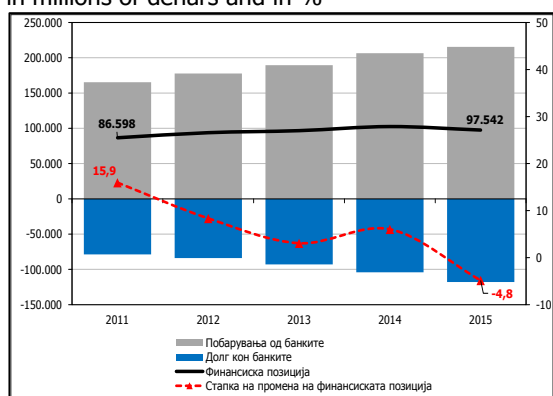
Average interest rate on household loans, by type of credit product in %



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

Chart 34

Dynamics of household financial position components and its growth rate in millions of denars and in %



Source: Credit Registry of the National Bank.

By type of **interest rate**, the share of newly extended loans with adjustable interest rate fell below 50%, in favor of newly extended loans with fixed interest rate. That contributed to the reduction of the share of total loans with adjustable interest rate by 12 percentage points. However, the growth of long-term debt with fixed interest rate results from debt in which the interest rate is fixed in the first few years of the loan repayment for which variable or adjustable interest rate is applied.

The average weighted interest rates<sup>41</sup> on new loans and total loans approved by banks to households mainly moved downwards, whereby the price of total loans reached its lowest level in the last five years.

Crisis events in the country and neighboring countries since mid-2015, which continued in 2016, caused decelerated growth of household deposits with banks and **deterioration of the financial position of households**<sup>42</sup>.

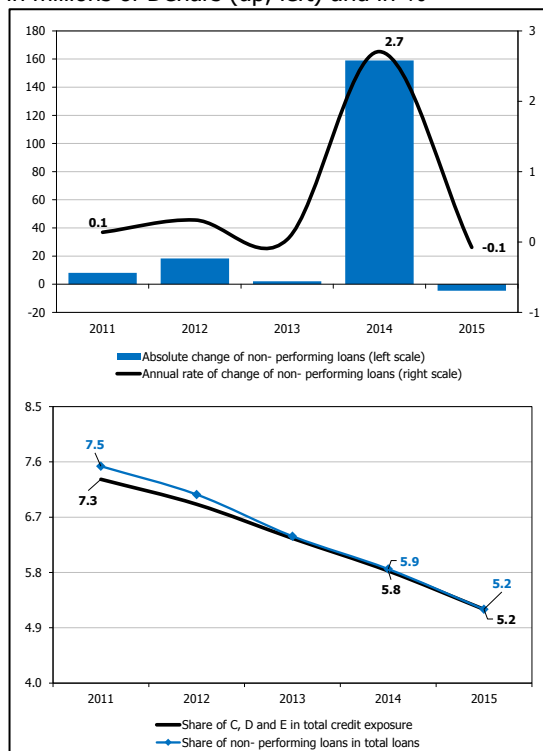
<sup>41</sup> Average interest rates are weighted for the share of each of the types of loans in total loans to households.

<sup>42</sup> Financial position of households is the difference between claims (deposits) on and debt (loans) to banks.



Chart 35

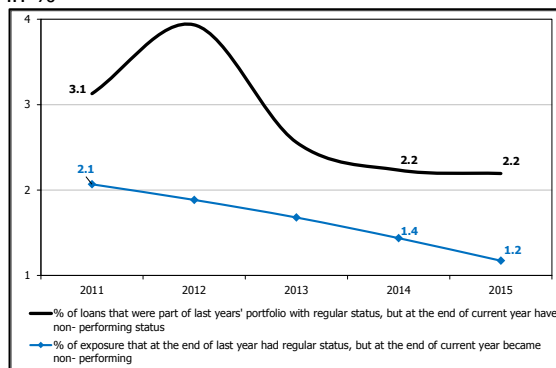
Growth of non-performing loans (up) and share of non-performing loans in total loans and of higher risk exposure in total exposure of households (down) in millions of Denars (up, left) and in %



Source: Credit Registry of the National Bank.

Chart 36

Estimated probability of default of households to the domestic banking sector in %



Source: NBRM's calculations, based on data from SSO, MF and CSD.

**On the other hand, the quality of household debt has been constantly improving.** This is evident from the increasingly smaller growth rates of non-performing loans (in 2015 the rate was even negative) and the increasingly smaller share of non-performing loans in total loans to households with banks. In 2015, banks have written off a slightly larger amount of claims from natural persons (Denar 464 million, which is an increase of Denar 399 million compared to 2014), which still has no significant impact on the share of non-performing loans in total loans of this sector (without the write-off, this share would be increased by 0.3 percentage points).

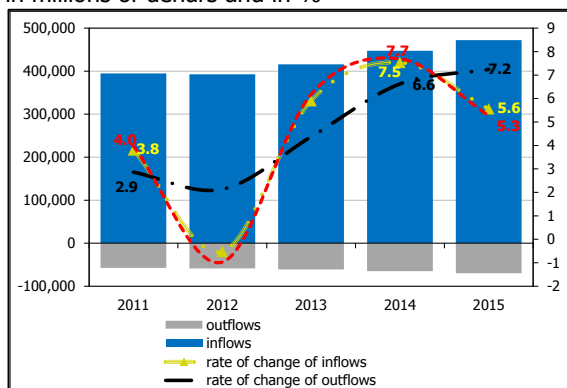
**The annual rate of default on contractual obligations of households<sup>43</sup> to domestic banks registered a steady decrease in the last five years.** Compared to 2014, the reduced percentage of exposure which from regular became non-performing suggests satisfactory creditworthiness of clients. Hence, it can be concluded that the risk of inability to repay the debt of this sector to the banking system is still relatively low.

<sup>43</sup> The estimated probability of default on contractual obligations of households is determined as: 1) percentage of regular credit agreements that receive non-performing status in a year and 2) percentage of regular credit exposure that becomes exposure with non-performing status in a year.



Chart 37

Dynamics of inflows and outflows of disposable income, and annual growth rate in millions of denars and in %



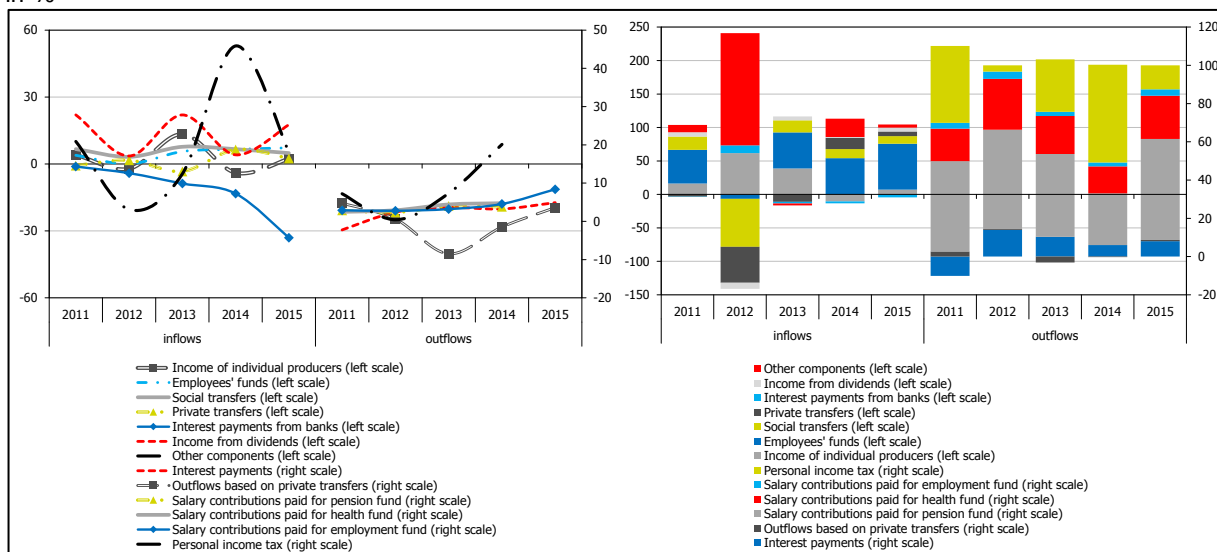
Source: NBRM's calculations, based on data from SSO, MF and CSD.

### 1.3. Savings rate, disposable income and private consumption of the household sector<sup>44</sup>

In 2015, the growth of disposable income<sup>45</sup> of households slowed down compared to the previous year. The significantly higher growth rate of outflows relative to inflows of households prevented higher disposable income growth. Analyzing the individual components of disposable income, private and social transfers, income from games of chance, from dividend, but also employees' assets registered significant contribution to the growth of total inflows of households.

Chart 38

Annual growth rate of components of inflow and outflow of disposable income (left) and their contribution to the growth of available income (right) in %



Source: NBRM's calculations, based on data from SSO, MF and CSD.

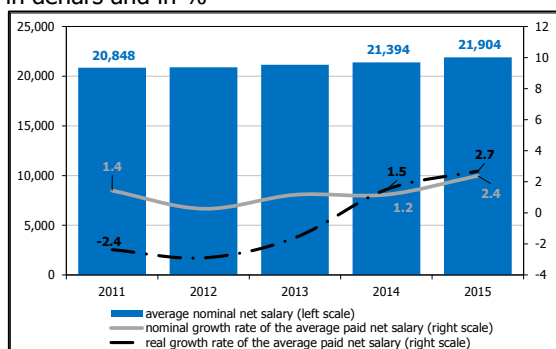
<sup>44</sup> In this section, some of the conclusions are drawn from the Annual Report of the National Bank for 2015.

<sup>45</sup> Due to lack of data on disposable income in the official statistics, since 2007 the National Bank has been making the disposable income of households in the Republic of Macedonia, which is updated annually. For some of the components of disposable income for which there is no official data, estimates are made, so that disposable income so recognized may not be comprehensive and may lack other components in its structure.

Disposable income is the difference between inflows (funds of employees, income of individual producers, social transfers (pensions, social welfare, unemployment benefits, sick pay), private transfers, interest payments from banks, dividend income, royalties, income from property and property rights, capital gains, revenue from gains from games of chance and other prizes, inflows based on old foreign exchange savings and denationalization, interest payments from treasury bills and workers compensations from abroad) and outflows (interest payments, wage contributions for the Pension Fund, Health Insurance Fund and Employment Fund, outflows based on private transfers and personal income tax) of households. All components of disposable income are nominal.



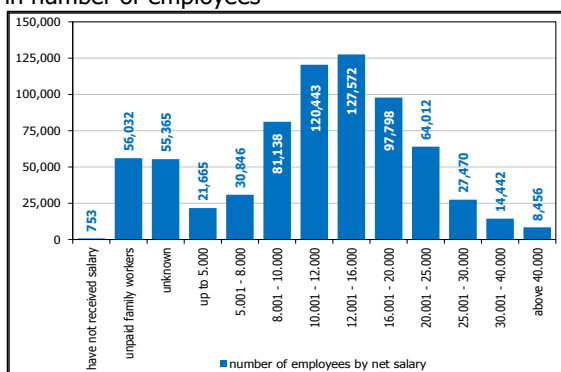
**Chart 39**  
Average nominal net salary and its nominal and real growth rate  
in denars and in %



Source: SSO (State Statistical Office)

The growth of total outflows mainly resulted from wage contributions for the pension funds due to an increase in the number of employees. Larger inflows of disposable income are associated with the improvement of the labor market indicators, primarily the employment growth and the growth of the average nominal wage by 2.7%.

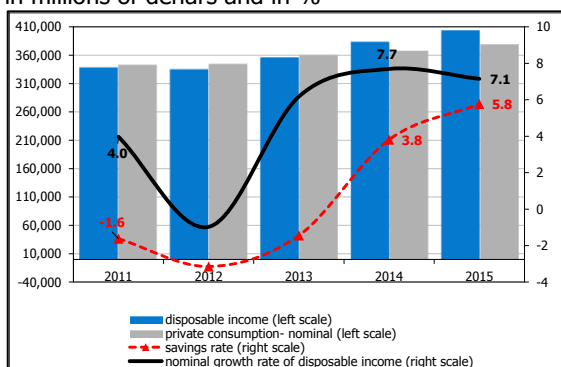
**Chart 40**  
Distribution of employees, by category of average net wage  
in number of employees



Source: SSO (State Statistical Office)

According to the amount of the average net wage, about 60% of employees receive a net wage<sup>46</sup> of Denar 8,000 to 20,000, which is below the average net wage for 2015. In contrast, only 16.2% of the employees receive a salary equal to or greater than the average monthly net salary. On the other hand, only 1.2% of the total employees fall in the highest monthly income category (above Denar 40,000).

**Chart 41**  
Disposable income, private consumption and savings rate of households  
in millions of denars and in %



Source: SSO and NBRM's calculations based on data from SSO, MF and CSD.

**The dynamics of disposable income determines the capacity for household savings**, as set by the so-called saving rate<sup>47</sup> which shows the proportion of disposable income which will remain for saving, after the settlement of private consumption. For the second consecutive year, the saving rate has a positive value, amounting to 5.8%, or 2 percentage points more than 2014. The increased saving rate is based on the faster growth of disposable income than the growth of private consumption. At the end of 2015, household deposits in banks reached Denar 215,429 million and an annual growth of 4.3%.

<sup>46</sup> Source: Labor Force Survey for 2015, SSO.

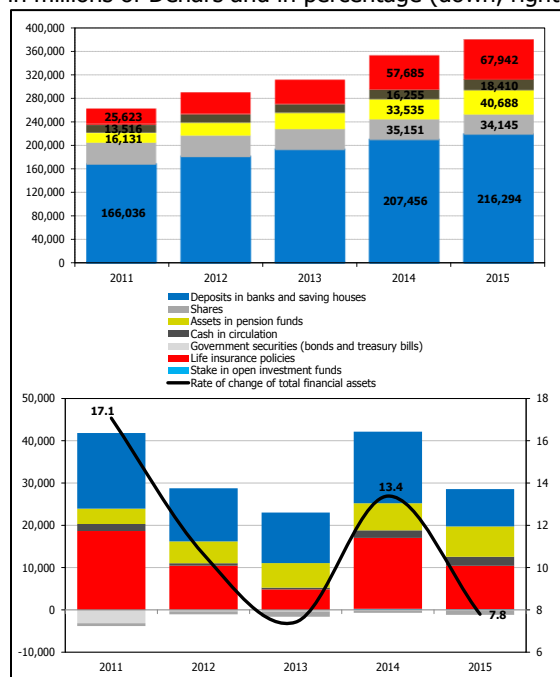
<sup>47</sup> Savings rate of households = (disposable income - private consumption) / disposable income.



## 1.4. Financial assets of the household sector

Chart 42

Financial assets of households (up) and annual growth of components (down) in millions of Denars and in percentage (down, right)



Source: NBRM, based on data submitted by banks and savings houses, MF, CSD, MAPAS, SEC, ISA and SSO.

Note: For the purposes of this analysis, based on the NBRM estimations, 70% of cash in circulation (outside banks) are included in the FA of households. The shares are the sum of shares listed at the stock exchange, at par value, life insurance is shown by the amount of contracted insured amounts and annual installments (including profits) of life insurance policies.

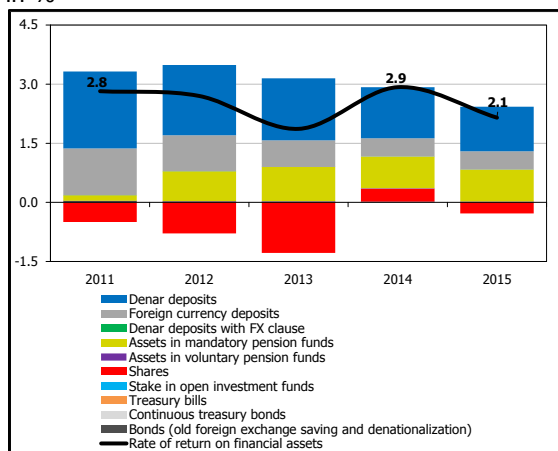
**The financial assets of the household sector recorded slower growth in 2015**, with a growth rate almost equal to that registered in 2013, but lower than the crisis 2008-2009. However, the share of financial assets in GDP rose by 0.8 percentage points and reached 67.6%. The growth of financial assets is conditional on the growth of household investments in deposits in domestic banks and savings houses, in life insurance policies and pension funds. The contribution of household deposits to the growth (32.3%) is lower compared to the previous year due to the increased importance of other financial assets components (the life insurance policies contribute with 37.5%, while the funds in the mandatory pension funds with 25.3%). The investment of households in life insurance policies is the fastest growing component of financial assets whose absolute growth is higher than the growth of household deposits, but the growth in policies is lower than the previous year. Equity investments decreased, which corresponds to the weak activity in the capital market in the country. However, the commencement with work of the SEE Link platform increases the investment opportunities in both the Croatian and Bulgarian Stock Exchange<sup>48</sup>, which in the future would help to increase the household sector property in securities.

<sup>48</sup> According to the latest announcements in 2016, there is an interest in increasing the number of stock exchanges included in this platform, thereby increasing the investment alternatives for households.



Chart 43

Weighted average yield on financial assets and yield on each component in total yield in %

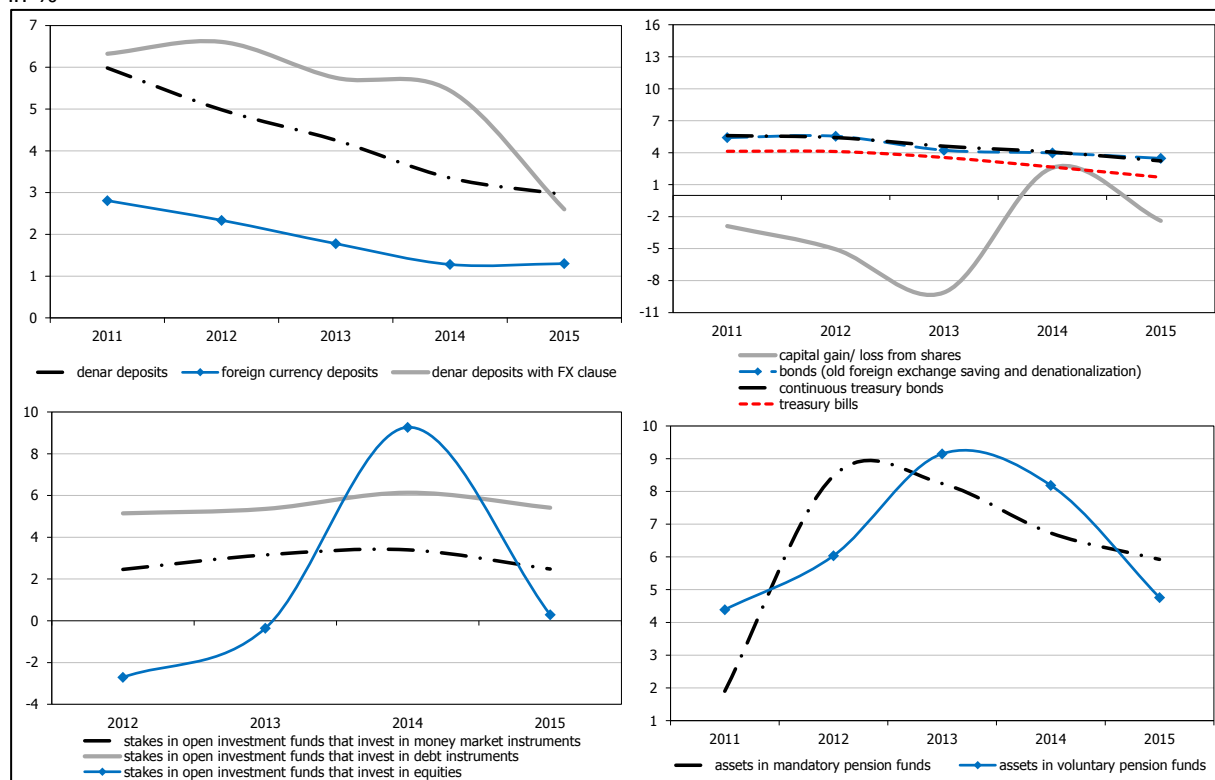


Source: NBRM, based on data submitted by banks and savings houses, MF, MAPAS, CSD and Macedonian Stock Exchange.

**The yield on financial assets of households decreased by 0.6 percentage points**, due to the decline in interest rates on deposits, but also due to the negative yield from equity investment. Analyzed by individual instruments, the highest annual yield was registered in funds in mandatory and voluntary pension funds<sup>49</sup> and shares in open-end investment funds.

Chart 44

Annual rate of return, by instrument of financial assets in %



Source: NBRM, based on data submitted by banks and savings houses, MF, MAPAS, CSD and Macedonian Stock Exchange.

<sup>49</sup> The annual nominal rate of return of mandatory and voluntary pension funds is calculated on the basis of weighting the rate of return of the individual pension funds to their net assets.



## **2. Corporate sector**

Performance of the domestic corporate sector in 2015 mainly improved, despite the negative impact of both domestic non-economic factors and the unstable global developments. Thus, the value added of the corporate sector, for the third consecutive year, increased, for which most industries contributed, and productivity indicators also improved.

The improved performance of the corporate sector positively affected the financial indicators of its operations. In 2015, the income of the corporate sector registered a faster growth compared to its expenditures, leading to improved profitability indicators, for efficiency of utilizing the assets, as well as for liquidity. However, in 2015, there were pronounced differences in the indicators depending on the size of entities, whereby the large and medium-size entities realize better results, unlike micro entities, as the largest group, but with the smallest share in total assets, which have considerably worse indicators for the performance in comparison with the other groups. The differences in the indicators in the categorization of companies are particularly evident, according to the financial result presented at the end of 2015. Thus, more than one third of the entities that are part of the corporate sector operated at a loss, according to the presented data in their annual accounts. All performance indicators of these entities are considerably less favorable in comparison with the indicators for the corporate sector as a whole. Also, entities that operated at a loss, in comparison with the corporate sector as a whole, have considerably worse debt indicators, which deteriorated in 2015, raising dilemmas regarding the efficiency of the allocation of financial resources and indicates the need for more active involvement of their creditors in any restructurings of this part of the corporate sector. Hence, the main limitations on the domestic corporate sector are associated with the negative operating performance of a significant number of entities, i.e. the business risk and inability for relatively rapid reallocation of resources to more productive purposes and to more profitable activities. The exposure of the corporate sector to operational risks becomes increasingly important given the volatile domestic environment and adverse effects that could be caused by the possible slowdown in domestic demand.

In 2015, the growth of the domestic corporate debt continued and accelerated compared to the previous year, reaching a share of around two thirds in the gross domestic product. Liabilities to non-residents made greater contribution to the growth of debt in 2015, which caused significant growth of net external indebtedness of the corporate sector. The growth of external funding sources for the domestic corporate sector carries risks associated with developments in the international financial markets and the possibility of refinancing under similar conditions. The net currency position of the domestic corporate sector is short, and therefore in conditions of increased FX component debt, the importance of the exposure to currency risk, for both debt sustainability and the overall stability of the corporate sector, increases. In addition, relatively high degree of exposure to the risk of changing interest rates is typical of the corporate sector, particularly due to the high share of loans with adjustable interest rates approved by domestic banks. Interest rates on loans extended by banks to the domestic corporate sector in 2015





decreased. However, the spread between the interest rates on corporate loans and interbank interest rates decreased in loans with FX clause, while in Denar loans increased, which may indicate perceptions of increased risks with domestic banks, as main creditors in local currency of the corporate sector.

The performance of the credit risk with domestic banks, demonstrated through the dynamics of non-performing loans to the corporate sector slowed down. However, the credit risk arising from the exposure to the corporate sector is still the most important risk to domestic banks, especially considering the considerable share of restructured loans and the risks specific to these exposures. Hence, regular monitoring is necessary of the operational performance of the domestic corporate sector, especially of its ability to provide positive cash flow from operational activity.

## 2.1. Analysis of the performances of the corporate sector

In 2015, there was a continuation of positive trends in the value added<sup>50</sup> of the domestic corporate sector<sup>51</sup>, which for the third consecutive year has registered an annual growth. At the same time, there was also a continuation of the trend of increasing the share of value added of the corporate sector in the creation of gross domestic product, whereby its importance to the overall economic developments and performances continually strengthened.

At the end of 2015, the value added of the corporate sector, in real terms and at constant prices of 2005, registered an annual growth of 7.6% and 5.8%, respectively. The structure of value added by individual activities had no major changes in 2015. The greatest contribution to the creation of value added of the corporate sector was generally made by wholesale and retail trade, transport, storage and hotels and restaurants, followed by industry, and real estate activities, professional, scientific, technical, administrative and auxiliary services.

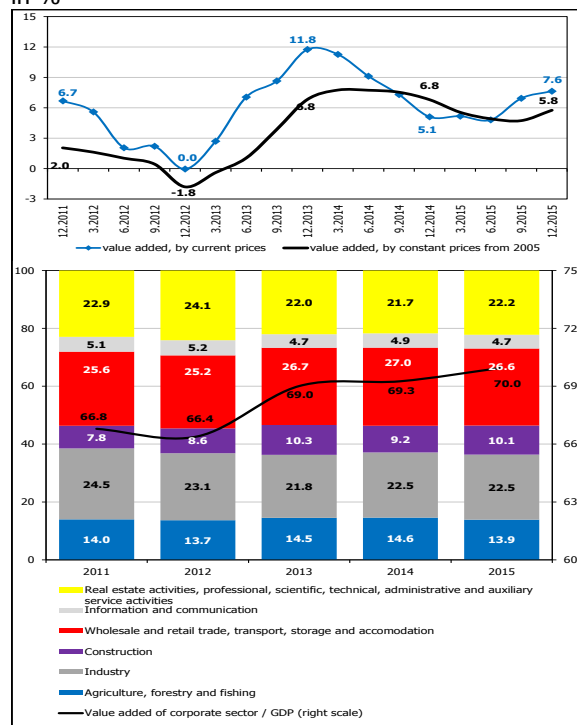
<sup>50</sup> The Report uses preliminary data on the value added of the corporate sector for 2014 and estimated data on the value added of the corporate sector for 2015, disclosed by the State Statistical Office in March 2016.

<sup>51</sup> Corporate sector includes companies and sole proprietors whose main activity, according to the National Classification of Activities, is industry (which includes entities with main activities of mining and quarrying, supply of electricity, gas, steam and air conditioning and water supply, sewerage, waste management and environmental recovery activities), wholesale and retail trade, and repair of motor vehicles and motorcycles, construction, agriculture, forestry and fishing, transport and storage, information and communications, accommodation and food services, real estate activities, professional, scientific and technical activities and administrative and ancillary services. The corporate sector does not cover legal entities that have registered prevailing activity in: financial and insurance activities; public administration and defense, compulsory social security; education; health and social care activities; arts, entertainment and recreation; other services; activities of households as employers; activities of households that produce different goods and perform various services for their own needs; and extraterritorial organizations and bodies. The State Statistical Office disseminated GDP data and the contribution of individual activities to its creation according to ESA 2010 methodology, according to which the categorization of individual activities is made: entities with main activity of wholesale and retail trade and repair of motor vehicles and motorcycles, transport and storage, accommodation and food services are published in aggregate and for the purposes of this report are presented as trade, transport, storage and hotels and restaurants, while entities with main activities related to real estate, professional, scientific and technical activities, and administrative and support services are categorized into one category.



Chart 45

Annual growth rate (up) and structure by current prices (down) of value added of the corporate sector in %

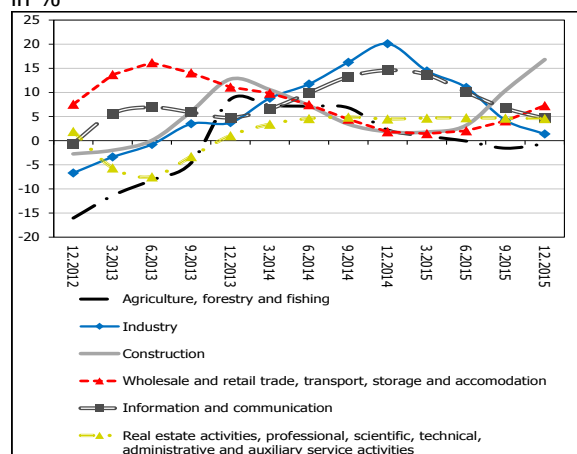


Source: State Statistical Office.

Note: The calculation is made with annualized data

Chart 46

Annual rate of change of value added by individual activities of the corporate sector, by constant prices from 2005 in %



Source: State Statistical Office.

Note: Value added data are annualized

**The growth of value added of the corporate sector in 2015 was present in almost all activities.** In 2015, negative real annual growth rates were registered only in agriculture, forestry and fishing. On the other hand, construction, and trade, transport, storage and hotels and restaurants registered an accelerated growth, and accordingly, forming over 70% of the real growth of the overall value added of the corporate sector in 2015. In contrast, in 2015, there was a slowdown of growth in those sectors which had the fastest growth last year - industry, and information and communications (Annex 1). Analyzed by real terms, all sectors had a positive contribution to the growth of value added of the corporate sector in 2015, whereby the highest growth rate was registered in construction, mainly driven by the public investments in infrastructure (Annex 2).

**The important role of the corporate sector for the overall economic trends is confirmed by its place and importance to the domestic labor market developments, and thus for the formation of disposable income and sustainability of the creditworthiness of households.** The overall corporate sector is the largest employer in the Republic of Macedonia, covering little more than three quarters of the total employed persons at the end of 2015. However, the weighted<sup>52</sup> average monthly net earnings of persons employed in the corporate sector registered a slight lag compared to the average monthly net salary calculated for all employees, primarily due to higher net wages paid to the employees in those activities which are not included in the scope of the corporate sector (financial institutions and public sector). In fact, in 2015, in parallel with rising volatility in the domestic political environment, there are certain signs of caution in the corporate sector, which are reflected on its contribution to the dynamics of the labor market, primarily for employment, and to a lesser extent for the amount of net wages.

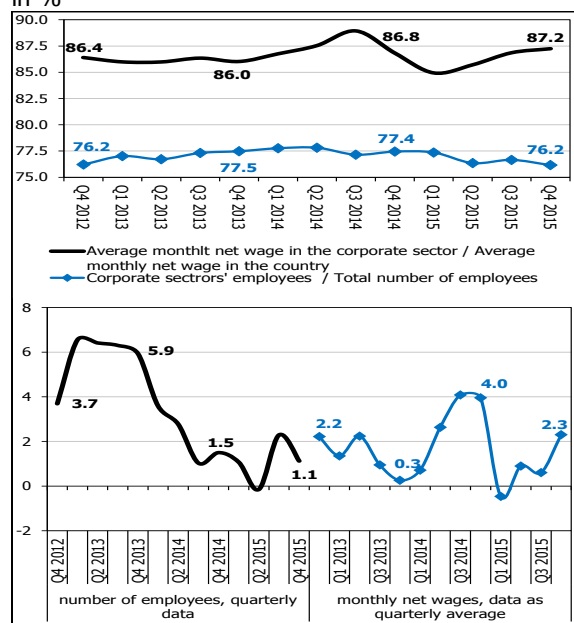
<sup>52</sup> The number of employees by individual activities that comprise the corporate sector is used as weight in the calculation.



Chart 47

Indicators of the importance of the corporate sector to the domestic labor market (up) and annual growth rates of the number of employees and average monthly net wage in the corporate sector (down)

in %



Source: State Statistical Office and estimations of the National Bank of the Republic of Macedonia.

Note: Uses data on the number of employees at the end of the respective quarters and monthly net wages calculated as a quarterly average.

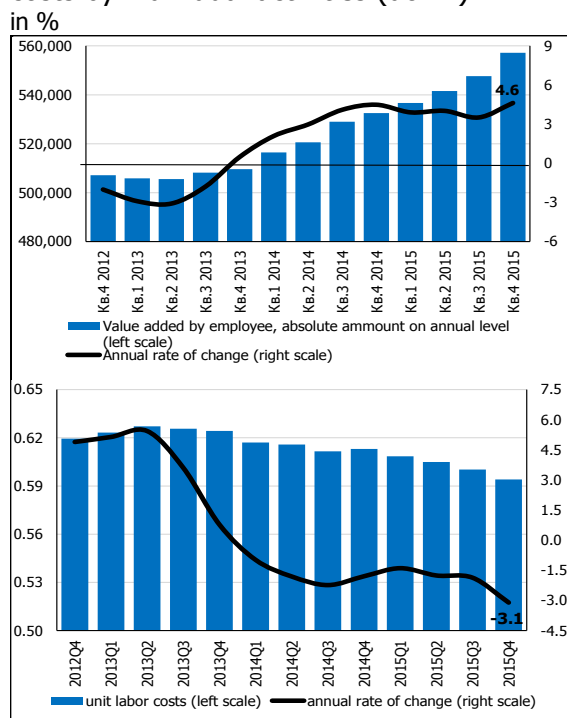
Thus, in 2015, the annual rate of growth of the number of employed persons in the corporate sector slowed down compared with the end of 2014 and is at its lowest level in four years. The contribution of the corporate sector to the growth of the total employed persons in 2015 was 30.7%, which is also the lowest contribution in the last four years. In addition, the number of employees decreased in three activities within the corporate sector (Annex 3). The contribution of trade, transport, storage and accommodation to the total annual growth of the employed persons in the corporate sector is evidently high. The average monthly net wage in the corporate sector during 2015 equaled Denar 18,881, registering modest growth of 0.8% (i.e. by Denar 159) in comparison with the end of the previous year, which is quite lower than the growth rate of the average net wage paid to all employees in the country (from 2.4%, i.e. by Denar 510). By individual activities, for the second consecutive year, the fastest growth of paid average net wages during the year was registered in construction, while in two activities (trade, transport, storage and accommodation and agriculture, forestry and fishing), the average net wages decreased during 2015 (Annex 4).

**The growth of value added of the corporate sector, followed by a slowdown in the employment of new persons, contributed to the continuation of the positive trends in productivity, registered over the past few years.** The value added per employee at the end of 2015 grew by 4.6%, which is the highest growth rate in the past five years. These trends positively contributed to the maintenance of the competitive ability of companies in both the domestic and the international market. This conclusion is also confirmed by the gradual decline in unit labor costs during 2015. Namely, for the second consecutive year, unit labor costs registered a negative change, indicating that the labor cost, as a factor of production, does not cause major cost pressures in companies and thus there is no adverse effects on its competitive ability. By individual activities, the largest growth of value



Chart 48

Movement of value added per employee in the corporate sector (up) and unit labor costs by individual activities (down)



Source: State Statistical Office and estimations of the National Bank of the Republic of Macedonia.

Note: The calculation is made using the average number of employees, obtained as an average of a quarterly frequency of data.

added per employee in 2015 was recorded in activities related to real estate, professional, scientific, technical, administrative and support services, and construction has seen relatively high growth rate (Annex 5). Also, in 2015, most industries registered lower unit labor costs. The highest unit labor costs were registered in agriculture, forestry and fishing, while the lowest were registered in activities related to real estate, professional, scientific, technical, administrative and support services. For most activities and individual entities covered in the corporate sector, it can be said that there is a high level of domestic and international competition, relatively low market barriers to entry, little opportunity to affect the prices of input or output components and modest differentiation and recognition of products and services. Hence, the ability of individual companies and the sector as a whole, to control the costs in operations, including unit labor costs, is extremely important for both the maintenance of the scope of their activities and the prospects for further growth in their operations.

The quantitative dimension of the entrepreneurial initiative in the Republic of Macedonia, to a certain extent, can be seen through the entry and exit from the market of new economic agents, i.e. through the dynamics of the annual change of newly incorporated and bankrupted legal entities. **For the first time since 2010, the number of newly incorporated legal entities in 2015 increased by 3.9%.** The share of newly incorporated legal entities in the total number of active legal entities<sup>53</sup> has been at a stable level of around 15% for several years. It seems that the reduction in the necessary time for registering legal entities, as well as facilitating the procedures, contributed to the elimination of major oscillations in the rate of change of newly incorporated legal entities. However, it should be

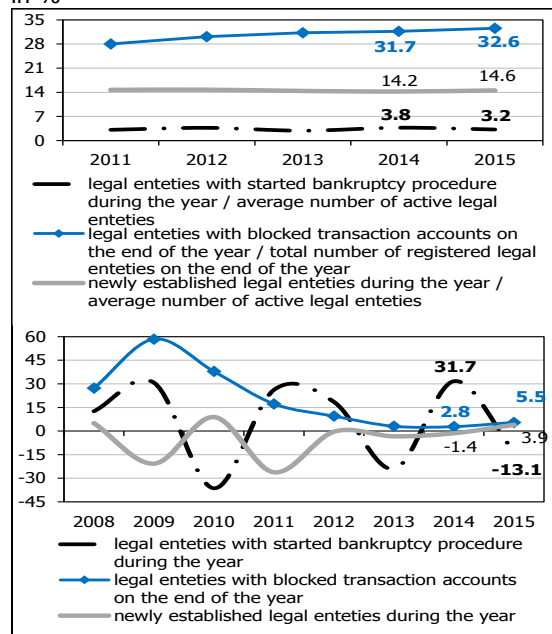
<sup>53</sup> Active legal entities in the year are considered those who submitted annual accounts to the Central Registry of the Republic of Macedonia. The Law on Trade Companies prescribes the procedure for determining the status of an inactive entity and the possibility of deletion of such entities from the records of the Central Registry, including at default to submit annual accounts. At the end of 2015, the total number of registered non-financial entities in the Central Registry of the Republic of Macedonia was 136,695, where only 58,920 entities have submitted annual accounts, where the corporate sector includes 52,556 trade entities.



Chart 49

Relative importance (up) and annual change (down) of newly incorporated, bankrupted and legal entities with blocked accounts

in %



Source: Central Registry of the Republic of Macedonia and National Bank of the Republic of Macedonia for number of blocked accounts

borne in mind that eased registration procedures and conditions for establishing a legal entity, by themselves, do not carry a guarantee of success in the business venture<sup>54</sup>.

In 2015, the number of legal entities under bankruptcy dropped by over 13%, whereby the approximate bankruptcy rate<sup>55</sup> decreased by 0.6 percentage points in 2015 (from 3.8% to 3.2%). However, the number of legal entities with blocked transaction accounts, regardless of the basis for the blockade, rose by 5.5% on annual basis, which is relatively high, with a share of over 32% in the total number of registered legal entities at the end of 2015. This share of entities with blocked access to payment services, combined with high and sustainable number of business entities that show loss of the earnings, as well as the indicators for the days of collecting claim and payment of liabilities, are signals for a possible underestimation of the rate of started bankruptcy procedures, which may suggest the existence of circumstances where creditors have incentives to intentionally delay or use tactics with the submission of a formal request for starting bankruptcy procedure<sup>56</sup>.

<sup>54</sup> The procedures for establishing a company are only one element of the overall business regulations in a particular jurisdiction, which directly or indirectly can affect the operation of enterprises and their competitiveness, as well as the interest of investors to occur in a specific country by starting new business ventures. There are other elements of the business regulation affecting the incentive for starting a particular business venture (e.g. receiving electricity, protecting minority investors, executing contracts, resolving bankruptcies, etc.) and they are presented in the World Bank's Doing Business Report. Despite this, there are a series of aspects of the business environment in a particular jurisdiction that are mainly outside the regulatory sphere, and which can have a decisive influence on both the entrepreneurial and investment activity, as well as on the competitiveness and that are not covered and assessed with the World Bank's Doing Business Report. A typical example of this is the labor quality, the quality of the institutions in a specific country, macroeconomic stability, corruption etc. (more details are available on: <http://www.doingbusiness.org/methodology/common-misconceptions>). Regardless of any elements of the regulatory and / or other business environment, the success of certain business venture is to the end of idiosyncratic factors related to the business venture, of both financial nature (objective determination of the projected cash flows and required rate of return, selected accounting policies, capital position, liquidity, etc.) and non-financial nature (e.g. the management quality, selected business model, differentiation and quality of products and / or services offered, etc.).

<sup>55</sup> Bankruptcy rate is calculated as the ratio between the number of legal entities under bankruptcy during the year (data obtained from the Central Registry of the Republic of Macedonia) and the average number of active legal entities in the year (as an average of the number of the active legal entities at the end and at the beginning of the relevant calendar year, according to data obtained from the Central Registry of the Republic of Macedonia).

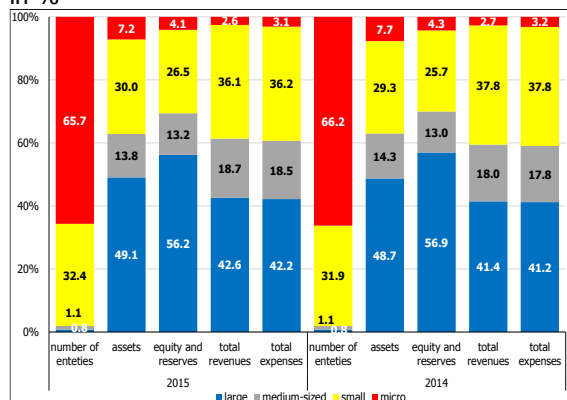
<sup>56</sup> According to the Bankruptcy Law (Official Gazette of the Republic of Macedonia No. 34/2006, 126/2006, 84/2007, 47/2011, 79/2013, 164/2013, 29/2014, 98/2015 and 192/2015), the bankruptcy procedure may be initiated by a proposal for opening a bankruptcy procedure, submitted to the competent court, by the debtor, creditor or other person empowered by law. In practice, creditors are usually those who submit this proposal to the competent court. However, creditors are often unprepared to engage in a bankruptcy procedure through formal submission of a proposal to the court for its starting, due to their established views that act demotivating, such as: the opinion on the duration of the procedure and procedural possibilities of its delay, the amount of the costs of conducting the bankruptcy procedure, the relatively low percentage of reimbursement of claims in the bankruptcy procedure, etc. According to the indicators of bankruptcy procedures, presented in the World Bank's Doing Business Report in 2015, in the Republic of Macedonia, the average time required for full or partial reimbursement (payment) of the bankruptcy claims of creditors is 1.8 year, the average cost of conducting the bankruptcy procedure is 10% of the value of the debtor's assets, and the average rate of





Chart 50

Structure of the corporate sector and selected balance sheet categories, according to the size of trading companies in %



Source: Central Registry of the Republic of Macedonia - statement from the Registry of Annual Accounts

Note: The structures are obtained on the basis of data from submitted annual accounts to the Central Registry of the Republic of Macedonia for each calendar year.

**According to the size of trading companies<sup>57</sup>, small and micro entities are predominant in the corporate sector in the Republic of Macedonia.** Thus, as of 31 December 2015, of the total number of corporate entities that have submitted final accounts to the Central Register, 98% are classified in these two categories legal entities. Typically, small legal entities and micro trading companies are not subject to obligation to audit their financial statements<sup>58</sup>, they often use accounting outsourcing and their accounting information system is focused toward receiving financial statements to meet different legal obligations, including for tax purposes. Hence, in perceiving of the financial performance of the corporate sector, it is necessary to take into account the possible risks regarding the quality of financial reporting. The risk of intentional or unintentional omissions in financial reporting and in the quality of financial statements is mitigated to some extent in small trading companies organized in the form of a joint stock company, as these trading companies have a legal obligation to organize an Internal Audit Department<sup>59</sup>.

payment (reimbursement) of the bankruptcy claims is 44.1%. The Report and methodology are available on: <http://www.doingbusiness.org/>.

<sup>57</sup> The criteria for classification of entities into large, medium, small and micro legal entities are defined in Article 470 of the Law on Trade Companies.

<sup>58</sup> Pursuant to Article 478 of the Law on Trade Companies (Official Gazette of the Republic of Macedonia No. 28/2004, 84/2005, 25/2007, 87/2008, 42/2010, 48/2010, 24/2011, 166/2012, 70/2013, 119/2013, 120/2013, 187/2013, 38/2014, 41/2014, 138/2014, 88/2015, 192/2015, 6/2016, 30/2016 and 61/2016), the audit of financial statements is compulsory for large and medium-sized trading companies organized as joint stock companies or limited liability companies and for companies whose securities are listed on the Stock Exchange. The audit is defined in the Audit Law (Official Gazette of the Republic of Macedonia No. 158/2010, 135/2011, 188/2013, 43/2014, 138/2014, 145/2015, 192/2015 and 23/2016), as "independent examination of the financial statements or consolidated statements and financial information, in order to express an opinion on their truthfulness and impartiality and their compliance with the accepted financial reporting framework".

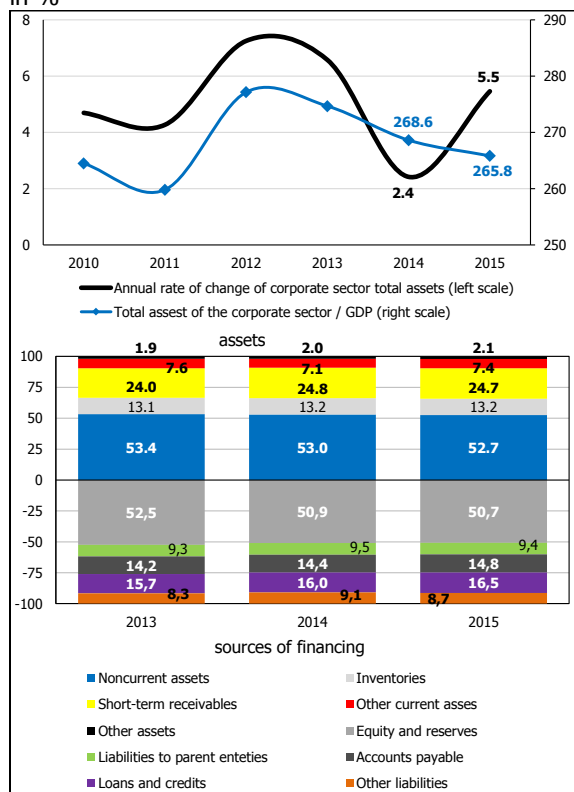
<sup>59</sup> Pursuant to Article 415-a of the Law on Trade Companies (Official Gazette of the Republic of Macedonia No. 28/2004, 84/2005, 25/2007, 87/2008, 42/2010, 48/2010, 24/2011, 166/2012, 70/2013, 119/2013, 120/2013, 187/2013, 38/2014, 41/2014, 138/2014, 88/2015, 192/2015, 6/2016, 30/2016 and 61/2016), joint stock companies, regardless of their size, are obliged to organize an Internal Audit Department as an independent organizational unit in the company. The Internal Audit Department should conduct constant and full-scope audit of the legitimacy, accuracy and promptness of the company's operations, among other things through assessment of the accuracy and reliability of the commercial books and financial statements, assessment of the internal control systems adequacy and efficiency and monitoring of the compliance with the regulations, policies and procedures of the company.



Chart 51

Relative importance and growth of corporate assets (up) and structure of assets and funding sources of the corporate assets, by item (down)

in %



Source: Central Registry of the Republic of Macedonia - statement from the Registry of Annual Accounts.

Note: The structure was obtained using data on entities that submitted annual accounts to the Central Registry of the Republic of Macedonia for each calendar year.

Large and medium-sized entities, although together cover less than 2% of the total number of entities (Annex 7), have a significant influence on the performances of the corporate sector. This is illustrated by their joint share of 62.9% in total corporate assets and of 61.3% in total revenues. Most of these trade companies<sup>60</sup> have an obligation to audit their financial statements, have internally established accounting function, while those that are organized as joint stock companies should have an Internal Audit Department<sup>61</sup>, which taken all together, is the starting point<sup>62</sup> for a greater degree of reliability of the presented financial information.

**The growth of total corporate assets in 2015 stood at 5.5%, which is more than twice higher growth rate compared to 2014.** By individual activities, construction made the largest contribution to the annual growth of corporate assets (of 45.6%), which corresponds to the highest rate of growth of value added in 2015 in this sector. Besides construction, trade, transport, storage and hotels and restaurants (37.9%) and industry (17.4%) made a significant contribution to the total growth of corporate assets. **In 2015, there were no significant changes in the structure of funding sources and in the structure of domestic corporate assets.** Thus, the structure of funding sources is dominated by equity and reserves, while non-current assets are most common in the structure of corporate assets<sup>63</sup>, followed by short-term claims.

<sup>60</sup> There is an exception to the obligation to audit for large and medium-sized trade companies who are not established as joint stock companies or limited liability companies.

<sup>61</sup> There is an exception to the obligation to establish an Internal Audit Department for large and medium-sized trade companies who are not organized as joint stock companies.

<sup>62</sup> The existence of an obligation to audit the financial statements is only a necessary but not a sufficient condition to prevent deviations from the existing standards of neutrality in financial reporting or application of inappropriate accounting policies of some company.

<sup>63</sup> Non-current assets include tangible assets, intangible assets, property investment, long-term financial assets and long-term claims

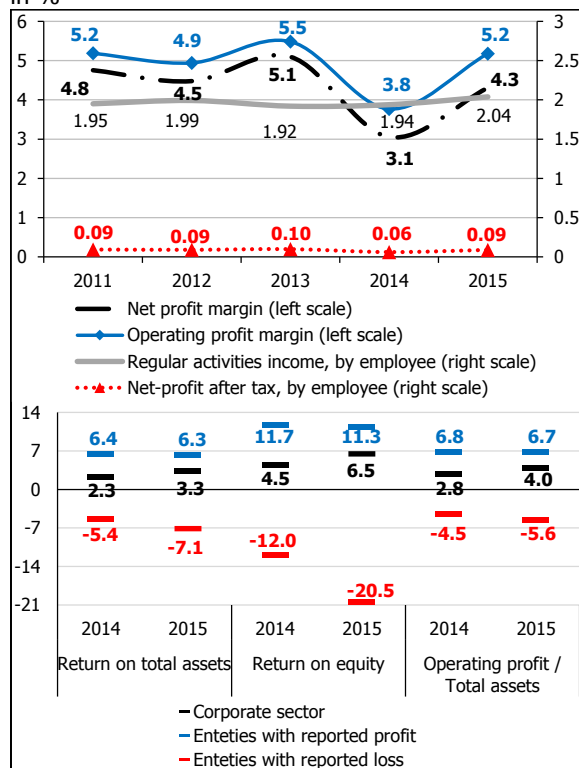




Chart 52

Profitability indicators of the corporate sector - profit margins and per employee ratios (up) and return ratios (down)

in %



Source: NBRM calculations based on data from the registry of annual accounts with the Central Registry of the Republic of Macedonia. Note: Profit margins are calculated for the submitted data at the end of the calendar year, while per employee ratios and return ratios using the average values from the beginning and end of the calendar years for which the indicator is calculated.

**The domestic corporate sector showed improved operating results in 2015.** Thus, the total income of the corporate sector<sup>64</sup> registered an annual growth of 7.1%, with sales income being the main generator which form around 94% of the annual growth of total income. On the other hand, operating expenses of the corporate sector increased, but at a slower pace in 2015, i.e. by 5.9%. The faster growth of income versus expenditure of the domestic corporate sector contributed to increasing net profit and operational income before financial expenses and taxes (approximation of operating profit) by 45.7% and 36.2%, respectively. These developments actually show the high level of sensitivity of the profitability of the corporate sector to changes in sales income, i.e. relatively high level of operational deleveraging (leverage) in domestic enterprises.

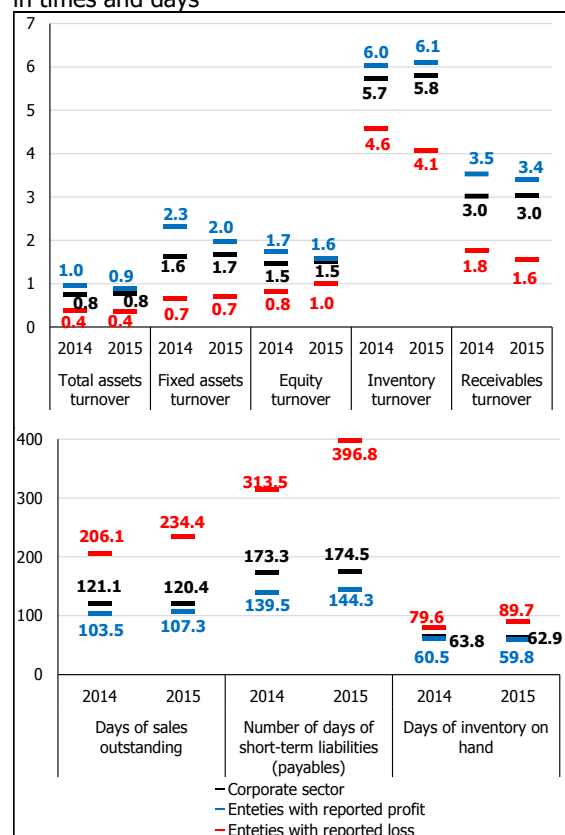
**The positive dynamics of income and net profit of the corporate sector reflected positively on all profitability indicators.** Thus, after the noticeable fall in 2014, in 2015, the net profit margin and operating profit margin of the corporate sector grew, same as the return ratios on average assets and average equity and reserves. However, the operational and business risk in the domestic corporate sector are strongly emphasized and in fact, together with the limited management skills<sup>65</sup>, constitute one of the main limiting factors for the improvement of its performance and consequently, for better performance in the economy as a whole. More than 37% of the total number of entities in the

<sup>64</sup> Total income of the corporate sector includes sales income, capitalized own products, other income from regular operations, financial income, share in the profit of parent entities, net profit from discontinued operations (in cases where it occurs) and the positive effects of deferred tax assets and liabilities.

<sup>65</sup> The Global Competitiveness Index, which is presented by the Global Competitiveness Report 2015-2016, among other things, assesses the quality of management of private institutions, i.e. of trade companies as the most important representative in this institution category. This category includes estimates of the following five indices: Ethical behavior of firms, Strength of auditing and reporting standards, Efficiency of corporate boards, Protection of minority shareholders' interests and Strength of investor protection. . Among 140 countries, the Republic of Macedonia is ranked 21st for the strength of investor protection (with obtained 6.7 out of a possible of 7 index points), 47th for ethical behavior of firms (with obtained 4.2 out of a possible of 7 index points), 62nd for the efficiency of corporate boards (with obtained 4.8 out of a possible of 7 index points), 64th for the strength of auditing and reporting standards (with obtained 4.6 out of a possible of 7 index points) and 73rd for protection of minority shareholders' interests (with obtained 4.1 out of a possible of 7 index points). According to the presented estimates, there is room for improvement in the management of trade companies and larger initiative of economic agents for the application of modern standards in this area. The Report and methodology are available on: <http://reports.weforum.org/global-competitiveness-report-2015-2016/>.



Chart 53  
Indicators of efficiency of utilizing the  
assets of the corporate sector  
in times and days



Source: NBRM calculations based on data from the registry of annual accounts with the Central Registry of the Republic of Macedonia. Note: Indicators of turnover are calculated using the total income as numerator.

corporate sector registered a loss in 2015. These entities account for approximately 22% of total corporate assets at the end of 2015, registering noticeably reduced share, by about 12 percentage points on an annual basis (Annex 8). Profitability indicators of the companies that generated operating loss recorded further deterioration, which could be interpreted as a clear indicator that a significant portion of these entities have chronic problems of an operational nature, usually in the form of insufficient volume of income and / or excessive expenditures which can not be avoided, also holding a modest volume of liquid assets. Amid unfavorable domestic environment and increased uncertainty about the trajectory of domestic demand, there is a risk that most companies which constantly recorded losses can not come to the necessary funding sources and to face problems in their operations. The evident differences in the distribution of profits between the entities according to their size are another feature of the profitability indicators of the domestic corporate sector (Annex 7). Thus, in 2015, micro entities, as the largest group, generated operating loss, while entities classified in the group of large entities realized slightly more than half of the profits of the corporate sector. Analyzed by sectors, in 2015, profitability indicators mainly improved, with the exception of entities with main activity information and communications, where return ratios on assets and equity declined (Annex 6). However, the highest profit margins were registered exactly in entities of this activity, while agriculture, forestry and fishing usually registered the lowest profitability. In 2015, the indicators of productivity, as measured by the shares by average number of employed persons, improved.

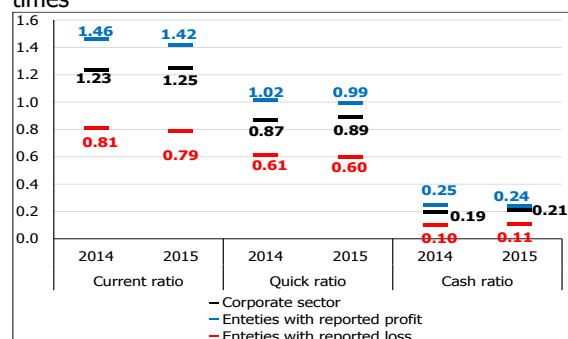
**The positive trends in sales income of the corporate sector in 2015 contributed to the slight improvement of indicators of efficiency of utilizing the assets.** However, the amount of these indicators, as well as the indicators for the days of "tying" certain categories of funds, indicate the existence of room for greater improvement in the efficiency of



the management of funds. There were noticeable differences in the indicators of efficiency of utilizing the assets in entities depending on whether they showed profit or loss at the end of 2015.

There is special sensitivity of these indicators in case of inappropriate presentation of the potential impairment of assets, regardless of the reason for the occurrence of the need for correction in the value of assets. The most frequent occurrences which can lead to the need for impairment of assets and consequently to the correction of the presented financial result and equity and reserves are: uncollectible claims, the possible obsolescence of inventories and impairment of fixed assets, primarily in cases where the fair value of real estate is drastically different from their market value. In 2015, the expenditures of the corporate sector from value adjustment of claims and financial assets were lower by almost 90% compared to 2014. Such drastic changes in costs of impairment of financial assets (including claims) are a clear signal for possible inappropriate values of financial assets and possible reflection on claims turnover. Indicators of efficiency of utilizing the assets are sensitive to the main activity of entities. Trade, transport, storage and hotels and restaurants registered relatively higher indicators of turnover, which are above the average for the corporate sector (Annex 6). As profitability, indicators of efficiency of utilizing the assets registered differences in entities classified according to the size, where large entities had the greatest efficiency of utilizing the assets (Annex 7).

Chart 54  
Liquidity ratios of the corporate sector times



Source: NBRM calculations based on data from the registry of annual accounts with the Central Registry of the Republic of Macedonia.

**In 2015, liquidity indicators slightly improved, although they are still relatively modest<sup>66</sup>.** Taking into account that liquidity indicators are continually at a relatively similar level, it seems that because of the existing modest level of net working capital<sup>67</sup> of the domestic corporate sector, combined with the structure of current assets and their liquidity features, most domestic enterprises still have the

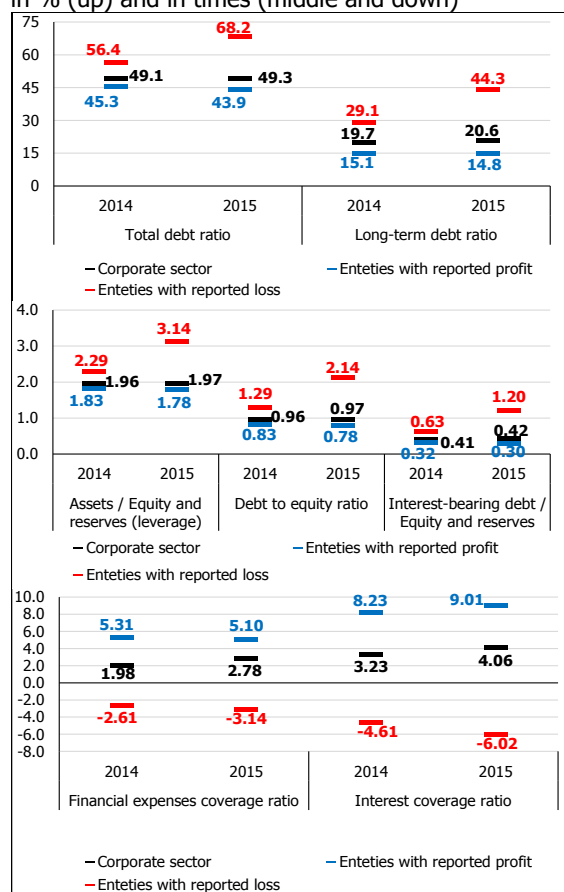
<sup>66</sup> The rule of thumb, which is considered satisfactory, usually, uses 1 for current liquidity, 2 for the current liquidity.

<sup>67</sup> Net working capital is defined as the difference between current assets and current liabilities.



opportunity for sustainable operations. Also, there is an uneven distribution of liquidity between individual entities in the corporate sector. Thus, companies that show operating profit have almost twice as high liquidity compared to companies operating at a loss. This is also confirmed by the negative net working capital of the entities from the corporate sector operating at a loss. By individual activities, trade, transport, storage and hotels and restaurants registered the highest liquidity indicators, where almost 60% of total net working capital is concentrated in the corporate sector.

Chart 55  
Dynamics of corporate debt ratios  
in % (up) and in times (middle and down)



Source: NBRM calculations based on data from the registry of annual accounts with the Central Registry of the Republic of Macedonia.

**Corporate debt ratios in 2015 registered a modest increase, with evident differences in the level of debt by individual entities included in its composition.** Thus, entities operating at a loss have significantly higher leverage, higher sensitivity of the financial result to changes in the cost of funding sources and higher encumbrance with financing costs. On the other hand, entities which have relatively good operating performance and show operating profit register lower indebtedness indicators compared to the corporate sector as a whole and have a higher coverage of financial expenses (or interest expenses) with the income from regular activities<sup>68</sup>. Differences in indebtedness indicators are also evident in activities (Annex 6). Some activities (industry, construction and real estate activities, professional, scientific, technical, administrative and ancillary services) register higher indebtedness indicators compared to the entire corporate sector, indicating greater vigilance in monitoring performance. Also, in the absence of strengthening the capital position of entities from these activities, there is a possibility of tightening of the conditions for the new debt financing. Given the fact that in two of these three activities, the business activities are directly related to the domestic real estate market, there is an additional risk of deterioration in their creditworthiness in case of a slowdown in

<sup>68</sup> Profit from regular activities is calculated as the difference between income and expenditures from the regular operations of the domestic corporate sector. Financial expenses, in addition to interest expenses, also include expenses from exchange rate differences, realized and unrealized losses from financial assets and losses based on impairment of financial assets and investments.



domestic demand and negative spillover effects on the demand for real estate.

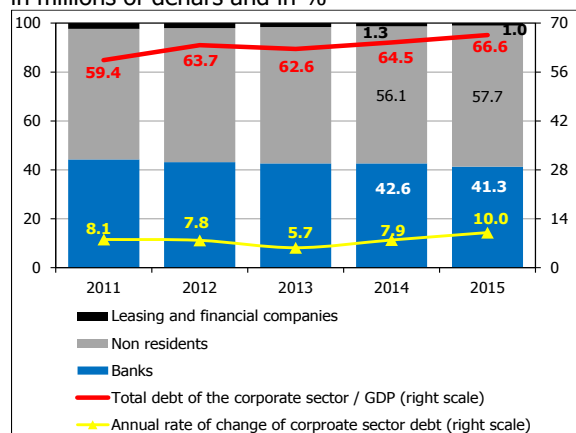
## 2.2. Indebtedness of the corporate sector

**In 2015, the debt of the Macedonian corporate sector registered a faster growth compared to 2014, with structural changes related to the increase of the external debt component.** The total debt of the corporate sector<sup>69</sup> grew annually by 10.0%, which is faster growth compared to the past five years. The share of the corporate debt in the gross domestic product continues to grow, reaching a level of approximately two-thirds. In 2015, liabilities of domestic enterprises to non-resident creditors made the largest contribution to the growth of the total indebtedness of the corporate sector. Domestic debt funding sources of corporate activities are mainly in the form of contractual funding by financial institutions and there is no developed funding practice through direct participation in financial markets. Domestic banks are predominant within the domestic institutional funding of the corporate sector, while non-banking financial institutions have insignificant share.

**Net debt<sup>70</sup> of the domestic corporate sector at the end of 2015 constituted 37.6% of GDP, recording an annual growth rate of 11.9%.** For the second consecutive year, the growth of net indebtedness of the corporate sector was mainly caused by the debt to non-residents. Thus, the net external debt of

Chart 56

Structure and change of corporate debt, by type of creditor  
in millions of denars and in %



Source: National Bank of the Republic of Macedonia, Ministry of Finance and State Statistical Office

\*Note: External corporate debt data and GDP data for 2014 are preliminary data, and GDP data for 2015 is estimated data.

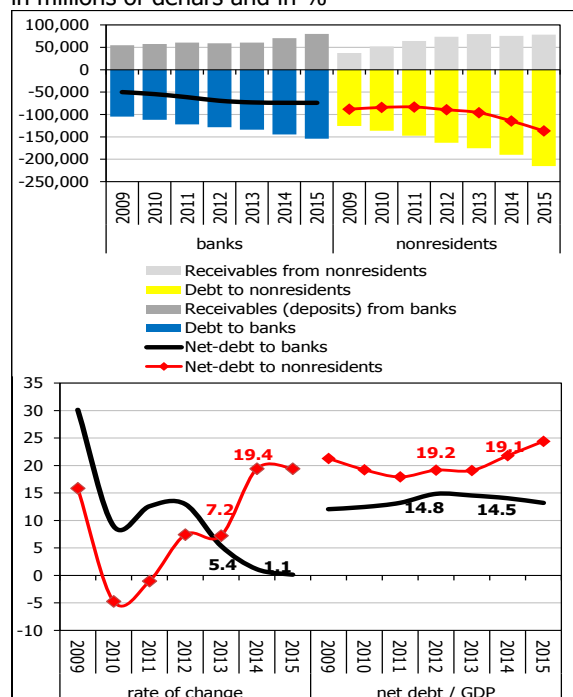
<sup>69</sup> For the needs of this analysis, the total corporate debt includes: debt based on loans, interest and other claims of banks, total external liabilities of corporate sector (non-residents), value of active lease contracts and indebtedness based on active contracts with financial companies.

<sup>70</sup> Net debt of the domestic corporate sector shall be the difference between claims and debt of the corporate sector on and to domestic banks (net domestic debt to banks) and on and to non-residents (net external debt). Net debt to the government (central government), to other public sector entities, to the household sector, as well as intercompany claims and liabilities are not included in the determination of net debt of the corporate sector. Based on data from the annual accounts submitted by the Central Register of the Republic of Macedonia, only one part of the liabilities and claims of the corporate sector to the government can be determined, i.e. only those claims and liabilities arising from public duties (liabilities and claims based on current taxes, deferred tax assets and liabilities, liabilities and claims based on customs, excise taxes, contributions for employees, personal income tax on behalf of other tax payers etc.). The portion of the claims and liabilities of the corporate sector on and to the government arising from the business relationships (sales, purchase and other contracts), litigations or other non-tax relations, can not be accurately identified, because it is presented in aggregate within the respective accounting categories (e.g. if this is a purchase and sale relationship in the item "claims on purchasers" and / or "claims to vendors" etc.). As of 31 December 2015, the corporate sector, based on public duties, has shown total amount of claims of Denar 13,962 million and total liabilities in the amount of Denar 18,515 million, which means that the corporate sector is a net debtor to the government, calculated solely on the basis of claims and liabilities based on public duties, totaling Denar 4.553 million.

Chart 57

Components of corporate net-debt (up ) and growth rates and net-indebtedness to GDP ratio (down)

in millions of denars and in %

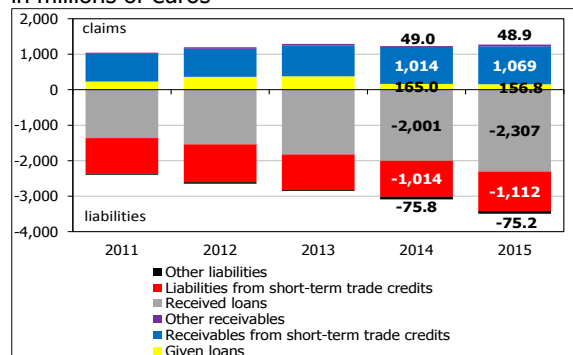


Source: National Bank and State Statistical Office

Chart 58

Structure of claims and liabilities of the domestic corporate sector to nonresidents, by instrument

in millions of euros



Source: National Bank of the Republic of Macedonia

\*Note: Data for 2014 are previous data, and for 2015 are estimated data

imposed alternative to invest their liquid reserves. This regulation on foreign exchange operations actually contributes to maintaining a lower level of net debt of the domestic corporate sector to domestic banks, with a simultaneous maintenance of a slightly higher

the domestic corporate sector, at the end of 2015, registered almost two times higher share in gross domestic product compared with the net debt of the corporate sector to domestic banks. **At the end of 2015, the external debt of the domestic corporate sector to non-residents amounted to about Euro 3.5 billion, while the total claims of the corporate sector on non-residents amounted to about Euro 1.3 billion.** The accelerated growth of net debt to non-residents is due to the growth of debt abroad (13.1%), amid noticeably lower growth of claims of the domestic corporate sector on non-residents (of 3.8%). Increasing reliance of the domestic corporate sector on net external funding results from the mutual influence of several factors. On the one hand, structural changes in the domestic economy and the growing presence of domestic companies owned by foreign investors, create possibility of easier access to external funding, through their foreign parent entities.

Also, there is a possibility the funding provided by foreign parent entities to be with lower costs, better conditions and / or with greater transparency. The restrictions on domestic enterprises set by the regulation on foreign exchange operations<sup>71</sup> are an additional factor that determines the level and distribution of the net debt of the corporate sector between non-residents and domestic banks. Practically, the legally set constraints on domestic enterprises to freely own and operate payment accounts in foreign banks, placements of deposits in foreign banks, as well as investing abroad through portfolio investments in foreign securities limit the ability of domestic enterprises to increase the volume of claims from abroad through financial investments, so that the domestic financial instruments are the only

<sup>71</sup> The Law on Foreign Exchange Operations and appropriate by-laws.





volume of net external debt<sup>72</sup>. The growth of external funding sources by the domestic corporate sector, on the one hand, increases its sensitivity to developments in the international financial markets. Because of this, the corporate sector can easily be faced with higher cost of funds from external sources or with limited possibility to renew this type of funding.

**In 2015, there were no noticeable changes in the structure of liabilities and claims of the corporate sector to non-residents.** The highest share accounted for loan liabilities to non-residents<sup>73</sup>, in which the highest share of almost 70% was registered in intercompany loans, followed by liabilities based on short-term trade credits<sup>74</sup>. The rise in loan liabilities accounted for over three quarters of the total growth of the corporate sector liabilities to non-residents. The claims of the domestic corporate sector from abroad are almost entirely derived from credit relations (around 95%). The short-term trade credits constitute most of the claims on non-residents. In terms of currency, although liabilities expressed in euros take the main place (over 78%) in loan liabilities of the corporate sector to non-residents, in 2015, there was almost double increase of the liabilities in US dollars. Thus, their share increased from around 11% at the end of 2014, to nearly 21% at the end of 2015. In conditions of maintaining a stable parity of the exchange rate of the denar against the euro, changes in the currency structure of the corporate sector debt aimed at increased share of liabilities denominated in US dollars<sup>75</sup>, in fact, represent a signal for an increased level of tolerance of domestic enterprises to developments in the international financial markets and consequently, mean their greater exposure to currency risk.

Table 1

Structure and changes to components of the domestic corporate debt

Type of debt		Structure (in %)			Absolute change (in millions of denars)			Relative change (in %)		
		2013	2014	2015	2013	2014	2015	2013	2014	2015
currency	Denar debt	19.3	21.2	22.4	7,274	11,238	11,804	13.6	18.5	16.4
	FX debt	70.8	70.5	70.6	13,186	16,606	24,503	6.3	7.5	10.3
	Denar debt with foreign exchange clause	9.9	8.3	6.9	-3,581	-2,820	-2,292	-10.3	-9.1	-8.1
maturity	Short-term debt	33.9	35.4	33.3	-1,914	13,437	4,116	-1.8	12.6	3.4
	Long-term debt	59.2	57.4	59.8	15,516	9,028	28,347	9.1	4.9	14.6
	Other debt (past due and nonperforming)	6.9	7.2	6.9	3,277	2,559	1,551	17.8	11.8	6.4
type of interest rate	Debt with fixed interest rate	18.6	22.0	24.8	13,093	12,084	6,405	32.0	22.4	9.7
	Debt with floating interest rate	34.1	32.9	29.9	5,594	-956	7,686	7.4	-1.2	9.6
	Debt with administrative reviewable interest rate	44.2	41.8	41.6	5,177	8,449	12,331	5.3	8.2	11.1
	Other - debt without interest	3.0	3.3	3.7	1,280	1,773	2,232	19.1	22.2	22.9

Source: The National Bank on the corporate debt to banks and nonresidents, the Ministry of Finance on the corporate debt to leasing companies and financial entities.

Note: The corporate debt to financial entities is included in the calculations after 2014. In the maturity structure of the debt, the share of other (past due and non-performing) debt is obtained based on the data for the indebtedness of the corporate sector to banks, due to unavailability of data on the non-performing debt to other creditors. The structure of the debt by type of interest rate is obtained according to the debt to the banking system and debt on the basis of principal on loans to nonresidents.

<sup>72</sup> More details on the dynamics of external indebtedness can be seen in the section of this report for the domestic macroeconomic environment, as well as in the Annual Report of the National Bank for 2015, available on the website of the National Bank, in the section 3.4.4 Balance of payments, international investment position and external debt.

<sup>73</sup> Loans denote relations between residents and non-residents (claims or liabilities) arising from direct borrowing of funds based on credit or loan agreement, including intercompany loans.

<sup>74</sup> Trade (commercial) credits denote relations between residents and non-residents (claims or liabilities) arising from direct loan approval from the supplier (supplier) to the buyer (receiver) on the basis of trade in goods and services, advance payments for trade in goods and services or for performing work.

<sup>75</sup> The value of the US dollar, as well as of other currencies, against the denar, fluctuates according to changes in their parity against the euro.



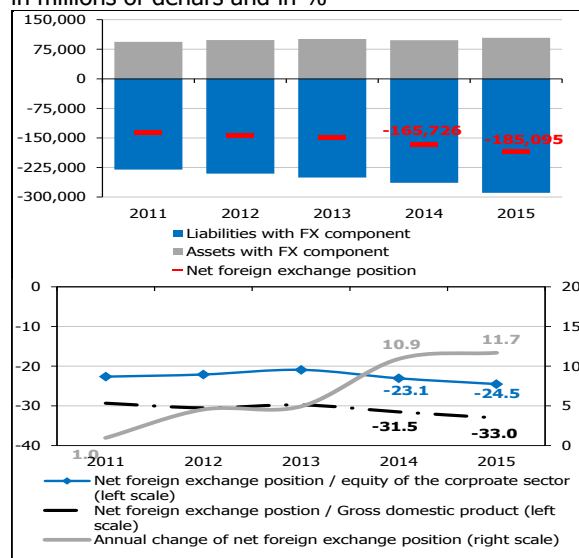


The weaker net corporate debt from domestic banks resulted from the twice as high growth of its deposits in the banking system (13.3%), compared with the growth of loans (6.6%). **Hence, the growth of indebtedness of the corporate sector to domestic banks<sup>76</sup> in 2015 registered a slight slowdown, from 8.0% in 2014 to 6.6% in 2015.** The debt of industry and trade, transport, storage and hotels and restaurants dominates the structure of indebtedness of the corporate sector by individual activities, which account for more than three quarters of the total corporate debt to domestic banks, whereby these two activities form 73% of the total annual growth of indebtedness of the corporate sector to domestic banks (Annex 9). The banking system has provided support to the corporate sector in the form of off-balance sheet instruments<sup>77</sup>, which at the end of 2015 amounted to Denar 36,903 million, with an annual growth of 13.0%.

**In terms of maturity structure of the domestic corporate debt, long-term debt has the main place, which increased by 23.2% during 2015.** The accelerated growth of the long-term debt results from the corporate debt to non-residents which conditioned about 80% of the total growth of the long-term indebtedness of the corporate sector. The slowdown in the growth of non-performing or past due debt, should also be noted. Although due to the partial coverage of data included in non-performing debt<sup>78</sup>, its amount and structural share are underestimated, however, the slowdown in non-performing debt is important with respect to the assessments of the creditworthiness of companies by creditors. The dynamics of non-performing debt is manifested in conditions of adverse domestic environment and plays an important role in

Chart 59

Net currency position of the corporate sector  
in millions of denars and in %



Source: The National Bank of the Republic of Macedonia and the State Statistical Office for the gross domestic product.

determining both the conditions of access to new funding sources of the domestic corporate sector and the risk premium creditors embed in the funding of domestic companies and through it, on the cost of debt, i.e. the cost of financing that is borne by the domestic corporate sector.

**Foreign currency debt has the largest share in the currency structure of the corporate debt, which primarily stems from the important role of the debt to non-resident creditors.** Over three quarters of the total corporate debt is with FX component (currency and denar with a currency clause). The corporate debt to domestic financial institutions is characterized by mixed currency structure, but the annual change refers to the increase in denar debt and the decrease in FX component debt. It is worth to note that for the third consecutive year, the denar debt with a currency clause has been decreasing.

<sup>76</sup> Corporate debt to the banking system includes debt based on credits, interests and other claims. More than 98% of the total domestic corporate debt to the banking sector is based on loans.

<sup>77</sup> Off-balance sheet exposure of banks to the corporate sector is not included in the corporate debt in the corporate debt analysis, and indicates potential future liabilities of the corporate sector to other creditors or potential additional borrowing from banks.

<sup>78</sup> Regarding the debt to non-residents, it cannot be determined how much of the debt is due or non-performing and therefore this data on the non-performing debt arises only from the debt of the corporate sector to the domestic banking system, which means that there is a risk of underestimation of the growth of this debt component.



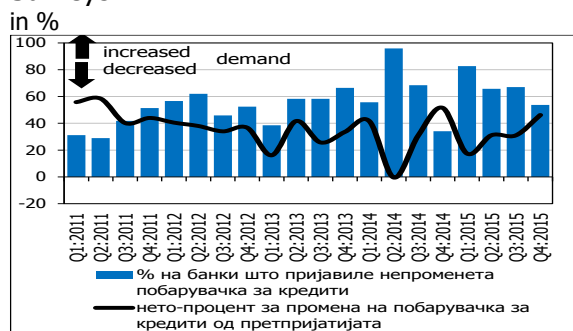
Although the contribution of FX component debt is larger to the annual growth of the total corporate debt (from domestic financial institutions and foreign creditors), however, the fastest growth of 16.4% in 2015 was recorded in denar debt (mainly due to debt to domestic banks). In terms of individual currencies, most of the debt with currency component of the domestic corporate sector (over 85%) is expressed or indicated in euros, followed by the debt in US dollars (about 13%).

Given the significant presence of funding with currency component, **net currency position<sup>79</sup> of the domestic corporate sector is short (negative)**, which means that the corporate sector has a larger volume of liabilities than assets with currency component. At the end of 2015, the negative currency position deepened annually by 11.7%, which is the highest change in the past five years. Also, there was an increase in the share of the negative net currency position of the corporate sector in the gross domestic product, as well as in its ratio to equity and reserves of the corporate sector. These developments indicate increased exposure of the corporate sector to currency risk, highlighting the sensitivity of its performances to the developments on the international foreign exchange market. In this context, the National Bank's policy to maintain a stable exchange rate of the denar against the euro actually enables sustainability of the level of debt and reduction in the possible negative spillover effects of the fluctuations of the inter-currency markets on the performance of the corporate sector.

**The sensitivity of the corporate sector to developments in market variables includes the exposure to changes in domestic and international interest rates.** Due to the historically low levels of interest rates on domestic and international financial markets, there

Chart 60

Assessment of demand for loans by companies according to Bank Lending Surveys



Source: NBRM, based on data in Bank Lending Surveys.

\*Note: The banks' percentage is weighted with the share of each bank in the total loans of corporations on specific dates. Net percentage is the difference between banks that have reported increased demand and reduced demand for loans from companies.

is greater likelihood of upward movement in the future, whereby the interest rate risk becomes important to the domestic corporate operation and is an additional source of its vulnerability. The exposure of the corporate sector to the risk of adverse movements in interest rates results from the high share (over 71%) of credit liabilities which have a price (interest rate), whose amount can be changed depending on market movements in interest rates, and thus the cost of companies which use such credits can be altered. Thus, about 30% of loans to the corporate sector, obtained primarily from foreign creditors, have floating (variable) interest rate, whose change is directly related to the movement of the selected key market interest rates. Regarding these loans, the effect of changes in the key interest rates would be automatically transferred on the cost of financing

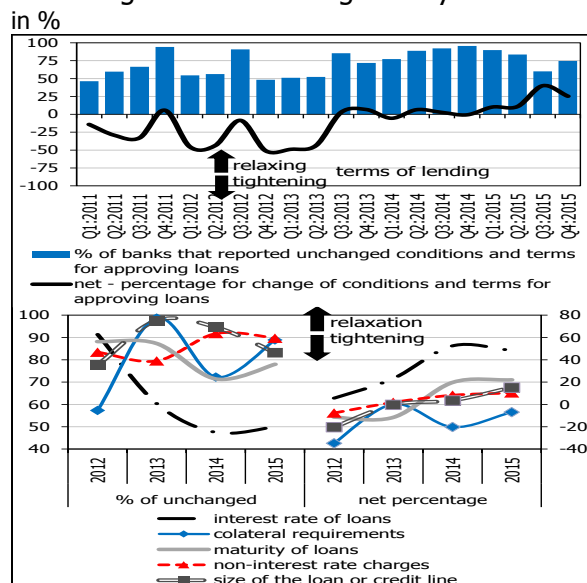
<sup>79</sup> Net currency position is calculated as the difference between assets and liabilities with currency component of the corporate sector. If the difference is positive, i.e. the assets are greater than liabilities, it is a long net currency position, and vice versa, if the liabilities with currency component exceed assets, it is a short net currency position. Assets with currency component include deposits with currency component, total claims on non-residents including cash on accounts abroad and investments abroad. Liabilities with currency component include: credits with a currency component from domestic banks and total liabilities to non-residents. The stock of investments abroad as of 31 December 2015 is based on data as of 31 December 2014, since the data for 2015 becomes available in the second half of 2016.



companies. In addition, over 40% of the total domestic corporate debt, fully approved by the domestic banks, contain clauses for the possibility of unilateral adjustment of the level of interest rates by a discretionary decision of the bank. Hence, the possible increase in the level of adjustable interest rates and creates a risk of disproportionate increase in financing expenses of the domestic corporate sector and limiting the ability to plan in advance the cost of financing. Domestic banks, with the use of such clauses in loans (and also, in deposits), transfer the risk of changing interest rates on domestic borrowers, whereby on the one hand provide own protection against the movements on financial markets, while on the other hand, create the opportunity to adjust the realized profit with its planned size. Over 80% of the domestic corporate debt to domestic banks is with adjustable interest rates (Annex 10), which illustrates the attractiveness of such clauses for banks. Loans with fixed interest rate, where the cost of financing is known in advance throughout the duration of the contract, accounted for slightly less than a quarter in the structure of loans, while the interest-free debt accounted for 3.7%. These two components of loans to the corporate sector mostly (over 85%) result from the loans from non-residents, including the interest-free loans from foreign parent entities.

Chart 61

Assessment of the total (up) and individual (down) terms of lending to companies according to Bank Lending Surveys



Source: NBRM, based on data in Bank Lending Surveys.

\*Note: The banks' percentage is weighted with the share of each bank in the total loans of corporations on specific dates. Net percentage is the difference between banks that have reported increased demand and reduced demand for loans from companies.

**According to the Bank Lending Survey, which is conducted by the National Bank<sup>80</sup>, banks, on average, assessed the demand for loans to the domestic corporate sector in 2015 as unchanged, with a slight tendency to increase.** Individual factors<sup>81</sup> affecting the demand for loans, according to the banks' assessments, on average, in 2015, mainly contributed to the unchanged demand. Factor that had the highest average impact for the increased demand for loans, as assessed by banks, was the need for debt restructuring, followed by financing investments of companies in inventories and working capital.

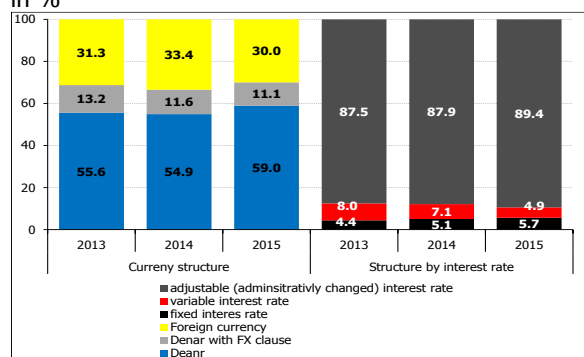
Regarding **the terms of lending to the corporate sector**, most of the banks during 2015, mostly reported that they remain unchanged. However, it should be noted that among the banks that emphasized changing terms of lending, changes are mainly related to easing. Hence, the net effect of changes in the terms of lending to companies, during 2015, was positive and higher than in previous years. In terms of individual term of lending, for the third consecutive year, banks reported that interest

<sup>80</sup> Surveys are conducted on a quarterly basis and, among other things, in them, banks add their own perceptions of lending to domestic companies. For the purposes of this section of the Financial Stability Report, the results of these surveys are analyzed as average results of the four quarterly surveys relating to each calendar year. More detailed results of the individual lending surveys are available on the web site of the National Bank.

<sup>81</sup> Factors whose impact on the demand for loans by the corporate sector is assessed by the banks are as follows: fixed investments financing needs, inventories and working capital financing needs, debt restructuring, internal financing, loans from other banks and issuance of securities.

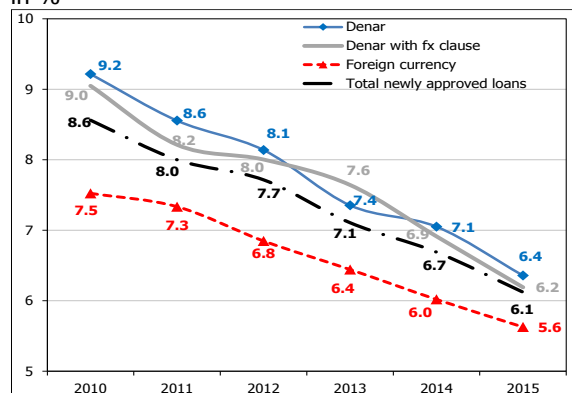


Chart 62  
Structural features of new loans by the banks for the corporate sector  
in %



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

Chart 63  
Average annual nominal interest rate on new loans to the corporate sector by banks  
in %



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

Note: The average interest rate is obtained by weighting the interest rate on the newly extended loans in each month with the share of new loans of the relevant calendar month in the total newly extended loans during the year.

rates have the greatest impact on the easing of the overall terms, which may be related to low key interest rates in 2015 on domestic and international financial markets. Although with little effect, in 2015, only the requirements of banks for collateralization of loans, on average, contributed to the tightening of the terms of lending to companies.

The avoidance of banks to expose themselves to risk of changing interest rates in the loan portfolio is reflected through **the structure of new loans to the corporate sector**. Usually, new loans with adjustable interest rates take the main place, with a modest share of loans with fixed interest rates. This feature was present in new loans during 2015. On the other hand, in 2015, there was a continuation of the trend of gradual change in the currency structure of new loans to domestic companies, by increasing the relative share of Denar loans, at the expense of the decreased share of new loans in foreign currency. This actually causes changes in the currency structure of the corporate debt to domestic banks, specifically increasing the share of the debt in denars. The currency transformation of the sources of funding of banks was the main driver of the process of increasing the share of the newly extended Denar loans in the past few years, primarily the faster growth and rising the structural share of Denar deposits. Hence, any turbulences in the deposit market, as the outflow of deposits or currency substitution, will inevitably reflect on the credit supply and its currency structure. The dynamics of the level of interest rates on new loans can serve as an additional incentive for the increased propensity of domestic banks to approve Denar loans.

The downward trend of interest rates on new loans from domestic banks for the corporate sector continued in 2015, whereby the spread between loans in denars and loans in foreign currency, as a measure of the additional premium that banks incorporate for currency risk, is at the historically lowest level. In such circumstances, the difference in interest rates, i.e. the cost effect

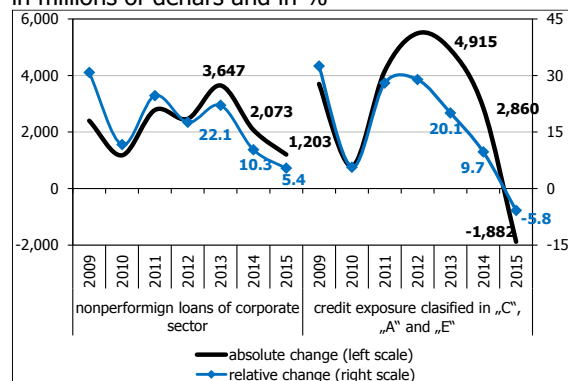


of funding in foreign currency, loses its importance, as one of the most common motives by the debtors to finance in foreign currencies at the expense of the domestic currency. In addition, it is noticeable that the interest rate on the newly extended loans with FX clause, is not at a level similar to interest rates on the newly extended foreign currency loans, but is closer to the interest rate on Denar loans. Hence, banks through FX clauses, not only have they found a mechanism in the form of so-called "embedded purchased options", which transfer the currency risk on clients, but also receive such created options with certain premium<sup>82</sup>.

Chart 64

Growth of non-performing debt and debt with a higher risk of domestic corporate sector to banks

in millions of denars and in %



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

**Improving the performances of the corporate sector in 2015 affected the dynamics of the credit risk exposure of banks to the corporate sector, i.e. the materialization of credit risk reduced.** Thus, the annual growth of non-performing loans to the corporate sector of 5.4%, was almost twice lower compared to 2014. In addition, for the first time in the period after the global financial crisis there was a decrease in exposure to the corporate sector, classified by banks as riskier. One part of the decrease in exposure with a higher degree of risk arises from written off claims of banks from the corporate sector, which in 2015 were higher by 14.8% compared with 2014. Restructuring of corporate loans by banks was in a minimal scope during 2015, still their share in the total debt of the corporate sector to domestic banks is above 10%. Exactly restructured loans are an important potential source of losses for banks in the future. These losses generally occur when the change in the terms of lending had not been made in an appropriate manner, whether due to maladjustment of the specific circumstances relating to specific debtor, differences in

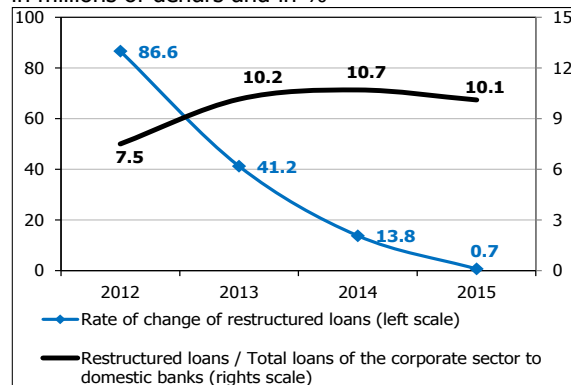
<sup>82</sup> The premium of these embedded purchase options should be borne by (i.e. to "pay") the holder of the option, which in the case of denar loans with FX clause is the entity for whose benefit the clause is set, i.e. banks. Newly extended loans with FX clause, according to the exposure to currency risk they create for banks and / or borrowers, have the same profile as foreign currency loans. Furthermore, both loans in foreign currency and loans in denars with clause are loans with currency component and are included in the relevant reports on foreign assets of banks and consequently, have a share in determining the aggregate currency position of individual banks. Hence, the amount of the embedded options premium (the price of FX clause) could be approximately determined by the difference between interest rates on new loans in denars and new loans in foreign currency, which in 2015 equaled 0.8 percentage points, on average. However, the premium paid by banks for the "embedded purchase option" in denar loans with FX clause instead of 0.8 percentage points, amounted to only 0.2 percentage points, which actually means "saving" of 0.6 percentage points for a certain amount of loan.



Chart 65

Relative importance and annual growth of restructured corporate loans by domestic banks

in millions of denars and in %

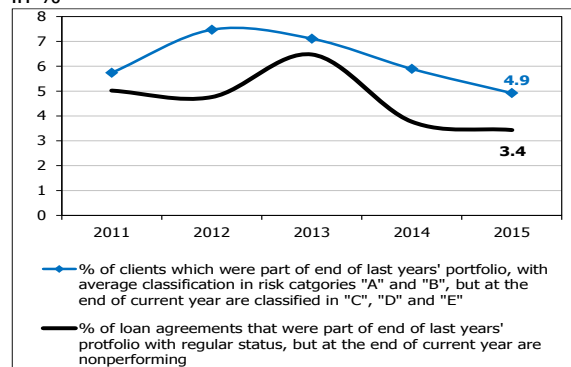


Source: NBRM, based on the data submitted by banks.

Chart 66

Estimated default rate of the corporate sector to the domestic banking system

in %



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

management capacity and policies of individual banks or because of excessive unfounded optimism in projections of the operational effects of restructuring.

In 2015, **the estimated approximate rate of default of the corporate sector to domestic banks decreased.** Thus, the share of clients who migrated from A and B risk categories to C, D and E risk categories throughout the year fell (and equaled 4.9%) at the end of 2015, which is another indication of the improved performances of the domestic corporate sector. However, operational risks in domestic companies, translated into poor operating results and the large number of entities operating at a loss, can cause increased default and deterioration of the banks' loan portfolio quality. These operational risks to domestic companies would particularly come to the fore in any weakening of domestic demand influenced by the unfavorable general economic environment.





### III. FINANCIAL SECTOR

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

The total assets of the financial sector in 2015 have been increasing, but at slower pace, with the growth being mostly conditioned by the banking system<sup>83</sup> and the pension funds. Since their share is the largest, the banks are the most important factor in maintaining the stability of the entire financial system, as well as other institutional segments. Although smaller in scale, the pension funds, as financial intermediaries, are also of key importance for the long-term financial stability of the households, representing an important component of household assets. Pension funds, together with the insurance companies have large potential for further growth, but in recent years they operate in an extremely unfavorable market conditions for investment and fertilization of funds to the final beneficiaries.

Table 2

Structure of the total assets in the financial system of the Republic of Macedonia

Type of financial institution	Total assets (in millions of denars)		Structure in %		Change 31.12.2015/31.12.2014		Number of institutions	
	2014	2015	2014	2015	Absolute change	In percent	2014	2015
<b>Depository financial institutions</b>	<b>403,176</b>	<b>426,313</b>	<b>87.5</b>	<b>86.4</b>	<b>23,137</b>	<b>5.7</b>	<b>19</b>	<b>18</b>
Banks	400,281	423,668	86.8	85.8	23,386	5.8	15	15
Saving houses	2,895	2,646	0.6	0.5	-249	-8.6	4	3
<b>Non-depository financial institutions</b>	<b>57,772</b>	<b>67,278</b>	<b>12.5</b>	<b>13.6</b>	<b>9,506</b>	<b>16.5</b>	<b>101</b>	<b>108</b>
Insurance companies	16,416	17,562	3.6	3.6	1,146	7.0	15	15
Insurance brokers	n/a	689	n/a	0.1	n/a	n/a	30	32
Insurance agents	n/a	89	n/a	0.02	n/a	n/a	11	13
Leasing companies	4,311	3,408	0.9	0.7	-903	-20.9	8	8
Pension funds*	33,580	40,802	7.3	8.3	7,222	21.5	4	4
- Mandatory pension funds	33,074	40,065	7.2	8.1	6,991	21.1	2	2
- Voluntary pension funds	506	737	0.1	0.1	231	45.7	2	2
Pension fund management companies	508	773	0.1	0.2	265	52.2	2	2
Brokerage companies	178	153	0.0	0.0	-25	-14.0	6	6
Investment funds*	1,950	2,882	0.4	0.6	932	47.8	13	13
Investment fund management companies	33	49	0.0	0.0	16	48.5	5	5
Private equity fund management companies	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Financial companies	796	871	0.2	0.2	75	9.4	7	10
<b>Total</b>	<b>460,948</b>	<b>493,591</b>	<b>100.0</b>	<b>100.0</b>	<b>32,643</b>	<b>7.1</b>	<b>120</b>	<b>126</b>

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

\*The amounts refer to total gross assets.

Note: According to the regulation, private funds and private fund management companies have no obligation to provide data on the value of their assets and net assets. In accordance with the Law on Supervision of Insurance, insurance brokerage houses and insurance agents are not required to submit financial reports to the Insurance Supervision Agency.

**In 2015, the structural changes of the financial system continued. The number and the scope of activities is still falling<sup>84</sup>, as well as the role of the leasing companies and brokerage houses. The growth in the financial companies' activities accelerated twice faster, but their significance within the entire system remains negligible.**

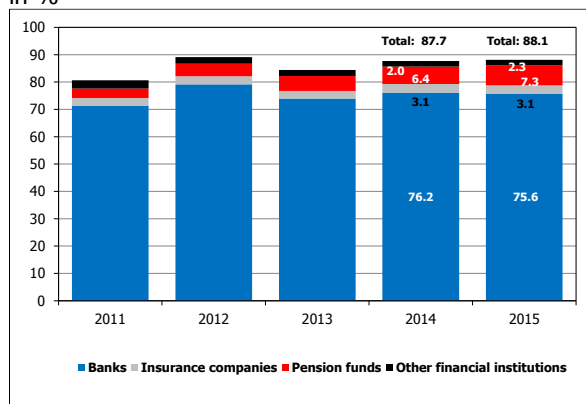
<sup>83</sup> The term "banking system" refers only to banks, while the term "depository institutions" also includes savings houses.

<sup>84</sup> In accordance with the amendments to the Banking Law made at the beginning of 2013, the savings houses were enabled to transform into a financial company without going into liquidation, transformation into a bank, as well as certain status changes of the savings houses.





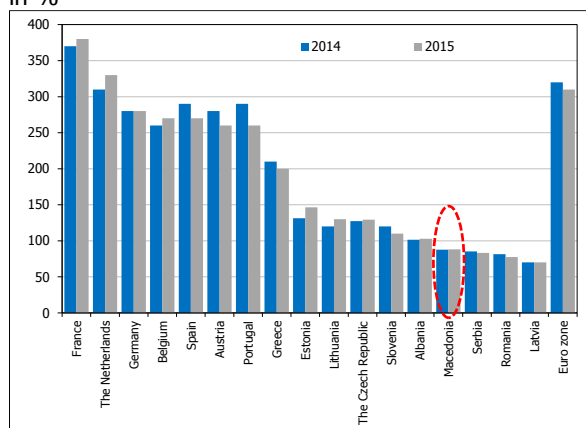
Chart 67  
Financial sector assets to GDP ratio  
in %



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

**In 2015, the assets of the financial sector in the Republic of Macedonia registered slower growth** compared to the previous year<sup>85</sup>, mainly due to the decelerated growth of assets of the banking system and the mandatory pension funds and insurance companies. The further reduction of assets of leasing companies and brokerage houses also contributed to the slower growth of the financial system's assets.

Chart 68  
Total financial sector assets to GDP ratio, by country  
in %



Source: ECB Report on Financial Structures 2015 and web sites of the central banks for individual countries.  
Note: Data on Macedonia, Albania and Estonia are as of 2014 and 2015, while the data on other analyzed countries, they are as of 2013 and 2014.

**In 2015, although the annual growth of total assets of the financial system decelerated, it became a bit more important for the domestic economy (0.4 percentage points).** The total assets of the financial system take up 88.1% of the gross domestic product<sup>86</sup>. There are still possibilities to improve the financial intermediation in the Republic of Macedonia. In comparison with selected countries of the region and the European Union, the degree of financial intermediation in the domestic financial sector is among the lowest.

**Concentration in individual segments of the financial system is high.** For banks and insurance companies, the concentration, as measured by the Herfindahl index for the assets, is acceptable, which is not the case with other segments of the financial system, where the concentration is quite high and above acceptable limits. In addition, only two of six brokerage houses account for 78.2% of total assets of this

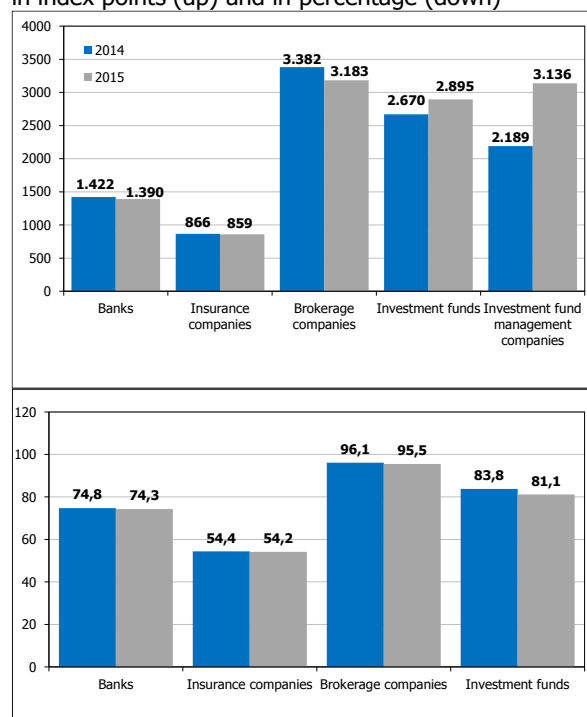
<sup>85</sup> The growth of assets of the financial system in 2014 equaled 9.3% (2015: 7.1%).

<sup>86</sup> Data on GDP in 2015 are estimated.



Chart 69

Herfindahl index and CR5 index for the total assets, by segment of the financial system in index points (up) and in percentage (down)



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

sector, while the market share of three out of thirteen investment funds in 2015 amounts to 70.6%. Also, most (72.2%) of the total assets of the investment funds management companies are concentrated in two out of five companies.

**The foreign capital prevails in the ownership structure of the financial institutions, except in brokerage and savings houses.<sup>87</sup>**

Table 3

Ownership structure of financial institutions in %

Owners	Banks	Saving houses	Insurance companies	Brokerage companies	Leasing companies	Pension fund management companies	Investment fund management companies	Financial companies
<b>Domestic owners</b>	<b>24.9</b>	<b>100.0</b>	<b>7.8</b>	<b>75.5</b>	<b>2.0</b>	<b>49.0</b>	<b>28.5</b>	<b>58.6</b>
Nonfinancial legal entities	9.3	90.3	0.8	34.8	1.3	0.0	0.0	13.3
Banks	0.1	0.0	0.0	7.0	0.7	49.0	20.3	0.0
Insurance companies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other financial institutions	0.6	0.0	0.4	0.0	0.0	0.0	4.4	0.0
Natural persons	8.9	9.7	6.6	33.7	0.0	0.0	3.8	45.3
Public sector	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Foreign owners</b>	<b>74.8</b>	<b>0.0</b>	<b>92.2</b>	<b>24.5</b>	<b>98.0</b>	<b>51.0</b>	<b>71.5</b>	<b>41.4</b>
Natural persons	2.5	0.0	0.1	15.3	0.0	0.0	0.3	3.1
Nonfinancial legal entities	8.9	0.0	0.0	0.0	5.7	0.0	9.9	35.1
Banks	56.2	0.0	0.0	1.8	13.5	0.0	0.0	0.0
Financial institutions	7.3	0.0	92.1	7.4	78.7	51.0	61.3	3.2
<b>Unclassified</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

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

Note: The share of domestic and foreign capital in the ownership structure refers to shareholder capital (core capital) of the financial institutions.

<sup>87</sup> The regulation allows only Macedonian nationals to be owners of savings houses.

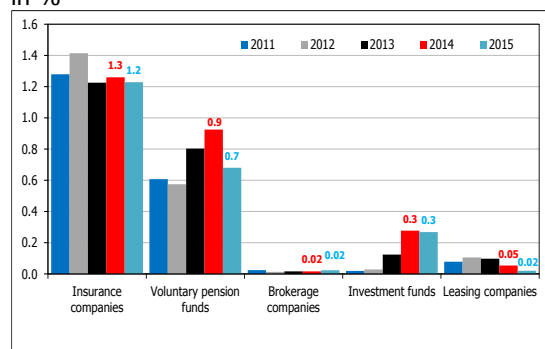


## 2. Cross-sector relation, "contagion" channels and their impact on financial stability

The financial system of the Republic of Macedonia has simple structure with minimal interdependence and connection of its individual segments. In recent years, there is larger interest for combining insurance and banking products (for example bank insurance), but their scope is still small. As a result, the possibility of risk spillover from one institutional segment to another is limited, thus limiting also the risks of deteriorating the financial stability in the country on that basis.

Banks are the main connectors within the financial segment having the largest impact on the overall developments in the financial system, which is achieved primarily through the deposits the other financial institutions hold in the banks. Although these deposits are almost insignificant as a source of funds for the banks (3.4% of their total deposit base), they are especially important for some financial institutions as they represent a significant portion of their investments. Therefore, it can be said that the banking system is the key segment, which can transfer risks to other segments of the financial system and its stability is crucial for the maintenance of financial stability, especially considering that it also holds the savings of the non-financial sector.

Chart 70  
Share of deposits of individual non-depository financial institutions in the total assets of the banking system in %

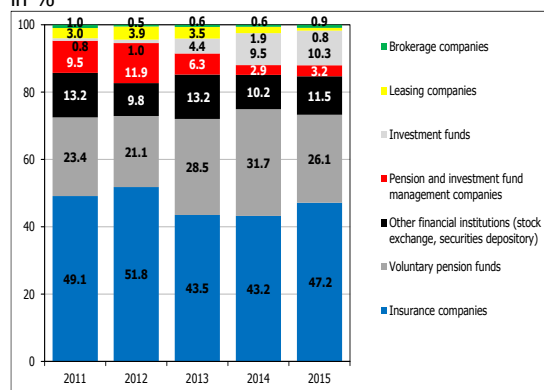


Source: NBRM, based on data submitted by banks.

In conditions of poor development of the financial markets and limited offer of financial products and instruments, **substantial part of the assets of non-depository financial institutions are placed in banks.** The deposits<sup>88</sup> of the non-depository financial institutions in the banks, totaled Denar 11,035 million at the end of 2015, which is an annual decrease of 5.4%. Assuming lower liquidity of non-depository financial institutions, i.e. need of deposit withdrawal from the banks, the liquidity and stability of the banking system as a whole would not be hindered. Namely, their share in the total assets and the banks' total deposit base is small and it equals 2.6% and 3.4%, respectively. However, the situation is slightly different in banks, where the share of deposits of non-depository financial institutions in total deposits reaches up to one-quarter (by bank, it ranges from 0.9% to 24.2%). This indicates that other financial institutions are important depositors for some of the banks, as confirmed by the recent events in April and May 2016, which showed that the sudden deposit withdrawal by financial institutions from some of the smaller banks could cause certain liquidity instability in these banks.

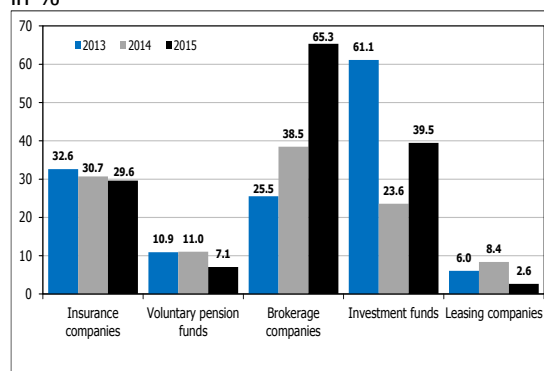
<sup>88</sup> Deposits also include transaction accounts of other institutional segments in the banks.

Chart 71  
Deposits of financial institutions with banks, structure in %



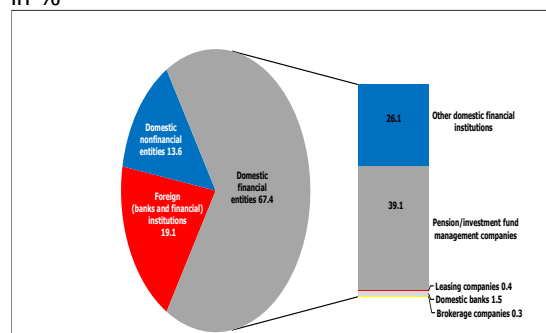
Source: NBRM, based on data submitted by banks.

Chart 72  
Share of deposits of non-depository financial institutions in banks in their total assets in %



Source: NBRM, based on data submitted by banks.

Chart 73  
Structure of banks' investments in financial institutions in %



Source: NBRM, based on data submitted by banks.

Accordingly to the nature of individual segments of the financial system, and the regulatory opportunities/limits, and even the capacity to invest in international markets, **the deposits placed with banks have a significant share in the assets of some financial institutions** (65.3% in brokerage houses, 43.4% of companies managing pension and investment funds, 39.5% in investment funds, 29.6% in insurance companies).

**The mutual lending, primarily through the interbank loans, is also seen as possible risk spill-over channel through the financial system.** The share of the bank loans extended to other financial institutions, in the total bank loans, equals only 4.9%, and if include the interbank loans, it would equal 17.5%. Due to the low activity on the interbank market and mostly sufficient liquidity in the financial system, primarily of banks, the importance of this risk transmission channel through the financial system, is reduced to minimum.

**In recent years, the interest for combining insurance and bank products and services (bank insurance) has increased.** The scope of these products increased by approximately 80% in 2015, but they still remain insignificant item in the both segments' balance sheet (they equal only Denar 3.3 million).

**The capital (ownership) connection between the financial system segments is small, which is also a factor that does not elevate risks for the financial stability.** The banks' capital investments in the total assets of the banking system maintained last year's level and amounted to only 0.4%. Most of these investments (67.4%) are in domestic financial entities, especially in pension and investment fund management companies (39.1%), as well as other domestic financial institutions (26.1%), such as MSE, CSD, KIBS, CaSys). **The ownership connection between individual banks is very small.** In fact, the main channel for possible intersector risk spillover due to



capital connection between individual financial segments is the ownership of pension funds management companies by two banks. This connection is extremely important for the financial stability because it encompasses both major segments of the system, which are extremely important for the financial security of households, as well as for the overall economy.



### 3. Depositary institutions

#### 3.1. Banks

In 2015, despite all the challenges, the banking system preserved its stability thus proving the resilience to shocks from domestic and external environment<sup>89</sup>. Amid solid economic growth in the country, the intermediation role between depositors and credit users continued to strengthen, but at a slower pace. The uncertainty stemming from the domestic political turmoil and the outcome of the debt crisis in Greece, coupled with the environment of historically low interest rates, at both domestic and international financial markets, limited the opportunities for faster growth of non-financial entities' deposits. The annual growth rate of deposits from non-financial entities significantly slowed down (by 4 percentage points), while banks preserved almost the same annual growth rate of loans to non-financial entities (9.7%), registered in 2014. Banks provided most of the credit support to natural persons in order to finance their consumption, to the participants on the real estate market, as well as non-financial companies from "wholesale and retail trade" and the processing industry. Hence, the performance of only several segments of the banks' loan portfolio are of key importance for the quality of almost total credit exposure to non-financial sector.

The banks' credit channel registers smaller impairment compared to previous years. The non-performing loans grow, but at almost twice lower annual rate (which equals 4.7%). Amid minimal credit growth slowdown, the share of these loans in the total loans recorded an annual decrease of 0.5 percentage points and accounted for 10.8%. In addition, the risks the non-performing loans pose to banks' solvency minimized, given their high coverage with allocated impairment (86.7%), which limits the possible negative effects on the banks' capital positions in case of extreme unfavorable events. Currently, the banks generally set the percentage of impairment of regular loans (or average risk level of performing loans) at appropriate level. However, the losses due to materialization of the credit risk may go beyond the banks expectations, especially in unfavorable business conditions. Such exceeding is possible mostly because of the substantial concentration in the banks' credit portfolios, high costs or inability to collect the loan collateral (at favorable prices), as well as because of loans where the clients' cash flows is harder to follow (ex. bullet loans and loans with a grace period) or loans where impairment of value can be "concealed" (i.e. prolonged loans).

The most significant factors for the stability and resilience of the banking sector to internal and external shocks are its stable and high liquidity and solvency. The liquidity of the banking system remains satisfactory, despite the certain decrease in the indicators in 2015. Typically, banks maintain a high amount of liquid assets, which at the level of the total banking system, represent about one third of the total assets, covering about 55% of short-term liabilities, i.e. more than 80% of the contractual liabilities with residual maturity up to 30 days. However, indicators

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<sup>89</sup> On a regular quarterly basis, the National Bank prepares reports on the risks in the banking system of the Republic of Macedonia, which provides more details on the situation, activities and the exposure of the banking system to individual risks. The reports are published on the website, under "Publications" or "Banking Supervision".



of coverage of foreign currency liabilities with foreign currency liquid assets are far lower than indicators of the denar liquidity, which leads to more pronounced sensitivity of banks to larger foreign currency outflows and consequent danger of creating significant pressure on the domestic foreign exchange market in any crisis events.

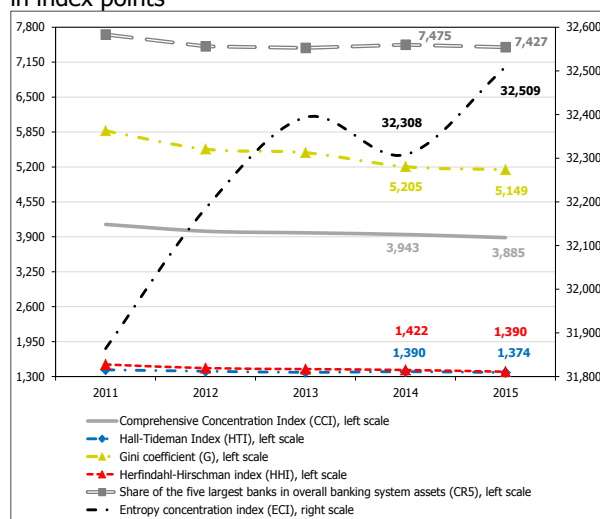
As of 31 December 2015, the capital adequacy ratio was almost twice the legally prescribed minimum and equaled 15.5%. Profit is the main source of strengthening the banks' capital position, which underlines the importance of profitability, not only for the stability of the banking system, but also for increasing the banks' activities. In 2015, again there was an improvement in the profitability of the banking system relative to the previous year, mainly due to larger decrease in interest expenses, compared to the interest income, with the cost-efficiency of the banking system being also improved. Amid steady decrease in the deposit interest rates, the banks are strongly challenged to retain the current and to attract new deposits, which would further raise the volume of activities and maintain profitability. The non-economic factors, i.e. escalation of the domestic political crisis in the second quarter of 2016, re-created psychological pressure on depositors, especially on households and caused deposits withdrawal from the banking system. The tightening of monetary policy of the National Bank, i.e. increasing the interest rate on the main instrument by 0.75 percentage points (to 4%) in May 2016, contributed to stabilization of these movements, and the expectations are that the tightening will contribute towards increase in the deposit interest rates, which, however, ultimately depends on the banks' policies. The main challenge for banks in the coming period is associated precisely with the development and the possible negative effects of the political crisis in the country. The possible continuation of the political crisis and its escalation can have adverse effects on the deposit growth, and indirectly, on the possibility to intensify the banks' credit activity.





Chart 74

Concentration indices\* in the banking system, by the amount of assets in index points



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

\* With exception to **ECI** (entropy coefficient) and **HHI** (Herfindahl -Hirschman index), all indices range from 0 (all banks have equal market shares) to 10,000 (monopoly). **ECI** ranges from 0 (monopoly) to  $\log_2 n \times 10,000$  (all banks have equal market shares), while **HHI** of  $\frac{1}{n} \times 10,000$  (all banks have equal market shares) to 10,000 (monopoly).

$$CCI = \left( s_1 + \sum_{i=2}^n s_i^2 (1 + (1 - s_i)) \right) \times 10,000;$$

$$HTI = \left( \frac{1}{2 \sum_{i=1}^n i s_{i-1}} \right) \times 10,000 ;$$

$$G = \left( \frac{2 \sum_{i=1}^n i y_i}{n \sum_{i=1}^n y_i} - \frac{n+1}{n} \right) \times 10,000;$$

$$HHI = \left( \sum_{i=1}^n s_i^2 \right) \times 10,000;$$

$$CR5 = \left( \sum_{i=1}^5 s_i \right) \times 10,000;$$

$$ECI = \left( - \sum_{i=1}^n s_i \log_2 s_i \right) \times 10,000,$$

where,  $s_i$  denotes the bank's share  $i$  in the total assets of the banking system,  $n$  denotes the number of banks in the system, while  $y_i$  denotes the assets amount of the bank  $i$ .

There are several banks in the banking system that are systemically important, and whose achievements have a leading role for the entire banking sector and the domestic economy. The concentration in the banking system is reducing slowly, but continuously. On 31 December 2015, the three and the five largest banks in the system<sup>90</sup> take almost 60% and 75%, respectively, out of the total assets in the banking system.

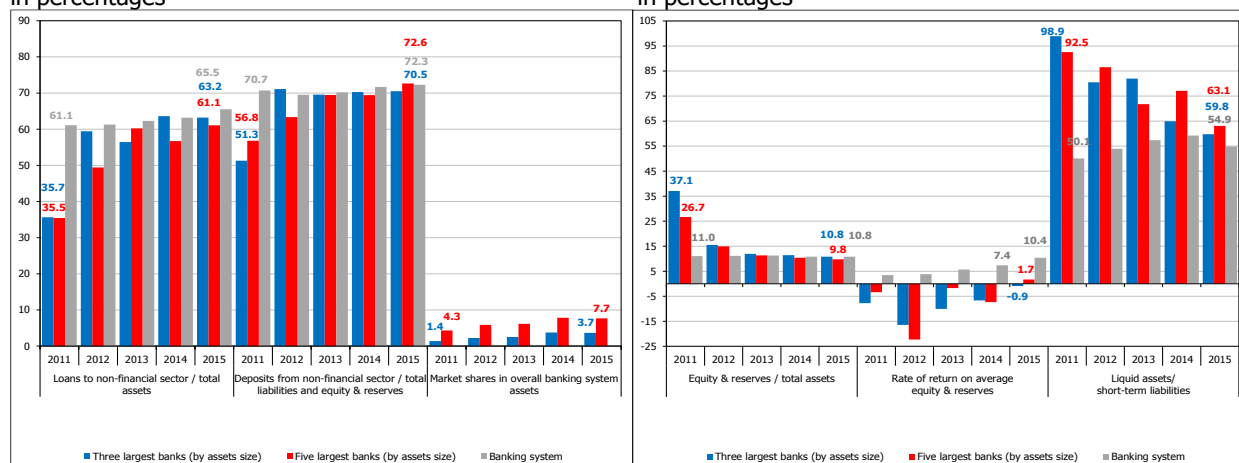
The strategic risk remains to be quite significant for small-size banks in the system. Despite present market consolidation and certain activities growth acceleration with the smallest banks in the system, however in the past several years these banks continue to not generate enough high and stable income, which would provide consistently positive financial results and long-term prospects for their existence.

<sup>90</sup> The banking system consists of 15 banks.



Chart 75

Level of activities, capitalization, profitability and liquidity of the three and the five smallest banks in the system  
in percentages



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

Table 4

Selected indicators of foreign banks that have subsidiaries in Macedonia, as of 31 December 2015

in percentages, except credit rating

Bank	Macedonian subsidiary assets / foreign (parent) bank assets	Credit rating (the last published, according to Fitch)	Equity and reserves / total assets	ROAE	Loans / deposits	Average level of risk (refers to loans)
NBG S.A. Athens	1.8	RD; RD (restricted default)	10.8	-5.7	141.2	22.8
NLB d.d. Ljubljana	12.9	BB+/stable; B	14.3	3.6	89.4	12.6
Steiermärkische Bank und Sparkassen AG Graz	2.2	-	7.7	1.1	112.3*	3.6*
Alpha bank S.A. Athens	0.1	RD; RD (restricted default)	13.0	-13.5	185.1	19.0
SocGen S.A. Paris	0.05	A/stable; F1	2.9	3.2	73.3	1.6
ЦКВ АД София	5.6	-	8.2	1.8	51.4	2.6
Halkbank A.S. Ankara	0.8	BBB-/stable; F3	10.3	12.9	103.0	2.4

Source: Internet sites of banks.

\*Note: The data marked with an asterisk (\*) are calculated for the banking group. All other data are calculated for the parent bank.

In May 2016, Alpha Bank S.A. Athens (Alpha bank S.A. Athens) has sold Alfa Banka AD Skopje.

On the other hand, smaller banks in the system registered a solid level of utilization of the current sources of funds and any further significant increase in the volume of activities of these banks should be accompanied by finding new, fresh sources of funding (primarily, capital). Namely, compared to the period five years ago when smaller banks "swam" in liquidity and capital, in 2015, the solvency and liquidity indicators in these banks are at the level similar to the one characteristic for the total banking system. Hence, some of the smaller banks are very likely to face the need of changing the business model or the operating strategy.

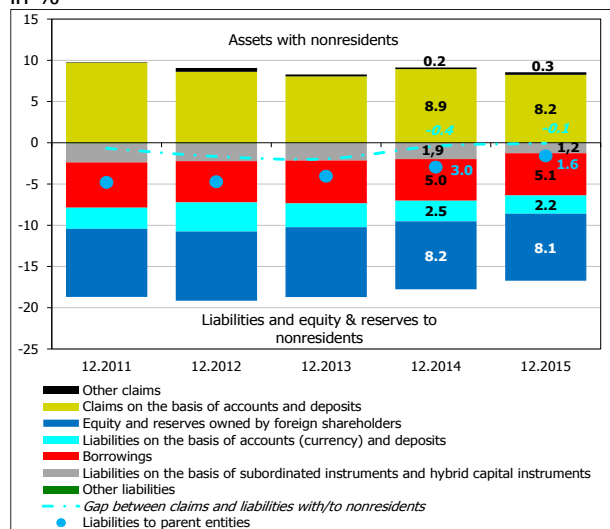
**Foreign shareholders are predominant in the ownership structure of banks (in 2015 this share was 74.8% of the share capital). Hence, the banking system is influenced by economic and non-economic risk factors, arising from the banks' parent entities and their home country.** Seven Macedonian banks are subsidiaries of foreign banks<sup>91</sup>, five of which are based in the euro area (market share of subsidiaries of foreign banks based in the euro area is 49.7%). Analyzed by country of origin of

<sup>91</sup> In May, 2016, one of the "Greek"-owned banks, Alfa Banka AD Skopje, is sold to a shareholder from Switzerland.

Chart 76

Shares of claims and funding sources originating from non-residents in the assets (liabilities)

in %



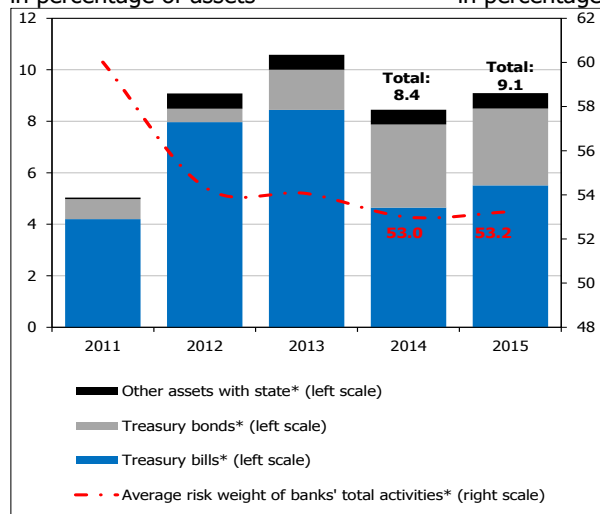
Source: NBRM, based on the data submitted by banks.

Chart 77

Share of claims on the government\* and average risk weight of banks' total activities\*\*

in percentage of assets

in percentage



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

Note: \* In the calculations of shares, claims on the government are included according to their net accounting value.

\*\* The average risk weight is calculated as a ratio between risk weighted assets and total banking system balance and off-balance sheet exposure.

the foreign bank, the highest is the market share of the Macedonian banks owned by banks based in Greece. Although this neighboring country is facing severe debt crisis and banks there face problems and significant outflows of deposits, it did not affect substantially the stability of the Macedonian banks, which are separate and independent legal entities established in the Republic of Macedonia, with their own management bodies, own capital and high solvency.

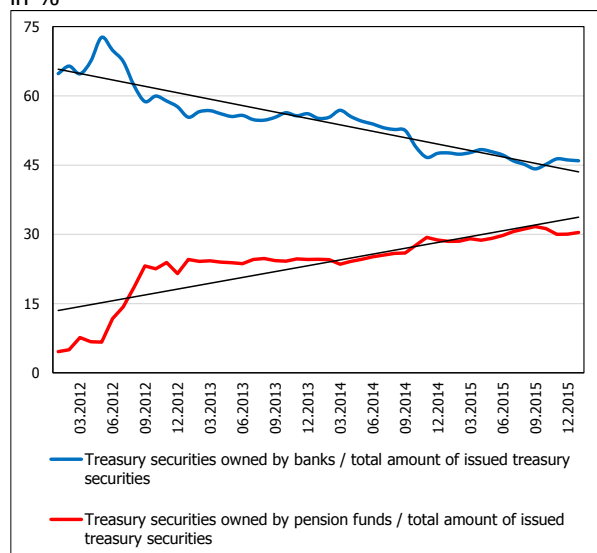
**The trend of financial deleverage of the banks in Eastern and Southeastern Europe to their parent entities based in EU countries did not avoid the Macedonian banking system. However, despite the predominant share of foreign shareholders in the ownership structure, the domestic banking system registered moderate scope of activities with non-residents, which additionally decreased in 2015.** In 2015, claims and liabilities from/to non-residents decreased, with their share in total assets (liabilities) of the banking system being reduced to the level of about 8.5%. The placements with non-residents are mostly liquid, composed of assets held in foreign banks on correspondent accounts or in the form of short-term time deposits. On the other hand, most liabilities to non-residents are long-term and in terms of the instrument, the highest share accounts for loans, where the largest portion are the liabilities of the Macedonian Bank for Development Support to international financial institutions. The Macedonian banks do not depend on loans from their parent entities, the amount of which declined in the past two years. In 2015, the liabilities of the domestic banks to parent entities halved, and their share in the total sources of funds reduced to the level of only 1.6%.

**In 2015, the banks' claims on the government registered annual increase, mostly based on placements in short-term treasury bills. On the other hand, the share of banks on the primary market of government securities continues**



Chart 78

Share of banks in issued government securities  
in %



Source: National Bank and Ministry of Finance.

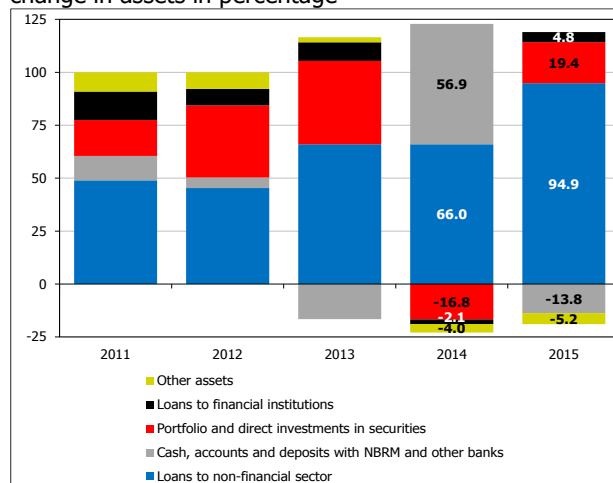
Note: The chart presents also the linear trend of the respective shares. The calculations are made at the face value of the continuous government securities.

registering downward trend, for the account of the larger participation of institutional investors on this market, especially pension funds. In 2015, the bank placements with the government increased by 4.7 billion (or 13.9%), which is due almost entirely to increased investments in treasury bills. Such developments resulted in increase in the share of banks' claims on the government total assets at the level of 9.1%, which is lower compared to the historical peak (since 2013), but still significantly higher than during both pre-crisis and crisis period (5.8% in 2007 and by 3.7% in 2008). The banks' interest to invest in government securities arises from the relatively attractive yield on these instruments compared with other investment alternatives, limited availability of other yield bearing liquid instruments, as well as from the favorable regulatory treatment of these instruments, although the banks have high liquidity, solvency and surplus own funds to cover risks<sup>92</sup>. In 2015 and 2016, international credit rating agencies confirmed the credit rating of the country from the previously made assessments of its creditworthiness.

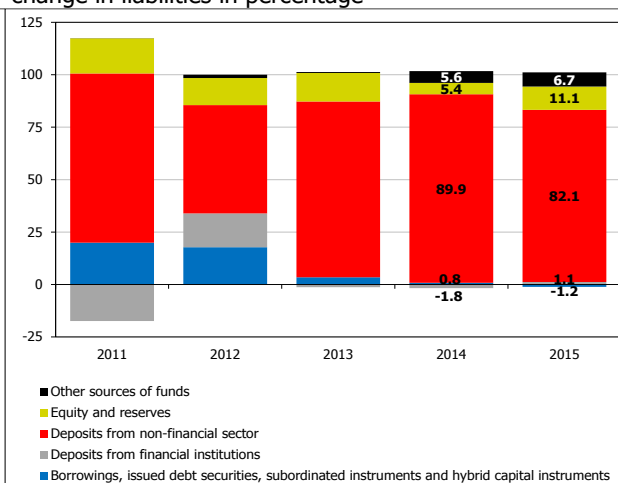
Chart 79

Structure of annual changes in assets (left) and liabilities (right)

change in assets in percentage



change in liabilities in percentage

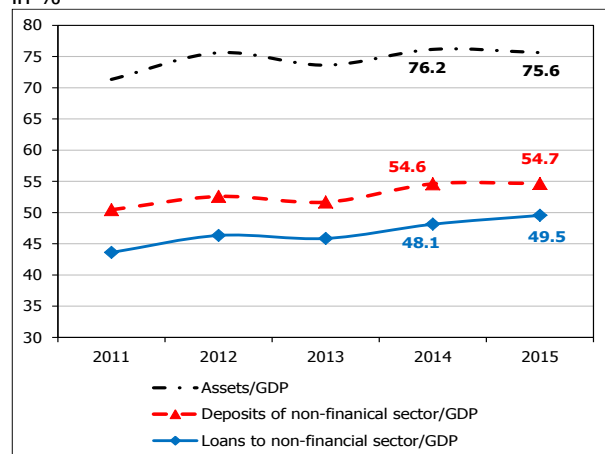


Source: NBRM, based on the data submitted by banks.

<sup>92</sup> The placements in domestic government securities are not subject to the requirement to determine capital requirement for credit risk coverage. Hence, the increase in investments in domestic securities, with all else unchanged, reduces the average risk weight of banks' activities. Also, the National Bank may use government securities as a collateral instrument while performing monetary operations or while granting loans of last resort, thus increasing the options available to banks in the operational management of their liquidity position. The aforementioned examples related to the favorable regulatory treatment of banks' investments in domestic government securities are a common international standard for these investments, which are considered risk-free investments.

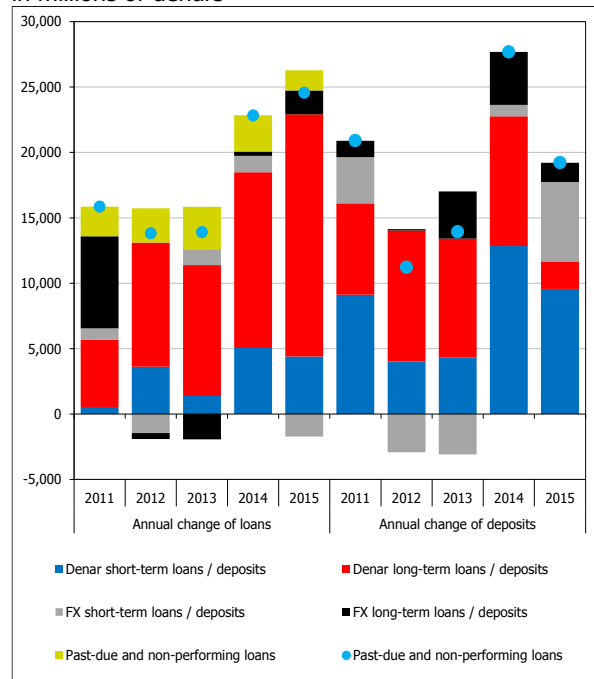


Chart 80  
Level of financial intermediation  
in %



Source: NBRM, based on the data submitted by banks.  
Note: GDP data for 2014 are preliminary, and data for 2015 are estimated

Chart 81  
Maturity and currency transformation of  
deposits in the financial intermediation  
process  
in millions of denars



Source: NBRM, based on the data submitted by banks.  
\*Denar deposits and loans include also the ones with currency clause. Short-term deposits include also the sight deposits and transaction accounts.

**In 2015, the banks financial intermediation between depositors and borrowers from non-financial sector continued to intensify, but at slower pace. At the same time, intensified maturity and currency transformation of the new deposits was registered, which usually complicates the liquidity risk management.**

In 2015, the annual non-financial entities' deposits growth significantly slowed down, while the credit growth has been maintaining almost the same level since 2014. Thus, during the year, the banks placed loans by Denar 5.4 billion (or by about 28%) more than the amount of the collected deposits from non-financial entities. Despite underperformance in the annual deposit growth, intensified maturity and currency transformation of the new deposits was registered. Namely, while sight deposits (including the transaction accounts) almost fully conditioned the increase in the total deposits of non-financial entities, in 2015, on the credit side, the annual increase in the long-term loans contributed the most (about 83%) to the total credit growth of non-financial entities. Simultaneously, Denar 7.5 billion were deposited in banks as new foreign currency deposits (compared to Denar 4.9 billion in 2014), of which the banks invested only Denar 218 million (or 3%) in foreign currency loans to non-financial sector. These developments potentially expand both maturity and currency mismatch between assets and liabilities, which could complicate the liquidity risk management.

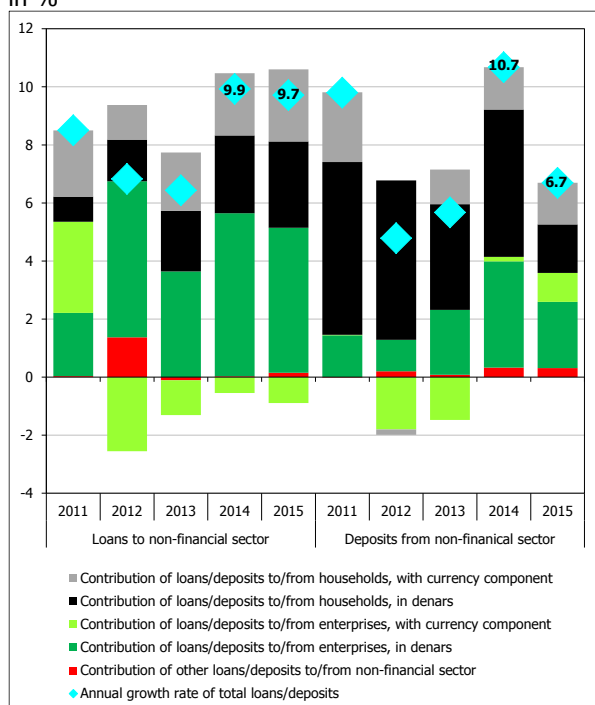
**The present uncertainty related to the domestic political turmoil and the outcome of the debt crisis in Greece, coupled with the environment of historically low interest rates, both domestic and international financial markets, influenced limiting on the opportunities for faster growth deposits from non-financial entities.**

The consequences of this environment were especially felt at mid 2015, when the banking system faced certain deposit withdrawals. Alleviation of the psychological pressures of the depositors in the



Chart 82

Contribution of individual components to the annual growth of total loans and deposits of non-financial entities in %



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

second half of 2015, driven primarily by the smooth fulfillment of the banks' obligations and the measures taken<sup>93</sup>, the intensified monitoring by the National Bank and stabilized developments in Greece<sup>94</sup> contributed towards normalization in the trends in the deposit base. However, the annual growth rate of deposits from non-financial entities significantly slowed down (by 4 percentage points) and on 31.12.2015 it reduced to the level of 6.7%. The slowdown in the annual growth is particularly evident in household deposits, whose growth rate was more than halved in 2015, reaching a level (4.3%) which is the lowest in the last decade. Also, the contribution of household deposits in the annual total deposits growth, for the first time in a long time, is somewhat lower compared to the contribution of the deposits from non-financial companies. The corporate deposits, which are typically more variable category affected by the liquidity needs of non-financial companies, despite the slowdown of several percentage points, grow at a double-digit annual growth rate (13.3%). The intensification of the domestic political crisis in the second quarter of 2016, recreated psychological pressure on depositors, especially households, and caused new deposits withdrawals from the banking system. Despite the quick response by the National Bank to overcome these crisis episodes, however any prolonged period of political turmoil and its intensification may have negative effects on the deposit growth and indirectly, on the opportunities to increase bank lending activities.

**Banks have maintained almost the same annual growth rate of the loans to non-financial entities, as in 2014. Amid significant slowdown in the deposit growth, the annual increase in loans was partly "financed" by using the liquid assets of banks. The environment of historic low interest**

<sup>93</sup> In the context of the developments in Greece, in late June 2015, the National Bank has taken precautionary measures to prevent major capital outflows from Macedonia and maintain balance in the balance of payments and the stability of the domestic banking system. The precautionary measures referred to limitation of capital outflows from Macedonian to Greek entities, only on the basis of newly concluded capital transactions. In addition, banks were obliged to withdraw all credits and deposits from banks in Greece and their branches and subsidiaries in Greece or abroad, regardless of the agreed maturity. The measures were temporary and their validity expired in December 2015, fulfilling the purpose for which they were introduced.

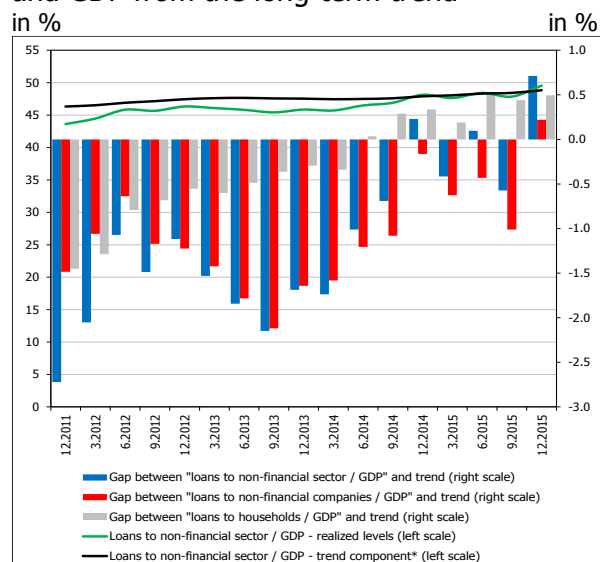
<sup>94</sup> After reaching an agreement with creditors at the end of June 2015.





Chart 83

Deviation of the actual ratio between loans and GDP from the long-term trend\*



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

\*Note: Trend component of the time series is determined by using a one-sided Hodrick Prescott filter and covers a period of 16 years.

rates on the domestic government securities market and the relatively low yields on international financial markets contributed significantly to the maintenance of the banks' preference to finance domestic private sector. Such tendencies were in part encouraged by the changes in the operational framework for conducting monetary policy, the National Bank made during 2015<sup>95</sup>, extending also the importance of non-standard monetary policy measures to support lending to net exporters and domestic producers of electricity<sup>96</sup>. Thus, the loans to non-financial entities registered an annual growth of 9.7%, a drop of 0.2 percentage points compared to growth in 2014. The minimal slowdown in the annual growth of loans entirely stems from delayed credit support for non-financial companies, whose annual growth rate (7.1%) was lower by 1.5 percentage points compared to that registered in 2014.

The lending to households register growth acceleration for the third consecutive year, and on 31 December 2015 it reached the level of 13.4%. Due to the solid credit activity growth, the ratio between the amount of loans to non-financial entities and GDP increased to a level which matches the long-term trend<sup>97</sup> calculated for this ratio (48.0%). Analyzed by sectors, as of 31.12.2015, the gap between "loans to non-financial companies/GDP" ratio and the estimated long-term trend for this ratio is small, but positive (0.2 percentage points) for the first time since 2009. On the other hand, the credit activity towards "households" sector, the gap between the GDP and its long-term trend is also positive, starting from the second quarter of 2014, but does not exceed half a percentage point.

<sup>95</sup> The National Bank lowered the interest rates on the banks' overnight deposit facilities from 0.5% to 0.25% and the deposit up to seven days from 1.0% to 0.5%. In addition, the National Bank changed also the manner of organizing the treasury bills auctions, i.e. it allowed application of a mechanism to limit the banks' demand for this instrument. Also in the first quarter of 2015, the banks were allowed, in need on a daily basis, to fully use the funds on their account with the National Bank, while in the third quarter of 2015, the reserve requirement ratio in the amount of 0% for liabilities to natural persons in domestic currency with contractual maturity of over one year was introduced.

<sup>96</sup> Additionally, at the end of 2015 the National Bank adopted measures to facilitate access to financial services for the corporate sector. With the measures (the implementation of which began on 1.1.2016) the capital requirement for guarantees issued by banks was reduced, which guarantees payment based on a certain business relationship of the client, as well as for banks' claims backed by commercial property that meets certain conditions.

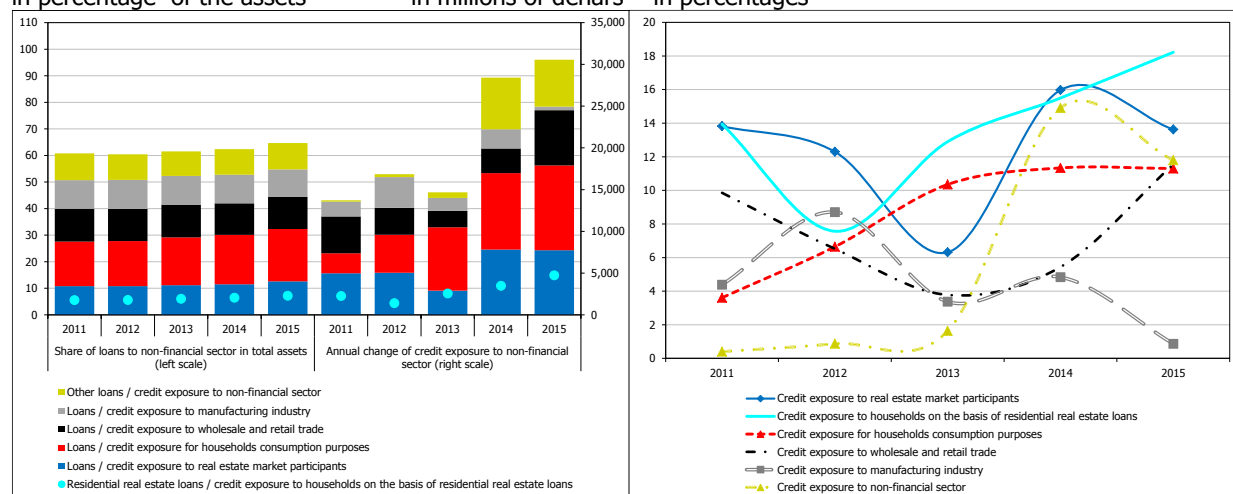
<sup>97</sup> Trend component of the ratios between the amount of loans and GDP is determined by using a one-sided Hodrick -Prescott filter and covers a period of 16 years.





Chart 84

Share of loans to non-financial entities in total assets and annual absolute change (left) and increase (right) in the credit exposure to non-financial entities in percentage of the assets in millions of denars in percentages



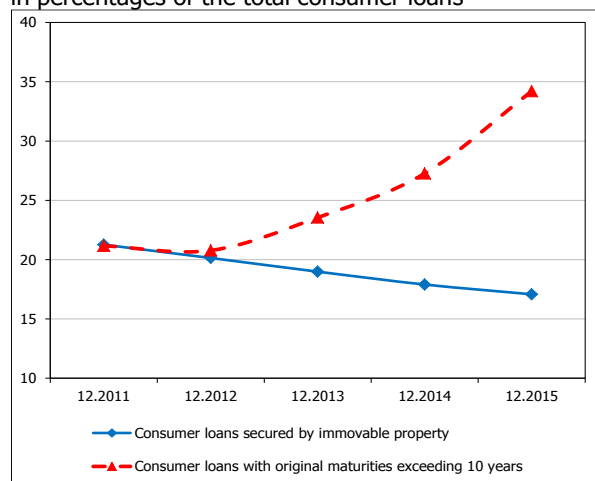
Source: NBRM, based on the data submitted by banks.

\*Credit exposure to the real estate market includes credit exposure to non-financial companies that deal with construction and activities related to real estate, as well as credit exposure to natural persons, based on credits for purchase and renovation of housing and business premises. Credit exposure for financing consumption of natural persons includes credit exposure to natural persons on the basis of consumer loans, overdrafts on current accounts, credit cards, car and other loans, except residential and business premises loans.

Chart 85

Consumer loans with original maturity over 10 years and consumer loans collateralized with real estate

in percentages of the total consumer loans



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

**The banks channel most of their credit support to the natural persons, for financing their consumption<sup>98</sup>, to the participants on the real estate markets<sup>99</sup>, as well as to the non-financial companies from the wholesale and retail sale activity, as well as from the manufacturing industry.**

**More than 30% of the credit exposure of banks to the non-financial sector is intended to finance the consumption of natural persons.** Interest rates on these loans are usually higher than interest rates on housing loans or loans to the corporate sector, due to which the loans intended to finance the consumption of natural persons are attractive for banks, especially in times of low interest rates and the so-called "search for yield". At the same time, the level of concentration to individual customers in the portfolios composed

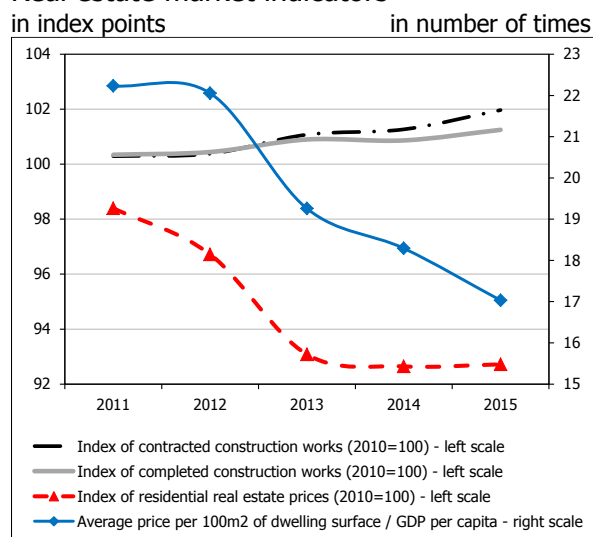
<sup>98</sup> Credit exposure for financing consumption of natural persons includes credit exposure to natural persons on the basis of consumer loans, overdrafts on current accounts, credit cards, car and other loans except for residential and loans for commercial properties.

<sup>99</sup> For analysis needs, credit exposure to the real estate market means credit exposure to non-financial companies that deal with construction and activities related to real estate, as well as credit exposure to natural persons, based on loans for the purchase and renovation of residential and business properties loans.



of this type of loans is relatively low. However, it should bear in mind the fact that for about two thirds of the amount of loans intended for financing the consumption of natural persons there is no collateral or the collateral applies only to the guarantor and bill of exchange. Furthermore, in the recent years, the other conditions for approving this type of loans are quite eased, which among other things is perceived from substantial prolongation of their maturity (at the end of 2015, the annual growth rate of consumer loans with original maturity more than 10 years has reached close to 50%)<sup>100</sup>. Finally, having in mind that the employees in the government and public administration are banks' common target group in granting of consumer (including housing loans), the levels of employment and wages in the administration significantly condition the performance of this type of loans.

Chart 86  
Real estate market indicators



Source: State Statistical Office.

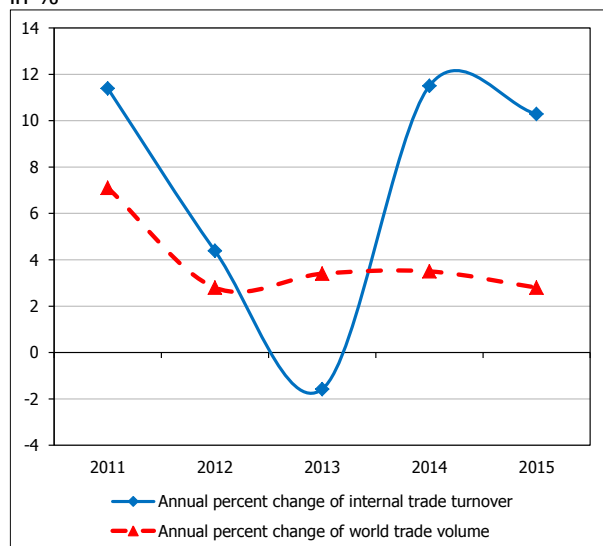
The index of housing prices is prepared by NBRM. The methodology used is described in details in Davidovska-Stojanova B., Jovanovic B., Kadievski-Vojnovic M., Ramadani G., and Petrovska M., (2008): Real Estate Prices in the Republic of Macedonia, Working Papers, NBRM. is developed by the NBRM for the territory of Skopje. Real Estate Prices in the Republic of Macedonia, Working Papers, NBRM.

**The credit exposure to the participants on the real estate market registers the highest annual growth rate (13.6%), for the second consecutive year, as a result of which its share in the total exposure to the non-financial sector reached almost 20%. Loans for the purchase and renovation of residential property caused more than half of the annual increase in credit exposure to the real estate market (growth of housing loans was 18.2%).** Mostly high profit margins in the construction business, coupled with stronger public investment of state construction in recent years, spurred increased construction activity in the country and attracted a number of construction companies and investors in the business. Some of them appear as bank borrowers, taking into account the need to have large amounts of capital and liquidity to work in this area. The demand for real estate (primarily housing) also increased, primarily in Skopje, given the certain improvement of the situation on the labor market and migration of the population

<sup>100</sup> Given these developments, the National Bank introduced higher capital requirements for new long-term consumer loans (with maturity equal to or longer than eight years) approved on 1.1.2016, as well as the growth of overdrafts on bank accounts and credit cards, in comparison with 31.12.2015.

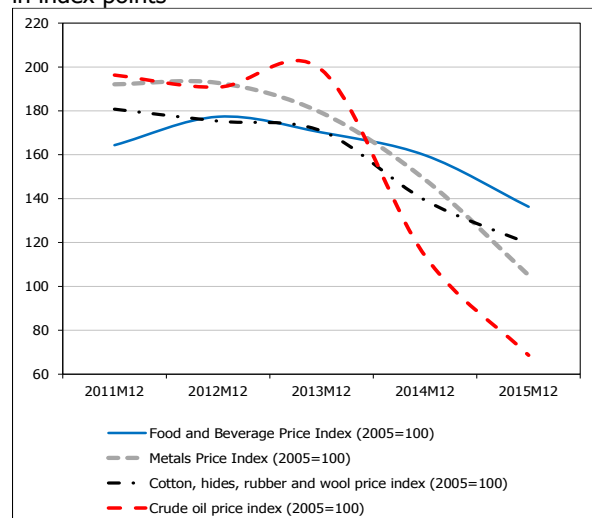


Chart 87  
Annual growth in trade  
in %



Source: State Statistical Office and IMF's World Economic Outlook, April 2016

Chart 88  
World oil prices, metals, food and beverages  
and raw materials for clothing  
in index points



Source: IMF's database on primary commodity prices.

to the state capital. Demand for housing is significantly financed by the banks (for part of the loans there is a possibility for subsidies from the government), which offer relatively attractive credit conditions, especially low fixed interest rates for a certain period of duration of the loans. Despite the certain reduction in the prices of apartments in the past five years (however, in the past two years, housing prices remained almost unchanged), and at the real estate market, at present, no serious imbalance has been registered. However, it should keep in mind that the movements on this market have exquisite procyclical character, and any adverse developments in the real estate market in many countries, are usually associated with impaired financial stability. In current conditions, the procyclical nature of the construction activity is especially evident, considering the fact that the current expansion in the construction sector is rather fueled by investment activity of the state in this sector. In addition, temporary low prices (primarily interest rate) for housing loans may act as "bait" for natural persons (for banks that may have made mistakes in credit analysis), given the typically long maturities of contracts for these loans during which there is a real possibility to significantly and repeatedly raise interest rates by banks to levels that would cause a "non-performance" of individual customers. Also, contracts for housing loans usually contain a currency clause, used for transferring the potential currency risk on their customers, for a longer period.

**Much of the credit support to non-financial companies is normally directed to the trading business, which accounted for nearly 20% of the total credit exposure to non-financial sector.** It is a service activity that is usually characterized by slightly lower level of investment and entrepreneurial spirit, and its achievements are of procyclical nature, depend on global trade flows, but primarily on the developments in the domestic environment. In 2015, the banks significantly intensified the credit support to non-financial companies from the trading activity, despite the certain slowdown in

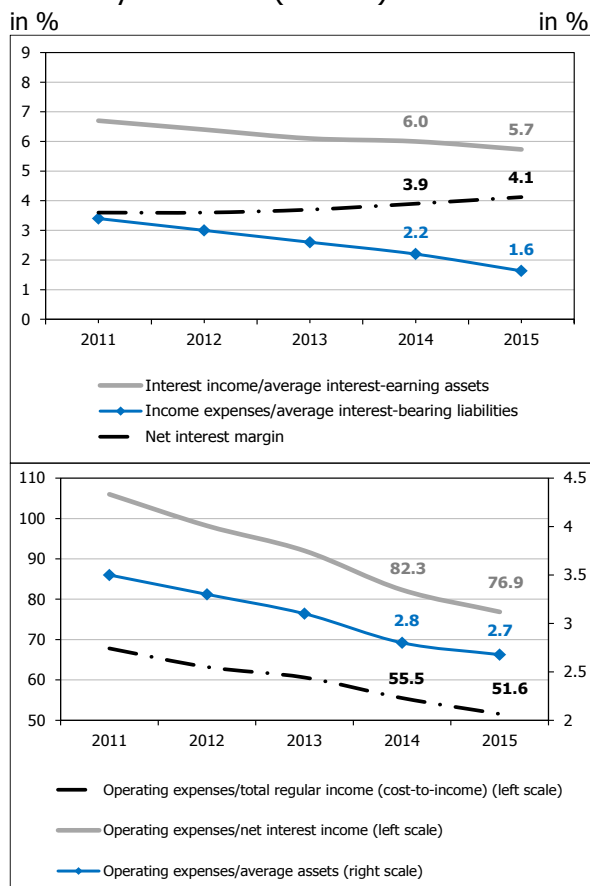


the annual growth rate in the domestic trade, as well as the volume of the world trade.

**The performances of the manufacturing industry determine the quality of fifteen percentages of the credit exposure to non-financial sector.** This capital and labor-intensive industrial activity covers several branches whose performances are rather import dependent and vulnerable to external shocks, i.e. determined by the developments in some economies and the developments in world markets for certain products. Those unfavorable movements in the prices of individual products on world markets in the past several years resulted in variable performance of the domestic non-financial companies from the manufacturing industry, while the banks gradually reduced the credit support to this sector. Namely, due to the downward prices on the world market for certain products which are important for the domestic manufacturing industry, the customers' (buyers) orders usually reduce (deferred consumption) due to the expectations of further decline in prices, which could adversely affect the performance of the manufacturing activity.

Chart 89

Net interest margin (top) and operational efficiency indicators (bottom)



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

**Net interest income that banks earn in the process of financial intermediation i.e. the net interest margin, went up to 4.1% at the end of 2015, which was enough to significantly improve the overall profitability of the banking system.** In conditions of downward interest rates, the banks succeeded to reduce interest expenses, in comparison with the interest income and increased profits by more than 47%<sup>101</sup>. However, it should also note the improved cost effectiveness reflected by the reduced ratio between banks' operating costs and the average assets or with certain income categories. These ratios have been at a minimum level in the past eight years. In the absence of significant amounts of recapitalizations, banks are mostly oriented toward reinvestment of realized gains in equity funds, i.e. toward internal capital creation,

<sup>101</sup> In 2015, more substantial growth was registered also in the bank revenues. However, half of the annual growth of non-interest income arises from capital gain realized from the sale of fixed assets in a bank, which is more or less uncommon event.



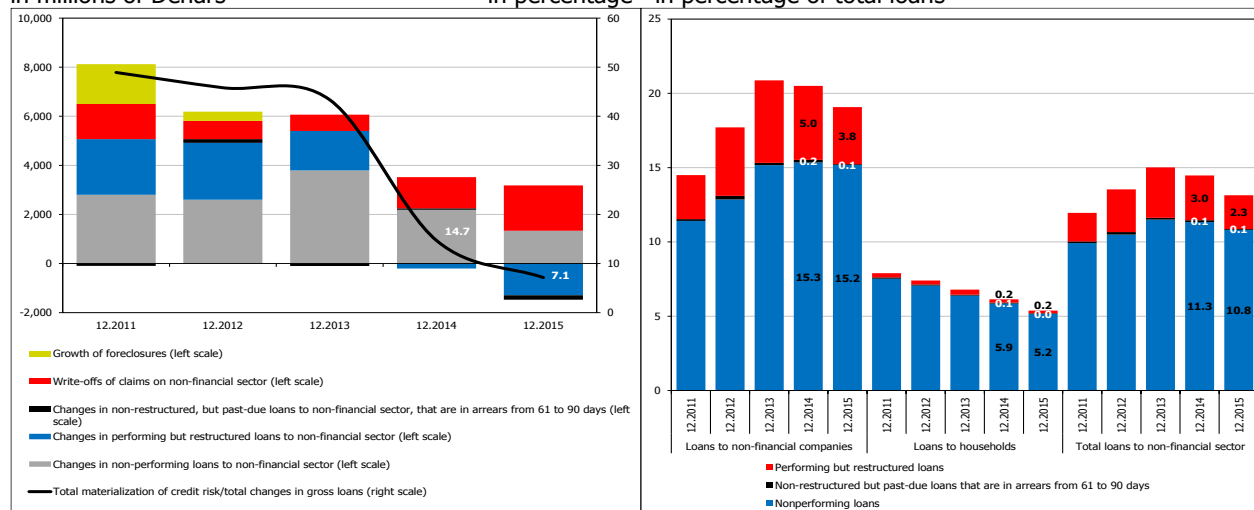
which underscores the importance of profitability for solvent position of the banks, but also for support of their activities.

Chart 90

## Materialization of credit risk in banks' balance sheets

in millions of Denars

in percentage in percentage of total loans



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

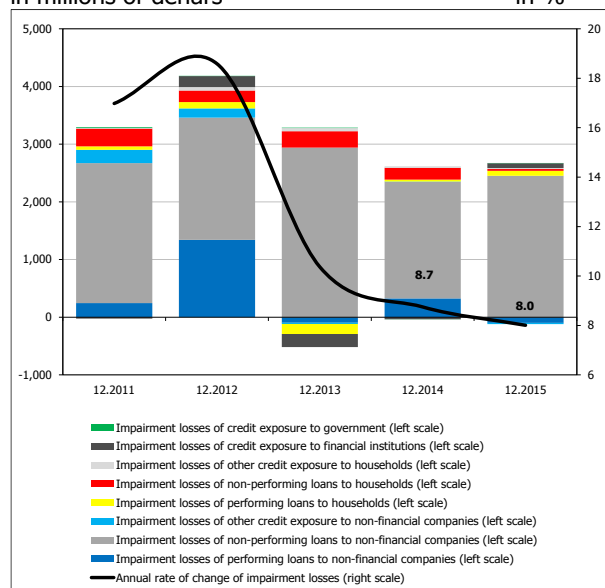
Note (left chart): The total materialization of the credit risk is calculated as a sum of actual written-off claims, the annual growth of foreclosures based on outstanding claims and the quarterly change in non-performing loans, regular restructured loans and non-restructured loans overdue from 61 to 90 days. \*\* The total change in gross loans refers to the annual change in gross loans including claims written off for the year and the annual growth of foreclosures based on outstanding claims.

Chart 91

## Annual change in impairment and special reserve, by sectors

in millions of denars

in %



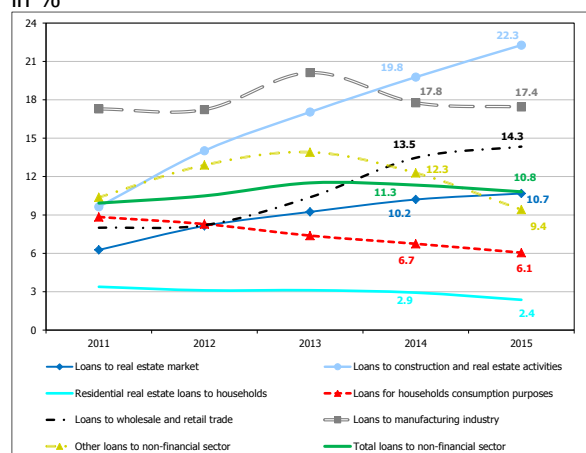
Source: NBRM, based on the data submitted by banks.

### The banks' credit channel registers slight impairment compared to the previous years.

Namely, the materialization of the credit risk in the banks' portfolios participate with only 7% in the change in the credits of the banking system in 2015 (compared to 15% in 2014). Non-performing loans continue to grow, but almost at twice lower annual rate (4.7%), whereby, given the minimally decelerated credit growth, their share in total loans equals 10.8% and registered a certain annual decline of 0.5 percentage points. Almost twice lower annual growth of non-performing loans of the non-financial companies (5.9%) contributed the most to the slower annual growth in the total non-performing loans, whereby the share of non-performing loans in the corporate portfolio minimally reduced to the level of 15.2%, stopping the trend of continuous growth of this share, which started back in 2009. Non-performing loans of households minimally decreased in 2015 (-0.1%), and their share in total loans (5.2%) continues to show continuous

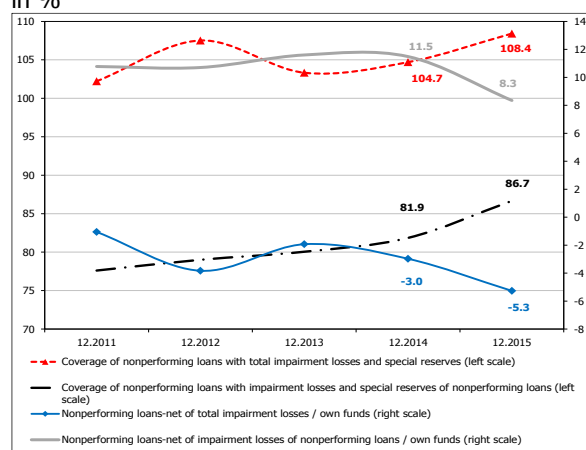


Chart 92  
Share of non-performing loans of the non-financial sector  
in %



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

Chart 93  
Coverage of non-performing loans and share of net non-performing loans in banks' own funds  
in %



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

decline since 2010. Total impairment and special reserve continue to increase, but less intensively.

**The negative effects of a possible full default of non-performing claims on the banks' capital are limited, given the high coverage of these loans with impairment (86.7%).** Thus, non-provisioned part of non-performing loans absorb only about 8% of the total own funds of the banking system, which would cover unexpected losses in a hypothetical extreme case of a full default of these loans. Also in 2015, the banks were engaged in resolving "bad" credit portfolio, which can be perceived through significantly higher amount (by 45.2%) of loans written off<sup>102</sup> and substantial annual drop (-16.9%) of foreclosed assets based on uncollected claims (for selling part of this property, as well as because of fewer foreclosures due to loan repayment by selling the property without foreclosure). However, it should have in mind that the majority of the sold property, previously foreclosed on the basis of outstanding claims was sold by approving a loan to the buyer, which means establishing new credit exposure for the bank.

**Currently, the percentage of the impairment of the regular loans (or the average level of risk of the regular loans) is adequately determined by the banks. However, the losses arising from the materialization of the credit risk can exceed the banks' expectations, especially in conditions of unfavorable business environment.**

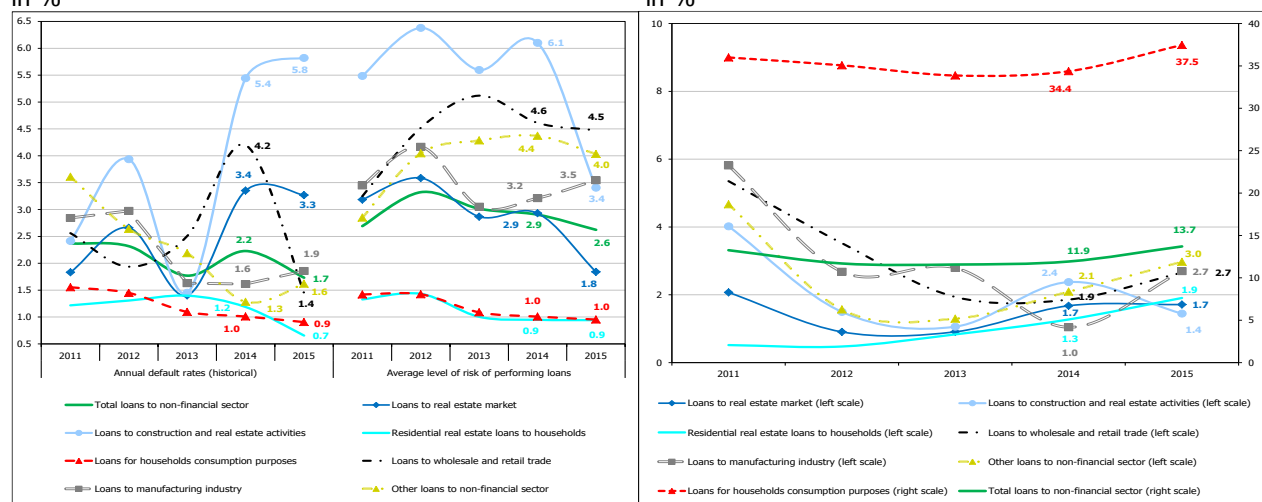
<sup>102</sup> At the end of 2015, the National Bank introduced certain amendments to the regulations according to which by 30 June 2016 the banks should write off (and to continue to write off) all claims that have been fully provisioned for more than two years, and where the bank has identified and fully covered the credit risk of default at least two years before. Regulations for mandatory write-off of claims of the banks that are fully provisioned for two years, should contribute to reduce the level of non-performing loans, as of mid-2016.





Chart 94

Annual rate of default\* of the credit exposure and average risk level of the regular loans (left) and share of the regular loans which are not collateralized in the total regular loans (right) in %

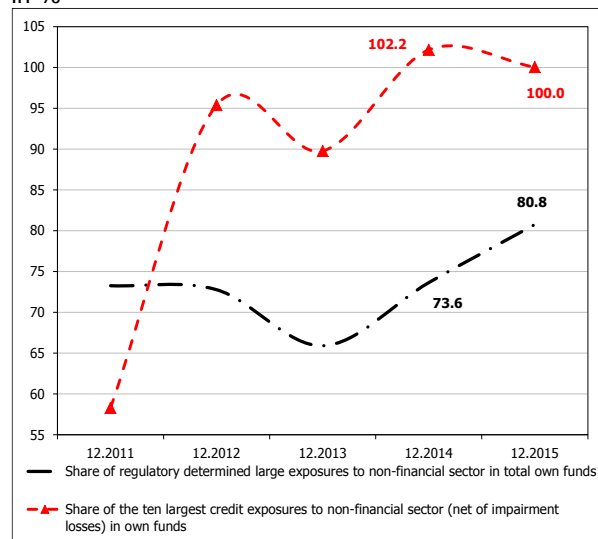


Source: NBRM, based on the data submitted by banks.

\*Note: The annual rate of default is calculated as a percentage of credit exposure with regular status, which for a period of one year transforms into exposure with non-performing status.

Chart 95

Indicator for the concentration level of the credit exposure to the non-financial sector in %



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

**The excess of expected losses due to credit risk materialization is possible mostly because of substantial concentration in the banks' credit portfolios, high costs or inability to materialize the loan collateral (at favorable price), as well as having loans where the banks do not have insight into current creditworthiness of customers (ex. bullet loans and loans with grace period) or loans where impairment of value can be "masked" (ex. prolonged loans).** In 2015, the annual default rate of the credit exposure with regular status<sup>103</sup> equals 1.7% and is slightly lower compared to the average risk level of the regular credits extended to the non-financial entities, determined by the banks (2,6%). Also, on 31.12.2015, 86.3% of the regular credits to the non-financial sector are collateralized, which "mitigates" the level of the banks' credit risk and consequently reduces the rate of expected losses due to credit exposure with regular status. However, the present relatively high concentration in the credit portfolios of individual banks as by customer and by some other

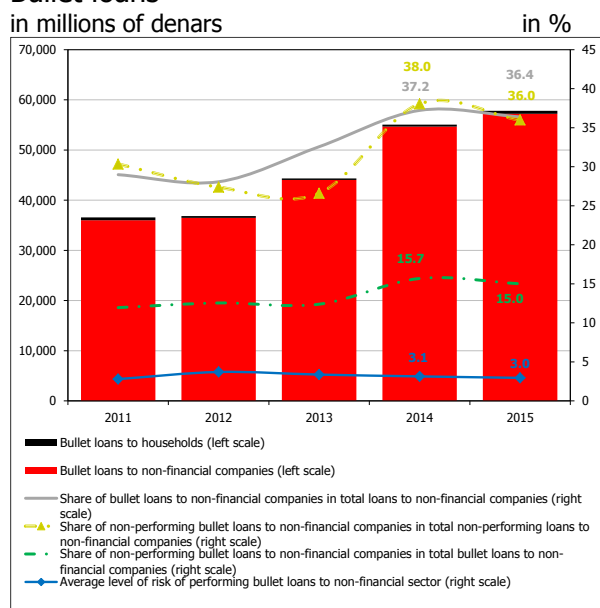
<sup>103</sup> The annual rate of default is calculated as a percentage of credit exposure with regular status, which for a period of one year transforms into exposure with non-performing status.





characteristics of the clients (for example, belonging to certain activities), indicates a high level of correlation between "performance" of individual segments of the credit portfolios, which under unfavorable business conditions may increase losses due to materialization of the credit risk, significantly above expectations of banks. Finally, despite the relatively high share of the regular credits with some form of collateral in the total regular credits, still this credit policy may be a limiting factor for the expansion of the credit activity, and can also mean transferring of the credit risk into a risk of inability to sell (at favorable price) the foreclosures.

Chart 96  
Bullet loans  
in millions of denars



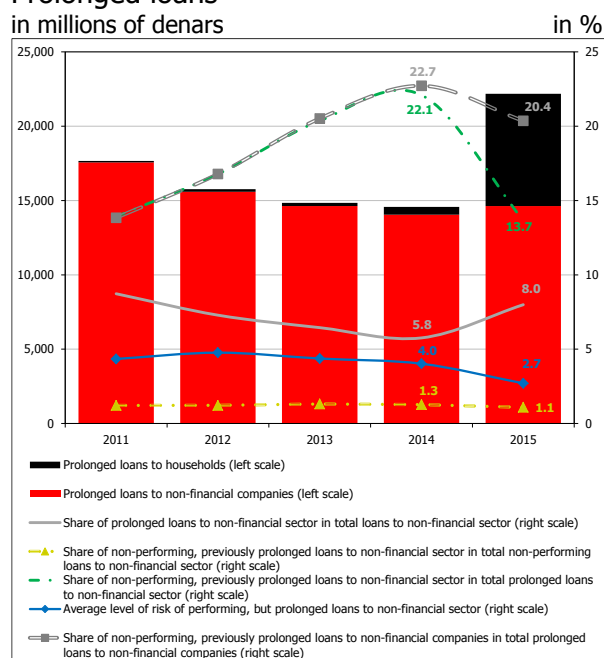
Source: NBRM, based on the data submitted by banks.

**It is hard for the banks to monitor cash flow of clients who are granted bullet loans or loans with granted grace period, until the expiration of the final maturity date, or grace period approved for loans. However, it should have in mind that the presence of such structured loans is indicative of the increased flexibility of banks in this way out to meet the specific needs of their customers (to fund a project, for example) and contribute to the process of financial intermediation.** Bullet loans are significantly present in the banks' portfolios, especially in the segment of corporate clients, where at the end of 2015, about 36% of the loans have a clause for single repayment of principal. Despite the higher risk level of these loans, the impairment set by the banks for performing bullet loans is at a similar level as of the total loan portfolio. Thus, the losses from the materialization of the credit risk of these loans can be higher than the banks' expectations. Loans that have been granted with a grace period are also significantly present in the portfolios of banks (including those where the grace period has already expired) and represents about a third of total loans to non-financial entities. It is positive that most of these loans (over 72%) have relatively short grace period not exceeding one year, and the level of quality, measured by the share of non-performing loans in total loans with a grace period is relatively high, at 5% (in the segment of corporate customers, this share is



7.3%). At the end of 2015, approximately 13% of total loans to non-financial entities are loans with grace period that is not expired on 31.12.2015 and the banks currently have no real insight into the creditworthiness of customers (about 60% of these loans are granted to non-financial companies). In 19% of loans with a grace period that had not yet expired on 31.12 2015, the approved grace period is part of the implemented restructuring or prolongation of loans.

Chart 97  
Prolonged loans  
in millions of denars



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

The substantial increase in the amount of prolonged loans to households in 2015 result from the change in reporting of prolonged loans, depending on whether the prolongation of the maturity was done independently or as part of a conducted consolidation of several loans into one or refinancing of a loan with other.

**Prolonged loans, where, according to the regulations, the extension of the maturity of the loans is a result of deterioration of the financial condition of customers, represent 8% of total loans to non-financial entities (this share was 9.3% in the portfolio of non-financial companies).** However, the high share of non-performing, previously prolonged loans in the total loans (20.4% in the segment of corporate portfolio) points to the conclusion that in fair share of prolonged credits, the deteriorated financial condition of customers, was probably the reason for prolonging the maturity. In contrast, impairment losses, determined by the banks for prolonged regular loans is at a similar level as for the total loan portfolio. Hence, the losses due to materialization of the credit risk in these loans, can exceed the banks' expectations.

**The liquidity of the banking system remained high, despite the certain reduction in indicators in 2015. Typically, banks maintain a high amount of liquid assets<sup>104</sup>, which at the level of the entire banking sector represent about one third of their total assets, covering about 55% of short-term liabilities, i.e. more than 80% of the contractual liabilities with residual maturity up to 30 days.** For the first time since 2008, in 2015, the liquid assets of the banking system decreased (by 0.2%), which in conditions

<sup>104</sup> According to NBRM's internal methodology, liquid assets include: cash and assets on the National Bank accounts, CB bills, correspondent accounts and short-term deposits with foreign banks and placements in domestic and foreign government securities. For the purposes of liquidity analysis, assets and liabilities in denars with foreign exchange clause are considered as denar assets and liabilities.

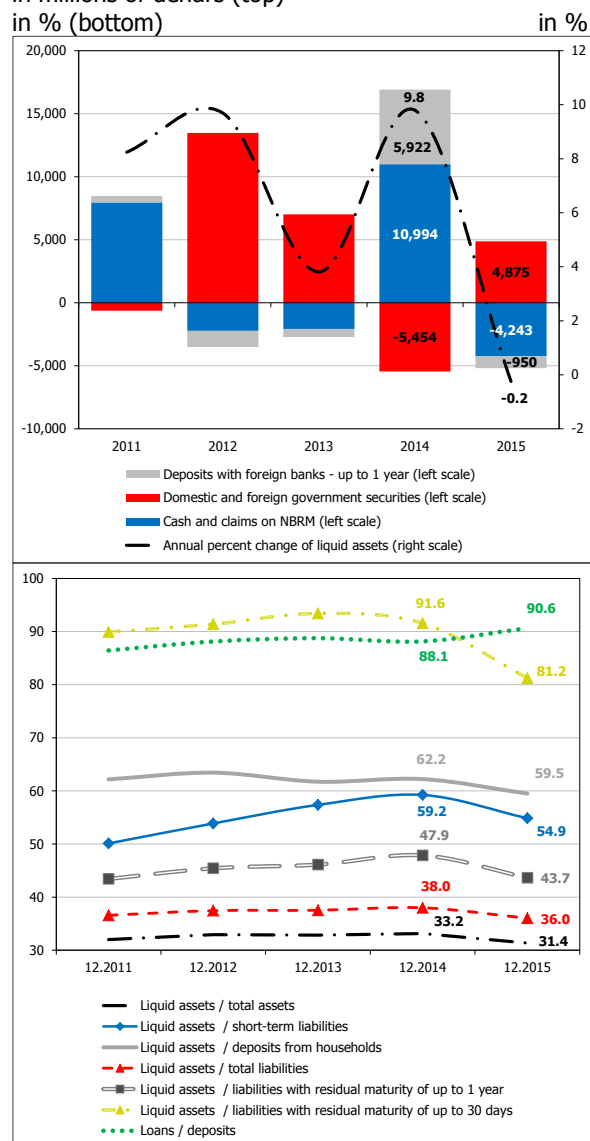


Chart 98

Annual change in liquid assets (top) and liquidity indicators of the banking system (bottom)

in millions of denars (top)

in % (bottom)



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

of banks' search for higher yields, mostly results from the use of these funds for lending to the domestic private sector. In part, the decrease in liquid assets is due to the uncertainty related to the domestic political crisis and the debt crisis in Greece, which in mid-2015 created a short-term psychological pressure on depositors. The intensification of the domestic political turmoil in the second quarter of 2016 raises the level of uncertainty in public about the outcome of the crisis and recreate psychological pressure on depositors, especially on households.

**Indicators for coverage of foreign currency liabilities with foreign currency liquid assets are far lower than the Denar liquidity indicators of the banks.** Liquid assets, denominated in foreign currency registered certain decrease (of 0.3%) in 2015, which additionally decreased the indicators for the foreign currency liquidity indicators. The lower coverage of foreign currency liabilities with foreign currency liquid assets indicates more pronounced sensitivity of banks to larger foreign exchange outflows and subsequent danger of creating a more significant pressure on the domestic foreign exchange market amid possible crisis episodes. The foreign reserves of the NBRM are at a level which allows adequate interventions in order to eliminate any imbalances in the foreign exchange market.

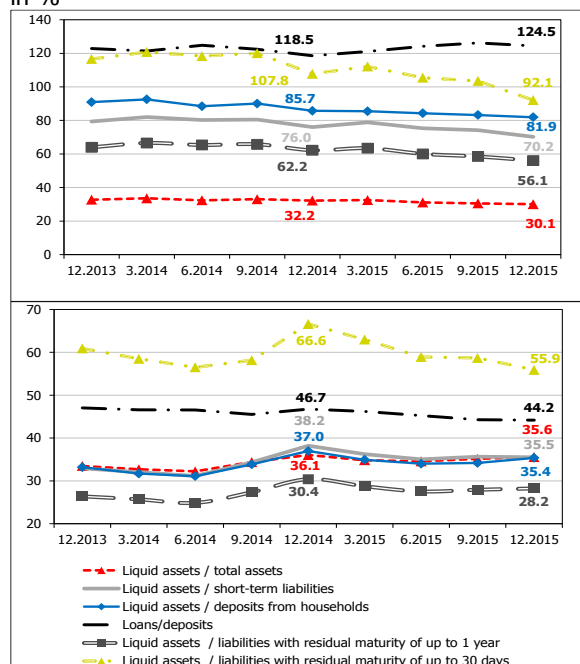
**The maturity mismatch between banks' assets and liabilities is high and in 2015 it additionally increased.** Namely, almost 45% of the banks' liabilities falling due in the next 30 days are not covered by assets that have the same residual contractual maturity (up to 30 days), and this gap, although smaller, is still significant also in the maturity bucket of up to 1 year (almost one third of the liabilities with residual contractual maturity of up to 1 year are not covered by assets from the same maturity bucket). However, the significance of the risks from these gaps declines if one has in mind the expected residual maturity, according to which the gap between assets and liabilities of banks is positive, in all analyzed maturity segments



Chart 99

Banking system liquidity ratios, according to currency structure - Denars (top) and FX (bottom) (according to banks' expectations) and in the maturity segments up to 30 and 180 days (according to the NBRM regulations<sup>105</sup>).

in %

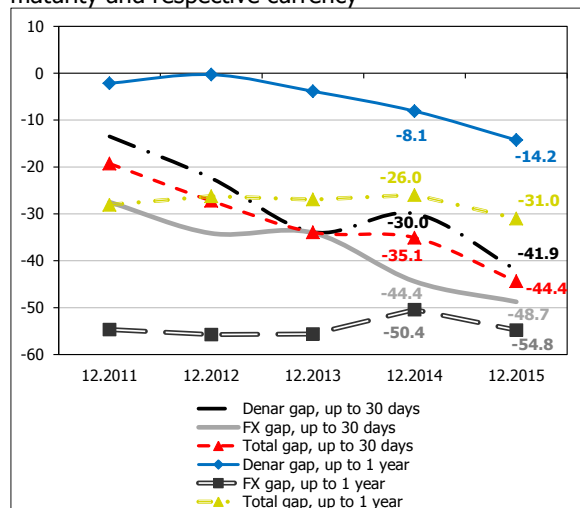


Source: NBRM, based on the data submitted by banks.

Chart 100

Gap between banks' assets and liabilities that mature in the next 30 days and in the coming year

a percentage of liabilities with respective residual maturity and respective currency



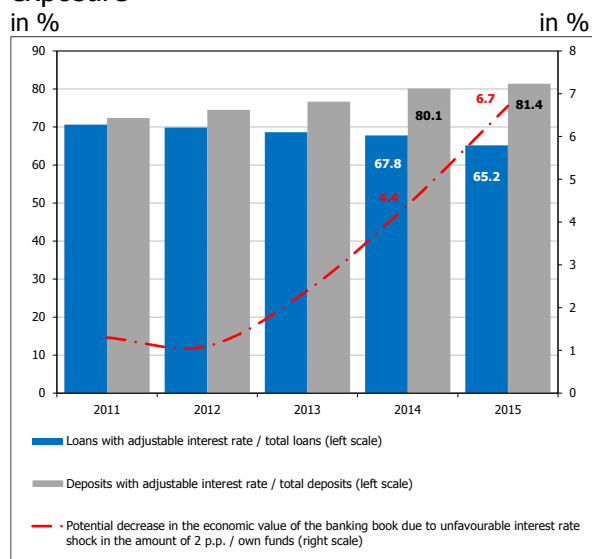
Source: NBRM, based on the data submitted by banks.

The significance of the direct exposure of the banking system to the movements in market financial variables is small for the time being, given the low probability of materialization of currency risk and still small direct exposure to the risk of changing interest rates in the banking portfolio. However, indirect exposure to these risks, i.e. potential exposure to credit risk arising from the presence of loans with currency component and loans with adjustable interest rates in the banks' portfolios is high, though decreasing. The denarization in the banks' balance sheets continued also in 2015, but at slower pace. The denarization in the banks' balance sheets was more evident on the assets side than the liabilities side, which resulted in lower share of the gap between the assets and liabilities with currency component in the total own funds (11.4% as of 31.12.2015). The

<sup>105</sup> According to the Decision on the banks' liquidity risk management ("Official Gazette of the Republic of Macedonia" No. 126/11, 19/12 and 151/13), banks are required to calculate and to meet regulatory liquidity ratios, in the maturity segments of up to 30 and 180 days.

Chart 101

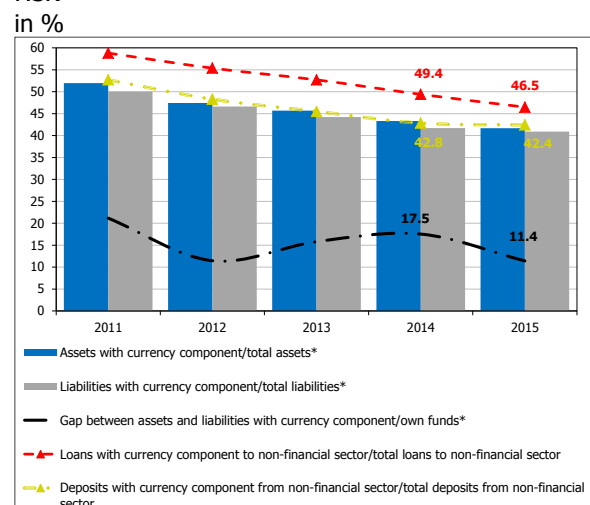
Exposure to risk of change in interest rates in the banking book and indirect credit risk exposure



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

Chart 102

Exposure to currency risk and indirect credit risk



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

Note: \*Data on Macedonian Bank for Development Promotion AD Skopje are not included in the calculation of assets and liabilities with FX currency component and the gap between them.

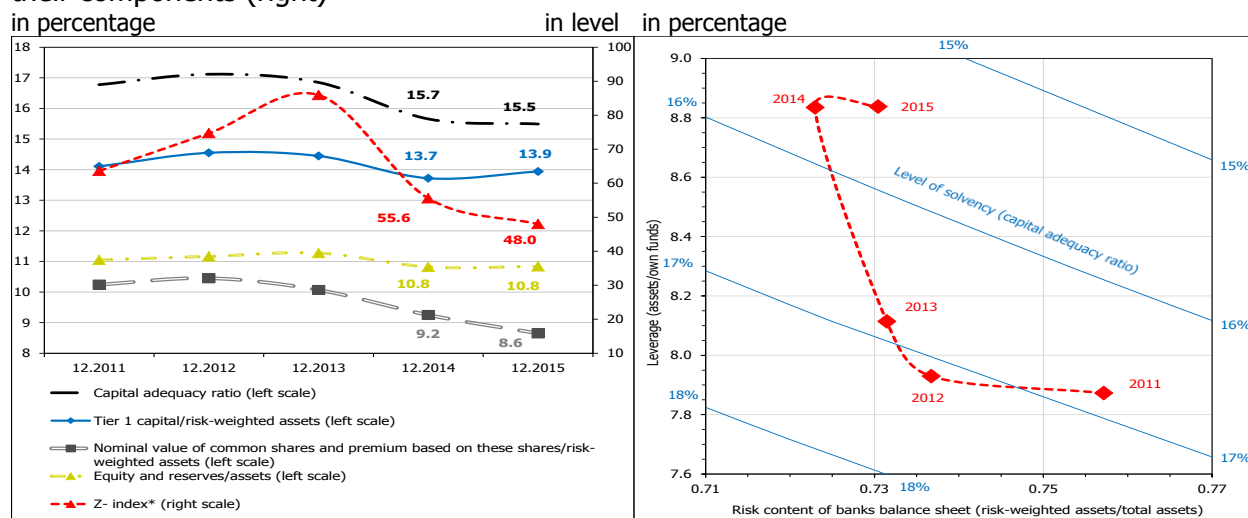
depreciation of the euro against other world currencies on the international currency markets has no influence on the stability of the Macedonian banking system, given the applied strategy of a stable exchange rate of the denar against the euro and the dominance of this currency in banks' items with currency component. The annual growth of banks' long-term assets with fixed interest rates caused an increase in the potential loss of economic value of the banking book given assumed unfavorable interest rate shock of  $\pm 2$  percentage points. At the end of 2015, the ratio between the potential loss at standard interest rate shock of  $\pm 2$  percentage points and own funds reached 6.7%, but it is still relatively low. The application of the clauses for adjustability of interest rates in credit agreements expose banks to indirect credit risk which will materialize in case of significant upward movement in interest rates. Additionally, the application of such clauses, not only for loans but also on the deposit side, exposes domestic banks to legal and reputation risk.

**The solvency of the banking system is high, despite the certain reduction in solvency indicators and capitalization in 2015.** After the maximum reached in 2013, the Z index registered some decline in 2014 and 2015, resulting mostly from the greater volatility of bank profits in analyzed period (measured by the standard deviation of the rate of return on average assets).



Chart 103

Indicators of solvency and stability of the banking system (left) and annual growth rates of their components (right)



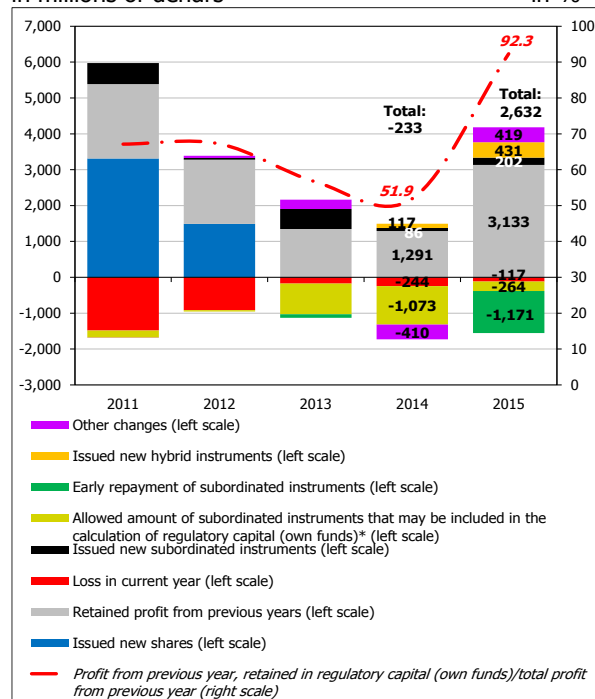
Source: NBRM, based on the data submitted by banks.

Note: The Z Index is calculated as follows:  $Z = \frac{ROA + E/A}{\sigma(ROA)}$ , where  $ROA$  is the rate of return on assets,  $E$  is equity and reserves,  $A$  is assets and  $\sigma(ROA)$  is the standard deviation of the rate of return on assets, calculated for the last three years.

Chart 104

Structure of annual changes in own funds

in millions of denars in %



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

Note: \* Refers to the changes in the amount of outstanding subordinated instruments arising from the compliance/non-compliance with the regulation for inclusion of these instruments in the calculation of own funds.

The capital adequacy ratio fell by 0.2 percentage points and it equals 15.5%. The slight decrease in the capital adequacy ratio of the banking system in 2015 was a consequence of the intensified banking activities (an increase of risk weighted assets), after several year period of steady decline in their risk content. At the same time, the level of indebtedness of the banking system remained unchanged, after a long period of its continuous increase.

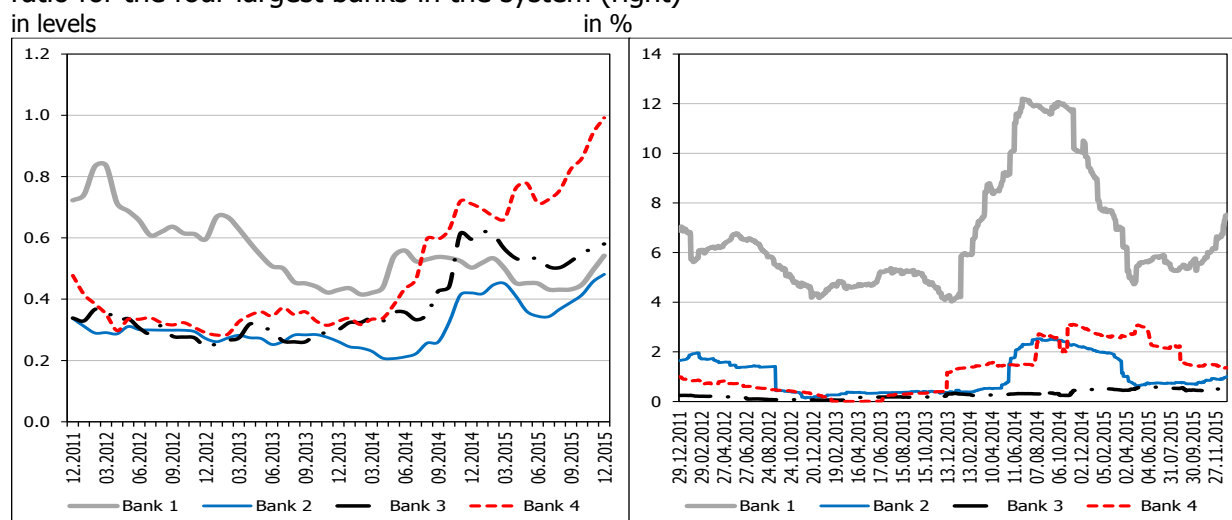
**In the absence of more significant amounts of recapitalization, the banks were mainly oriented towards internal capital creation.** Retained earnings in equity funds of banks is the most stable source of increase of capital in recent years, expecting that some of the relatively high profits achieved in 2015 to increase the own funds in 2016. The structure of own funds is dominated by the equity (89.8%), which indicates high quality of the banks' regulatory capital. More importantly, only half of the own funds are used to cover the individual risks, i.e. half of them are free (or a surplus) to cover unexpected losses.





Chart 105

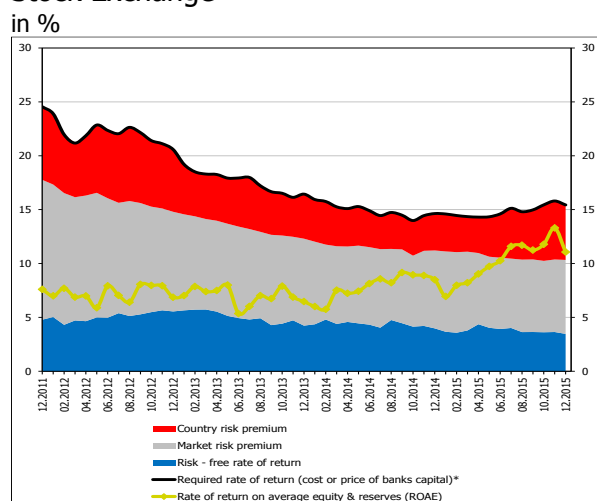
Price-to-book ratio for the shares of the four largest banks in the system (left) and turnover ratio for the four largest banks in the system (right)



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

Chart 106

Level and structure of the cost (price) of the capital\* of the banks whose shares are listed on the official market of the Macedonian Stock Exchange



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

\*Calculated using the so-called Capital-Asset Pricing Model (CAPM) where the price of equity is the sum of: 1) risk free yield rate (determined as the average of the yields to maturity of bonds listed on the Macedonian Stock Exchange), 2) the product of beta coefficient per share and the difference between the market rate of return and risk free rate on return (or premium market risk) and 3) the premium for country risk (defined as the difference between the yields of the Macedonian Eurobonds and comparable German bonds). The calculation includes eight banks with shares being listed on the official market of the Macedonian Stock Exchange. Market risk premiums is calculated as the average premium for market risk for each bank separately, weighted by the size of their assets.

**The cost of capital (required rate of return to investors in bank stocks), calculated by using the so-called CAPM on a sample of eight banks, increased in 2015, as a result of the growth of the risk premium by country in the second half of the year.** The cost of the banks' capital, calculated in the mentioned model, increased by about 1 percentage point and reached 15.4% at the end of 2015, which was higher by about 4 percentage points compared with the rate of return on equity registered by the banks covered by the analysis. Higher required rate of return on bank shares results from the expansion of the risk premium by country, by about 1.5 percentage points, in the second half of 2015. The trading in the shares of banks registered no significant changes in 2015, and with the exception of one bank, the market prices of bank stocks remain (approximately twice) below their book value.



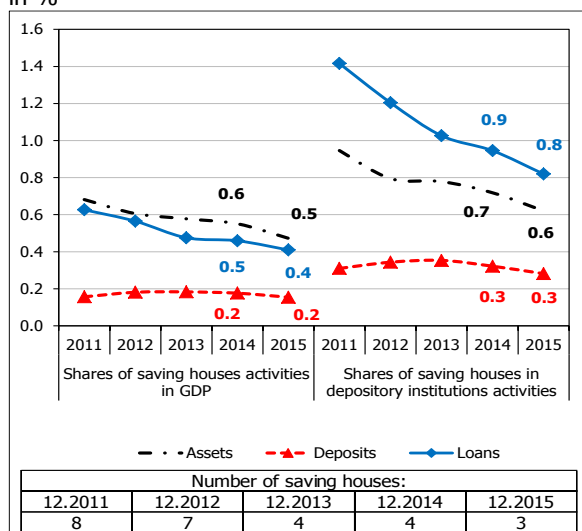


### 3.2. Savings houses

The financial disintermediation in the sector "savings houses" continued also in 2015. The "exit" of several savings houses from the segment of depositary institutions is only a partial reason for the reduced activity in this sector, where the concentration is quite high and the largest savings house to a large extent, determines the overall trends in the sector. The reduction of the savings houses' assets in 2015, results from the reduction in the liabilities based on loans and household deposits, which caused a decline in liquid assets of the savings houses. The business model of the savings houses enables profitability, despite lower volume of activities. The profitable operations, almost fully, are based on maintaining a fairly wide net interest margins and creation of net interest income, the amount of which is still moderate and limited, compared with the banks.

Chart 107

Level of financial intermediation and share in the activities of depositary institutions in %



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

Regulatory requirements for the savings houses in the area of risk management is at least the same as those that apply to banks. Although such regulatory requirements can pose costly "burden" for the savings houses, given the small scale and limited activities, they are however justified, because these institutions collect deposits from households. The risks to the entire financial system arising from the savings houses are small, due to sufficient liquidity and capitalization of these institutions.

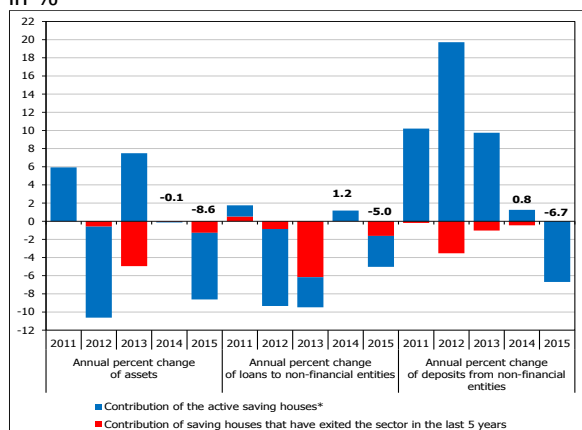
#### 3.2.1. Main developments in 2015

**Financial disintermediation in "savings houses" sector continued also in 2015.** In 2015, the assets of savings houses fell by Denar 250 million (or 8.6%) and reduced to a level that is 0.5% of GDP, i.e. 0.6% of total assets of depository institutions in the Republic of Macedonia. Similar trends are observed in loans and deposits in savings houses, whose share in GDP or in the relevant activities of depository institutions are insignificant. In the last five years,



Chart 108

Annual percentage change in the activities of the savings houses  
in %

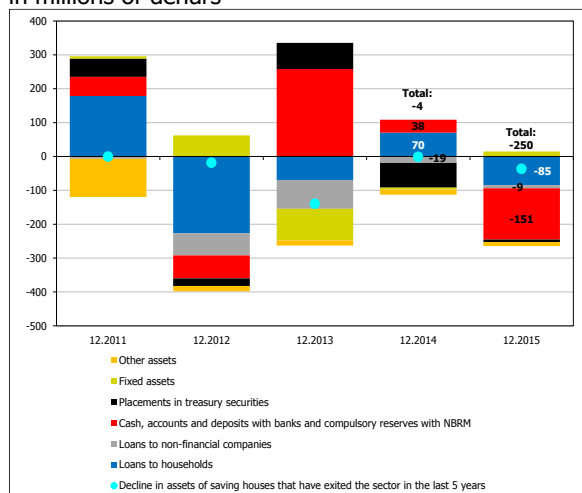


Source: National Bank, based on data submitted by the savings houses.

\*Active savings houses are the three savings houses which are currently functioning. All other savings houses are included in the "savings houses" category that have exited the system in the last 5 years.

Chart 109

Annual assets growth  
in millions of denars



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

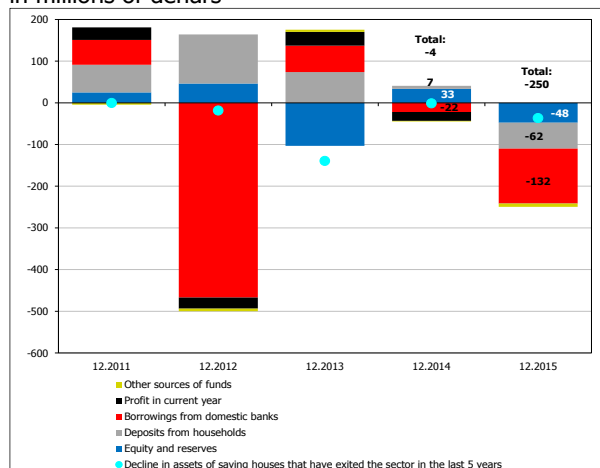
the number of savings houses reduced by 5, and at the end of 2015, a total of 3 savings houses operate. A liquidation proceeding was initiated in one of the savings houses, while the remaining four, following the full payment of collected deposits from households, transformed into financial companies, thus crossing from one to another segment of the domestic financial system. The establishment and operation of financial companies are regulated by a separate law, which provides for the application of a different business model compared to that typical for savings houses<sup>106</sup>, especially in terms of financing the activities of financial companies (which may not collect deposits) and the Ministry of Finance will act as the responsible regulator and supervisor of the work of these institutions. However, the "exit" of the five savings houses from the depository institutions segment only partially conditioned financial disintermediation present in the savings houses in the past. Namely, in 2015, a savings house became a financial company, but its "exit" from the sector, conditions only about 15% of the decrease in the total assets of the savings houses. On the other hand, there is a high degree of concentration in this system, where the largest savings house has a market share of over 60% and largely determines the overall trends in the "savings houses" sector.

**Decrease in the assets of the savings houses (Annex 17), in 2015, is due to the decrease in liabilities based on loans and household deposits (Annex 18), which resulted in fall in their liquid assets. The repayment of credit liabilities in one of the**

<sup>106</sup> According to the regulations, the savings houses may collect deposits from households only in denars with or without foreign currency clause (in 2015 the restriction of the permitted amount of collected deposits up to an amount that is twice the size of the founding capital was revoked), as well as to take loans from banks. On the assets side, loans to households and corporate loans can be extended (amounting to not more than 1.5 times of its own funds, without the mediation of banks, i.e. unlimited amount, through banks by providing bank guarantee), or placements in domestic government securities and short-term securities can be performed. Savings houses do not bear payment operations (participate in payment transactions through banks). Savings houses do not approve loans based on credit and debit cards, with exchange operations and economic and financial consulting being among the services they are allowed to exercise.



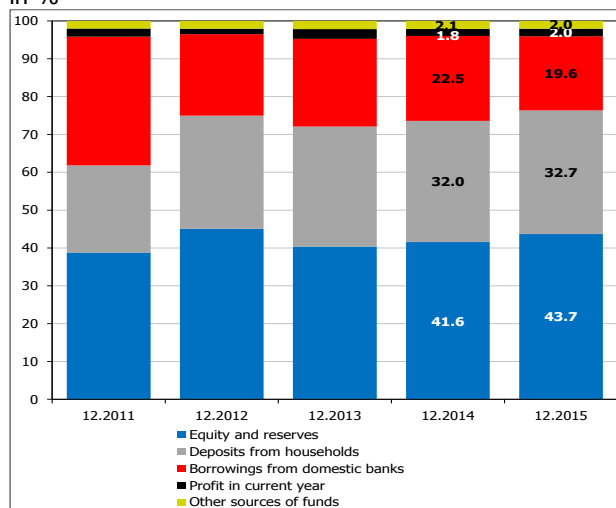
Chart 110  
Annual liabilities growth  
in millions of denars



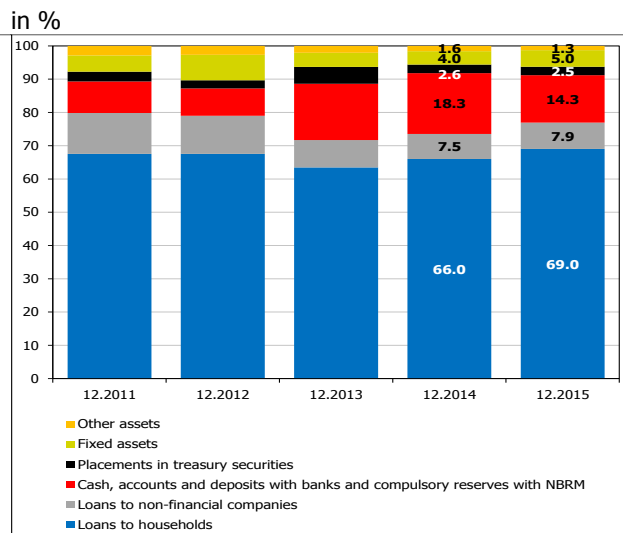
Source: National Bank, based on data submitted by the savings houses.

savings houses, in accordance with agreed maturity dates, reduced the overall liabilities based on loans to this segment of depository institutions. In addition, decline in household deposits, mostly in the first half of 2015, is registered, probably due to the uncertainty related to domestic political turmoil, which except on banks, had negative impact on the savings houses, as well (Annex no. 21). The decrease in deposits and liabilities based on loans was covered with liquid assets of the savings houses, while the decrease in the sources of funds partially "depreciated" also through reduced lending to households (Annex no. 20). Despite the decrease in the savings houses' liquid assets, they remain at the level which provides satisfactory coverage of individual liabilities categories of this sector.

Chart 111  
Structure of liabilities (left) and assets (right)  
in %



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



**The business model of the savings houses is profitable, despite the smaller activity volume (Annex 19). The net interest income dominates in the profit creation. The capital and reserves have the highest share in the sources of funds, while the household loans dominate on the assets side.** In the past five years, almost all savings houses operate profitably, which, at an aggregate level, increases the assets by 1-2% annually and provides a return for the owners in the savings

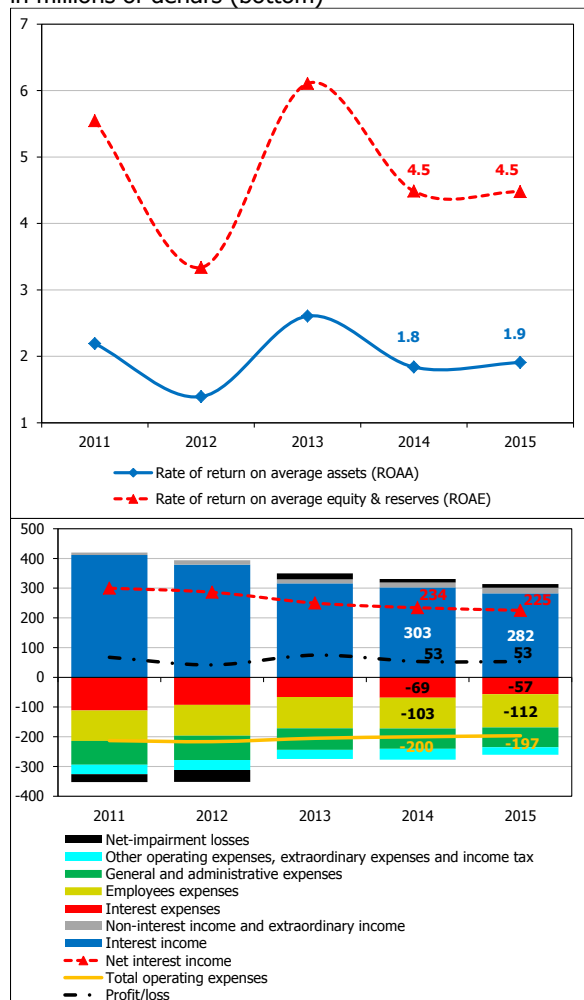


Chart 112

Rates on return on assets and equity and the reserves (top) and structure of the savings' houses profit (bottom)

in % (top)

in millions of denars (bottom)



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

houses, at an annual rate of 4-6%. The savings houses finance a large part of the activities by using their own funds (capital and reserves), which do not create expenditures in the income statement, as well as by collecting deposits from households, where they have to be far more price competitive than banks. Moreover, one of the savings houses is significantly financed through credit lines from domestic and foreign origin, which it uses through local banks. Most of the collected sources of funds are placed in loans intended for financing household consumption, which are typically the most expensive (yield-bearing) loan product of depository institutions. About 17% of the assets of the savings houses are liquid, where besides keeping non-yield bearing cash, the choice comes down to investments in domestic securities or depositing funds in domestic banks. Taking into account the structure of the activities, the net interest income prevail in the total revenues of the savings houses. In the expenditures structure, the largest share accounts to the expenses for employees, which is the only growing category among expenditures in recent years, probably due to the strong competitive pressure from banks<sup>107</sup>. Also, for the past three years, the savings houses released fairly high amount of impairment, which contributed positively for the savings houses profit with over 20%.

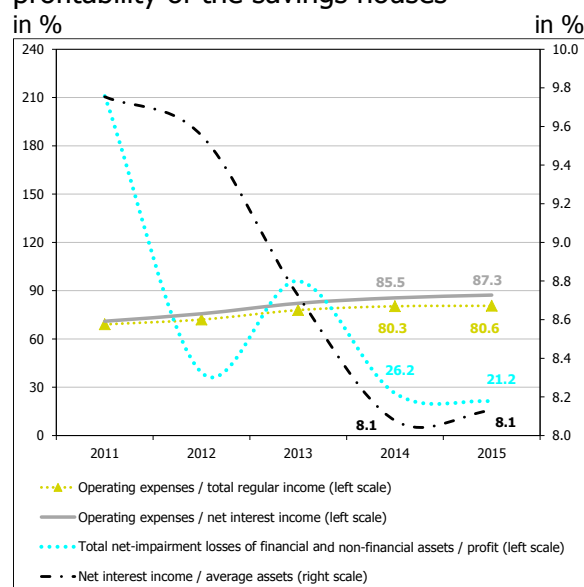
**After a few years of continuous decrease, in 2015, the rate of net interest income the savings houses earned in the process of financial intermediation remained at the same level, which enabled keeping the same amount of profit as in 2014. Despite the certain rationalization of the total operating costs, the operational efficiency of the savings houses is constantly worsening.** The ratio between net interest income and average assets of the savings houses is more than twice higher than the banking system, which is important in the profit creation process, but the wider net interest spreads are signal also **for significantly lower**

<sup>107</sup> As of 31.12.2015, the savings houses have 190 employees (189 employees as of 31.12.2014).



Chart 113

Indicators of operational efficiency and profitability of the savings houses



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

The total net impairment due to the impairment of the financial and non-financial assets is positive for 2013, 2014 and 2015, while negative for 2011 and 2012.

**competitiveness of the savings houses compared to banks**, which restricts the already small opportunity for stronger growth of their activities. The cost-to-income ratio is higher by about 30 percentage points, compared to the banks and registers constant deterioration in the previous period. Simultaneously, the difference in the share of the operating costs in the net interest income between the savings houses and the banks is far smaller and it equals ten percentage points. Hence, the reasons for poor operational efficiency of the savings houses should be sought primarily in their limited scope of activities, which produce small amounts of non-interest income (as opposed to banks, where non-interest income represented about one third of the total regular income, in the savings houses, this share equals about 7%). On the other hand, profitability, almost entirely, is based on the maintenance of fairly wide net interest spreads and net interest income creation, the amount of which is still moderate and limited.

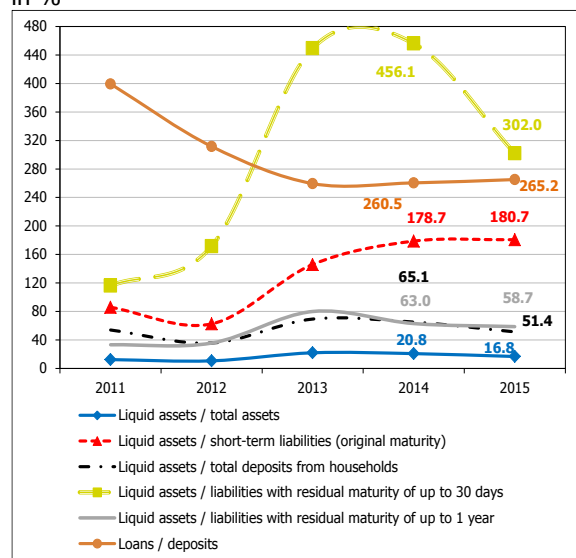
### 3.2.2. Risks in the operations of savings houses

**The regulatory requirements for the savings houses in the risk management domain, are at least, the same as those referring to banks.**<sup>108</sup> Savings houses are depository institutions partly funded through households' deposits, representing the most important depositor in the banking system as a key segment of the domestic financial system. Thus, the possible liquidity problems in the savings houses or the substantial materialization of some of other risks could lead to distrust and generally, bad reputation of depository institutions in the public, including banks. On the other hand, the savings houses extend (more expensive) loans to customers, which are riskier and some of them, probably not qualified for taking credit under the terms offered by banks.

<sup>108</sup> The amendments of bylaws on the terms and the manner of operation of savings houses from April 2015, envisaged further strengthening of operating standards of the savings houses within the risk management domain (capital adequacy and currency risk) and the manner of organization of the internal audit. Namely, they introduced a higher capital adequacy ratio which the savings houses have to meet - 20%. At the same time, the amendments terminated the restrictions of the allowed amount of collected deposits. Also, the savings houses shall establish a currency risk management system and determine internal indicators for monitoring and limitation of exposure to currency risk.



Chart 114  
Liquidity ratios of savings houses  
in %



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

**The liquidity of the savings houses remains satisfactory, despite the decrease in the liquid assets in the last two years.**

In 2015, the liquid assets of the savings houses<sup>109</sup> registered a substantial fall of Denar 159 million (or by 26.4%), which results from the repayment of part of the loan in one savings house and decrease in the households' deposits. About 17% of the savings houses' assets consist of liquid assets, almost twice less than banks, which on the one hand result from the favorable maturity structure of the savings houses' liabilities (due to which they do not have need of keeping large amounts of liquidity reserves), and on the other hand, it is a consequence of the limited selection of liquid financial yield bearing instruments for the savings houses (for example, the savings houses may not invest in CB bills or in deposit facilities in the NBRM). There is full coverage of the short-term liabilities (by original maturity) and liabilities with residual maturity up to 30 days with liquid assets (it is even a multiple). By contrast, the indicator for coverage of the total household deposits was slightly lower (in comparison with the banks). The relatively high difference between the indicator of coverage of the short-term liabilities with liquid assets and the indicators of coverage of the total households deposits with liquid assets stems from the predominant orientation of savings houses' depositors to save on a longer run. Hence, the liquidity of the savings houses could be put in question only in case of possible early maturity termination and deposits withdrawal by households<sup>110</sup>. The indicator of credit-to-deposit ratio is far over the usually acceptable limit (90-100%), which, however, does not indicate unfavorable structure of the sources of funds, but it mostly arises from the presence of substantial capital amounts for financing the activities of the savings houses.

**Analyzed by residual contractual maturity, the savings houses mostly use**

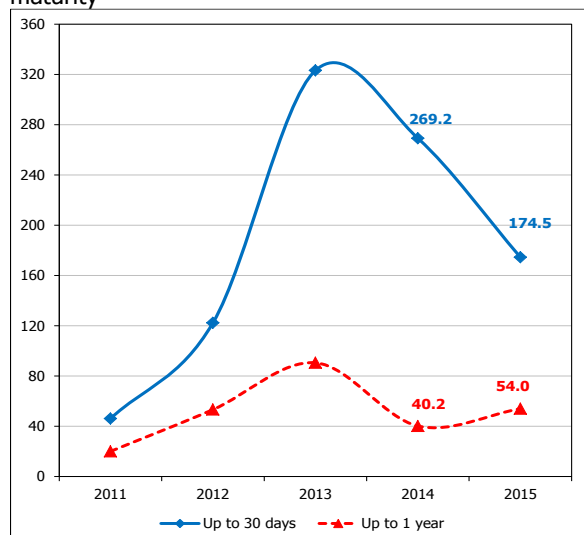
<sup>109</sup> They include cash, accounts and deposits with domestic banks, reserve requirement on the account with the NBRM and investments in domestic securities.

<sup>110</sup> Savings houses, as deposit-taking institutions are members of the Deposit Insurance Fund and these deposits are insured pursuant to applicable regulations in this area, as well as deposits collected by banks.



Chart 115

Gap between savings houses' assets and liabilities that mature in the next 30 days and in the coming year in percentage of liabilities with respective residual maturity

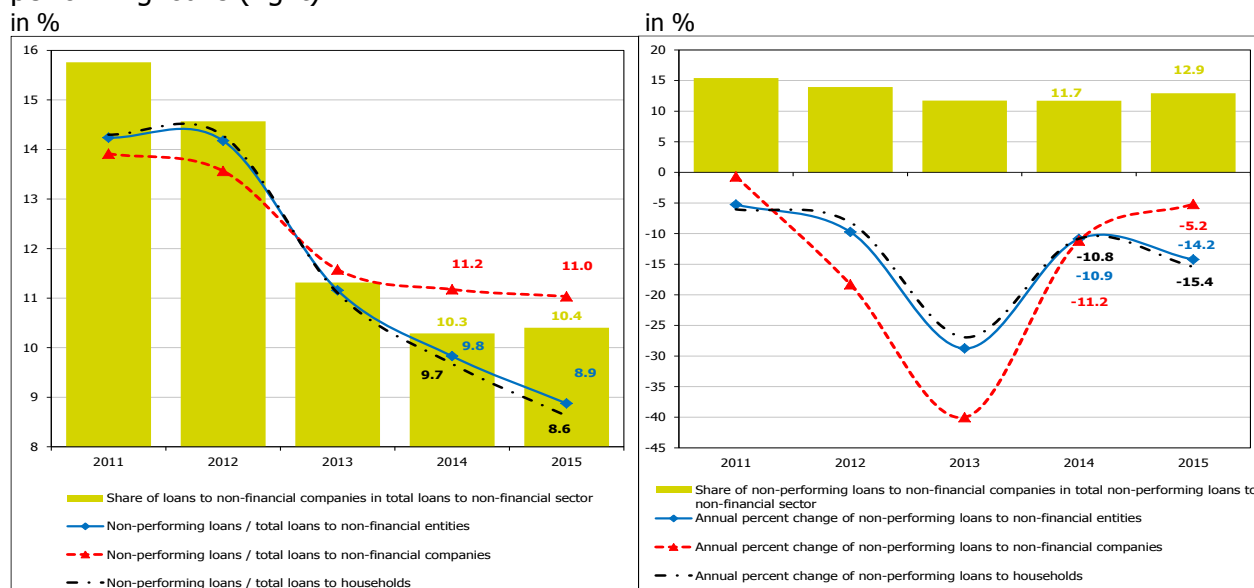


Source: National Bank, based on data submitted by the savings houses.

**sources of funds with a longer residual maturity, for financing investments with shorter residual maturity.** At the end of 2015, the savings houses' assets that mature in the next 30 days increased by almost three times compared to the liabilities with same residual maturity. **A positive gap, but far smaller, is observed in the maturity segment up to 1 year, where the assets that fall due in the next year are higher by more than 50% compared to the liabilities with same residual maturity.** Such maturity mismatch between assets and liabilities of the savings houses is favorable from the aspect of liquidity risk management, because it means more than full coverage of the possible outflows of funds that could occur in the following one-year period. **In contrast, this type of unusual maturity transformation carried out by savings houses brings negative term premiums in the process of financial intermediation, which is unfavorable for their profitable operation.**

Chart 116

Share of the non-performing in the total loans (left) and percentage growth rates of the non-performing loans (right)



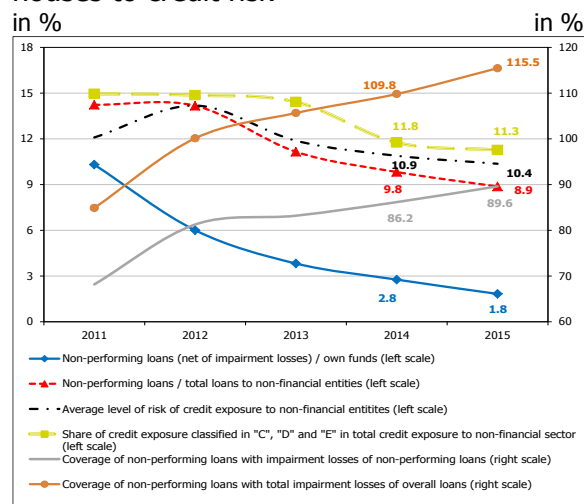
Source: National Bank, based on data submitted by the savings houses.





Chart 117

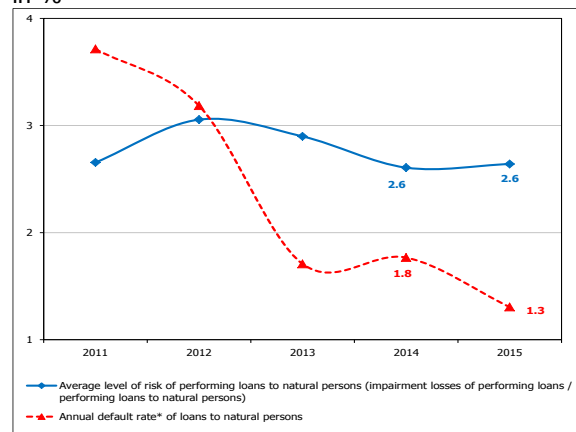
Indicators of exposure of the savings houses to credit risk



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

Chart 118

Average level of risk and annual default rate of the natural persons' regular loans



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

The annual default rate is calculated as a percentage of credit exposure with regular status, which for a period of one year transforms into exposure with non-performing status.

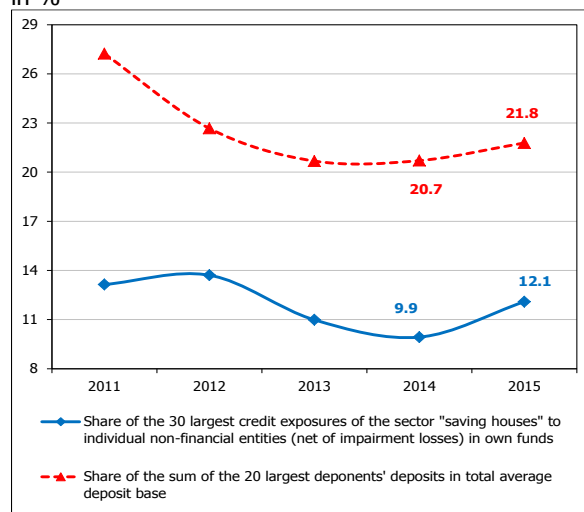
**Indicators for the savings houses exposure to credit risk registered a steady downward trend in the past, similar to present positive performance in the banks' credit exposures to households.** Non-performing loans to non-financial entities registered an annual decline of 34 million (or 14.2%), with the indicator for the share of non-performing loans in total loans being below 9%.

However, this share is higher in comparison with the banking system to the sector "households", given the fact that the credit activity of the savings houses is usually aimed at clients with a higher level of risk. The negative effects of a possible complete default of non-performing claims on savings houses' capital are limited, given the high coverage of these loans with impairment. The annual default rate of regular loans to natural persons fell to the level of 1.3%, which is twice lower than the percentage of impairment for these loans determined by the savings houses. In the last three years, savings houses show a positive amount of net impairment of financial assets on their income statements, which is another proof for the improved credit portfolios quality.



Chart 119

Level of concentration in the credit portfolio and deposit base of the savings houses in %



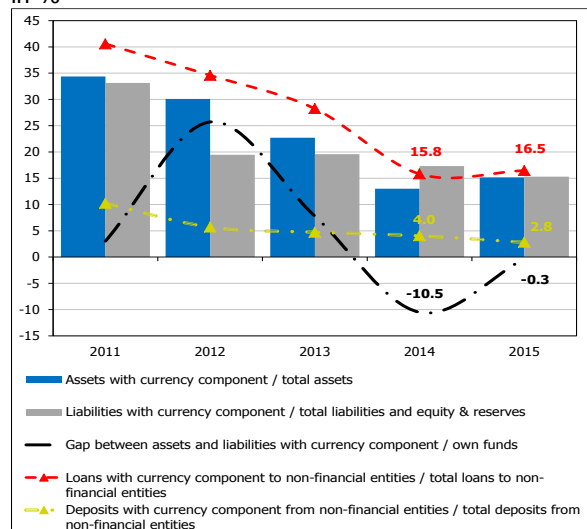
Source: National Bank, based on data submitted by the savings houses.

The 30 largest credit exposures do not include credits to connected persons/entities, while the 20 largest depositors include the deposits of connected entities/persons.

**The concentration of the savings houses' deposit base is relatively high. The concentration of the savings houses' credit portfolios are less concentrated.** Twenty largest depositors in each savings house occupy more than one-fifth of total deposits in savings houses and the possible withdrawal of these savings would absorb over 40% of the liquid assets of the savings houses. On 31.12.2015, the thirty largest credit exposures of the "savings houses" sector to individual non-financial entities accounted for 6.8% of total credit exposure to non-financial sector. Possible full default of the thirty largest credit exposures of savings houses would "impair" the own funds by about 12%.

Chart 120

Exposure to currency risk and indirect credit risk in %



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

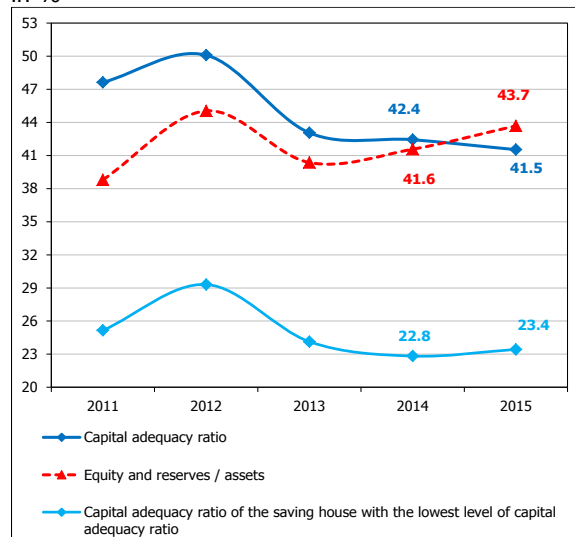
**Denarization in the savings houses' balance sheets is more pronounced compared to the banks. Currently, the savings houses' exposure to currency risk is fairly small, registering a considerable volatility in the past few years.** On 31.12.2015, the gap between assets and liabilities with currency component is negative but minor (representing only 0.3% of the total own funds). The share of the loans with currency component<sup>111</sup> in the credit portfolios of the savings houses registers severe downward trend<sup>112</sup> and currently, it equals 16.5%, which is significantly less compared to banks.

<sup>111</sup> Savings houses extend loans and collect deposits in denars (with or without foreign currency clause). Hence, the loans and deposits with currency component are fully denar with foreign currency clause.

<sup>112</sup> It should have in mind that one of the savings houses approved denar loans, where credit agreements envisage automatic transformation of loans into loans with FX clause, in the event of significant change in the exchange rate against the euro (the amount of change is also determined by the credit agreement).



Chart 121  
Solvency indicators of savings houses  
in %



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

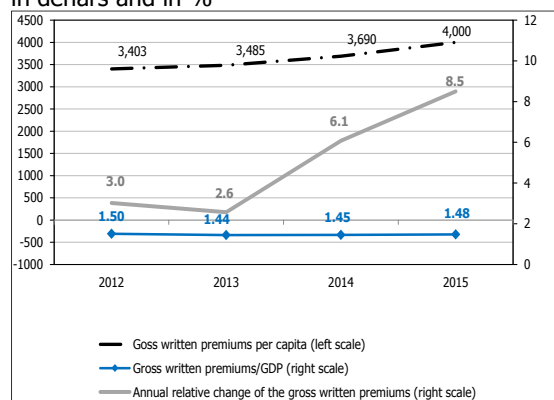
The solvency of the savings houses remains relatively high. In 2015, capital adequacy decreased by less than one percentage point, which is mostly a result of decrease in the number of savings houses. Own funds are almost entirely made up of core (Tier 1) capital. In accordance with regulatory requirements, the capital adequacy ratio is not lower than 20% in any of the savings houses, and on aggregate level it exceeds 40%. The level of the capitalization rate is similar. The high capital adequacy ratio, at the aggregate level, results from high capitalization of one of the savings houses, as opposed to the other two, whose adequacy ratios are relatively close to the regulatory minimum (of 20%). The extremely high capitalization of one of the savings houses results from the small deposit activity of this savings house.

#### 4. Insurance sector

In 2015, the growth of the insurance sector continues, expressed through the movements of gross written premium, which is significantly greater compared to the most of the countries in our environment. The increase of the assets of the insurance companies is mostly due to the increased sales activities and partially from the capital growth. In conditions of increased net costs for the implementation of insurance, the amount of transferred risks from reinsurers, and the profitability of the insurance companies improved due to the slower increase in claims and increased premiums. The solvency of the sector is extremely high, which is one of the factors for its stability. The liquidity of the sector also improved. The threat of spillover of the risks from the banking sector to the insurance sector through the use of insurance policies in banking products is still low, which slightly increased. The most important factors for uninterrupted function of the insurance sector are the stability of the banking system (due to invested deposits), and of the government (due to the investments in securities). The risk of change in interest rates in insurance companies registers a mild increase.



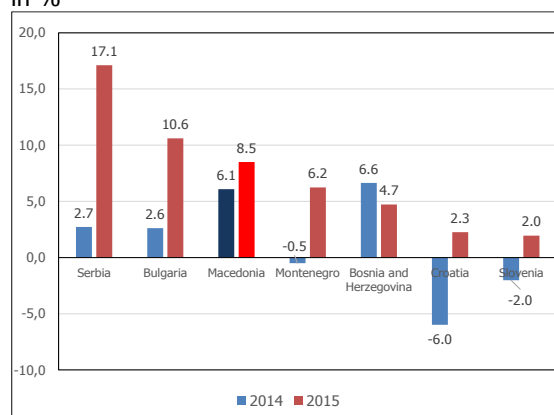
Chart 122  
Insurance sector development indicators  
in denars and in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

In 2015, the increase in the insurance sector is evident<sup>113</sup>, with a significantly higher annual growth rate of the gross written premiums. The density degree (gross premiums written per capita) increased by 8.5% (6.1% in 2014), and the degree of penetration (share of gross premiums written in GDP) registered minimal changes. Thus, the dominant contribution to the growth of the total gross written premium is that of non-life insurance with 67.2% (mostly the class of compulsory MTPL), while life insurance is slowly penetrating the Macedonian insurance market (Annex no. 22).

Chart 123  
Annual relative change in the total gross premium written in the countries of the region  
in %



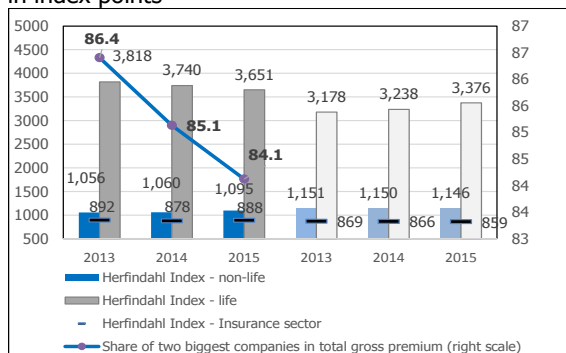
Source: Insurance Supervision Agency of the RM and NBRM's internal calculations, web site [www.xprimm.com](http://www.xprimm.com).

The increase of the insurance sector in the Republic of Macedonia, measured according to the movements of the gross written premiums, is constantly high compared to most countries in our environment, as well as compared to the countries of Central and Eastern Europe (average rate in 2015 is 1.5%)

<sup>113</sup> At the end of 2015, the insurance sector in the Republic of Macedonia consisted of: 15 insurance companies (11 non-life insurance companies, of which one company performs activities of reinsurance additionally to the non-life insurance and 4 companies for life insurance), 30 insurance and brokerage companies (4 new compared to 2013), 13 insurance agencies (2 new compared to 2014) and 3 bank - life insurance agent (in 2 it is expected two more banks to obtain a license for insurance agent).

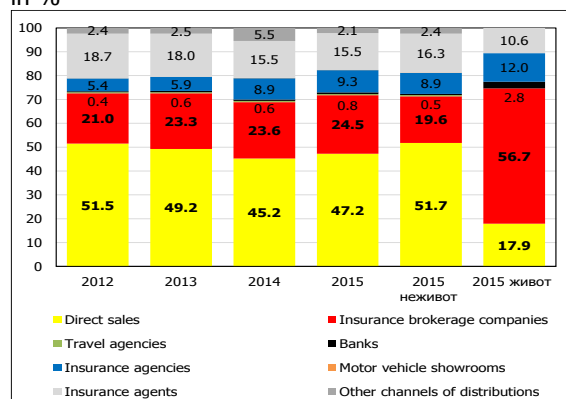


**Chart 124**  
Concentration level of gross written premium (left) and assets (right) in index points



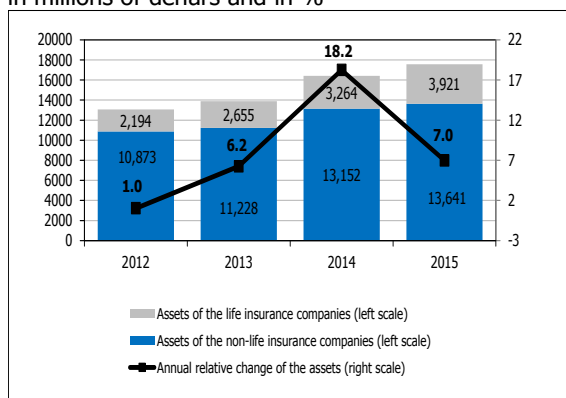
Source: Source: Insurance Supervision Agency of RM

**Chart 125**  
Structure of sales channels of the insurance sector. in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**Chart 126**  
Total assets of the insurance sector and annual relative change in millions of denars and in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

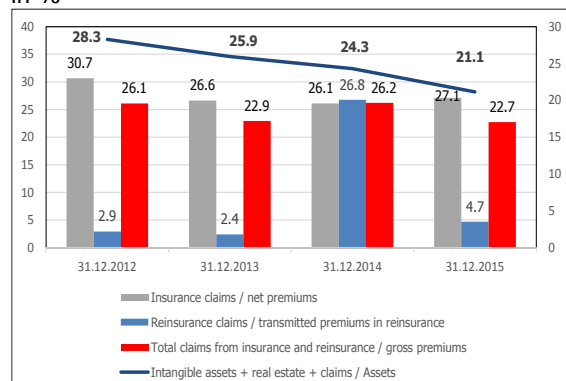
**Insurance market is moderately concentrated in terms of shares of the insurance companies in the assets and the gross written premium.** Non-life insurance companies contribute for the moderate concentration, respectively dispersion. Due to the small number of the companies (four) which perform life insurance activities there is a high concentration in life insurance, whereby almost 84% of the gross written premium is concentrated in two companies.

In the sales channels of the insurance products, in the level of the insurance sector, the direct sales are dominant and strengthening. In the total gross written premiums, the share of direct sales increased for 47.2%, with a simultaneous increase of the share of insurance-brokerage companies (24.5%) and the share of insurance agents (9.3%). According to the insurance group, in non-life insurance, the share of direct sales is still more evident and is 51.7% whereas in life insurance sector the insurance brokerage companies dominate with a share of 56.7%.

**The growth of the assets in insurance companies (increase of 7.0% or Denars 1.146 million) is due to the increase of sales activities, and partially to the growth of the capital.** The increase is much higher in life insurance companies, which still penetrate on the insurance market. In 2015, the increase of the assets of the non-life insurance companies decelerated (3.7%). In terms of moderate offer of, the long term investments of the insurance companies increased (for 11.6%). Thus, 62.8% of their assets are investments in securities and deposits in banks. Financial investments of life insurance companies reach up to 91.4% of their assets, whereas in non-life insurance companies up to 54.6%. (Annex no. 23).



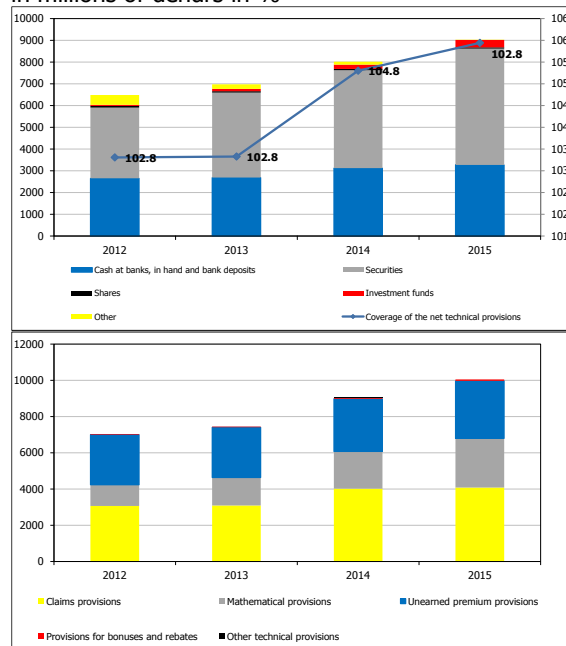
Chart 127  
Assets of the insurance companies  
in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**Compared to 2014, in 2015 the quality of the assets of insurance companies is better.** The share of potentially damaged means<sup>114</sup> in assets decreased for 3.2 percentage points and is 21.1%. The share of the total claims from immediate activities of insurance and reinsurance of total gross-premiums decreased to 22.7%. The share of claims from activities of reinsurance in transferred premiums in reinsurance decreased to 4.7%. Only the share of claims for immediate activities of insurance in net-premiums<sup>115</sup> increased for 1 percentage point (to 27, 1%).

Chart 128  
Technical reserves structure and structure of the assets used cover technical reserves  
in millions of denars in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**In liabilities of insurance companies, with a share of 57.2%, gross technical reserves<sup>116</sup> dominated with an annual increase of 11.2%.** The mathematical reserve (65%) had the greatest contribution in the growth of the gross-reserves. In 2015 the upward trend of the technical reserves (11.9%) was followed with a faster increase of assets which cover the technical reserves<sup>117</sup> of the insurance companies (12.6%), due to which the coverage of the technical reserves increased to 105.4%.

<sup>114</sup> Intangible assets, real estates and total claims are included in potentially impaired assets of the insurance companies.

<sup>115</sup> Net premiums represent gross premiums decreased for the premiums towards reinsurance companies.

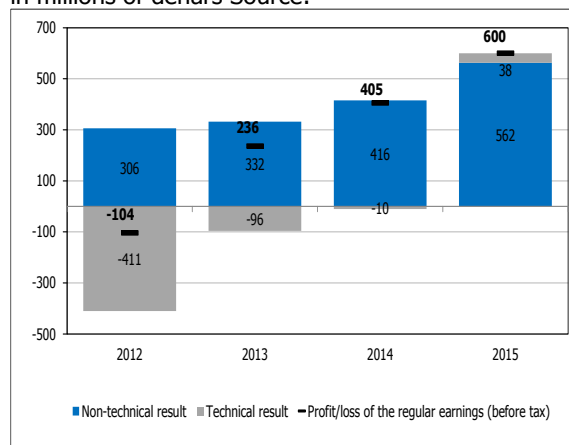
<sup>116</sup> 187/2013), insurance companies are required to allocate adequate technical reserves for permanent securing of the performance of liabilities under insurance contracts and possible losses for risks arising from their insurance operations. Companies are required to set up the following types of technical reserves: unearned premiums provisions, mathematical provisions, provisions for bonuses and rebates, claims provisions and other technical provisions.

<sup>117</sup> Assets covering technical reserves are the assets of the insurance companies that serve to cover future liabilities arising from insurance contracts, and possible losses from the risks associated with doing insurance work. These assets should be at least equal to the value of technical reserves.



Chart 129

Assets of the insurance companies  
in millions of denars Source:



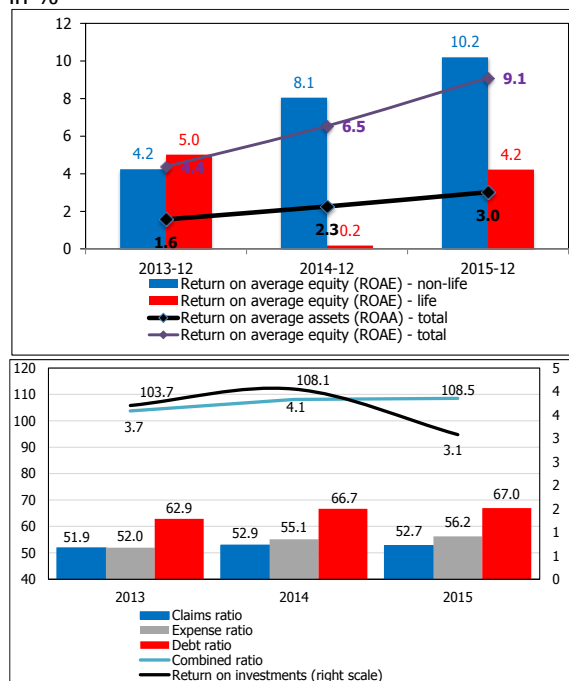
Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**In 2015, the profitability of the insurance companies increased**, whereby the realized profit of the insurance companies is higher for 48.6%<sup>118</sup> compared to 2014 (Annex no. 24). The realized profit in both insurance groups (net technical result of Denars 38 million and net non-technical result Denars 562 million) contributed in improving the rates of return of the assets and capital.

In 2015, at the level of insurance sector, the return rate of the average assets increased to 3.0% whereas the return rate of the average capital reached 9.1%. Non-life insurance companies, in average, realized a return rate of average capital of 10.2%, whereas life insurance companies, in average, realized a return rate of 4.2%.

Chart 130

Indicators of profitability (up) and efficiency  
of insurance companies (down)  
in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**In 2015, despite the positive financial result certain reduction was registered in the operational efficiency of insurance companies.**<sup>119</sup>

The expense ratio reached 56.2%, which is due to the significant increase of net costs for conducting insurance activities<sup>120</sup> (7.1%), compared to the increase in net - premiums written (5%). The claims ratio mildly decreased 52.7%, due to the slower increase of claims (4.6%) in relation to premiums, therefore the combined ratio increased to 188.5%

Furthermore, increase is also registered in the debt ratio (share of liabilities in assets) which increased by 0.3 percentage points.

<sup>118</sup> One company realized a profit of Denars 267 million, before taxation, from which Denars 160 million based on write-offs of previously incurred obligations. Four companies have realized a negative financial result.

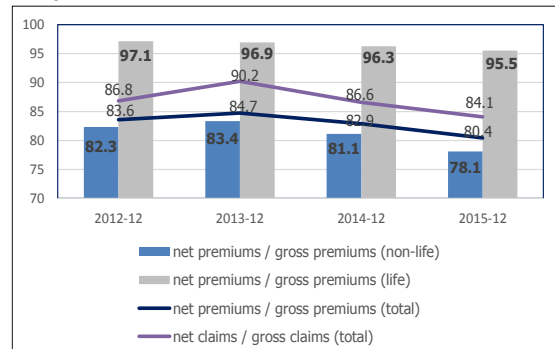
<sup>119</sup> The claims coefficient is calculated as the ratio between net claims in the year and net - premium written, the expenditures coefficient as a ratio between the costs of the insurance and the premium, the debt coefficient as a ratio between total liabilities and total assets and the return on investments as a ratio between revenue less costs of investments and the amount of investments.

<sup>120</sup> The expenses for conducting the insurance include: staff costs, administrative costs, commissions paid and other expenses for conducting insurance.





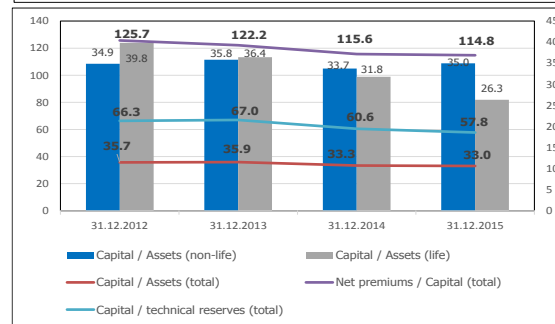
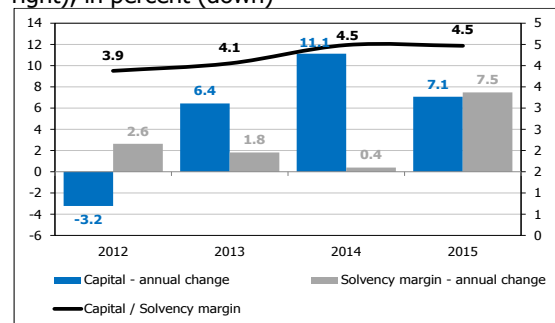
Chart 131  
Transferred risk to reinsurers  
in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

Chart 132  
Indicators of solvency in insurance companies

In Denar millions and percent (up left), times (up right), in percent (down)



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

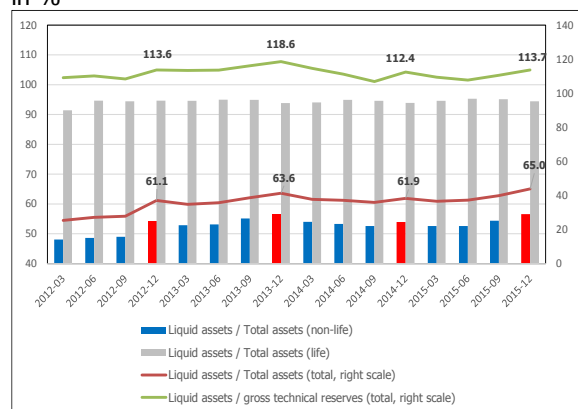
**The amount of the risk transferred to reinsurance companies increased.** Due to the faster growth of the premiums transferred to reinsurance (24.1%) in relation to the increase in gross-premiums (8.5%), the share of net-premiums decreased to 84.1%. Simultaneously, the share of net-claims from insurance companies in gross-claims decreased to 80.4%, as an indicator of the influence of the reinsurance on claims.

Solvency position of this sector continues to be high, which is based on the high capital of the sector which covers the solvency margin (capital requirement) by 4.5 times. The high solvency allows higher stability and resistance of the sector. The share of net-premiums in the capital, as an indicator of solvency of the sector, also improved. However, the ratio of the capital with the assets and with gross technical reserves mildly decreased, due to the faster increase of the assets and gross technical reserves in relation of the capital in life insurance.

**The liquidity of the insurance sector improves.** Nearly two-thirds of the assets of the insurance companies are liquid assets<sup>121</sup>, which, in turn, fully cover the gross technical reserves.

<sup>121</sup> Liquid assets include: deposits in banks, securities, shares, stakes in investment funds and cash in hand.

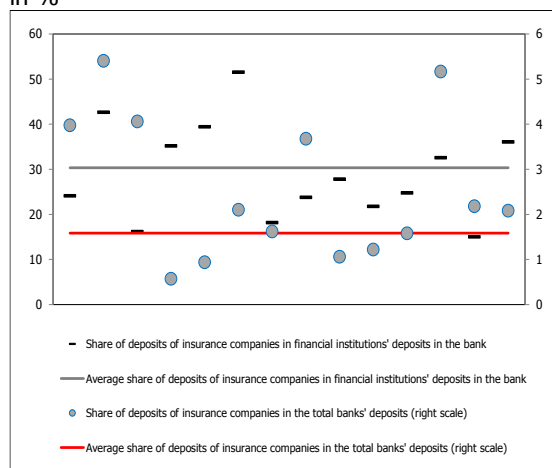
Chart 133  
Indicators of insurance companies' profitability  
in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**The threat of creating and spillover risks from the insurance sector towards other segments of financial systems in the Republic of Macedonia is small,** primarily due to the weak links with the other segments of the system, but also due to the absence of complex financial instruments and services in this sector and domestic financial markets in general. However, the stability of this sector is extremely important, especially due to greater presence of the life insurance, which contributes to the social security of the households.

Chart 134  
Share of deposits of insurance companies in banks' deposits  
in %



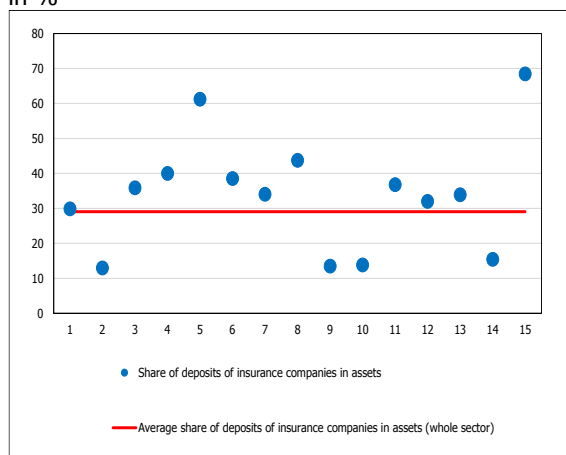
Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**The link of insurance companies and banks is low. The threat of transferring risks from the insurance towards banking sector is still with a low probability.** Banking insurance, i.e. cooperation between banks and insurance companies based on an agreement for representation in insurance, currently applied by three banks is low. In 2015, gross premiums written through banks represented only 0.8% of total premiums (2.8% of total premiums for life insurance).<sup>122</sup> For the banks, the exposure provided by life insurance policy is still in an insignificant amount (0.7% of total credit exposure or 3.4% of exposure towards natural persons without credit cards and current accounts). Another potential channel for connection between insurance and banking sector is the potential claim of providing loans in which a share of 7% is provided in the total credit exposure of nonfinancial entities provided with real estate. However, the probability of a single event is likely to cause great claim which cannot be paid from the insurance company, thus threaten the payment of determined great claim of a bank, is low and usually is reinsured in other foreign insurance companies.

<sup>122</sup> This percentage includes gross premiums written through those banks that do not have a license issued by the Agency for Insurance Supervision, but under the Law on Insurance Supervision they can sell policies from the segment of non-life insurance.



Chart 135  
Share of deposits of insurance companies  
in their assets  
in %

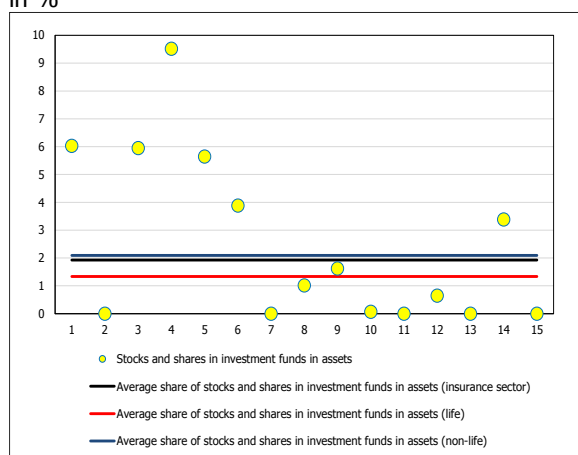


Source: Source: Insurance Supervision Agency of RM

Traditional channel for spillover of the risks from the banking to the insurance sector derives from the invested deposits of insurance companies placed in banks. As noted, these deposits continue to have minor significance as a source of financing the banking system because they occupy only 1.6% of the total deposits of the banking system, and the highest share in individual banks is 5.4%. But, the stability and liquidity of the banks are important for the insurance companies, because the deposits in banks are an important part (29.6%) of their assets. Individually, per insurance companies, the highest share in deposits in the assets of the insurance companies reaches 68.4%.

Lending to the insurance sector by the banks is almost absent.

Chart 136  
Share of the stakes in investment funds in  
the assets of insurance companies  
in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

**On the other hand, the exposure of the insurance sector towards the financial markets increases, given the increased share of the portfolio of securities in assets (34.1%).** Due to the predominant exposure towards securities (33.7%) and the low share of investments in stock (0.4%), the insurance sector is predominantly exposed to risk of change of interest rates. In conditions of low interest rates, life insurance companies are exposed to the risk of the upward change of interest rates in the harmonization of the so called duration<sup>123</sup> of the long-term investments of assets in long term bonds of liabilities.

In 2015, a certain share of stakes of investment funds is recorded in the assets of the insurance companies (1.9%). Even though the market risk dominates among these instruments, the exposure is still low, in sector level and individual insurance companies. Individually, per insurance companies, the highest share of investments funds in the assets of insurance companies is 9.5%.

<sup>123</sup> Duration is a measure for price sensitivity of equity financial instruments in the change of interest rate.



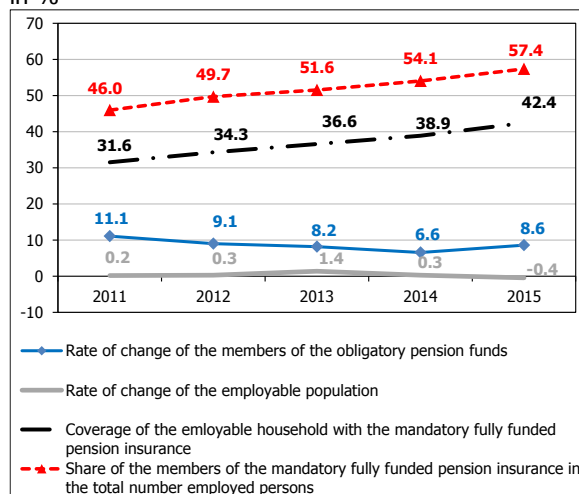
## 5. Fully funded pension insurance

Fully funded pension insurance represents the second segment by size in the financial system of the Republic of Macedonia after the banking system. Assets in private pension fund also increased in 2015, whereby the majority of total assets are still invested in securities. Funds management companies apply a relatively conservative strategy for investing. Given that these funds still have a relatively young membership and greater outflows are not expected based on the pension payment, a greater risk of maturity mismatch between the cash flows from investments and servicing of liabilities does not exist. In 2015, private pension funds registered a lower rate of yields. In the last two years, the nominal and real yield rates are similar, which is due to the low, and even negative rates of inflation.

### 5.1. Mandatory fully funded pension funds

Chart 137

Membership in fully funded pension insurance funds  
in %



Source: Agency for Supervision of Fully Funded Pension Insurance - MAPAS and SSO.

At the end of 2015, voluntary pension funds comprised 405,288 persons.

In 2015, 32,137 new people became members in these funds, which enabled accelerated increase of membership compared to the previous year (8.6% in 2015, versus 6.6 in 2014). The share of the members in fully funded pension funds in the total number of employees also registers an increase, which corresponds with the increased rate of employment in the economy and the legal obligation of the unemployed people to become members of these funds. After ten years of existence, mandatory pension funds still have a relatively young structure of the members, whereby most of them are 31 to 35 years of age. **In 31.12.2015, net assets<sup>124</sup> increased by Denars 6.923 million, or by 21.0%, which represents a deceleration of 2.3 percentage points.** Their share in gross domestic product also registers an increase, which at the end of the year is 7.1%, and is higher by 0.9 percentage points compared to 31.12.2014. Over 70% of their increase is due to the cash flows from paid contributions of the members, which increased by 14.3% which is by 4.2 percentage points more than of their increase in the previous year. The change in net assets which is due to the investments and managing with funds' property,<sup>125</sup> also registers an increase, which is

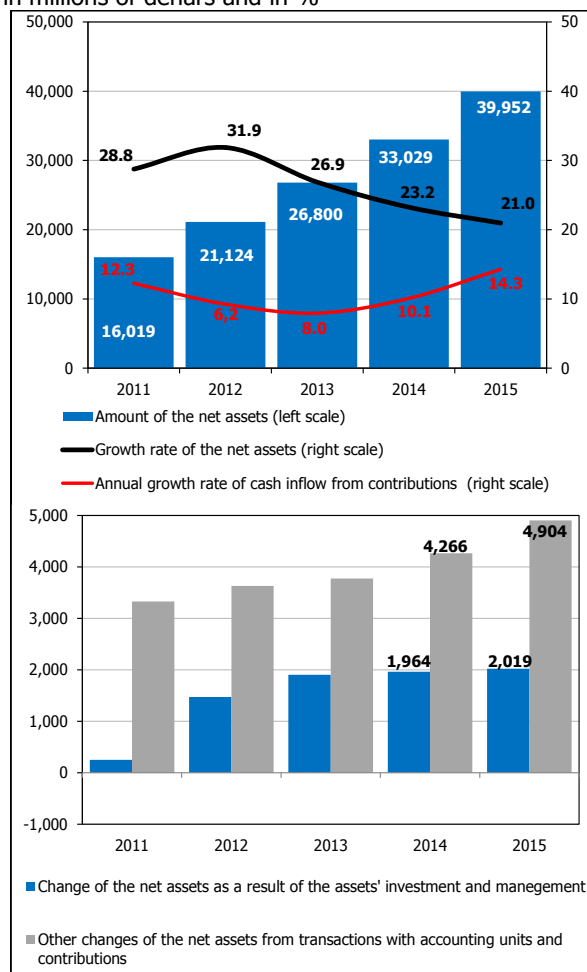
<sup>124</sup> Net assets of the pension fund are determined as the difference between the value of the assets and the net liabilities of the pension fund.

<sup>125</sup> The change in the net - assets as a result of management and investment include net gains/losses from investments, the total unrealized gains/losses from investments in securities and revaluation of securities available for sale.



Chart 138

Movement and growth of net assets (left) and breakdown of the structure of the growth of net assets (right) of fully funded pension insurance funds in millions of denars and in %



Source: Audited financial statements of fully funded pension insurance funds

still lower by 0.4 percentage points compared to the previous year and is 2.8%. The share in the change of net assets which is due to the investments and managing of funds is 29.2% in the overall change of net assets, whereas in the previous year this share was 31.5%.

**Companies that manage with mandatory pension funds apply a conservative policy of investing the assets of the funds.** Investments in debt securities still occupy a significant portion of the total investments of mandatory pension funds, respectively, with a share of over 60% in the total investments of pension funds. In 2015, they continue to increase by 25.5%, which is more by 9.5 percentage points than the increase in the previous year. On the other hand, the share of the deposits placed in domestic banks registers a continuous decrease in the last seven years, compared to the previous period before 2010, when they represented a significant item in the investments of private funds. At the end of the year, deposits register a decrease on an annual basis by 21.5% (respectively by Denars 779 million).

The increase in equity financial instruments was lower by 17.3 percentage points, compared to 2014, and at the end of the year it amounted 25.3% (or Denars 2.487 million). However, the share of equity financial instruments constantly increases and at the end of 2015 and amounts a little more over 30% of the total investments. The smaller increase of equity financial instruments in 2015, compared to two previous years<sup>126</sup>, is partially due to the fact that in the two previous years the movements of

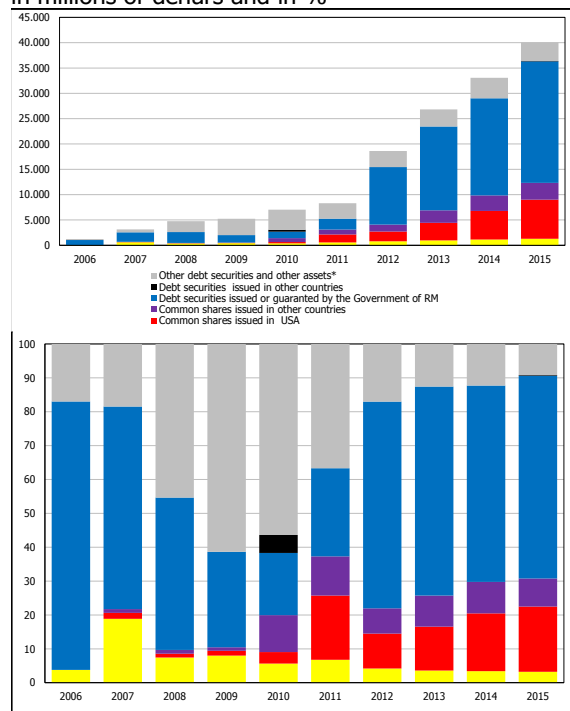
<sup>126</sup> The increase of equity financial instruments in 2013 and 2014 was 69.0% and 42.6%, respectively. On the other hand, debt securities registered an increase of 19.1% in 2013 and 15.9% in 2014.



Chart 139

Movements of the investments by type of instrument and country - absolute amount (up) and structure (down)

in millions of denars and in %



Source: Agency for Supervision of Fully Funded Pension Insurance - MAPAS and SSO.

\* The other assets include cash and claims of funds.

the world capital markets were more favorable. The financial instruments of issuers based in the US have the most important place among equity financial instruments. These investments first appeared in 2007, with a moderate share, since then they have registered a constant increase, and at the end of 2015 they occupy 62.6% of the equity financial instruments. The remaining part of equity financial instruments is allocated in other countries (26.9%) and companies listed in secondary capital market of the Republic of Macedonia (10.5%).

**In the structure of equity financial instruments in which the mandatory pension funds have invested, according the type of the instrument, the stakes in foreign investment funds dominate, which are entirely stakes of the so called Exchange Traded Funds ETF.** The investments in stakes of foreign investment funds have share of 70% in the structure of equity financial instruments and in 2015 increased by 24.8%, which still is a slower increase rate compared to 2014 (53.2%). The increased investment in stakes in foreign investment funds represents a relative investment alternative for investment fund companies, because on one hand, they have a higher expected yield relative to bonds, and on the other hand, investments in stakes of foreign investments funds indirectly mean diversification and decrease of the risk compared to the investments in shares of individual issuers. Private pension funds have little space for further diversification of the risk through further investments in the stakes of foreign funds<sup>127</sup>, bearing in mind the legal restrictions for investing abroad<sup>128</sup> and the amount of investments in certain types of financial instruments<sup>129</sup>. Within equity financial instruments, the shares of foreign issuers record the fastest growth with a growth rate of 35.0%, which is more by 11.3% percentage points compared to 2014.

<sup>127</sup> In 31.12.2015, 27.5% of the total assets of mandatory pension funds are invested in foreign equities.

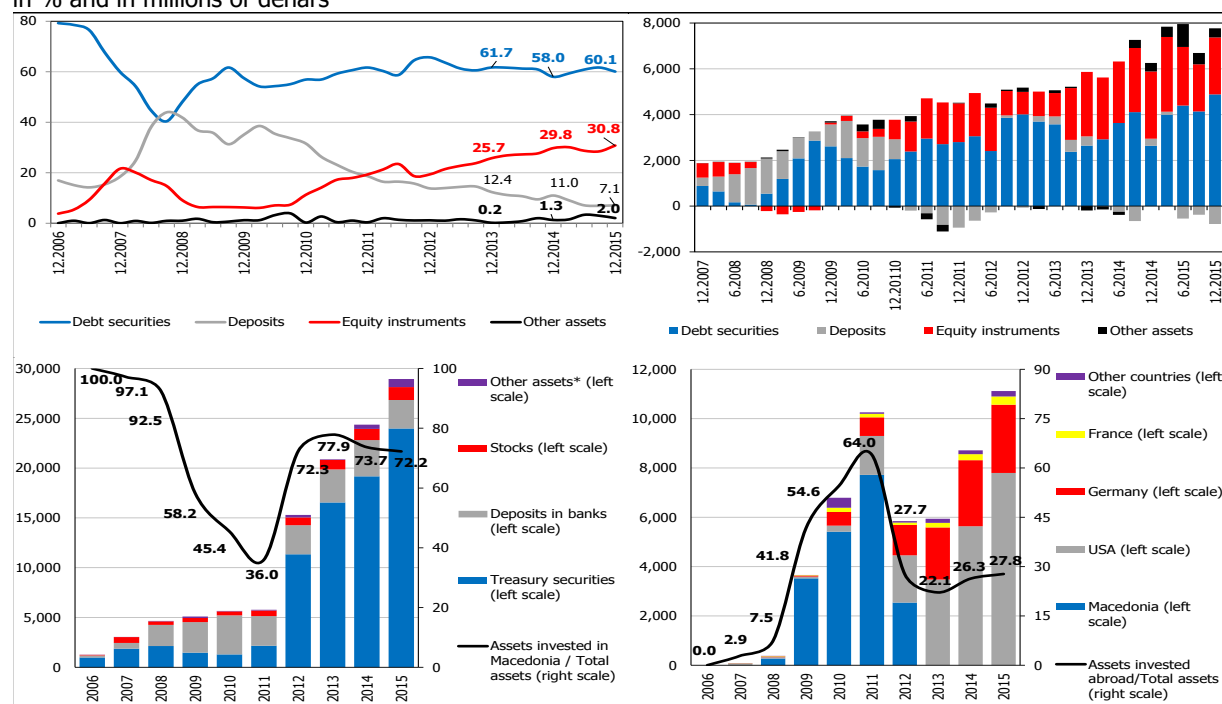
<sup>128</sup> Law on mandatory full funded pension insurance provides restrictions of max 50% of assets of funds which can be invested abroad (EU and OECD). According to the regulation in force in the EU for free movement of capital, such restriction should not exist for investments in assets of pension funds.

<sup>129</sup> Under the Law on the Fully Funded Pension Insurance, funds have a right to invest up to 30% of the assets in securities issued by non-government foreign companies, banks or investment funds.



Chart 140

Structure of investments of fully funded pension insurance funds by individual instruments (top left), annual absolute change of individual instruments (top right), movement of investments in the Republic of Macedonia (bottom left) and structure of investment abroad, by country of origin of the issuer (bottom right) in % and in millions of denars

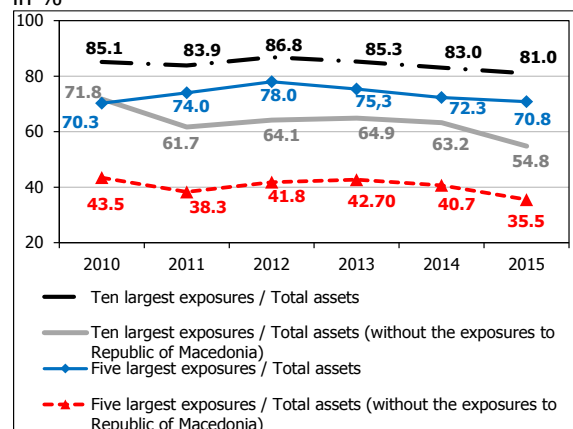


Source: MAPAS and audited financial statements of fully funded pension insurance funds.

\* The other assets include cash and claims of funds.

Chart 141

Concentration of assets of mandatory pension funds by issuer in %



Source: MAPAS (Agency for supervision of fully funded pension insurance)

Note: The exposure towards the Republic of Macedonia includes the Eurobonds in which pension funds could invest as of end 2012.

**In terms of geographic structure of investments, the largest portion of investments in private pension funds (72.2%) are in the Republic of Macedonia. Within which, 82.9% are invested in government securities that represent 59.9% off the total assets of pension funds.** Hence, the risk of concentration of investments in pension funds is strongly present, given the fact that 59.9% of total assets are government securities issued by one issuer, the Republic of Macedonia.

Excluding the exposure towards the Republic of Macedonia, the concentration of investments is still present, but in somewhat lower extent. Therefore, five largest exposures, without the exposure towards the Republic of Macedonia, have a share of 35.5% of total assets, whereas the share of ten largest

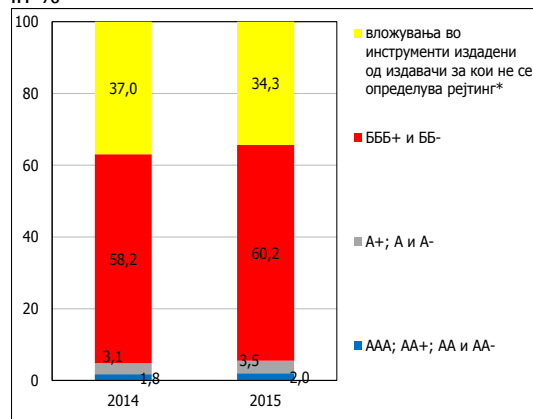




Chart 142

Structure according to the credit rating of the issuer of instruments in which the assets of mandatory pension funds are invested

in %



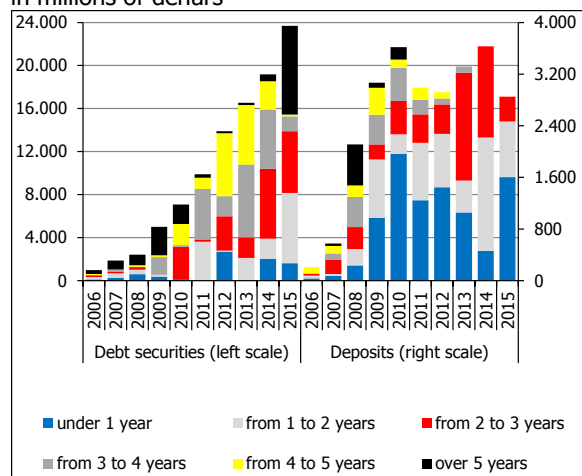
Source: MAPAS and audited financial statements of fully funded pension insurance funds.

Note: Financial instruments for which credit rating is not determined are related to the investments in stakes in foreign funds, deposits, deposits in domestic banks and claims of mandatory pension funds.

Chart 143

Structure of the debt instruments in which fully funded pension insurance funds invested, according to the remaining term to maturity

in millions of denars



Source: MAPAS and audited financial statements of fully funded pension insurance funds.

exposures (without the exposure towards the government) is 54.8%. However, **even though the concentration of the assets of pension funds is exceptionally high, to mark the trend of its gradual decrease**, at the end of 2015 all the indicators for the concentration are lower compared to the two previous years.

However, the risks of the high concentration of assets of private pension funds is more evident in conditions of unstable domestic political environment which is present in the Republic of Macedonia in 2015 and continues in 2016.

**At the end of 2015, most debt instruments of mandatory pension funds have a residual maturity of up to three years.** In 31.12.2015, the share of the bonds with residual maturity of over five years significantly increased and reached almost 35% of total bonds and is higher by 30 percentage points than in the previous year, when it amounted 3.3%. This confirms the existence of the credit risk, and further emphasizes the risk of reinvesting the assets. The bonds with a residual maturity of one to two years register an absolute increase and have a share of 27.6%, whereas the bonds with a residual maturity of two to three years, even though they did not register significant absolute changes, still occupy a significant part of the portfolio of the bonds with a share of 24.2%.

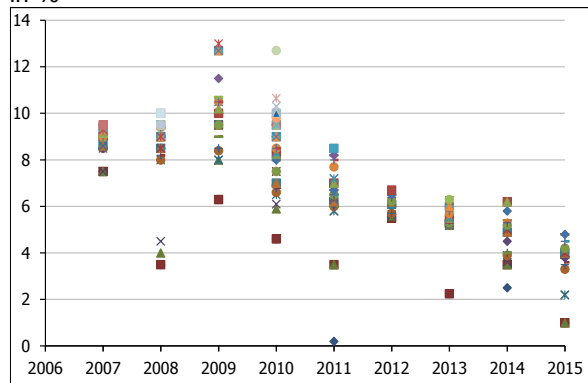
**On the other hand, funds continued with the trend of decreasing residual maturity of the deposits in banks, whereby the deposits with a residual maturity of over five years are no longer present in the portfolio of total deposits.** Thus, in



Chart 144

Movements in interest rates on deposit agreements of fully funded pension insurance funds, according to the years of signing the agreement

in %



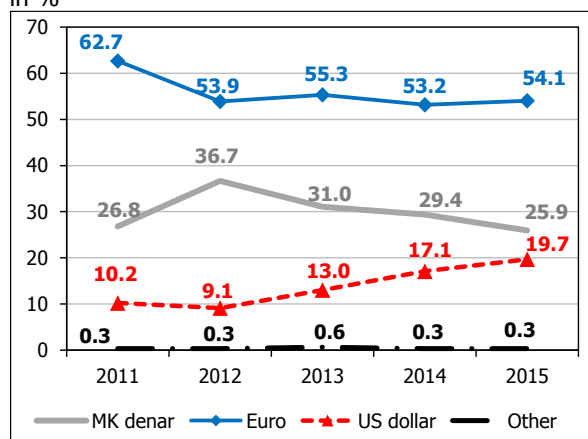
Source: MAPAS (Agency for supervision of fully funded pension insurance)

31.12.2015, the largest portion (56.2%) of deposits have a residual maturity of one year and increased for more than three times compared to the end of 2014. This increase of deposits with a residual maturity of one year is due to the decrease of deposits with a residual maturity of two to three years. In 2015, funds do not have new placements in deposits with a residual maturity longer than three years, and simultaneously the deadline of submitting previous time deposits decreases. As part of the reasons for the decrease of the maturity in deposits in domestic banks are of course the low and declining interest rates which in 2015 reached the lowest historic level.

Chart 145

Currency structure of assets of fully funded pension insurance funds

in %



Source: Audited financial statements of fully funded pension insurance funds

**In the currency structure of investments in private pension funds, the investments in Euros dominate, including investments in Denars with Euro-clause.**

Their share mainly had a stable movement in the few previous years and in 2015 it registers a small increase. The share of investments in US dollars registers constant increase in the last three years. On one hand, this is due to the increased investments of funds in equity securities in US dollars, and on the other hand from the trend of appreciation of the dollar against the euro, consequently against the Denar, during 2014, that was also present during 2015 but slightly weaker.

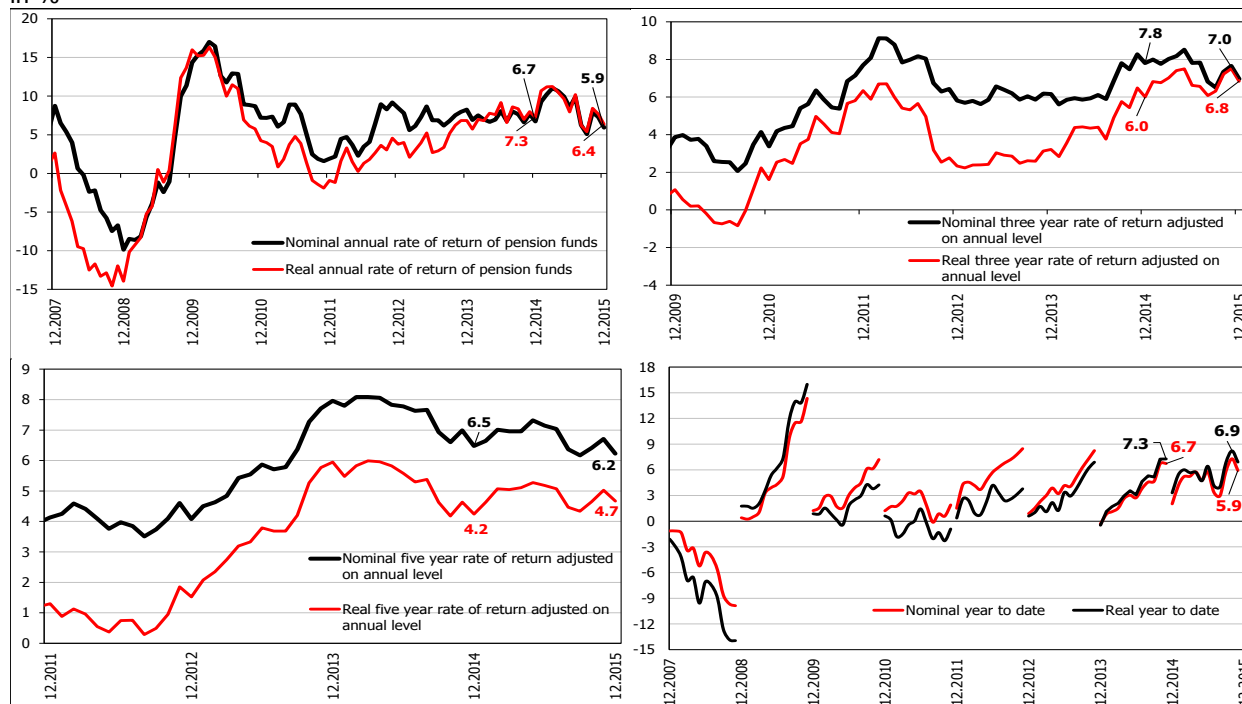
It should be emphasized that, the exposure to private mandatory pension funds towards euros do not derive exclusively from the euro area, rather one part is due to the investments in domestic financial instruments, respectively in government securities. Therefore, total assets of pension funds that are expressed or defined in euros, 89.9% represent the investments in government securities with FX clause which in 2015 registered an increase by 22.9% respectively Denars 3.6 million.



Chart 146

## Rates of return of the fully funded pension insurance funds

in %



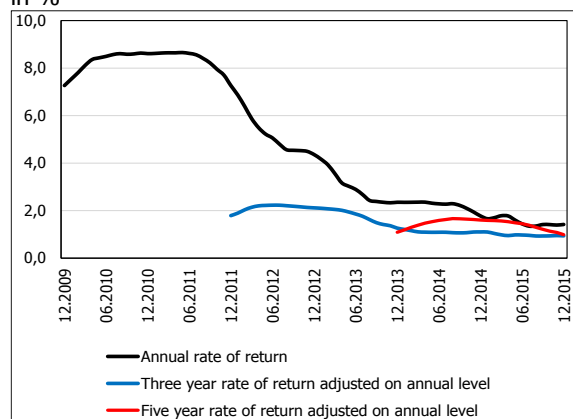
Source: MAPAS, NBRM

Note: The nominal yield is calculated by the percentage change in the value of the accounting unit between two consecutive accounting periods, converted into an equivalent annual rate when the accounting period is greater than one year. The real yield is calculated when the nominal yield will be corrected by the cumulative inflation rate (consumer price index) for the relevant accounting period, expressed on an annualized basis.

Chart 147

## Standard deviation of the nominal rate of return

in %



Source: MAPAS, NBRM

Standard deviation of rates of return is calculated from a series of data on the respective rates of return with a monthly frequency for a reference period of past 36 months.

In 2015, the yield rates from mandatory pension funds are lower compared to the previous year. The lower yield is due to the lower net capital gain (from domestic stocks and stakes in foreign investment funds) and lower income from the interests of deposits from mandatory pension funds<sup>130</sup> which had a negative impact on the increase of the value of their accounting unit. One year rates of yield in the last four years are more stable and register smaller changes compared to the rates of yield at the beginning of establishing the funds. This year, same as in 2014, a low even negative rate of inflation is registered, therefore the nominal and real annual rate of yield continues to move almost in the same level. As a result to the same reasons, in 2015 a significant approach was registered in the nominal and real yield rate.

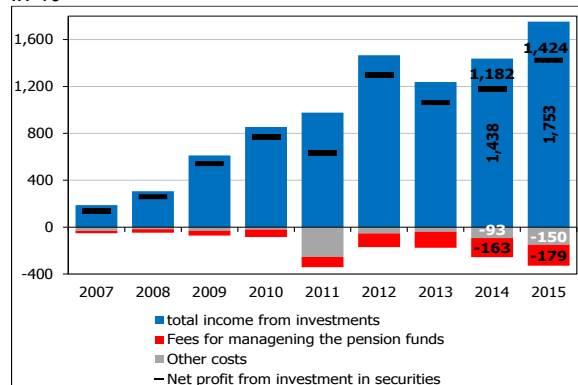
<sup>130</sup> In 31.12.2015, net capital gain from domestic shares and stakes in foreign investment funds is lower by Denars 73 and 26 million, respectively, whereby incomes from interest from deposits are lower by Denars 49 million.



Chart 148

Change in the investment income, expenses and income from investments of fully funded pension insurance funds

in %

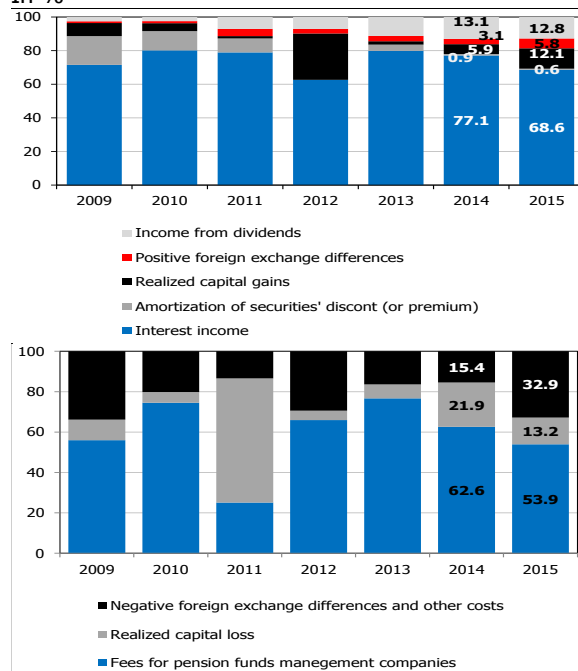


Source: Audited financial statements of fully funded pension insurance funds.

Chart 149

Structure of revenues (top) and expenses (bottom) of the fully funded pension insurance funds

In %



Source: Audited financial statements of fully funded pension insurance funds

**Total incomes of mandatory pension funds are Denars 1.753 million, which is more by Denars 315 million, or by 21.9% from the previous year.** Incomes from interests, are still the main incomes of the funds<sup>131</sup>, even though their structural share significantly decreased (by 8.5 percentage points). In 2015, increase of the realized interest gains is registered by Denars 128 million, respectively more than double, which represents the fastest growing rate in the structure of total income.

**Total income of mandatory pension funds are Denars 329 million and at the end of the year they register an increase by Denars 73 million, or by 28.6%.** The largest income rate from pension funds are the fees that are paid to the managing companies<sup>132</sup>. However, the negative exchange rate differentials contribute with over 90% in the increase of total expenses of mandatory pension funds in 2015, thus by the end of the year they became the second largest rate in their structure. Realized capital losses in 2015 decreased compared to 2014 by 22.6% (respectively Denars 13 million).

**Net realized capital gain of mandatory pension funds is greater by six times compared to the previous year. It, mainly (almost 90%) is due to transactions with stakes in foreign open-end investment funds.** Indexes that monitor these funds have an upward trend of movement, which is in accordance with the upward movements of the index in New York Stock Exchange - APKA (NYSE

<sup>131</sup> Over 88% of the incomes from interest, are due to the interest from investments in domestic government bonds. In the previous year, their share was around 83%. Corresponding to the decrease investments in deposits, the share of interest income from deposits also decreased, which in 2015 was 11.5% (16.9% in 2014)

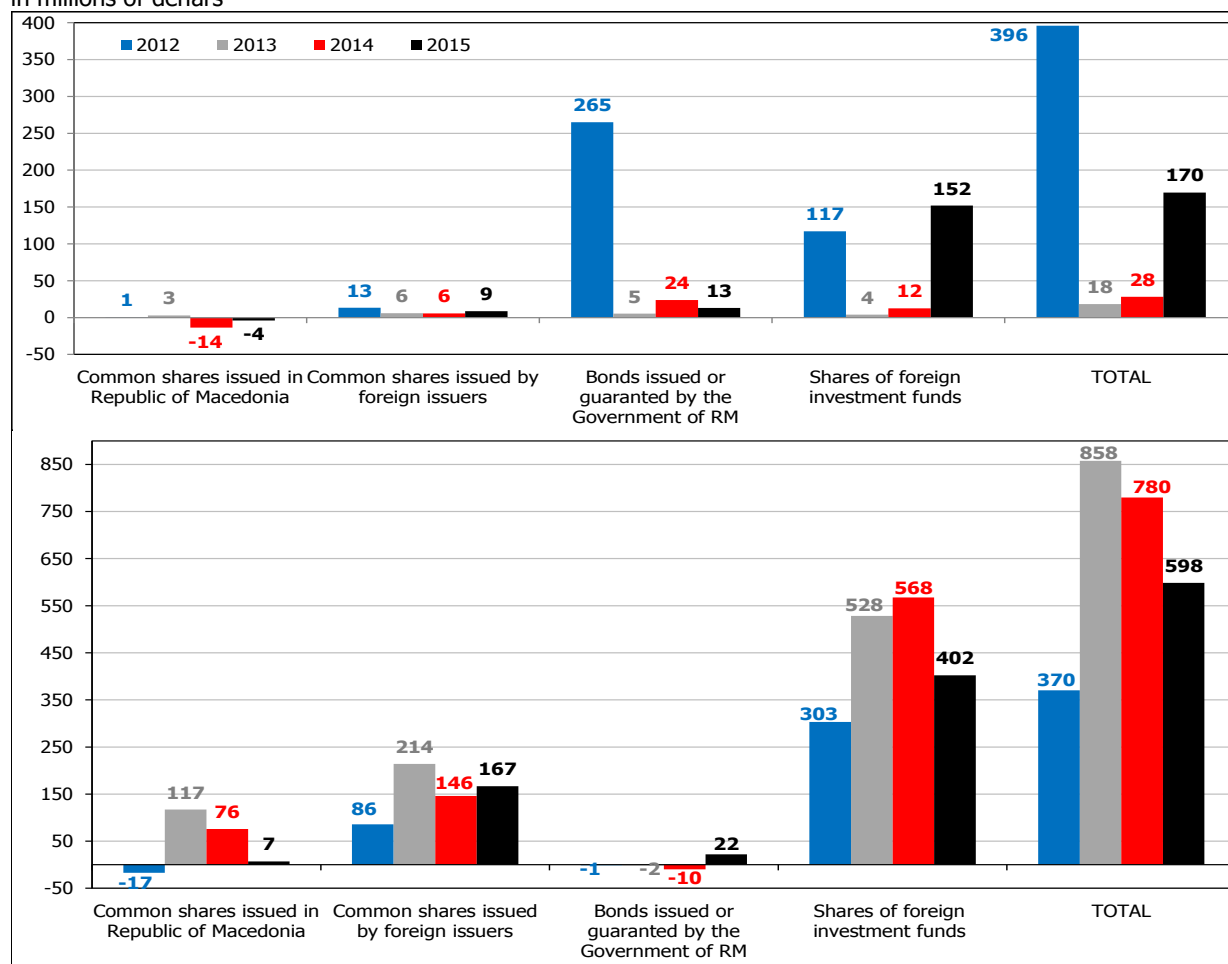
<sup>132</sup> According to Article 98 of the Law on the Fully Funded Pension Insurance, the pension company may collect the following fees borne by the Fund: reimbursement from contributions paid, monthly fee of the Pension Fund management and fee for the events of transfer of funds of a member from one to another pension fund, if the member who is being transferred was a member of the existing fund less than 24 months.



ARCA)<sup>133</sup>. The index in the New York Stock Exchange registers a constant increase, starting from 2009 until the first half of 2015. Despite the downward movements of this index in the second half of 2015, it had a higher value than any other period in 2014. **Net capital gain is lower than the previous year by Denars 181 million, or 23.3%.** This gain is due to the stakes in foreign open end investment funds (around 67%)<sup>134</sup>, and from common shares issued by foreign companies and banks (27.9%)<sup>135</sup>.

Chart 150

Net realized (top) and net unrealized (bottom) capital gains/losses by individual instruments of the fully funded pension insurance funds in millions of denars



Source: Audited financial statements of fully funded pension insurance funds for 2015.

Note: The calculation of net capital gains includes the exchange rate differences, while interest and dividends are not included.

<sup>133</sup> Most of the stakes from which the funds have realized a profit are stakes of the so called Exchange Traded Funds – ETF which are traded in the New York Stock Exchange through the system called ARKA. These investments are mainly in American dollars.

<sup>134</sup> Unrealized gain of stakes is mostly due to investments in the same stakes, part of which the funds have sold and realized profit, and the other part is kept in the portfolio and for it unrealized profit is registered.

<sup>135</sup> The bulk of this gain (70%) arises from shares of companies based in the United States.



Table 5

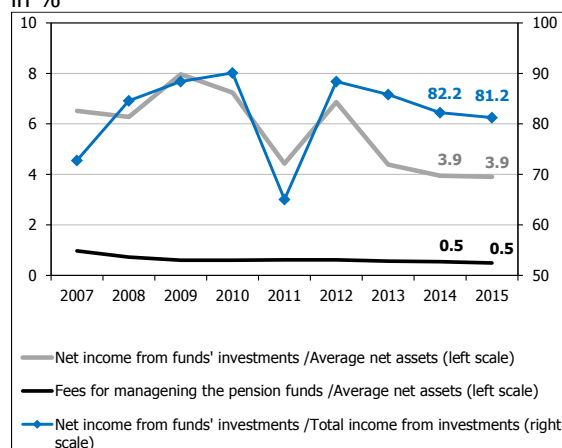
Rates of return on invested assets of fully funded pension insurance funds by type of instrument  
in %

Type of the instrument	2013			2014			2015		
	Net realized gain	Net unrealized gain	Total gain	Net realized gain	Net unrealized gain	Total gain	Net realized gain	Net unrealized gain	Total gain
Stocks issued by foreign issuers	0.6	8.9	9.5	0.4	10.1	10.5	0.5	8.8	9.3
Bonds issued by foreign issuers								-0.3	-0.3
Shares issued by foreign investment funds	0.1	8.3	8.4	0.2	9.7	9.9	1.9	5.0	6.9
Stocks issued by domestic issuers	0.3	-2.0	-1.7	-1.3	7.3	6.0	-0.3	0.6	0.2
Deposits			6.9			5.3			4.2
Bonds issued by domestic issuers	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.2

Source: Audited financial statements of fully funded pension insurance funds for 2015, the Agency for supervision of fully funded pension insurance and internal calculations of the NBRM.

Chart 151

Indicators of the results from the investments of fully funded pension insurance funds  
in %



Source: Audited financial statements of fully funded pension insurance funds

Note: Total revenues and net profit do not include unrealized gain.

The lower net unrealized gain compared to the previous year gave lower return rates of the invested assets in funds. The greatest decrease of return rate is registered in shares of domestic issuers which this year, have a lower net unrealized gain and net realized loss. The negative return rate of the invested assets is also registered in the bonds of foreign issuers<sup>136</sup> which is due to the unrealized loss of these assets. The FED's policy rate increased at the end of 2015, which was envisaged, and expected from the investors, therefore it caused decrease of the prices of American government bonds and increase of their yields in 2015.

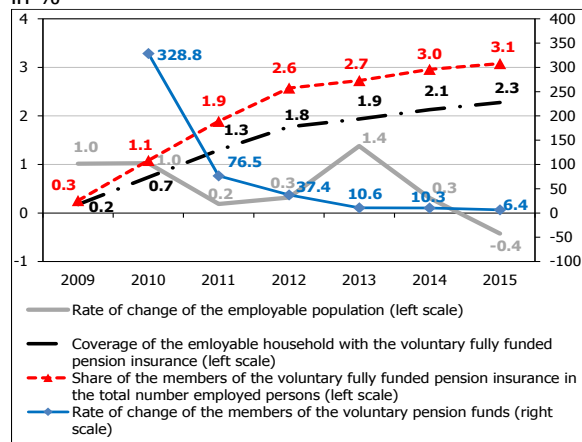
**The decreased yields of investments caused a decrease of the share indicator of net profit in investments of total incomes of funds. Other indicators of relative significance of results from investments of mandatory pension funds do not register changes in 2015 compared to the previous year.**

<sup>136</sup> In 2015, mandatory pension funds invested assets in a thirty-year American government bond.



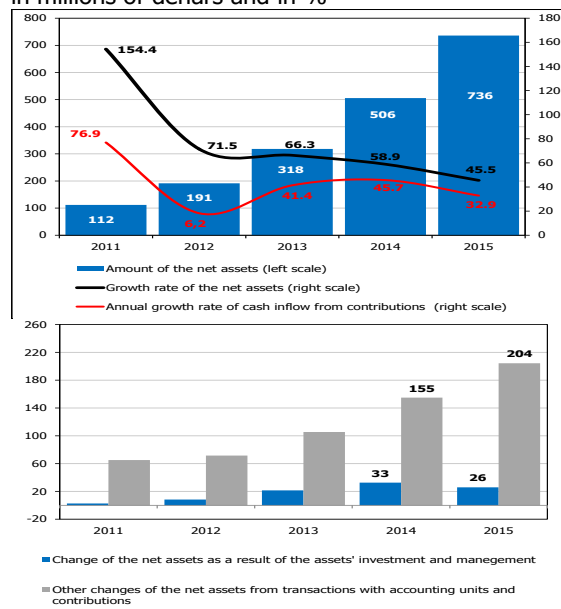
## 5.2. Voluntary fully funded pension funds

Chart 152  
Membership in voluntary fully pension funds  
in %



Source: Agency for Supervision of Fully Funded Pension Insurance - MAPAS and SSO.

Chart 153  
Net assets (up) and the structure of the  
growth of net assets (down) of the  
voluntary fully pension funds  
in millions of denars and in %



Source: Audited financial statements of fully funded pension insurance funds.

In 2015, the number of members of the voluntary pension funds continued to grow, however the growth rate continues to decelerate. Since the first year of the establishment of these funds, the change rate of the membership started to significantly decrease, whereas in the last two years this deceleration is slightly milder, which means that the effects of the low, initial base of the number of members are gradually depleted. At the end of 2015, the number of people who were members of these funds was 21.744 and is greater by 1.311 new members compared to 2014. The share of the members in voluntary pension funds and the coverage rate of active population with fully funded pension insurance<sup>137</sup> are in a really low level, indicating that there is room for a more aggressive approach in the market by the companies, aiming to attract new members and to popularize the voluntary pension insurance.

The high growth rate of net assets from voluntary pension funds is due to few memberships of the voluntary funds and the low starting point. However, their share of 0.1% in gross domestic product, indicates that they have significant impact in the overall financial system. Also, the slow growth of net assets in pension funds corresponds with the slow growth of the number of the members of these funds whose paid contributions are the main engine of net assets growth in funds. In 2015, these contributions accounted for 92.4% of the annual growth of net assets and had a higher contribution in their growth compared to the previous year. Compared to mandatory pension funds, in voluntary pension funds the change of net assets as a result to managing and investing funds has a smaller impact on the total change of net assets (11.2% versus 29.2% in mandatory funds).

<sup>137</sup> The rate coverage of the active population with voluntary full funded pension insurance is calculated as a share in the total number of members in voluntary pension funds in the total number of employed and unemployed people that are economically active (labor force).

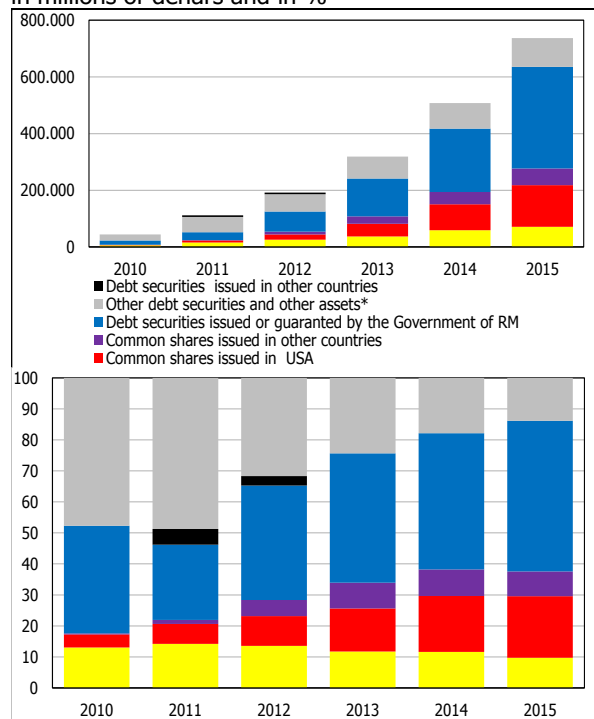




Chart 154

Movements of the investments by type of instrument and country – absolute amount (up) and structure (down)

in millions of denars and in %



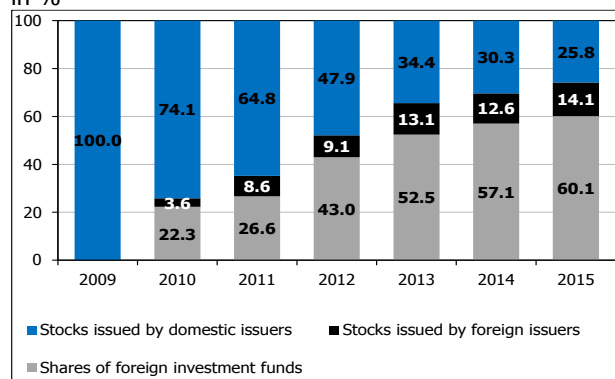
Source: Agency for Supervision of Fully Funded Pension Insurance - MAPAS and SSO.

\*In other securities and other assets are covered: The other assets include cash and claims of funds.

Chart 155

Structure of equity instruments in which voluntary fully funded pension insurance funds invested

in %



Source: MAPAS (Agency for supervision of fully funded pension insurance)

**The investment policy that is applied in voluntary pension funds is similar to the investment policy that is applied in mandatory pension funds.** Hence, most of the assets in voluntary pension funds are invested in debt securities, followed by the investments in equity instruments. In the structure of equity instruments, almost two-thirds of the investments of funds account for investments in stakes in foreign investment funds.

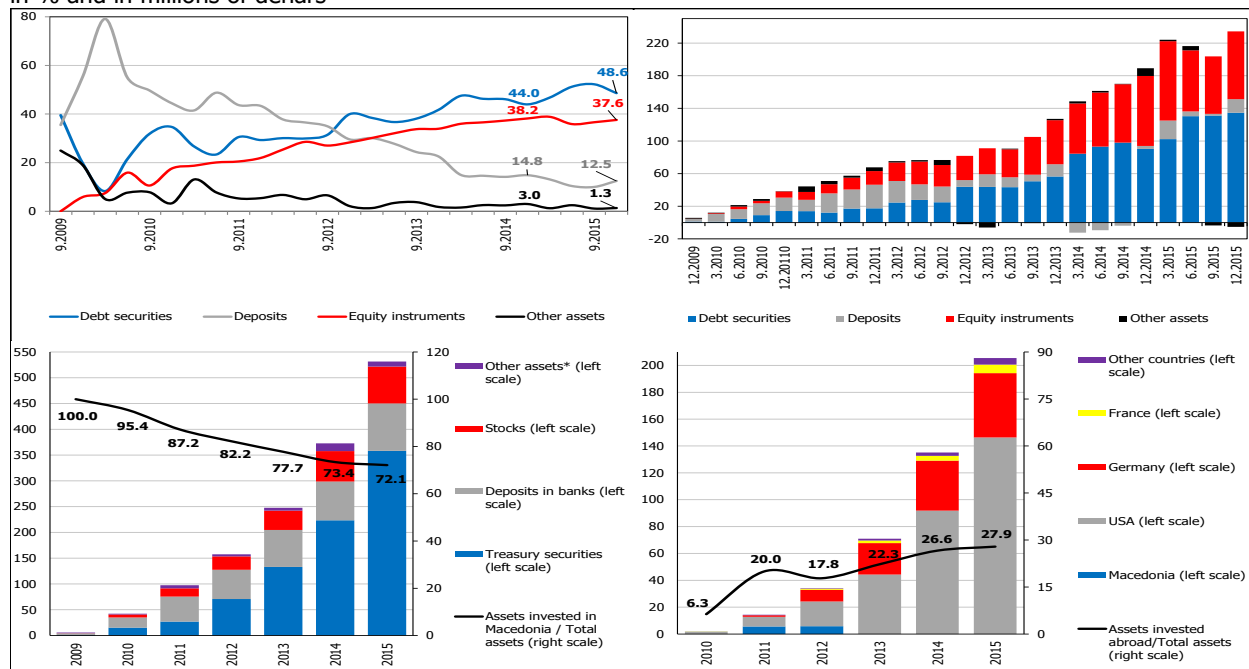
Similar structural changes of investments are also registered in voluntary pension funds. The share of debt securities in the total share of investments of voluntary pension funds registers a continuous growth, whereas the movements of equity instruments, as well as deposits are almost similar as in mandatory pension funds, respectively, the structural share of equity instruments mainly moves upwards (except in the last year, when their share decreased)<sup>138</sup>, whereas the share of deposits registers constant downward trend.

<sup>138</sup> On 31.12.2015, equities instruments register an absolute growth of Denar 83 million, however their share in total assets of voluntary pension funds decreased due to the share of debt securities.



Chart 156

Structure of investments of voluntary fully funded pension insurance funds by individual instruments (top left), annual absolute change of individual instruments (top right), movement of investments in the Republic of Macedonia (bottom left) and structure of investment abroad, by country of origin of the issuer (bottom right) in % and in millions of denars

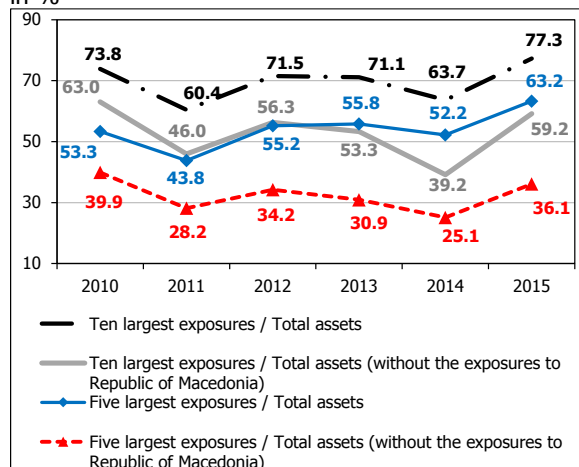


Source: MAPAS and audited financial statements of fully funded pension insurance funds.

\* The other assets include cash and claims of funds.

Chart 157

Concentration of assets of voluntary fully funded pension insurance funds by issuer in %



Source: MAPAS (Agency for supervision of voluntary fully funded pension insurance)

Note: The exposure towards the Republic of Macedonia includes the Eurobonds in which pension funds could invest as of end 2012.

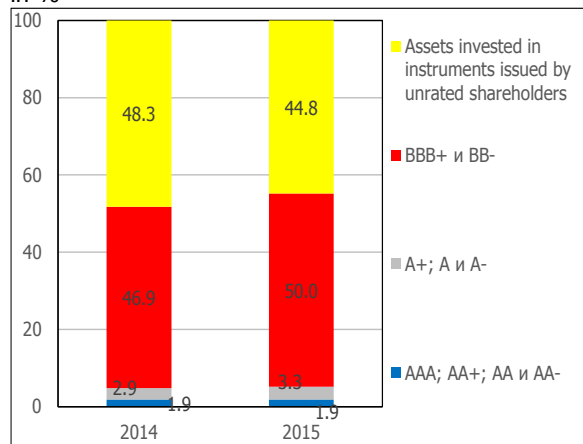
The concentration in assets is also high in voluntary pension funds and apart from the mandatory funds all the indicators for the concentration increased compared to 2014.



Chart 158

Structure of the credit rating of the issuer of the instruments in which assets of the voluntary pension funds are invested.

in %



Source: Audited financial statements of voluntary pension insurance funds.

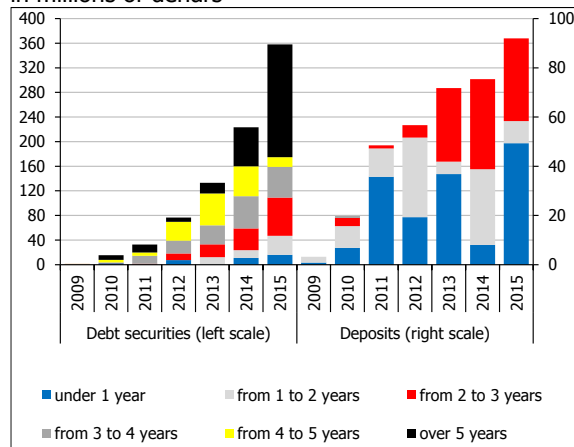
The credit risk is also present in voluntary pension funds. A very small portion of the assets of these funds are invested in financial instruments with the highest assessments for credit rating (from AAA to AA-) and financial instrument which are also characterized by high level of security (from A+ to A-), whereas half of assets are invested in financial instruments with a relatively stable credit rating, but in a short term. Investments in financial instruments for which a rating is not determined also occupy a large part of the total investments of voluntary pension funds.<sup>139</sup>

**At the end of 2015, the bonds with residual maturity greater than 5 years had the largest share in the structure of debt securities according to their residual maturity.** On annual basis, such debt securities increased for almost three times compared to the end of the previous year. At the end of 2015, their share in the structure of assets of voluntary pension funds according to residual maturity is 51.2% and is greater by 22.8 percentage points from the previous year.

Chart 159

Structure of the debt instruments in which voluntary fully funded pension funds invested, according to the remaining term to maturity

in millions of denars



Source: MAPAS and audited financial statements of voluntary fully funded pension insurance funds.

**On the other hand, the deposits with residual maturity of one year had the largest share in the structure of deposits according to their residual maturity.** Despite the decrease of maturity of already placed deposits, the voluntary pension funds are more prone for placement of new deposits in short term, respectively up to one year. This means that the companies that manage with voluntary pension fund have a slightly different strategy for investments in deposits than in mandatory pension. Short-term deposits also decrease the risk of reinvesting assets in in case of growth of interest rates in short term, because these assets mature and can be reinvested in instruments with potentially higher return.

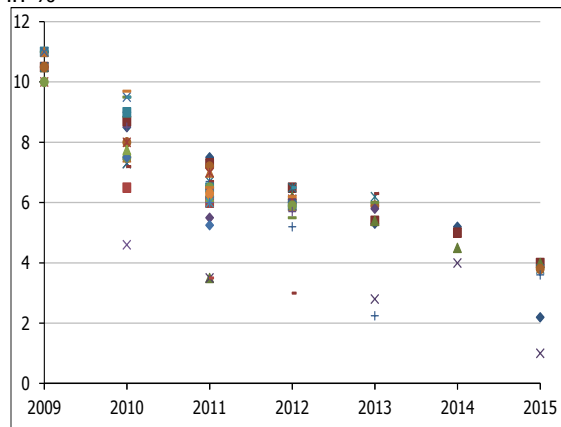
<sup>139</sup> The financial instrument for which credit rating is determined are related to the investments in shares in the foreign investment funds and the claims of the voluntary pension funds.



Chart 160

Movements in interest rates on deposit agreements of voluntary fully pension funds, according to the years of signing the agreement

in %

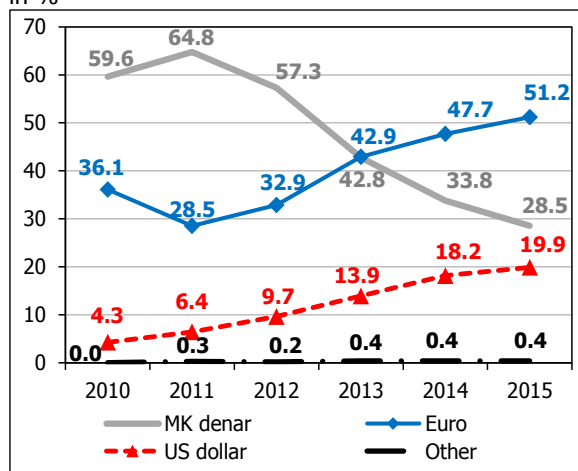


Source: MAPAS (Agency for supervision of fully funded pension insurance)

Chart 161

Currency structure of assets of voluntary fully pension insurance funds

in %

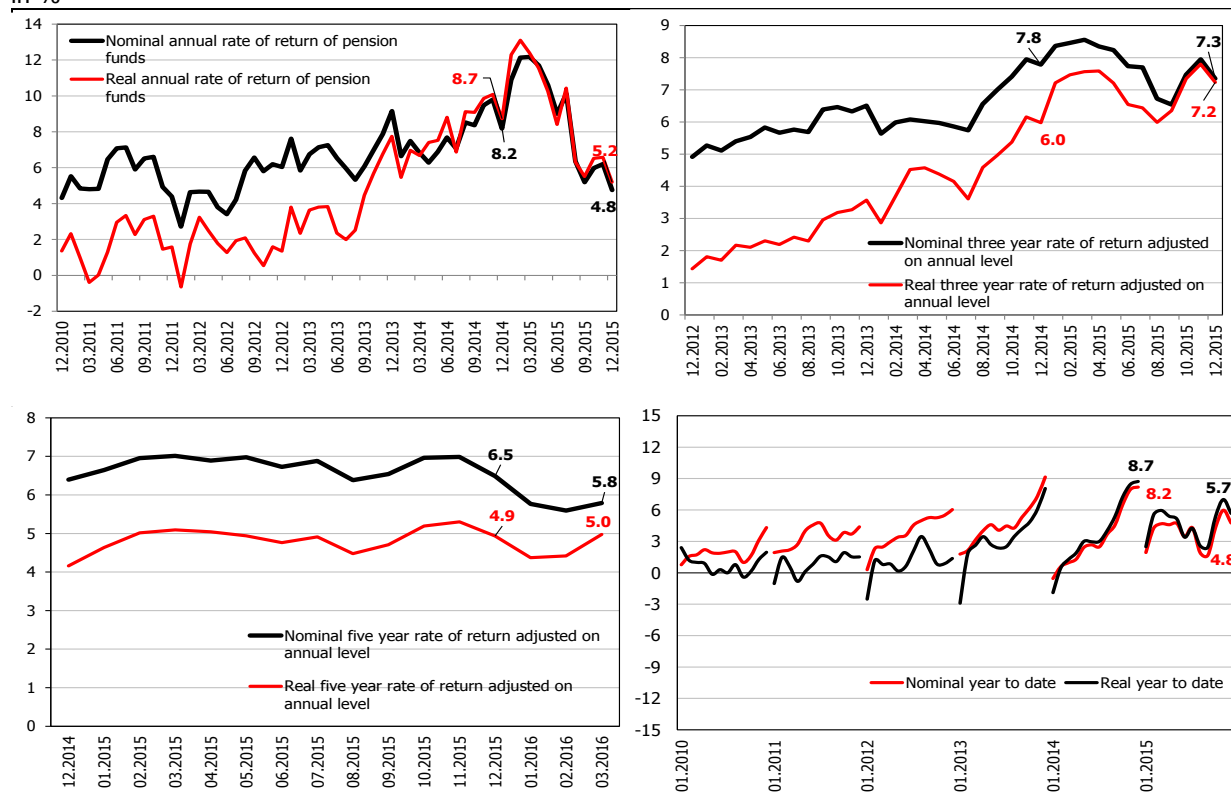


Source: Audited financial statements of voluntary pension insurance funds.

**The euro is the currency that still dominates in the currency structure of voluntary pension funds (including the positions with the currency clause in euros).** Thus, a growth is registered in the share of assets of voluntary pension funds in foreign currencies, more precisely in euros, and to a lesser extent in assets invested in US dollars. At the expense to this, the share in Denar assets decreased in the structure of investment of the voluntary pension funds. From the funds in euros, 82.9% are investments in government securities with a currency clause issued by the Republic of Macedonia.



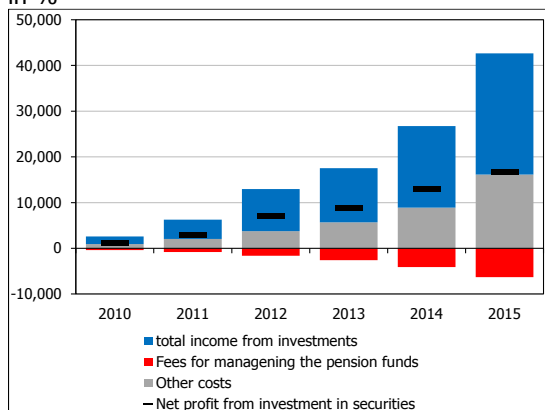
Chart 162  
Rates of return of the voluntary pension funds  
in %



Source: Agency for supervision of fully funded pension insurance.

Note: The nominal yield is calculated by the percentage change in the value of the accounting unit between two consecutive accounting periods, converted into an equivalent annual rate when the accounting period is greater than one year. The real yield is calculated when the nominal yield will be corrected by the cumulative inflation rate (consumer price index) for the relevant accounting period, expressed on an annualized basis.

Chart 163  
Change in the investment income, expenses and income from investments of voluntary fully pension insurance funds  
in %



Source: Audited financial statements of voluntary pension insurance funds.

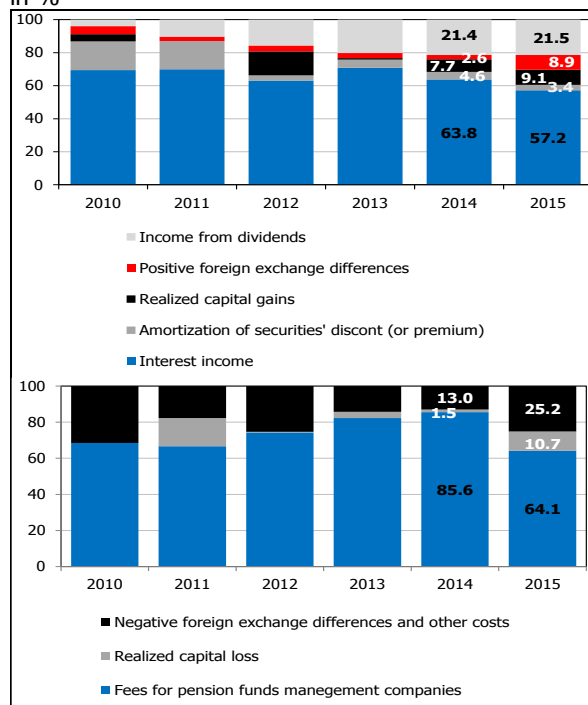
In 2015, the return rate of private voluntary pension funds registered a higher variability compared to the previous years. At the end of 2015, the one-year nominal rate of return in voluntary pension funds was 4.8% compared to 2014 is lower by 3.4 percentage points. At the end of 2015, the real one-year rate for return, due to deflationary pressures, was higher than the nominal reaching 5.2%, with an annual decrease of 3.5 percentage points. **The lower return rates of voluntary pension funds compared to the previous year** are due to lower unrealized gains of these funds, especially from shares of domestic issuers.



Chart 164

Structure of revenues (top) and expenses (bottom) of the voluntary fully funded pension insurance funds

in %



Source: Audited financial statements of voluntary pension insurance funds.

**The total revenues of the voluntary pension funds increased for about Denar 9 million or for 33.2% and by the end of the year amounted to nearly Denar 27 million.** And in voluntary funds, the most significant revenues are from interests which occupy more than half and are accounted for 43.6% of the growth in total revenues.

**The total revenues of voluntary pension funds are Denar 10 million and are greater than double compared to the revenues in the previous year.** The costs of the operations of pension funds<sup>140</sup> account for almost two-thirds of total revenues of these funds.

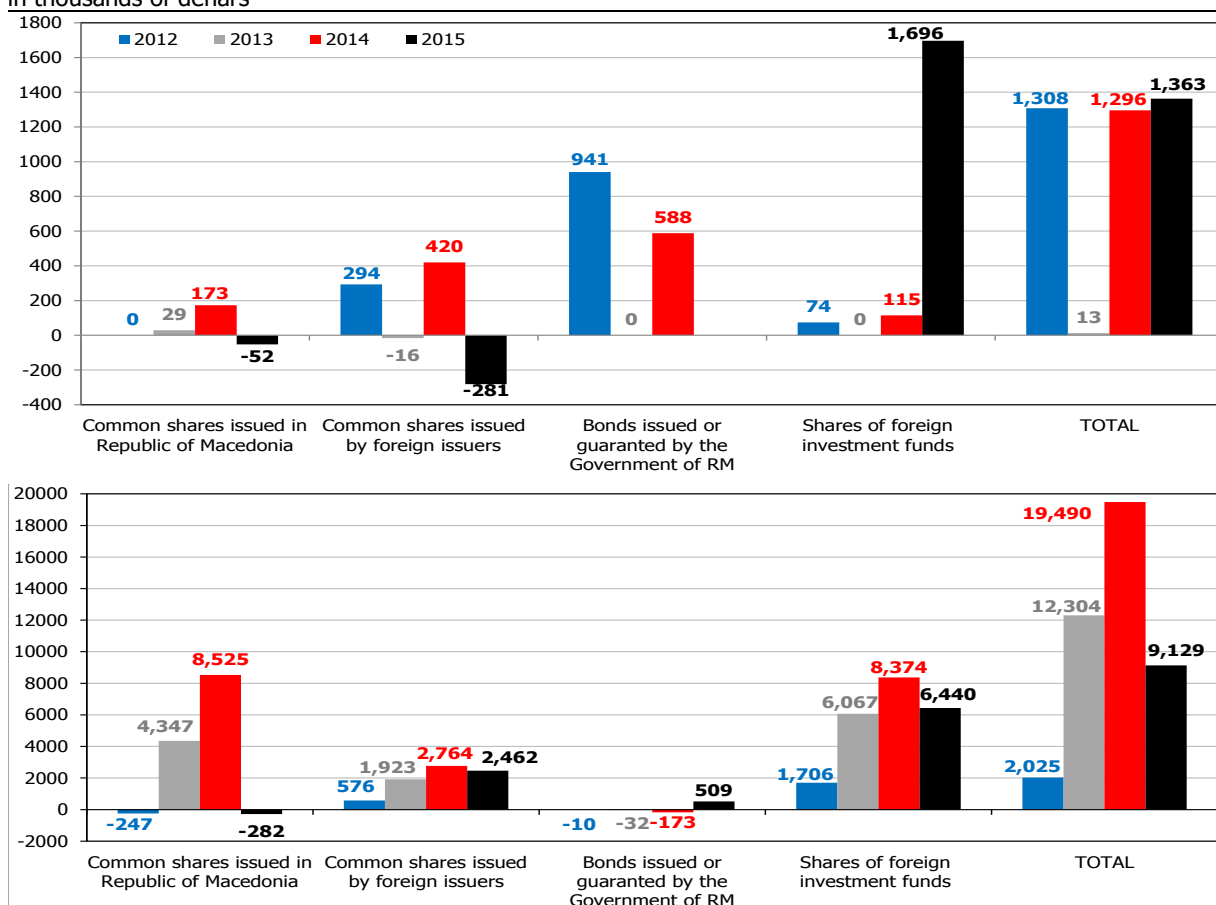
**In 31.12.2015, the net realized capital gains of the voluntary pension fund is greater for only Denar 67 thousand and is due exclusively to the net realized gains from investments in shares in foreign investment funds (shares of so-called exchange traded funds - ETF), whereas from the investments in domestic and foreign shares the funds realized a net loss.**

<sup>140</sup> According to Article 117 of the Law on the Fully Funded Pension Insurance, the pension company may collect the following fees borne by the Fund: reimbursement from contributions paid, monthly fee of the Pension Fund management and fee for the events of transfer of funds of a member from one to another pension fund, if the member who is being transferred was a member of the existing fund less than 24 months.



Chart 165

Net realized (top) and net unrealized (bottom) capital gains/losses by individual instruments of the voluntary fully pension funds  
in thousands of denars



Source: Audited financial statements of voluntary pension funds for 2015

Note: The calculation of net capital gains includes the exchange rate differences, while interest and dividends are not included.

**Net unrealized gains, same as in the mandatory pension funds, is lower compared to the previous year,** which is due to almost all investments. Net unrealized capital gains which arises from financial equity instruments issued from foreign issuers have the largest share in the total net unrealized gain of the voluntary pension funds.<sup>141</sup>

<sup>141</sup> The shares in foreign investment funds participate with 70.5% in net unrealized gains, whereas 27.0% are accounted from the shares issued from foreign issuers. The remaining 5.6% of the net unrealized gain is due to the investments in domestic bonds.





Table 6

Rates of return on invested assets of voluntary pension funds by type of instrument  
in %

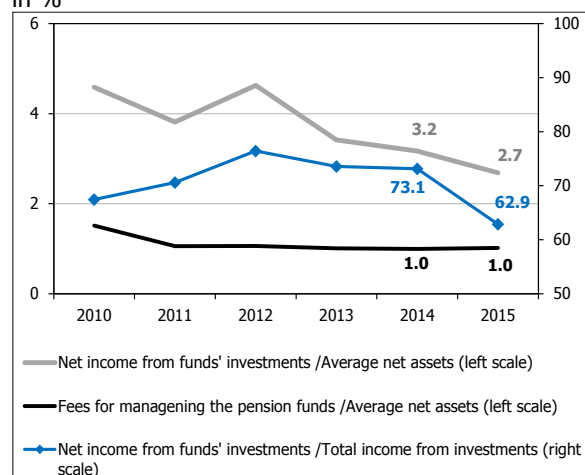
Type of instrument	2013			2014			2015		
	Net realized gain	Net unrealized gain	Total gain	Net realized gain	Net unrealized gain	Total gain	Net realized gain	Net unrealized gain	Total gain
Stocks issued by foreign issuers	-0.2	20.1	19.9	2.2	14.3	16.5	-0.9	7.8	6.9
Shares issued by foreign investment funds	0.0	15.1	15.1	0.1	10.0	10.1	1.2	4.6	5.9
Stocks issued by domestic issuers	0.1	13.7	13.8	0.4	17.7	18.1	-0.2	-0.4	-0.6
Deposits			6.0			4.6			4.0
Bonds issued by domestic issuers		-0.03	-0.03	0.3	-0.10	0.2		0.18	0.2

Source: Audited financial statements of voluntary pension funds for 2015, the Agency for supervision of fully funded pension insurance and internal calculations of the NBRM.

Chart 166

Indicators of the results from the investments of voluntary fully funded pension funds

in %



Source: Audited financial statements of voluntary pension insurance funds.

Note: Total revenues and net profit do not include unrealized gain.

Hence, the return of the invested assets of voluntary pension funds in shares from domestic issuers is significantly lower, and even negative compared to the one in 31.12.2014. The return rates of all instruments in which voluntary pension funds have invested are mainly lower compared to the previous year.

**Indicators for the performed results from the investments of voluntary pension funds also register a decrease.** This is due to reduced yields from investments which are noticed in voluntary pension funds.



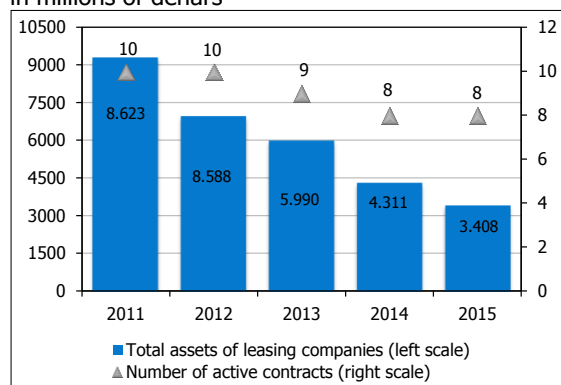
## 6. Leasing

Leasing sector increasingly loses the minor role and significance for the domestic economic activity (0.8% of GDP). The scope of operation of this sector decreased in the last four years. The continuation of the downward trend can be expected, taking into account the small range of services offered by the companies, but above all deleveraging and/or disinvesting measures of the EU banking groups, whose members are some of the domestic leasing companies, as well as the weak competitiveness of this sector compared to the banks. The growth of the number and value of the terminated contracts for leasing is an indicator of the deteriorated collection of claims based on leasing, and the growing non-profitable operations of the leasing companies.

Due to the small volume of assets and activities, and the insignificant connection with the banking system and other segments of the financial system, this sector does not represent a risk for the overall financial stability.

Chart 167

Assets of the leasing companies  
in millions of denars



Source: Ministry of Finance.

In 2015, the number of leasing companies was unchanged compared to the previous year, whereas the assets registered a decrease by 20.9%<sup>142</sup>. Claims based on financial leasing, as the core business of these companies, decreased almost three times faster (19.4%) compared to 2014<sup>143</sup>. The decrease of the activities of the leasing companies corresponds with the reduced borrowings and loans on the liabilities side (a decline by 16.6%). The reduced assets of the "leasing" sector influenced the reduction of its share in assets of the non-deposit financial institutions (the share reduced to 5.1%) and the financial system as a whole<sup>144</sup> (0.7%). The shares of the assets of leasing companies in GDP<sup>145</sup>, also reduced (down to 0.6%), thus losing the minor role and significance of this sector for the domestic economic activity.

<sup>142</sup> During the previous year the assets decreased by 28.0%.

<sup>143</sup> In 2014 this decline was 7.8%.

<sup>144</sup> In 2014, the share of the leasing companies in assets of the non-deposit financial companies was 7.5%, whereas the share of total assets of financial system was 0.9%

<sup>145</sup> Data on GDP for 2014 are preliminary, and data for 2015 are estimated.

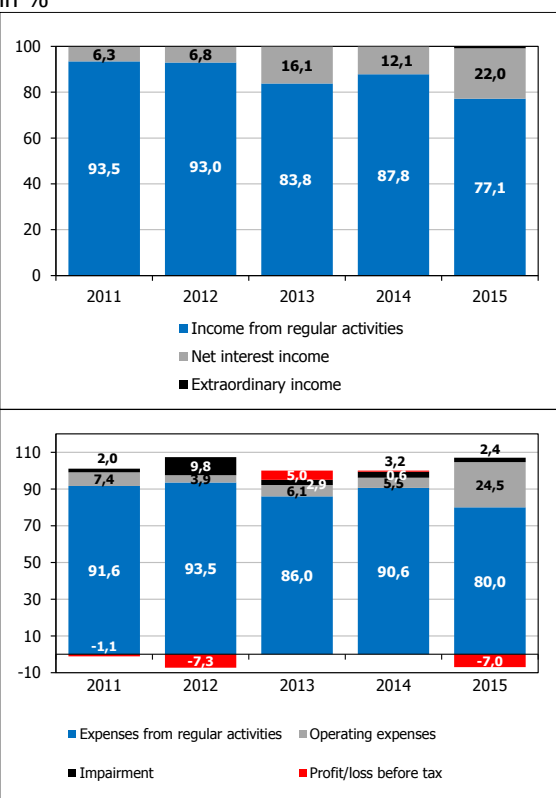


Table 7  
Balance sheet of the leasing companies

Item	Amount in millions of denars			Structure in %		
	2013	2014	2015	2013	2014	2015
Claims for financial leasing	3,399	3,133	2,526	56.7	72.7	74.1
Fixed assets	872	702	538	14.6	16.3	15.8
Loans	983	0	0	16.4	0.0	0.0
Deposits	206	72	62	3.4	1.7	1.8
Other assets	530	403	282	8.8	9.4	8.3
<b>Total assets</b>	<b>5,990</b>	<b>4,311</b>	<b>3,408</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Borrowings	4,193	2,068	1,724	70.0	48.0	50.6
Reserves	1,260	1,165	794	21.0	27.0	23.3
Other liabilities	483	431	277	8.1	10.0	8.1
Equity and reserves	54	647	613	0.9	15.0	18.0
<b>Total liabilities</b>	<b>5,990</b>	<b>4,311</b>	<b>3,408</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Ministry of Finance.

Chart 168  
Structure (top) and use (bottom) of total income of leasing companies in %



Source: Ministry of Finance.

**The underdevelopment and the little importance of the leasing companies for the overall financial stability is perceived also through their weak links with the other segments of the financial system.**

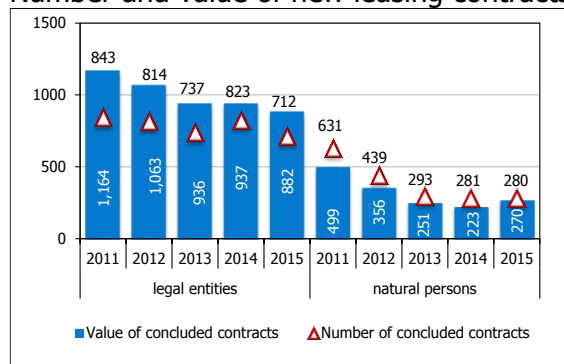
Deposits of these companies in domestic banks occupy insignificant 0.03% of the total deposits of the banking system. These deposits are insignificant even for the leasing companies, because their share in the total assets of the sector is only 2.6%. A certain connection or dependence in terms of financial stability can be located between "leasing" sectors and "insurance", because the subject of leasing is usually insured. However, given that the assets of the leasing companies are five times smaller than the assets of the insurance sector (in absence of better data, when comparing the assets of both segments are used), there is no great risk for a spillover of the credit risk of the leasing companies on the insurance sector.

**In 2015, the leasing companies operated with a loss<sup>146</sup>** (Denars 50,4 million), which is mainly due to the significant decrease of the income from current operations (56.7%) and almost double increase of the operating costs compared to 2014.

<sup>146</sup> In 2014, the leasing companies presented a loss of Denars 4.7 million (profit before tax of Denars 7.5 million).

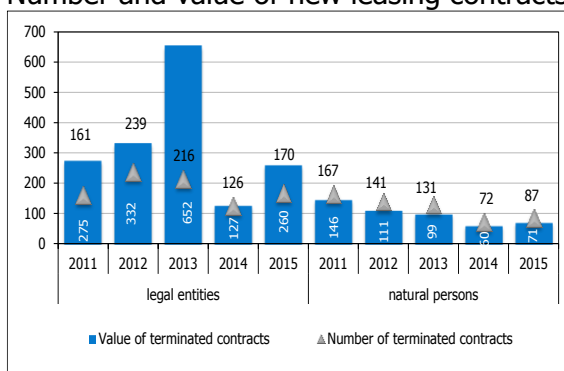


Chart 169  
Number and value of new leasing contracts



Source: Ministry of Finance.

Chart 170  
Number and value of new leasing contracts



Source: Ministry of Finance.

In 2015, the lower volume of operation of the leasing companies is perceived also through the reduced number of newly concluded and active contracts for leasing, both with legal entities and natural persons. Legal entities are still dominant users of leasing services, with an equal share of 76.6% of the total value of newly concluded contracts and the total value of active contracts. According to the subject of leasing, passenger vehicles still have the largest share in the total number of concluded and active contracts for movable items (75.7% and 69.5%, respectively). There are almost no changes in terms of maturity of the active contracts for leasing, where 77.9% are with repayment period of up to five years. Almost all active contracts are in Denars with FX clause (99.5%).

In 2015 both the number and value of the terminated contracts for leasing increased<sup>147</sup>, which is an indicator for growing risks of non-payment of claims. The absence of appropriate growth and impairment of claims based on leasing, indicate to inappropriate coverage of the risks of (non)payment of claims based on financial leasing.

## 7. Financial companies

**Financial companies are an extremely small segment in the financial system, which operates pursuant to the Law for financial companies adopted at the end of 2010. Significant increase of the number of the active licensed financial companies happened in 2013 and 2015, as a result of the regulation of the possibility of status change (transformation) of the saving houses into financial companies. Financial companies according to the type of activities they perform<sup>148</sup>, should supplement the lending activity of banks, especially for the customers who have limited access to the bank loans due to more conservative credit policies of the banks. However, financial companies still do not represent competition to any other segment of the financial system. With a share of only 0.2% in the total assets of the financial system, the small volume of activities<sup>149</sup> and low cross-sector relations, these institutions do not represent risk for the overall financial stability.**

<sup>147</sup> Compared to 2014, the number of terminated contracts in the period of 2015 is increased for 59 contracts per leasing (with a total value of Denars 143 million).

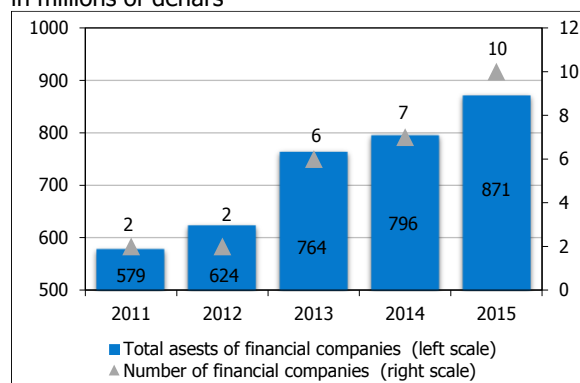
<sup>148</sup> The activities that can be performed by the financial companies are: lending to natural persons and legal entities, as well as counseling for financial activities and operating lease.

<sup>149</sup> According to the Trade Company Law (Official Gazette of the Republic of Macedonia No. 158/2010), financial companies can grant loans up to ten times the amount of the core capital and reserves.



**At the end of 2015, the number of licensed financial companies is 10, which is an increase for three companies compared to the previous year.**

Chart 171  
Assets of financial companies  
in millions of denars



Source: Ministry of Finance.

**The total assets of these institutions amount Denar 871 million** and compared to 2015 they record a growth for 9.5% (or Denar 75 million), primarily as a result to the increase of the number of financial companies. In 2015, the claims based on granted loans, whose annual growth was 22.0% have the greatest contribution in the growth of total activities of the financial companies (60.4%). Claims based on factoring and issued credit cards also increased by 15.1% and 5.8%, respectively. Nearly half of the funding sources of the financial companies in the Republic of Macedonia are capital and reserves. Other activities of these institutions are financed through short-term borrowings in domestic banks. However, the possibility of spillover of risks in this segment to the banking sector is very low, given that the share of the loans in financial companies in the total loans of banks is less than 1%.

Table 8  
Balance sheet of the financial companies

Item	Amounts in millions of denars			Structure in %		
	2013	2014	2015	2013	2014	2015
Cash	25	114	108	3.3	14.3	12.4
Loan claims	179	207	252	23.4	26.0	29.0
Factoring claims	67	46	53	8.8	5.7	6.0
Credit cards claims	294	313	332	38.5	39.4	38.1
Fixed assets	70	53	63	9.2	6.7	7.2
Other assets	129	63	64	16.9	7.9	7.3
<b>Total assets</b>	<b>764</b>	<b>796</b>	<b>871</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Long-term borrowings from domestic banks	12	3	0	1.6	0.4	0.0
Short-term borrowings	206	247	248	27.0	31.1	28.5
Other short-term liabilities	192	193	205	25.1	24.3	23.5
Equity and reserves	342	342	386	44.8	43.0	44.3
Other liabilities	12	10	32	1.6	1.3	3.6
<b>Total liabilities</b>	<b>764</b>	<b>796</b>	<b>871</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Ministry of Finance.

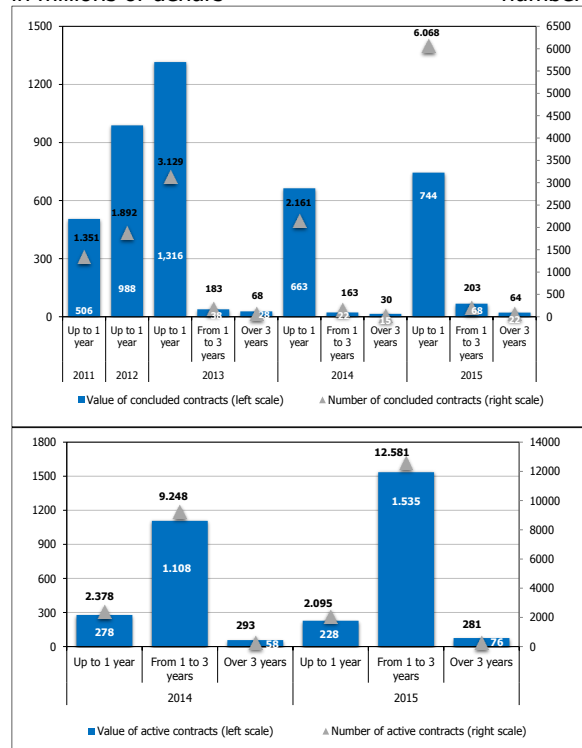


Chart 172

Number and value of newly concluded (up) and active (down) contracts, according maturity

in millions of denars

number



Source: Ministry of Finance.

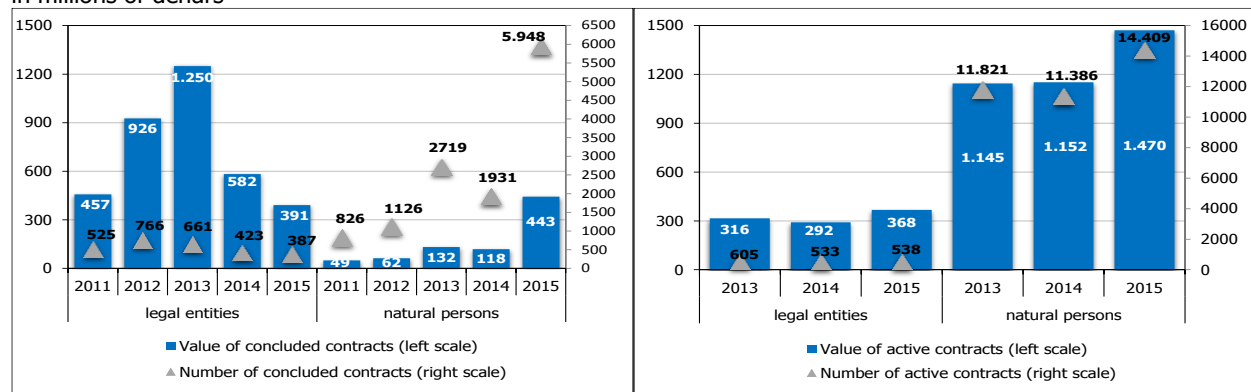
In 2015 the growth of assets in financial companies had no influence on their share in the total assets of the financial system, which is unchanged compared to the previous year and is only 0.2%. The share of the assets of financial companies in the assets of non-deposit financial institutions is 1.3% and is lower by 0.1 percentage points compared to 2014. **The importance of financial companies for the domestic economy is very low**, given the small share of this segment in GDP<sup>150</sup> (0.2% for 2015 and 2014).

**The increased volume of operations of financial companies is reflected in the increased number and the value of newly concluded contracts.** The triple increase of the newly concluded contracts in 2015 is due to the concluded contracts with natural persons, while less new loans are concluded in contracts with legal entities compared to the previous year. Natural persons are the most frequent users of the services that are offered by the financial companies, with a share of 80.0% in total value of the active contracts and 53.1% in total value of newly concluded contracts in 2015. Short-term borrowings prevail in the newly-extended loans. Over 80% of the contracts are in Denars.

Chart 173

Number and value of newly concluded (left) and active (right) contracts, according to the type of customer

in millions of denars



Source: Ministry of Finance.

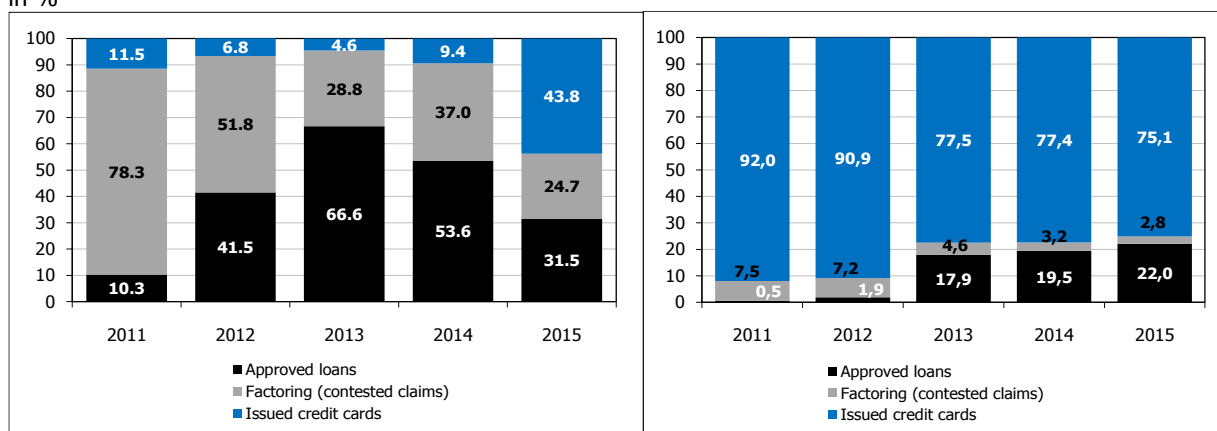
<sup>150</sup> Data on GDP for 2014 are preliminary, and data for 2015 are estimated.



**Most of the activities that are carried out by the financial companies are issuance of credit cards and granting loans.** In 2015, according to the type of activity of the newly concluded contracts, the contracts for issuing credit cards have the greatest value (99.6% from them are contracts concluded with natural persons), compared to 2014 when the contracts for granting loans and factoring (undertaking claims) prevail.

Chart 174

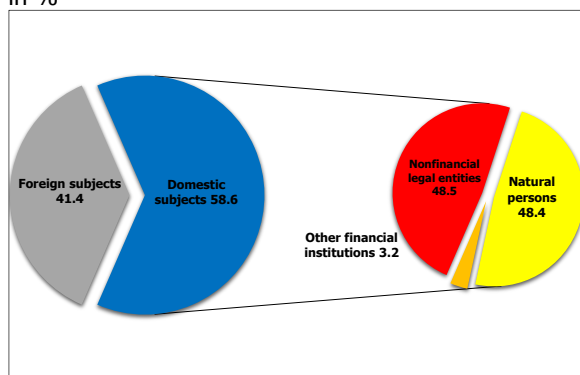
Structure of the newly concluded (left) and active (right) contract, according to type of activity in %



Source: Ministry of Finance.

Chart 175

Ownership structure of the banking system in %



Source: Ministry of Finance.

On the other hand, most (69.9%) from the total value of active contracts is occupied by the contracts for issuing credit cards to natural persons with maturity of up to 3 years<sup>151</sup>.

**Financial companies are in predominant ownership by domestic subjects, whose share in the total capital is 58.6%** (increase by 4.4 percentage points compared to the previous year). The foreign capital comes from Bulgaria, Luxemburg, and USA. Thus, non-financial legal entities and natural persons have almost equal share in the total capital of the financial companies.

<sup>151</sup> The cards are issued with a residual maturity of one year, after whose expiration, the residual maturity is extended for two other years.

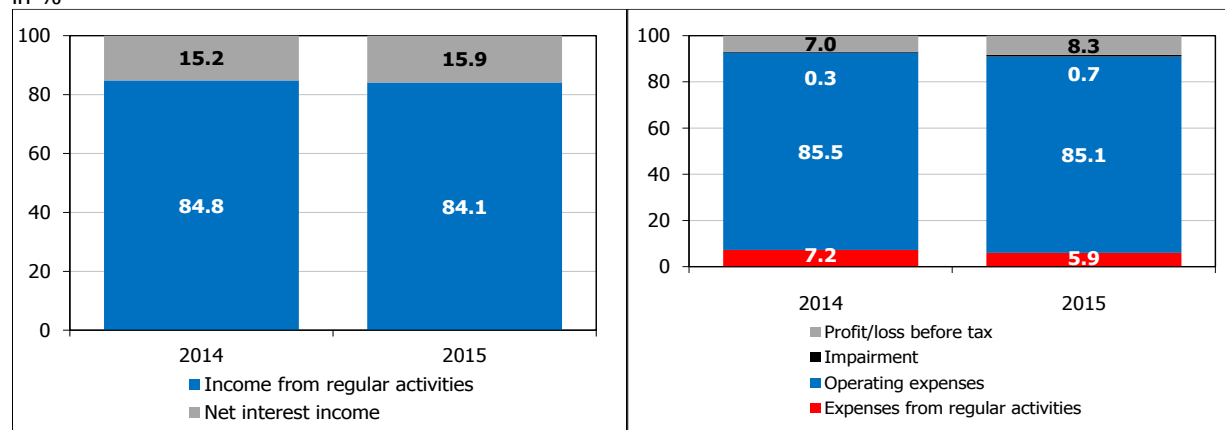




Chart 176

Structure (top) and use (bottom) of total income of leasing companies

in %



Source: Ministry of Finance.

**Financial companies operate with a positive financial result.** In 2015, they realized a profit of Denar 16 million, which compared to the previous year is higher by Denar 4 million (or 31.5%). The driving force of the growth of profits is the increased income from current operations (by 9.0%) and the decline in expenditures from current operations (for 9.6%).

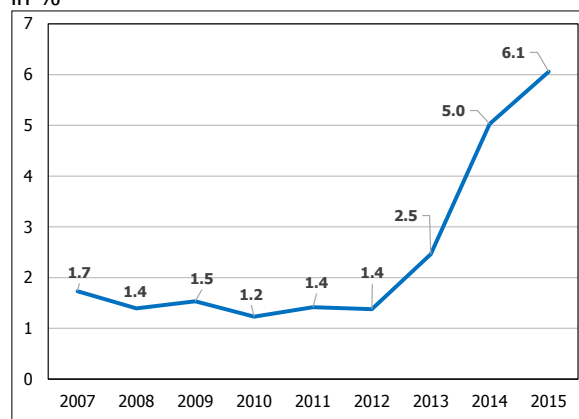


## 8. Investment funds

**Investment funds<sup>152</sup> continued growing in 2015. Although their share in total assets of the financial system increased, it was insignificant and accounted for only 0.6%. Hence, their importance for the movements and stability of the overall financial system is modest. The growth of investment funds' assets was mainly driven by net inflows from sale of issued units, and less by the managing funds' assets. In 2015, the bulk of net inflows into investment funds came from sales and withdrawal of unit documents from domestic non-financial entities. The index of the movement of prices of unit documents in open-end investment funds (MOFI) increased during 2015. At year-end, the weighted annual yield of open-end investment funds was positive, despite the downward trend throughout 2015, due to the lower yield of equity investment funds.**

Chart 177

Share of investment fund property in the total property of non-banking institutional investors  
in %



Source: Securities and Exchange Commission (SEC)

Note: Total amount of non-banking institutional investors includes the property of life insurance companies, pension and investment funds.

**Investment funds are the smallest segment among the institutional investors.**

However, their share in total assets of non-bank institutional investors increased significantly and came closer to the share of life insurance companies (8.2%).

**As of 31 December 2015, the assets of open-end investment funds<sup>153</sup> were valued at Denar 2.882 million, which is an increase of Denar 933 million compared to the previous year.** The growth of the net assets of open-end investment funds, as in previous years, results mainly from the net income from sales of units issued, and less from the funds' investments and property management.

In 2015, given the unchanged number of investment funds, the growth rate of funds' property is lower compared to the previous year because of the lower net inflows from sale of unit certificates (by Denar 396 million or 31.9 %).

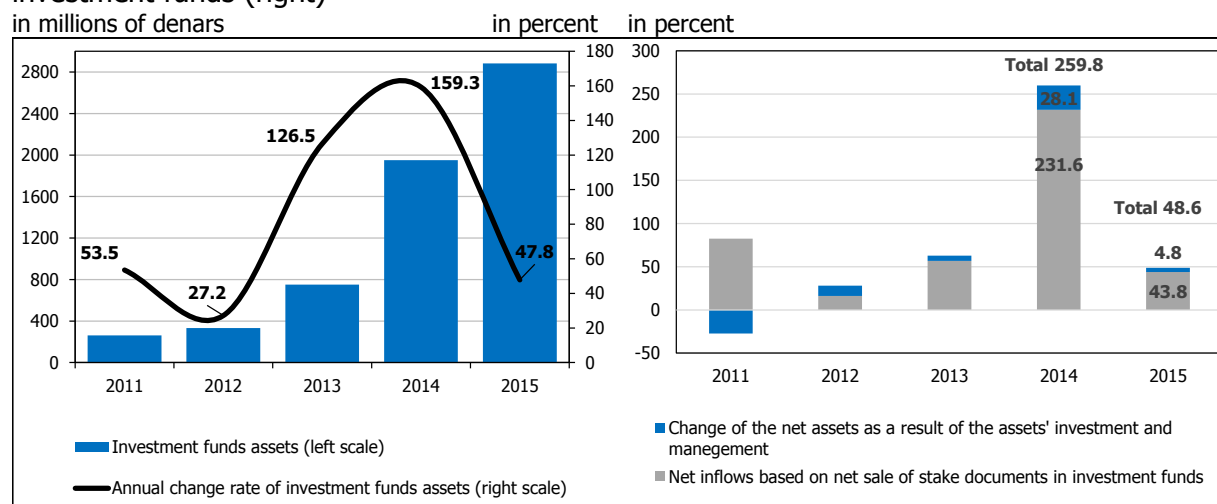
<sup>152</sup> The analysis in this section of the Report does not include private investment funds and private funds management companies, since the Law on Investment Funds (Official Gazette of the Republic of Macedonia No. 12/2009, 67/2010, 24/2011 and 188/2013) does not require supervision of private funds, i.e. of the companies authorized to manage private funds, nor submission of regular reports to the competent authority in the Republic of Macedonia.

<sup>153</sup> Given the lack of closed-end investment funds in the Republic of Macedonia, the analysis in this section of the report refers to open-end investment funds and the companies that manage them.



Chart 178

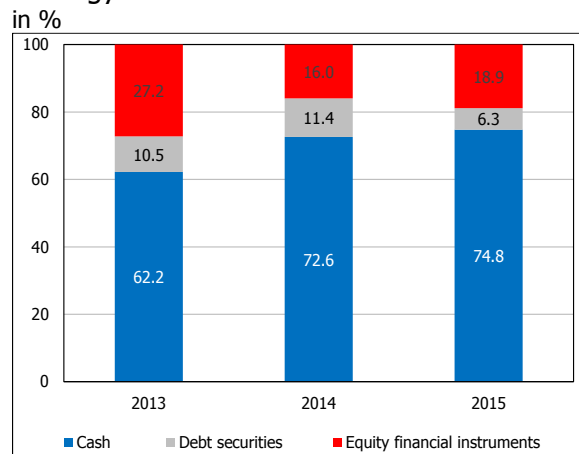
Property of open-end investment funds (left) and structure of the growth of net property of investment funds (right)



Source: Securities and Exchange Commission (SEC)

Chart 179

Structure of property of open-end investment funds by their investment strategy



Source: (SEC).

This is due to the higher risk aversion of domestic investors as major investors in the funds. Also, the net assets<sup>154</sup> of these funds recorded lower growth rate, due to the lower net inflows as well as funds' liabilities<sup>155</sup>.

Cash funds<sup>156</sup> still dominate the total value of investment funds' assets, with a share of 74.8%.

**Investment funds are cautious when investing funds.** The majority of their assets are invested in deposits in domestic banks<sup>157</sup>. Deposits have the highest absolute growth (of Denar 408 million or 32.4%) and contribute to

<sup>154</sup> Net assets of investment funds are the value of the fund's assets less the value of its liabilities.

<sup>155</sup> Funds have liabilities to fund management companies, to depository banks, liabilities based on allowable costs of funds and other expenses. These liabilities exclude net property that belongs to the holders of redeemable units.

<sup>156</sup> Cash funds are open-end investment funds that invest funds in instruments that can quickly and easily be turned into cash, mainly deposits. The investment strategy of these funds suggests investing in the short run without a pre-defined period of investment. Owners of units in these funds may be domestic and foreign institutional and individual investors who are permitted to invest in accordance with regulations.

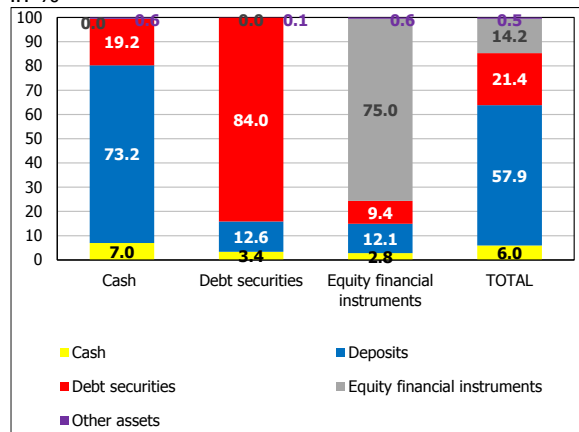
<sup>157</sup> Over 94% of investment funds' time deposits with maturity up to one year with domestic banks are funds of cash funds.



Chart 180

Structure of property of categories of open-end investment funds by type of financial instrument

in %

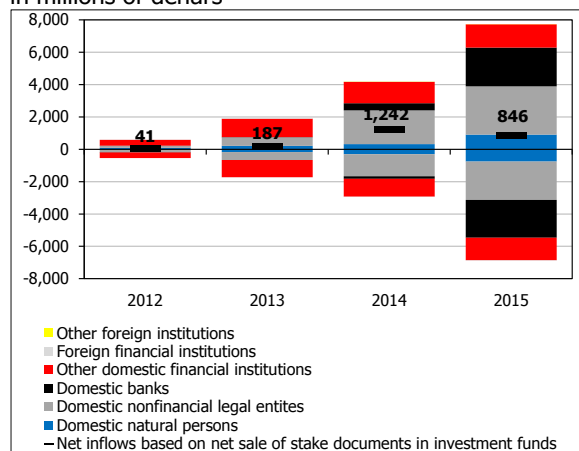


Source: (SEC).

Chart 181

Structure of inflows and outflows based on transactions with unit documents

in millions of denars



Source: (SEC).

almost half (43.8%) of the growth in funds' assets. Shares issued by foreign joint stock companies have doubled, i.e. by Denar 203 million, fully derived from investments of equity investment funds. Bonds issued by the Republic of Macedonia and bonds issued by other countries increased by Denar 158 million (66.1%) and Denar 144 million (or more than three times), respectively.

**In 2015, the trade in unit certificates in investment funds increased, with the largest trade being recorded in unit certificates owned by domestic non-financial entities and domestic banks.** However, majority (72.9%) of net proceeds from sale of unit certificates arises from domestic non-financial entities (Denar 617 million), followed by domestic natural persons (Denar 137 million and share of 16.1%). Despite the increased trade in unit certificates in the investment funds, net inflows from transactions with unit certificates decreased in 2015 compared to the previous year.

The index of movements of prices of unit certificates in open-end investment funds (MOFI)<sup>158</sup> continued increasing during 2015, **and at the end of 2015, its value was higher by 2.1% compared to the last day of 2014.** The weighted nominal annual rate of return of open-end investment funds<sup>159</sup>, began to move downwards since the end of 2014, a trend that continued throughout 2015. However, as of 31 December 2015, the weighted annual rate of return was positive, of 2.2%, a trend followed in the first months of 2016.

<sup>158</sup> The index for the movement of prices of unit documents in open-end investment funds (MOFI) is designed by the National Bank, as a price index weighted by the value of the net assets of individual funds. MOFI is constructed as a weighted average of the value of the individual indices for the movement in the prices of documents for stakes in each of the investment funds. Such calculated value of MOFI is corrected by a so-called correction factor, determined at each change in the number of funds, thus ensuring time comparability of the index. The base of MOFI, with value 100 is 25 March 2011, when the data necessary for its calculation started to be available.

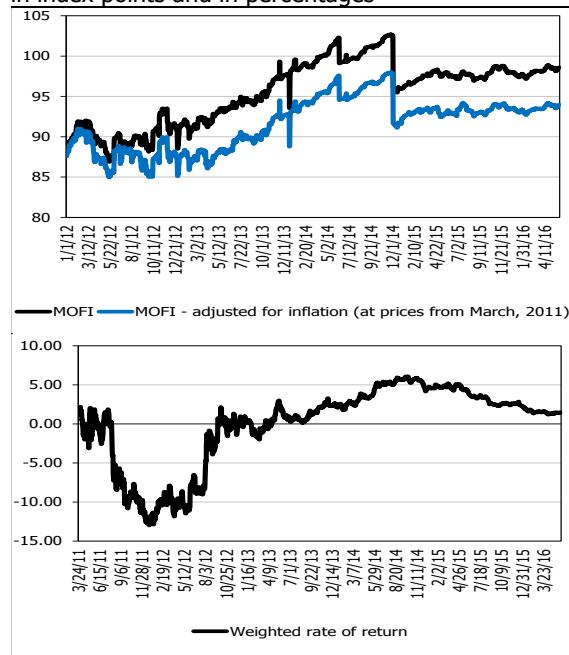
<sup>159</sup> It is calculated as weight of nominal annual rates of return of individual types of investment funds (cash, equity and debt). The nominal annual rate of return is calculated on the basis of the weighted average of the daily sale price of the units of each investment fund, grouped by their type. The share of each fund in net assets of investment funds is used as weight.



Chart 182

Movements in the MOFI index (up) and the weighted annual rate of return of open-end investment funds (down)

in index points and in percentages



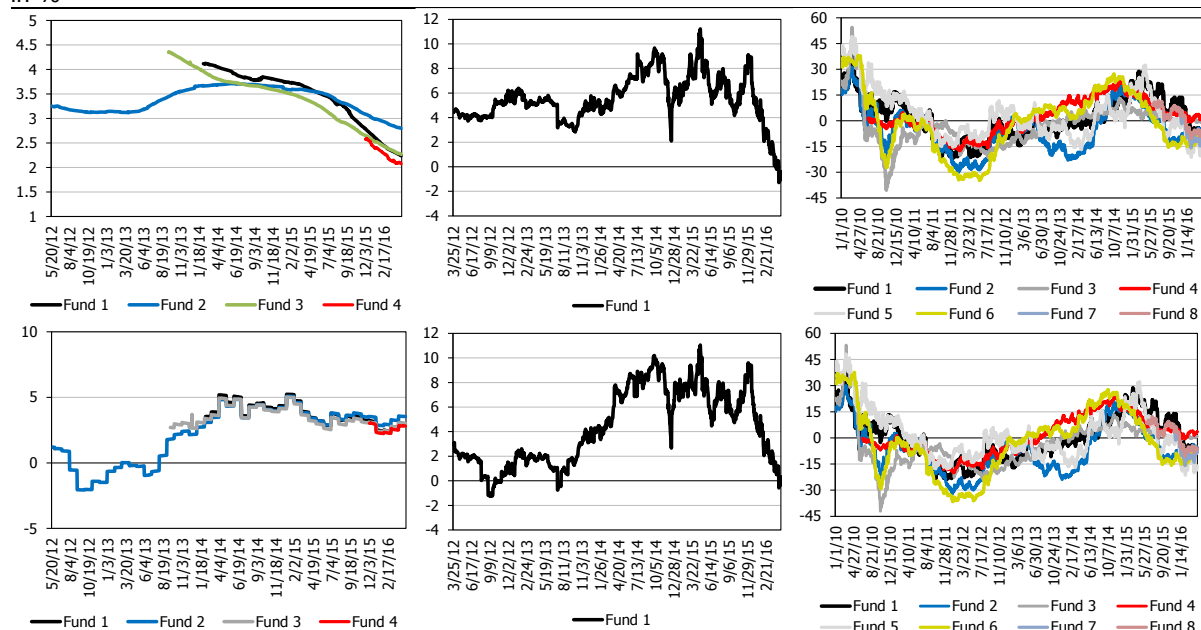
Source: Web site of the Macedonian Stock Exchange and National Bank calculations

The main reason for reducing the annual yield of open investment funds are low yields generated from equity investment funds. This type of funds reported a significant drop in the nominal annual rate of return from 9.3% at the end of 2014, to 0.3% at the end of 2015. The decline in the yield of these funds results mainly from the inappropriate choice of investment equities, but also from the generally inactive management of their property, as well as the unfavorable movements on the markets this year. Debt investment funds reported the highest annual weighted rates of nominal yield of 5.4% in 2015 (6.1% at the end of 2014), which corresponds to the higher yields offered by debt securities. At the end of 2015, cash funds reported an annual weighted rate of nominal yield of 2.5% (3.4% at the end of 2014). The reduction in the nominal rate of yield of these funds reflects the trend of gradual decline in interest rates in the domestic money market in 2015, which indirectly caused a reduction in the yield of each financial instruments in which they invest.

Chart 183

Annual nominal (up) and real rate of return (down), by individual investment funds according to the type of instrument in which they predominantly invest - instruments on the money market (left), debt instruments (middle) and equities (right)

in %



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



**Accounting for only 0.01% of GDP, investment fund management companies have little importance to the domestic economy.** These companies have almost identical share in the total assets of the financial system of the Republic of Macedonia. In 2015, their income was worth Denar 15 million, with net profit of Denar 40 million.

## **9. Domestic financial markets**

### **9.1. Money and short-term securities market**

In 2015, the impact of money and short-term securities market on the financial flows in the country and the conditions for real sector financing was still modest. The interbank market of unsecured deposits remained the major segment of the money market (accounting for 83.7% of the total turnover) despite its reduced trade during the year. The importance of primary market of short-term securities is significantly greater, primarily due to the continued issuance of CB bills and treasury bills. Secondary trading in short-term securities is still modest, although in 2015 it grew significantly and after the one-year break, the switch in the manner of auctioning at the primary market has led to repeated trading in CB bills. Repo market reported reduced turnover, compared with last year. Further strengthening of the role of money market and consequently, the overall financial market, will contribute to achieving the central bank's objectives of price stability and for more efficient allocation of resources of financial institutions.

Given the still high level of euroization, and the considerable amount of household and corporate debt with FX component, the greatest risks to the functioning of the financial system and the real sector originate from the developments on the foreign exchange market that reported the highest turnover (close to 90% of GDP) in 2015, compared to any other segment of the financial markets. Maintaining a stable exchange rate of the denar against the euro, despite having a key role in maintaining macroeconomic balance, is extremely important for the sustainability of the debt of the household and corporate sectors, and hence the maintenance of financial stability.

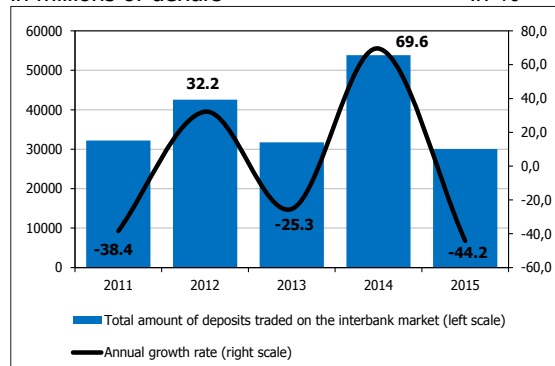


### 9.1.1. Unsecured deposit market

The interbank unsecured deposit market is the most important segment of the money market in the Republic of Macedonia, which should be the pillar of the operations of all other segments of the financial markets.

Chart 184

Trading volume and annual growth of the interbank unsecured deposit market  
in millions of denars in %

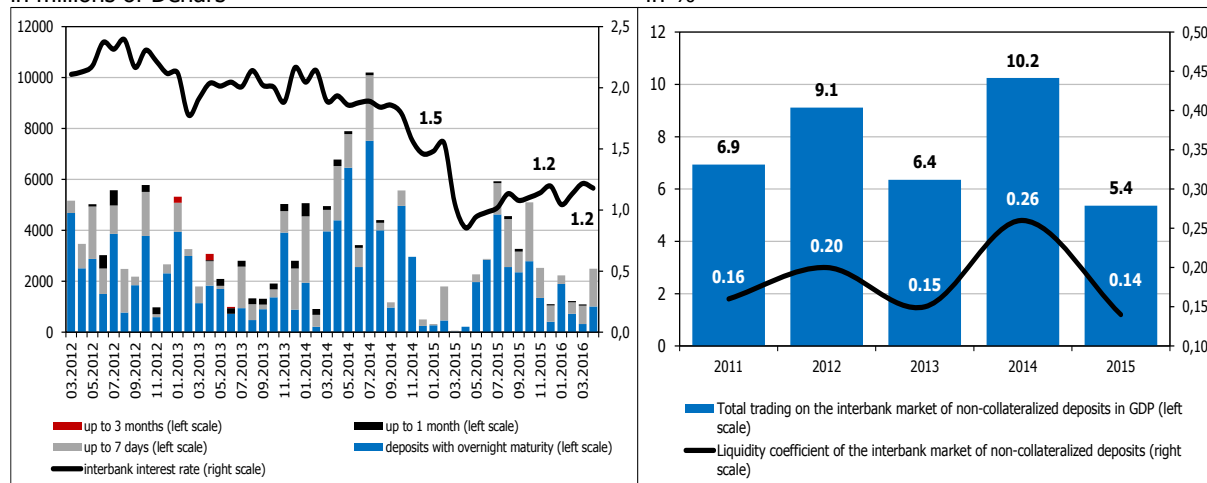


Source: NBRM.

The volume of trading in the unsecured deposits market in 2015 decreased by Denar 23,812 million, or 44.2%, which is mainly explained by lower trading on the interbank market of unsecured overnight deposit facility (unlike the previous year when amid the trade in the so-called mandatory<sup>160</sup> seven-day deposits, banks increased their trading on this market segment). In addition, the banks' propensity to trade in deposits with maturity up to seven days and up to one month has also reduced. In the last two years, the unsecured deposit market registered no transactions with maturity up to three months, which are typical for this market, where deposits with shorter maturities are most commonly traded.

Chart 185

Maturity structure of interest rates on the interbank deposit market (left) and liquidity ratio on the unsecured deposit market and share in GDP (right)  
in millions of Denars in %



Source: NBRM.

<sup>160</sup> The obligation of banks to allocate funds in seven-day deposits with the National Bank arises from the Decision on CB bills (Official Gazette of the Republic of Macedonia No. 166/13) from November 2013, which introduced a methodology for determining the potential demand for CB bills, which was a basis for the amendments to the Decision on deposit facility, which required placing funds in seven-day deposits, in conditions of higher demand for CB bills than the potential.



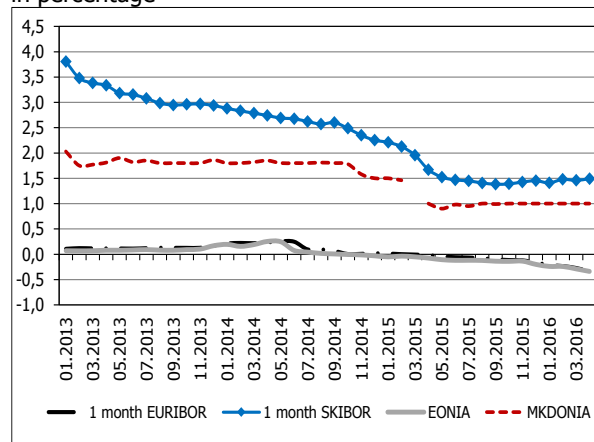


Amid sufficient amount of liquid assets of banks, the reduced turnover on the market of unsecured deposits contributed to the decrease of the liquidity ratio in this market<sup>161</sup>, as well as of its share in the total economic activity of the country from 10.2% in 2014 to 5.4% in 2015<sup>162</sup>. At the same time, the sufficient liquidity position of the banks is one of the factors for the relatively low interest to trade in unsecured deposits, which in turn causes limited significance of this market segment.

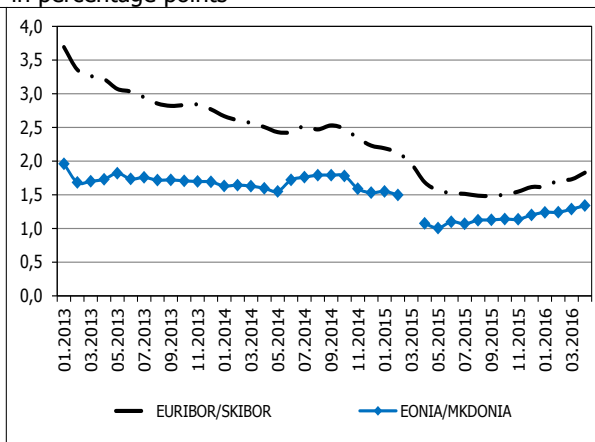
Chart 186

Interest rates (left) and interest rate spread (right) on the unsecured deposit market in the Republic of Macedonia and in the EU

in percentage



in percentage points



Source: NBRM, ECB.

In 2015, the interest rates on the European and the domestic financial interbank market - EURIBOR<sup>163</sup> and EONIA<sup>164</sup>, i.e. SKIBOR<sup>165</sup> and MKDONIA<sup>166</sup>, moved downwards. Accordingly, the interest rate spread between one-month SKIBOR and one-month EURIBOR narrowed. Regardless of the turbulence in the domestic environment, the interest rate spread between one-month SKIBOR and one-month EURIBOR in June 2015 hit a record low of 1.5 percentage points (1.6 percentage points in December 2015, and 1.7 percentage points in March 2016). In December 2015, the interest rate spread between the respective interest rates of overnight transactions - MKDONIA and EONIA was 1.2 percentage points, which is an annual contraction of 0.3 percentage points.

<sup>161</sup> The liquidity ratio on the market of unsecured deposits is the correlation between the average turnover on the interbank market of unsecured deposits and the average balance on banks' accounts with the National Bank.

<sup>162</sup> Source: Press Release of the State Statistical Office of the Republic of Macedonia from 10 March 2016. Data on GDP for 2014 are preliminary, and data for 2015 are estimated.

<sup>163</sup> EURIBOR (Euro Interbank Offered Rate) - interest rate at which reference banks on the euro area money market are ready to sell deposits to another reference banks and it is calculated on the basis of the average of the quoted interest rates of selected banks.

<sup>164</sup> EONIA (Euro OverNight Index Average) - interest rate of the euro area money market calculated as a weighted average of the interest rate on all overnight transactions where reference banks are deposit sellers. The interbank interest rate EONIA fluctuates in the spread between the marginal lending and deposit rates of the ECB.

<sup>165</sup> SKIBOR (Skopje Interbank Offer Rate) - interbank interest rate introduced in July 2007 for selling unsecured Denar deposits, calculated as an average of the quotations of reference banks, for the following standard maturities: overnight, one week, one month, three months, six months, nine months and twelve months (the last three maturities were introduced in 2011).

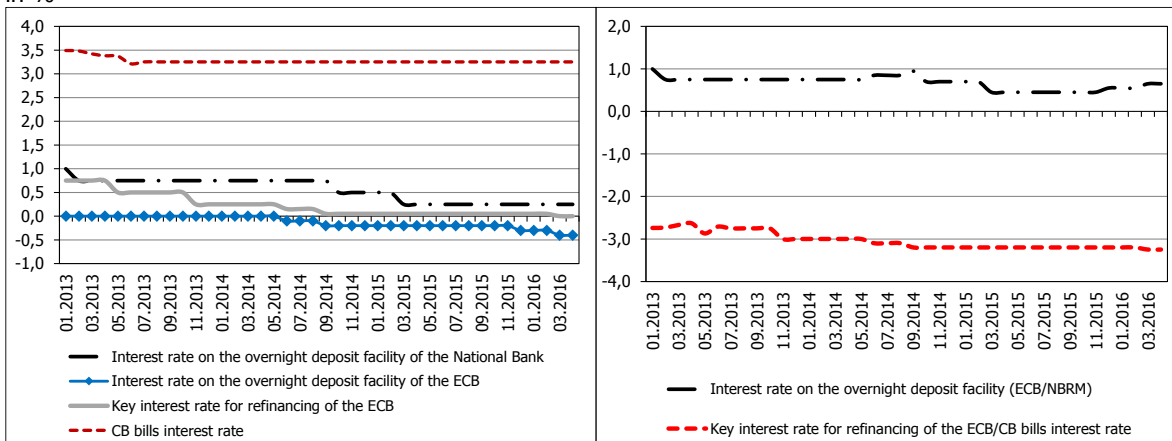
<sup>166</sup> MKDONIA - it started being calculated on 15 October 2008, as a weighted average interest rate of concluded overnight transactions, with reference banks emerging as sellers of unsecured Denar deposits. Unlike SKIBOR which is an interest rate based on listings, MKDONIA is based on the interest rate reached in concluded transactions. Reference banks whose transactions are used to calculate MKDONIA are the same reference banks that quote interbank interest rates SKIBOR.



Chart 187

Policy rates (left) and interest rate spread (right) on the financial markets in the Republic of Macedonia and in the EU

in %



Source: NBRM, ECB.

During 2015, the ECB increased the degree of monetary easing to revive lethargic economic activity in the euro area. In the middle of the year, the debt problems of Greece again came to the fore. In such circumstances, the ECB maintained its policy rate to the level of its last change (in September 2014, when it was reduced to the historically lowest level of 0.05%), and therefore, no changes were noted in the interest rate spread to the interest rate on the CB bills. On the other hand, amid revival of the strong expectations for slowing economic growth and relatively low inflation rate, at the end of 2015, the ECB reduced the interest rate on overnight deposit facilities from -0.2% to -0.3%<sup>167</sup>. As a result, the interest rate spread between the interest rate on overnight deposit facilities of the National Bank (which during March 2015 was halved from 0.5% to 0.25%) and the interest rate on overnight deposit facilities of the ECB narrowed and for the most part of the year was at the historically lowest level of 0.45 percentage points.

The movements in the spot-curve of the interbank interest rate on the deposit market - SKIBOR indicate continuous decrease of the interest rates on the interbank market. Also, at the end of 2015, the spot yield curve for SKIBOR had a small positive slope, which in the past three years has seen a downward trend - a gradual rectification of this yield curve. Such change in the slope signals that banks have formed expectations for increased uncertainty in the economy. The gradual strengthening of risk perceptions in the economy is also confirmed by the movements of the slope of the implied forward curve<sup>168</sup> of the interbank interest rate - SKIBOR.

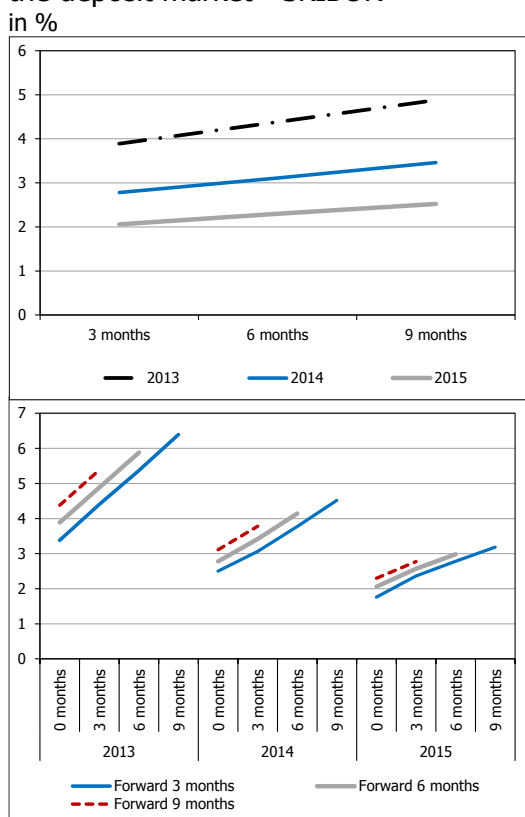
<sup>167</sup> In March 2016, the ECB again reduced the interest rate on overnight deposit facility from -0.3% to -0.4%. In addition, the ECB cut the interest rate on overnight loans from 0.3% to 0.25% and on refinancing operations conducted through a tender with fixed rates from 0.05% to 0%.

<sup>168</sup> Implied forward (or so-called forward-forward) yield curve is the ratio of the forward rates and the corresponding terms to maturity.



Chart 188

Spot (up) and implicit forward (down) curve of the interbank interest rate on the deposit market - SKIBOR



Source: NBRM.

Note: Calculations of forward interest rates are in accordance with the actual/360, which is used to calculate SKIBOR. Implied forward curves begin with spot rates on each of the displayed dates (for each respective maturity), followed by the calculated implied forward rates for each respective maturity.

Namely, the movements of implied SKIBOR forward yield curves show consistent decrease in forward interest rates<sup>169</sup> in the past few years and gradual correction of short-term forward yield curves for all three maturities of forward rates. Given that the forward yield curves are used for observing market (banks) expectations of where should be the interest rate in the future, correcting the forward yield curves indicates that banks in the future will see low inflationary expectations in the observed period, which corresponds to the actual minimum rates of inflation and deflationary pressures. It should be noted that forward interest rates are not forecast for the future spot rates<sup>170</sup>, which means that the expectations of banks at a time when the forward yield curve is observed are correct.

<sup>169</sup> Forward interest rates are calculated using the current spot rates through mathematical principles that reflect rates that do not allow arbitrage and relate to an expected period in the future. The general formula used to compute the implied forward rates is as follows:

$$F_{m_1, m_2} = \left( \frac{(1 + c_{spot, 360} m_2)^{m_2}}{(1 + c_{spot, 360} m_1)^{m_1}} \right)^{\frac{1}{m_2 - m_1}} - 1$$
, where  $m_1$  presents the number of months in the future when the implied forward rate is calculated (shown on the horizontal axis of Chart 188), and  $m_2$  - maturity in months to which the implied forward rate refers (three, six or nine months). The current spot yield curve should incorporate all available current information, economic or political, from domestic and external sources, to reflect the consensus of market participants (for interbank interest rates - the consensus among banks). These current information are actually incorporated in the calculation of forward rates and the derivation of the forward yield curve.

For a period of three, six or nine months, which refer to the respective forward curves yield, there will be new information and events that will change perceptions of market participants and that can not be known in the calculation of forward interest rates.

<sup>170</sup> For a period of three, six or nine months, which refer to the respective forward curves yield, there will be new information and events that will change perceptions of market participants and that cannot be known in the calculation of forward interest rates.

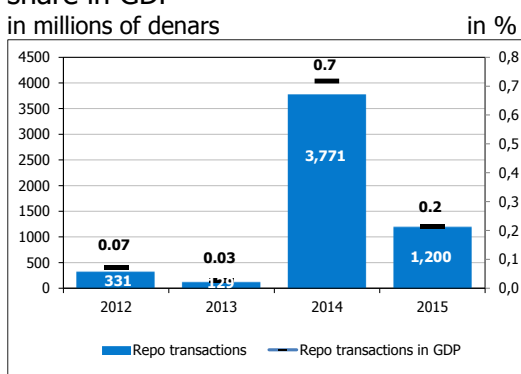


### 9.1.2. Market of secured deposits (repo market)

Since the establishment of the repo market in the Republic of Macedonia in 2005, this market segment has been characterized by low turnover. Until 2012, transactions included only monetary interventions of the National Bank with banks, and since then, this market has seen conclusion of interbank repo transactions. In 2015, the turnover of the repo market is slightly lower, compared to the previous year, when it showed the greatest revival since the establishment of this market.

Chart 189

Trade volume on the market of unsecured deposits (repo-market) and share in GDP



Source: NBRM.

**Banks did not have much interest in the repo market, which to some extent is due to the volume of their liquid assets.** Thus, the turnover of interbank repo transactions in 2015 amounted to Denar 1,200 million, which compared to 2014 is a decrease of more than three times (for comparison, the turnover in 2014 was Denar 3,771 million). The share of the repo market in GDP as a measure of the overall economic activity in the country also reduced from 0.7% in 2014 to 0.2% in 2015. Hence, in 2015, transaction between banks and the National Bank played the leading role on the repo market, which in 2015 amounted to Denar 1,400 million (for comparison, in 2014, repo transactions with the National Bank amounted to Denar 1,870 million).

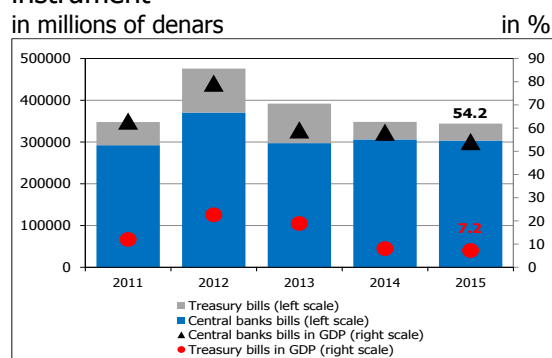
### 9.1.3. Primary money and short-term securities market

**Short-term securities issued in the Republic of Macedonia include CB bills (available only for banks) and treasury bills of the Ministry of Finance (investment accessible to the public). Financial institutions and non-government economic entities do not use the market of short-term securities as a potential source of funding of its activities. The offered amount of short-term debt securities during 2015 remained at approximately the same level as in the previous year.**

In 2015, the CB bills auctions were conducted through a volume tender and limited amount. Namely, at a stable level of prices and absence of major pressure on the foreign exchange market in 2015, the National Bank kept the supply of CB bills at Denar 25,500 million and unchanged interest rate of 3.25%<sup>171</sup>. However, at the beginning of May 2016, the political uncertainty in the country increased the demand for foreign currency and the pressures on banks'

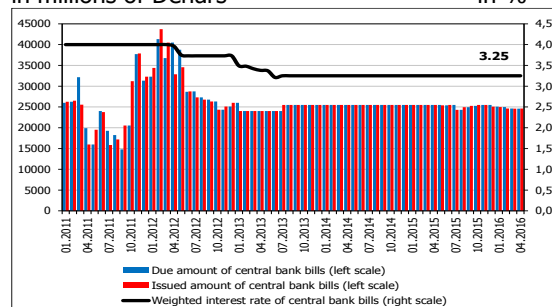
<sup>171</sup> Since the last change in July 2013.

**Chart 190**  
Performances on the primary money market and share in GDP, by type of instrument



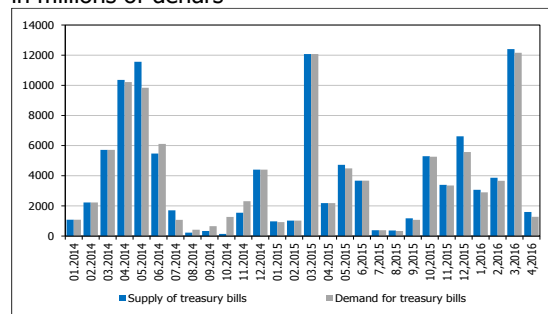
Source: NBRM.

**Chart 191**  
Due and realized amount of CB bills and interest rate, by month



Source: NBRM.

**Chart 192**  
Supply and demand for treasury bills, by month



Source: NBRM.

deposit base, urging the National Bank to increase the policy rate by 0.75 percentage points (from 3.25% to 4%).

During 2015, the average monthly demand of banks for CB bills was Denar 30,931 million, and compared with 2014, it is lower by 17.6%. The lower amount of banks' investments in CB bills is associated with the limited amount offered, through the changes in the mechanism of establishing the banks' bids at the auctions of CB bills<sup>172</sup>.

**The second most important instrument on the primary money market are treasury bills, whose offer in 2015 remained almost the same as in the previous year.** The total amount of bills issued by the Ministry of Finance (Denar 40,371 million) is lower by Denar 1,907 million, or by 4.5%, compared with the last year. Also, the structure of total treasury bills is almost unchanged, and for the second year in the row has been predominated by 12-month treasury bills<sup>173</sup> in domestic currency<sup>174</sup>.

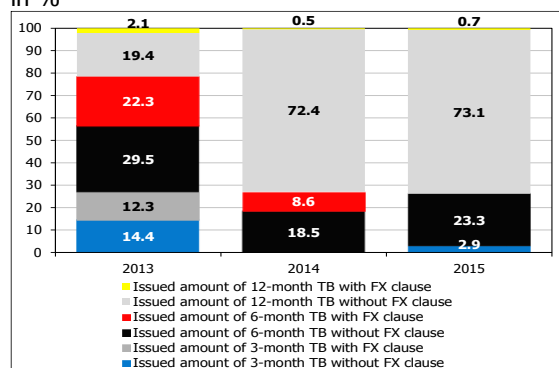
<sup>172</sup> In March 2015, the banks' offers for purchasing CB bills in the primary market started being determined according to their share in the Denar reserve requirement (Decision amending the Decision on CB bills (Official Gazette of the Republic of Macedonia No. 35/2015)). In August 2015, criterion was established for allocation of the amount offered by banks, through the relative share of Denar liabilities of individual banks in the total Denar liabilities of the banking system (Decision amending the Decision on CB bills (Official Gazette of the Republic of Macedonia No. 148/2015)).

<sup>173</sup> In May 2012, the Ministry of Finance started issuing treasury bills with maturity of up to twelve months.

<sup>174</sup> Almost all treasury bills were issued in domestic currency (99.3%).

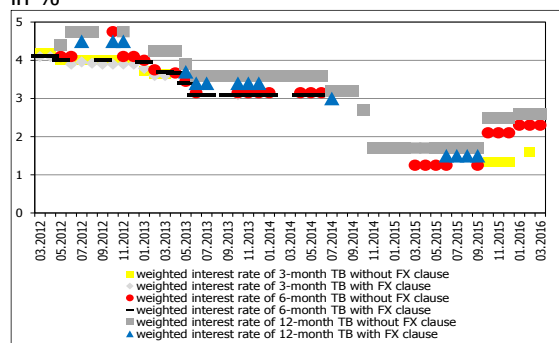


Chart 193  
Structure of treasury bills by maturity and currency  
in %



Source: NBRM.

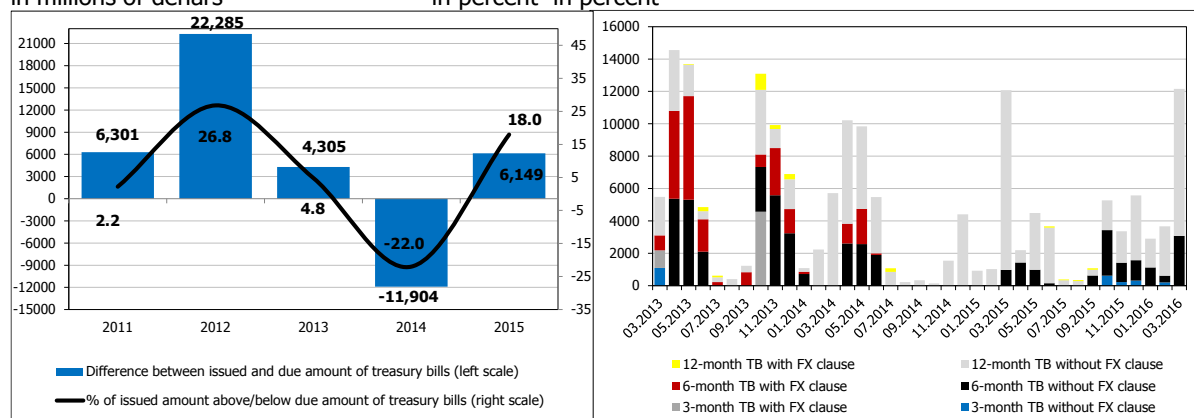
Chart 194  
Interest rates on treasury bills, by maturity and currency  
in %



Source: NBRM.

In the past few years, treasury bill auctions have been conducted through a volume tender and fixed interest rate (predetermined discount rate), which in 2015 ranged from 1.25% to 2.6%, depending on the maturity and the currency component of the offered treasury bills. Compared to 2014, the interest rate on the primary market of treasury bills decreased within the range from 0.2 to 1.9 percentage points, depending on the features of the bills.

Chart 195  
Realized amount above/below the due amount of treasury bills on an annual level (right) and by currency (left)  
in millions of denars in percent in percent



Source: NBRM.

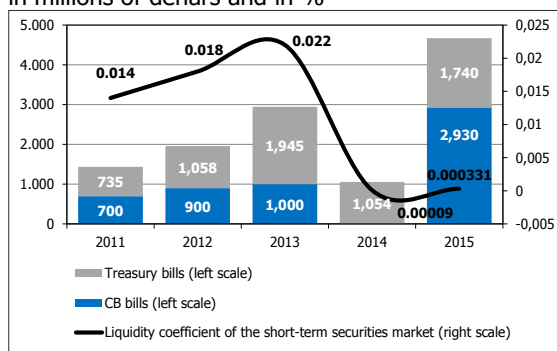


### 9.1.4. Secondary short-term securities market

**The total turnover of the secondary securities market more than tripled compared to the previous year and reached Denar 4,670 million.**

Chart 196

Trading volume in the secondary short-term securities market  
in millions of denars and in %



Source: NBRM.

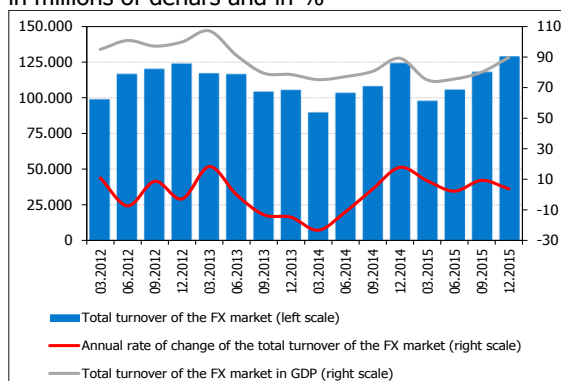
Such developments on the secondary market of short-term securities largely result from increased trading in treasury bills (by 65.0% on an annual basis). Besides, after one year break, this market traded CB bills of Denar 2,930 million, mainly in the second half of the year. The increased volume of trading on the secondary market of short-term securities is seen through the increase in the liquidity ratio on the OTC market<sup>175</sup>. However, this ratio is very low (0.000331% in 2015), thus confirming the still low activity on the secondary market.

### 9.1.5. Foreign exchange market

**In 2015, the total turnover on the foreign market reached Euro 7,314 million<sup>176</sup>, which is an increase of Euro 407.2 million or 5.9% compared to the previous year. Thus, the share of turnover in the foreign exchange market remained above 80% of GDP, making this segment of the financial market by far the most important for the economy as a whole.**

Chart 197

Total turnover and share of the turnover on the foreign exchange market in GDP  
in millions of denars and in %



Source: NBRM.

The National Bank intervenes on the foreign exchange market through transactions with market makers, for the purposes of overcoming the occasional inconsistencies between the supply and the demand for foreign currency. On annual basis, the National Bank intervened on the foreign currency market by selling foreign assets in the net amount of Euro 34.2 million, which is 1.5% of the average foreign reserves during the year (in 2014, the net sale was 0.25% of the average foreign reserves in 2014). With the interventions of the National Bank, in 2015, the nominal exchange rate of the denar against the euro averaged 61.61 denar per euro. Considering the implementation of the strategy of targeting a stable nominal exchange rate of the denar against the euro, the changes in

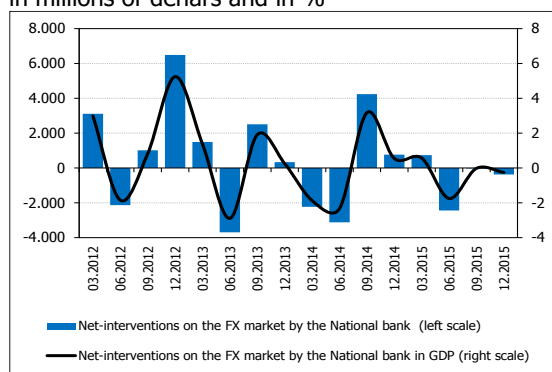
<sup>175</sup> Ratio between the average daily turnover and average stock of outstanding securities.

<sup>176</sup> The total turnover on the foreign exchange market encompasses banks' transactions with companies and natural persons, interbank transactions, including net-interventions of the National Bank with the market makers.





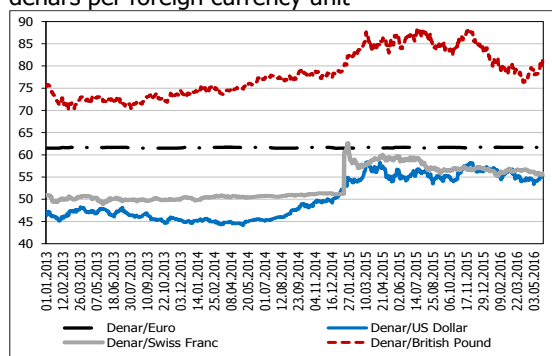
**Chart 198**  
Net interventions on the foreign exchange market and share in GDP in millions of denars and in %



Source: NBRM.

Note: Net-interventions on the foreign exchange market of the National Bank comprises net interventions with market-makers.

**Chart 199**  
Movement of the official prompt exchange rate of the denar for certain more significant currencies denars per foreign currency unit



Source: NBRM.

the cross-currency rates of the denar with the other currencies directly depend on the fluctuations in the value of the euro on the international foreign exchange markets<sup>177</sup>.

In addition, as a result of the applied monetary strategy, there is a low bid-ask spread on the foreign exchange market and the domestic exchange market for the euro. In contrast, the other major currencies showed considerably larger spreads, indicating modest liquidity (for the foreign exchange market) and/or availability (for the currency exchange market) of these currencies.

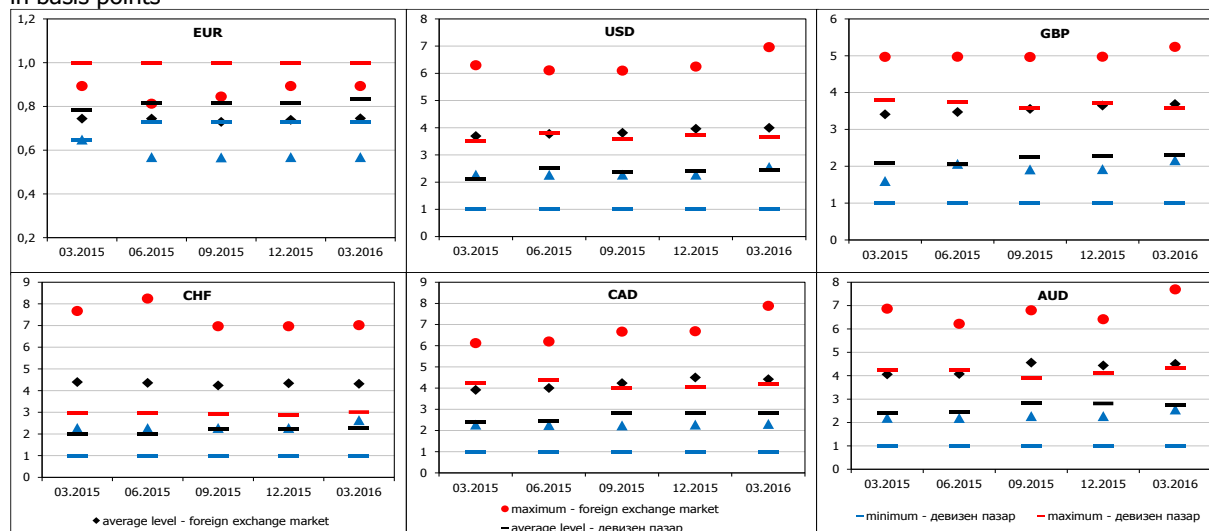
It is notable that the average spread on the foreign exchange (non-cash) market is lower than the average spread on the currency exchange market (cash) in the range from 1.4 to 2.1 percentage points, depending on the currency, which is an indicator of additional margin the banks incorporate in currency prices to cover cash handling costs.

<sup>177</sup> In 2015, one US dollar was exchanged for 9.1 denars more, one British pound was exchanged for 8.4 denars more, and one Swiss franc was exchanged for 7.0 denars more, compared to 2014.



Chart 200

Bid-ask spread on the currency exchange market and the foreign exchange market of the banks in the Republic of Macedonia.  
in basis points



Source: NBRM and websites of banks.

Note: The bid-ask spread on the foreign exchange market includes only market makers.

## 9.2. Capital market

During 2015, the government was the most active issuer of long-term securities, issuing government bonds to provide funding for the budget of the government and for public debt management. Companies hardly used market funding in the sense of fund-raising through the issue of new shares and/or debt instruments, which is a limiting factor for a more significant growth in the overall volume of activity of the corporate sector. Domestic banks and pension funds have played the role of major investors in government bonds on the primary capital market, where the fluctuations in the capital market are of enormous importance for the stability of each institutional segment of the financial system, and thus for the overall financial stability.

The secondary trading on the capital market in the Republic of Macedonia is marked by poor supply of investment alternatives, causing its low attractiveness, where the effect is a small turnover and low value of equities. This is also confirmed by the reduced turnover on MSE from traditional trading<sup>178</sup>, and lower market capitalization. This caused the Macedonian MBI-10 to move downwards. Restraint and pessimism of the potential investors prevailed, with insignificant presence of foreign investors. Hence, the only net buyers of securities, and therefore, a major long-term investor in the capital market in the Republic of Macedonia are the domestic legal entities. The unfavorable setup of the Macedonian capital market and the lack of public confidence in the issuers and participants have increased the already present insolvency and unattractiveness of this segment of the financial system. The regional link of the Macedonian, Croatian and Bulgarian stock

<sup>178</sup> The turnover in standard trading does not include block transactions, public stock exchange auctions and public offerings of securities.



exchanges<sup>179</sup> can be an impetus for greater trading volume. The possibility to invest in securities in these stock exchanges will open up new investment opportunities for the Macedonian investors, which may contribute to new development opportunities for the domestic brokerage community.

### 9.2.1. Primary capital market

In 2015, the movements of the primary capital market seen through the value of newly issued long-term securities decreased by Denar 7,671 million, or by 39% compared to 2014. The issued long-term securities are solely continuous government bonds with different maturities (from two to fifteen years), and traditionally, denationalization bonds were issued<sup>180</sup>. The total amount of government bonds issued in 2015 constituted 4.6% of the government total public debt as of 31 December 2015, i.e. 14% of the domestic public debt. The demand for government bonds generally corresponded with the offered amount of securities, indicating the absence of major imbalances between the supply and demand on this market.

Table 9  
Structure of the realized issues of long-term securities  
in millions of denars

Realized issues of long-term securities	2011 година	2012 година	2013 година	2014 година	2015 година
Amount of realized issues of long-term government securities	1.845	10.466	12.359	13.362	11.896
1. two-years continuous government bonds	0	0	3.055	4.841	899
2. three-years continuous government bonds	0	2.082	1.417	912	2.800
3. five-years continuous government bonds	1.168	7.768	7.085	4.213	0
4. ten-years continuous government bonds	0	0	0	2.782	3.209
5. fifteen-years continuous government bonds	0	0	0	0	4.402
6. Denationalization bonds	677	616	802	615	586
Amount of realized issues of long-term, non-government securities	3.531	10.032	121	6.325	120
1. Corporate bonds	0	0	0	0	0
2. Shares	3.531	10.032	121	6.325	120
- Issued by banks	3.314	2.546	0	0	0
- Issued by other financial institutions	217	191	111	267	3
- Issued by non-financial legal entities	0	7.295	10	6.059	117
Total amount of realized issues of long-term securities	5.376	20.497	12.481	19.687	12.016

Source: The Securities and Exchange Commission of the Republic of Macedonia, web site of the Ministry of Finance and the Macedonian Stock Exchange and National Bank calculations.

Only demand for government bonds with longer terms to maturity (ten and fifteen years) was mostly lower than the amount offered, which is probably a result of the reluctance of some investors to invest in securities with such maturity, given that most of their liabilities are in shorter terms. In terms of the currency structure of the issued continuous government bonds, in 2015, the share of government bonds with FX clause and those in denars in the total issued government securities became equal. Namely, at a significant annual decline of continuous bonds in denars, their share in the total amount of the continuous bonds was reduced to 49.9% (53.1% in 2014). The government continuous bonds in denars are predominantly owned by banks from the Republic of Macedonia (59.9%), while the continuous government bonds in denars with FX clause are almost entirely (98.9%) owned by non-bank entities. In terms of maturity, the share of ten-year and fifteen-year continuous bonds (67.3%) is the highest.

<sup>179</sup> In March 2016, the joint so called SEE Link platform for cross-border diversion of orders for trading of the stock exchanges of members from Bulgaria, Macedonia and Croatia was launched. By the end of 2016, it is certain that the number to markets in the region participating in this platform will increase.

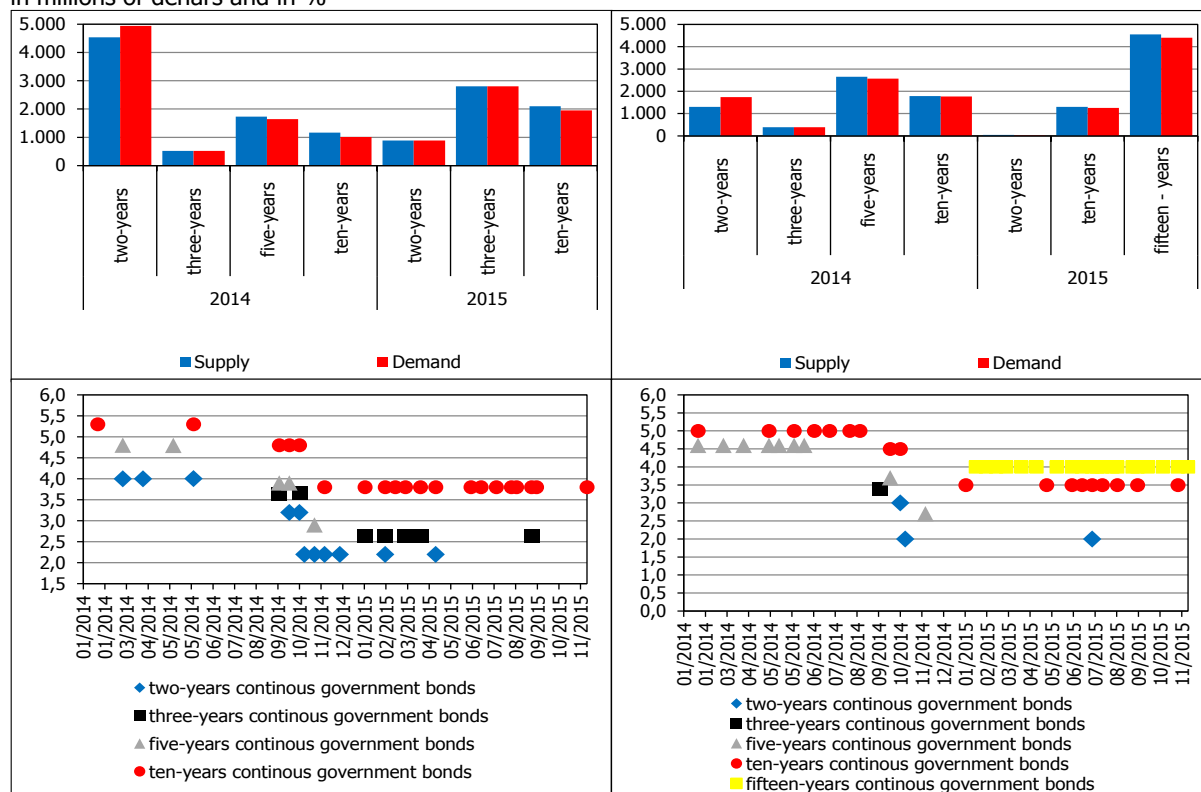
<sup>180</sup> Denationalization bonds are bearer securities denominated in Euro and are freely transferable. The bonds bear an interest rate of 2% p.a., while the nominal value and the interest are repaid in a period of 10 years.



**During 2015, there were hardly any significant developments on the primary capital market in the segment of issuing non-government securities.** The most active issuer of long-term non-government securities were non-financial companies, which by way of private bid made only three new issues of shares of Euro 117 million<sup>181</sup>, which made no greater contribution to the increase in the total sources of financing companies. Financial institutions are also not particularly active in the primary capital market. In the last three years, there have not been any new issues of shares by banks, and other non-banking financial institutions issued new shares of only Denar 3 million. Hence, the total amount of equity shares issued in 2015 is insignificant (0.12% of the market capitalization of all shares traded on the Macedonian Stock Exchange as of 31 December 2015).

Chart 201

Supply and demand of continuous government bonds in denars (top left) and foreign currency indexed (top right) and a coupon interest rate on issued continuous government bonds in denars (bottom left) and foreign currency indexed (bottom right) in millions of denars and in %



Source: The web site of the Ministry of Finance and National Bank calculations.

Note: Auctions of government bonds in 2015 were conducted through a volume tender (restricted with a coupon interest rate).

<sup>181</sup> In 2015, the Securities and Exchange Commission of the Republic of Macedonia issued four approvals for issuance of shares, all of which through private offering of common shares. One of the issues was made in accordance with the Law on the conversion of the claims of the Republic of Macedonia on the basis of public duties into equity in the companies Ohis AD Skopje, Emo AD Ohrid, Tutunski Kombinat AD Prilep and 11 Oktomvri - Eurokompozit AD Prilep (Official Gazette of the Republic of Macedonia No. 159/2008) and in order to increase the share capital with new deposits for a known buyer - Government of the Republic of Macedonia. The other issues were made for the purposes of increasing the share capital to create conditions for smooth functioning of the company. All approved issues registered success rates of 100%.



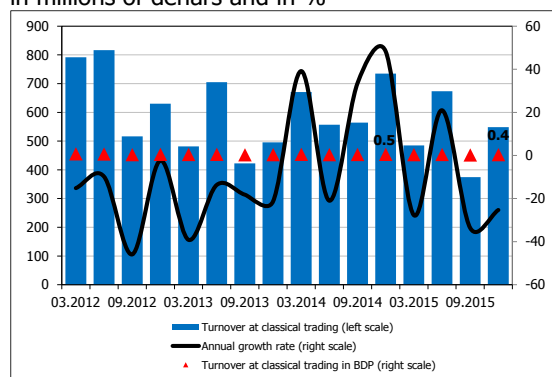
## 9.2.2. Secondary capital market

**The importance of secondary trade in long-term securities to the overall financial system remains very small (the share of the turnover from traditional trading in GDP is minimal 0.4%).**

Chart 202

Volume and annual growth of the stock exchange turnover in classical trade, by quarter

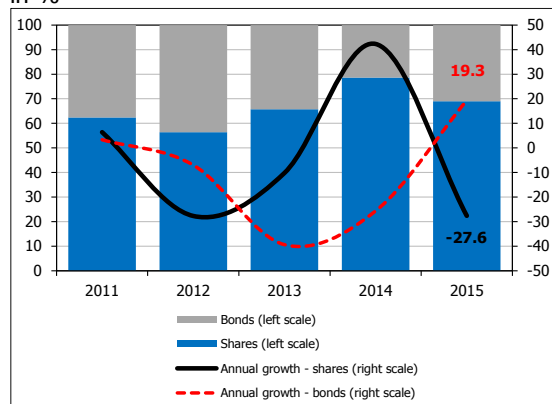
in millions of denars and in %



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

Chart 203

Structure and annual changes of the turnover in the standard trading in %



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

In 2015, the turnover of the secondary capital market from traditional trading (shares and bonds) amounted to Denar 2,082 million and was lower by 17.6% compared with the previous year. The reduction is completely due to the lower trading. For the first time in three years of reduction, the annual turnover in bonds increased (by Denar 104 million, or 19.3%, with the most significant increase being registered in June, with the fourteenth issue of denationalization bonds in nominal value of Euro 9.5 million). Accordingly, in 2015, compared with 2014, there was a decrease in the average daily turnover (by Denar 1.6 million), the number of transactions in traditional trading<sup>182</sup>, and the average value per transaction in traditional trading (Denar 190 thousand in 2014; Denar 177 thousand in 2015).

**Reduced stock market turnover, and present risks of external and domestic environment, as well as the uncertainty over the year, influenced the expectations of the investment community, and accordingly, had impact on the movements of stock indices<sup>183</sup>.** Namely, at the end of 2015, the Macedonian MBI-10<sup>184</sup> reduced to 1833.26 index points, down by 0.6% compared to the level at the end of the previous year. Not even the published dividends of some of the listed companies were stimulating for the investors, although the yield is relatively higher than the yield on deposits. Thus, in the first few months (except in January<sup>185</sup>), the index registered a downward movement, while in the second half of

<sup>182</sup> In 2015, the number of transactions in shares and bonds on the secondary capital market was 11,746, which is by 1,518 transactions less, compared to the previous year.

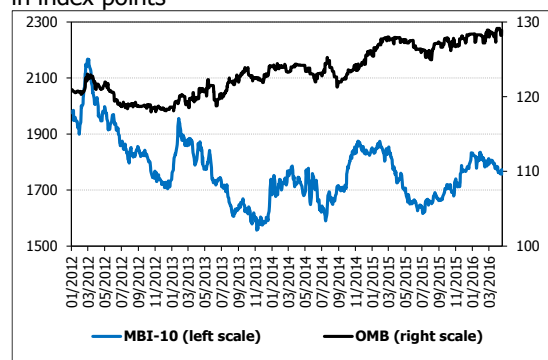
<sup>183</sup> The methodologies for calculating individual indices and information on their structure are available on the website of the Macedonian Stock Exchange - [www.mse.mk](http://www.mse.mk)

<sup>184</sup> On 15 December 2015, the MBI-10 index was revised, and as of 30 December 2015, the index includes the following companies: Alkaloid AD Skopje; Stopanska Bank AD Skopje; Granit AD Skopje; Komercijalna Bank AD Skopje; Makpetrol AD Skopje; Stopanska Bank AD Bitola; Macedonian Telecom AD Skopje; Makedonijaturist AD Skopje; Tutunska Bank AD Skopje and Skopski Pazar AD Skopje.

<sup>185</sup> On 30 January 2015, the Macedonian MBI-10 index reached the highest value in 2015, which amounted to 1,874.42 index points.

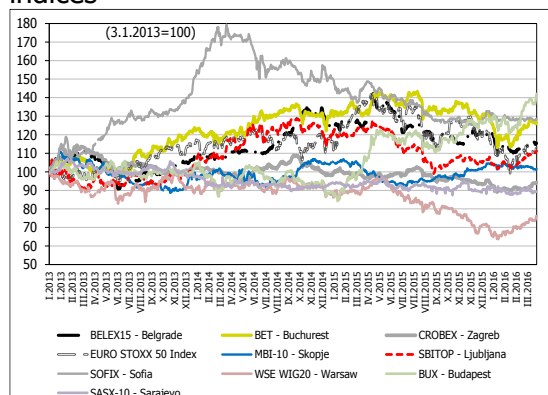


Chart 204  
Movement of the main stock indices  
in index points



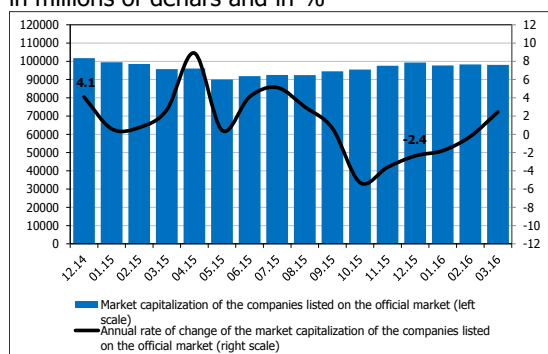
Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Chart 205  
Movement of individual stock exchange  
indices



Source: Website of the Macedonian Stock Exchange, Bloomberg and national stock exchanges

Chart 206  
Market capitalization of listed companies  
on the official market of the stock  
exchange  
in millions of denars and in %



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

the year, despite occasional negative fluctuations, the stock exchange index registered an upward adjustment. Such index movements reflect lack of interest and awareness of the domestic investment community, and absence of foreign institutional investors. In addition, in circumstances where the environment in the country was strongly influenced by non-economic factors, the investment risk aversion also increased.

In 2015, the values of almost all regional stock indices decreased. The downward movements and increased volatility in the stock markets are partly associated with increased uncertainty in the international environment (primarily due to the slowdown of the Chinese economy), while the downward movement of indices in the region are linked to specific local factors.

**The share of market capitalization of securities listed on the official market of the Macedonian Stock Exchange continued decreasing in 2015.** The market capitalization of shares of companies listed on the Macedonian Stock Exchange as of 31 December 2015 amounted to Denar 99,359 million, which is a decrease of Denar 2,400 million, or merely 2.4% compared to 31 December 2014. On the other hand, the market capitalization of bonds also decreased on an annual basis (by 14.1%), and it should be considered that the denationalization bonds are amortized bonds, which means that they have regular annual due annuities of 10% of their principal. As a result, the share of market capitalization of the shares listed on the official market in GDP and the share of the market capitalization of bonds in GDP are lower compared to 2014.

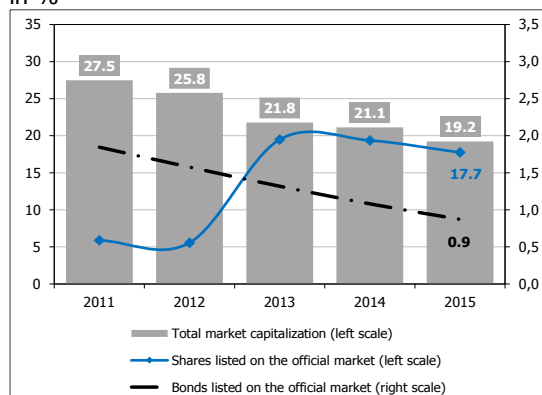
Despite the introduction of mandatory listing, companies subject to mandatory listing are not interested in market funding. It further confirms the unattractiveness of the Macedonian capital market for both domestic and foreign investors, which given the current trends is not expected to increase even after the extension of





Chart 207

Market capitalization relative to GDP  
in %

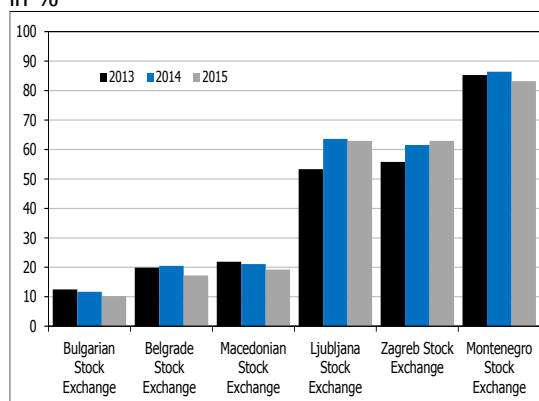


Source: Web site of the Macedonian Stock Exchange and National Bank calculations

Note: The total market capitalization covers the shares listed on the official market, the shares on the market of joint stock companies with special reporting obligations and bonds listed on the official market.

Chart 208

Share of the total market capitalization  
on regional stock exchanges in GDP  
in %



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

the validity of the regulations according to which investments in the stock market are exempt from income tax on the generated capital gains from trades in securities, to 31 December 2018<sup>186</sup>.

In comparison with the regional markets, the share of total market capitalization to GDP declined in almost all markets in the region under observation, with the exception of the Zagreb stock exchange that registered growth.

**Adverse domestic environment and increased risks from the immediate surrounding (debt crisis in Greece) influenced the trends and structure of stock turnover by type of investors.** The shifts in the structure of stock turnover by type of investors, compared to the previous year, were largely noticed on the purchase side, mainly due to the greater caution in taking risks and the declining interest of foreign investors to invest in securities on the Macedonian exchange market. Contrary, their interest to sell was increasing, and in 2015, foreign investors sold securities in the amount of Denar 547 million, which on an annual basis is higher by more than 80%. Resident natural persons also had the role of net sellers of securities. Greater interest in buying securities was registered only among resident legal entities, which in 2015 registered a net purchase of Denar 892 million.

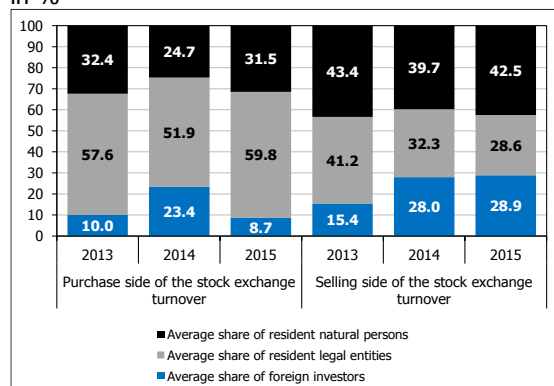
<sup>186</sup> Law amending the Personal Income Tax Law (Official Gazette of the Republic of Macedonia No. 199/2015).





Chart 209

Structure of total turnover on the stock market, according to the type of investors in %



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

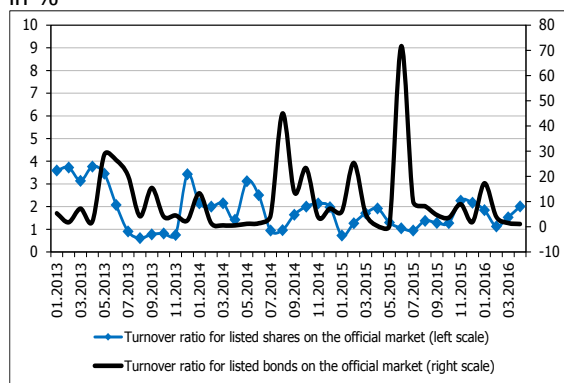
Note: The total turnover of the market covers: turnover from standard trading, block transactions, turnover from public stock exchange auctions and public offerings of securities.

In the last two years, the trade in government bonds on OTC markets<sup>187</sup> considerably increased. In 2015, government bonds of Denar 1,197 million were traded, which is an increase relative to the previous years<sup>188</sup>.

In 2015, the number of members of the Macedonian Stock Exchange remained unchanged<sup>189</sup>. Nevertheless, there was a change in the **concentration ratio of the stock exchange turnover from traditional trading by individual member**<sup>190</sup>. CR3 on turnover in traditional trading of the members increased, suggesting reduced dispersion of turnover from traditional trading by individual member and its further concentration in a few members, which in turn means reduced competition in this segment of the financial system.

Chart 210

Indicators of turnover for the securities in standard trading on the Macedonian Stock Exchange, by month in %



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

Despite the decrease, the concentration ratios of the turnover of the five and ten most traded shares of the listed companies in the stock market are still relatively high. On the other hand, the share of the five/ten shares with the highest market capitalization in the total market capitalization of the listed companies in the stock market slightly increased. These movements are proof of the low liquidity of the domestic capital market and the insufficient supply of quality listed

<sup>187</sup> OTC markets are organized by the National Bank, in cooperation with the Ministry of Finance.

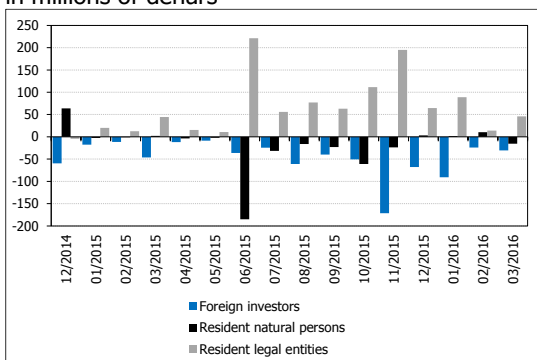
<sup>188</sup> For comparison, during the 2014 and 2013, government bonds in the amount of Denar 1,113 million and Denar 34 million, respectively, were traded on the OTC market, while in 2010, 2011 and 2012, there was no trading.

<sup>189</sup> As of 31 December 2015, there were ten authorized participants performing securities operations on the MSE (of which six brokerage houses and four banks licensed to trade in securities).

<sup>190</sup> The data taken into consideration when calculating the turnover from traditional trading of the Macedonian Stock Exchange members are based on double calculation (at both purchasing and selling) in order to cover also the activity of the members in the crossed transactions, except the data on government securities trading that pertain only to the purchasing side.



Chart 211  
Net effect of trading of certain types of  
investors  
in millions of denars



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

instruments for the public investment. Furthermore, the reduction of the total market capitalization on an annual basis was more pronounced in listed companies with lower market capitalization (due to the steeper fall of the prices of their shares)<sup>191</sup>.

Table 10  
Indicators of concentration of the secondary capital market in the Republic of Macedonia  
in %

Concentration indicators	2013	2014	2015
Number of stock exchange members <sup>1</sup>	13	10	10
CR3 for the total stock exchange members' turnover in standard trading	55,2	57,7	62,7
CR5 for the total turnover from trading in the ordinary shares of the listed companies	67,3	71,6	62,5
CR10 for the total turnover from trading in the ordinary shares of the listed companies	79,8	86,1	82,9
CR5 for the total market capitalization of the listed companies	59,8	58,3	61,1
CR10 for the total market capitalization of the listed companies	70,8	70,4	72,9

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

Given the reduced volume of stock exchange trading and decline in the stock market turnover, the **brokerage houses**<sup>192</sup> have limited possibility to generate revenues. In 2015, they showed operating loss of Denar 10 million<sup>193</sup>, which is by 50% more compared to the loss registered in the previous calendar year. The total assets of brokerage houses continued decreasing, and reduced to Denar 153 million at the end of 2015. Also, the total income of this segment of the financial system were by Denar 10 million lower than the income generated in 2014. Given the unattractive offering of domestic listed financial instruments and the low interest of the investment community to trade in the domestic secondary capital market, the single potential new source of income for the brokerage houses could be the functioning of the system of cross-border forwarding of orders for trading of the members of the Macedonian stock exchanges and selected regional markets.

<sup>191</sup> The greatest drop in the average price of shares in 2015 was registered in the shares of five legal entities, none of which among the ten shares with the largest market capitalization.

<sup>192</sup> During 2015, the number of brokerage houses remained unchanged.

<sup>193</sup> Source: Securities and Exchange Commission and National Bank calculations.



## **ATTACHMENTS**