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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 2017

August 2018

Contents

Summary

The financial stability of the Republic of Macedonia continued to be maintained in 2017. All financial system segments operated smoothly, despite the uncertainties surrounding the domestic and broader environment. In 2017, risks to the financial stability from the *international environment* were lower primarily due to the revival of economic growth in the developed economies, including the euro area. Liquidity, capitalization and credit risk indicators of the euro area banks improved, which is particularly important for the domestic banking system given the prevalence of the euro area banks in the ownership structure of the domestic banks. The international financial markets in 2017 reported low volatility and upward trend in stock prices and fluctuations in leading currencies (US dollar). The international environment outlook for the coming period is accompanied by risks of the possibility of restoring trade protectionism, the success of Brexit and the response of the global financial markets, as well as the geopolitical risks and climate change. Internationally, the importance of cyber risks and continued innovation in financial services is increasing as challenges to the financial stability.

In 2017, the Macedonian financial system operated in conditions of uncertain *domestic environment* conditioned by the political situation, which gradually stabilized in the second half of the year, but led to economic stall. Inflation remained moderate (1.4%), while in the fiscal sector, public debt to GDP reduced. The National Bank continues to implement the strategy for maintaining a stable nominal exchange rate of the denar against the euro, whereby the exchange rate of the denar against the euro was maintained at a stable level given the net purchase of foreign currency on the foreign exchange market, amid particularly favorable movements in the second half of the year. In the first months of 2017, when expectations stabilized, the NBRM continued normalizing the monetary policy, by restoring the policy rate back to the level before May 2016, when it was increased in response to the effects of the the political crisis and the subsequent response of households. In early 2018, the international credit rating agencies improved the credit rating of the Republic of Macedonia.

The Macedonian financial system has a relatively simple structure, modest interdepartmental connectedness and absence of complex financial instruments. The contagion risk of spillover of problems from other institutional segments to the banking sector is insignificant, given the modest amounts of mutual claims and liabilities among the financial institutions. The ownership relationship between financial institutions is mainly due to banks' investments in pension fund and open-end investment fund management companies, but such relationship does not create direct financial effects for the domestic banks, but rather entails reputational risks. This structure is one of the main factors for the small systemic risk and the small threat of spillover of risks among financial system sectors. The banking system is crucial for the financial system stability. This is primarily because of its size, since it accounts for 83% of the financial system's assets, although its share tends to slow down. In addition, for some of the domestic financial institutions, especially brokerage houses, insurance companies and investment funds, invested deposits in banks are an important investment alternative, whereby their performance sustainability is largely conditioned by a safe and sound banking system.

The *banking system* remained sound. Banks' activities enhanced slowly reflecting the slower growth of deposits of non-financial entities, due to the uncertain domestic environment and stalled economy. The domestic environment uncertainty shied economic agents away from

investing, which generally reduced demand for loans. Yet, the credit growth remained moderate, mainly targeted at households. In 2017, there were no significant changes in the banking system exposure to operational risks. Risks arising from non-performing loans are not considerable, given that banks mostly cover them with impairment, whereby their default would not deteriorate banks' solvency. In 2017, the solvency of the banking system mildly improved, increasing the capital adequacy ratio to 15.7%. The high amount and quality of banks' own funds enabled relatively easy harmonization with the new higher capital requirements introduced for the purpose of applying the international standards (Basel III) aimed at strengthening the resilience of the banks and the banking system. The banking system liquidity is satisfactory, i.e. the liquid assets remained at a level that enabled smooth conduct of banks’ operations. In 2017, the banks started abandoning clauses for unilateral change in the contractual interest rates on new credits and deposits. This, on the one hand, tends to increase transparency in customer relationships and reduce reputational and legal risk arising from unilaterally adjustable interest rates. On the other hand, it tends to increase the effect of market variables, primarily market interest rates, on the design of products and services offered by banks, and consequently on the performance of their activities. Such a change requires strengthening of banks' interest rate risk management capacity, designing products and services, and pricing considering the client’s risk profile, as well as forming expectations for future economic developments.

The Macedonian banking system mainly operates on the domestic market, and therefore, the performance and the level of *corporate and household debt* are crucial for its stability, as well as for the stability of the other financial system segments. In 2017, the performance indicators (earnings, turnover, assets utilization, liquidity) of the *domestic corporate sector* determined using the aggregated official financial statements of the sector, improved. The corporate debt was increasing slowly as well, whereby its net external debt reduced for the first time in the last seven years, due to the growth of the loans granted by domestic corporate clients to non-residents. However, the value added of the corporate sector declined in 2017. Such changes can be explained by the new and large-scale capacities in the technological-industrial development zones in the Republic of Macedonia, whose financial statements predetermine the positive movements of aggregated indicators for the entire corporate sector. Also, these mostly internationally active companies have an easy and quick access to low-cost sources of finance and for now, they cannot be considered major clients of the domestic banks. Poor credit demand from the domestic corporate sector, in times of increased nonperforming loans and loan losses from the corporate sector, is the reason behind banks’ preference to lend to households, assessing them as more eligible for lending, primarily because of the greater dispersion of loans and customers.

The banks’ preference to lend to *households* is supported by the increased demand for loans, primarily housing loans, favorable developments in the labor market and favorable consumers’ expectations for the unemployment and the financial situation. Solid collection and accordingly, good quality of banks’ household loan portfolio is an incentive for greater household lending, as shown through the low and stable rate of non-performing loans of 2.4%. The growth of non-performing loans to households is also low, yet slightly higher, if analyzed by product, primarily consumer loans, and requires more careful monitoring of consumer loan trends. In 2017, the household debt increased, but it is still relatively modest. While the portion of disposable income used for repayment of interest and principal increased annually, the household creditworthiness indicators are still favorable. Also, the household solvency and liquidity indicators show limited vulnerability of this sector and, in general, controlled debt position. Still, there are movements that require careful monitoring in the period ahead and appropriate measures, if needed. This primarily relates to the growth of the household long-term debt who are already borrowers, which is a sign of growing debt. Also, the trend of easing the standards for consumer loans with a maturity up to 8 years (which is not covered by the already undertaken measure for a larger capital requirement), as well as for insufficiently collateralized or unbacked consumer loans requires more careful monitoring. The exposure of domestic non-financial sector to currency and interest rate risk is particularly important for its creditworthiness. The corporate sector usually has a short foreign currency position (liabilities exceeding claims in foreign currency), while households report significant share of debt with a currency component (they mainly generate revenues in domestic currency). Hence, the stability of the denar exchange rate is crucial for the maintenance of the level of non-financial sector debt, i.e. its creditworthiness. Also, the significance of the exposure to the risk of higher burden of debt financing increased with the abandonment of the unilaterally adjustable interest rates on new loans by banks and their replacement with fixed or floating interest rates whose amount is periodically and commercially reassessed using a selected reference interest rate. Against such background, given the current low interest rates, any upward movement in market interest rates (especially if more common compared to the unilateral changes in adjustable interest rates in the previous period) could increase cost of repayment of loans by the non-financial sector, which may pose an indirect credit risk for banks as its main creditors.

Fully funded pension insurance is the second segment by size of assets in the financial system of the Republic of Macedonia, but with significantly lower share than the banking sector. Private pension funds are important primarily as institutional investors, but by their very nature, they are exceptionally important for the long-term social security of households, whose performance is crucial for the stability of the financial system. The pension funds' net assets grew in 2017, yet at a slower pace. Growth slowdown is expected since it has been thirteen of the establishment of the pension funds, unlike in the early years when they reported very high growth rates. The investment strategy of the pension funds is largely determined by the legally set limits for maximum share of certain categories of financial instruments. Thus, a significant part of their investments are in domestic government securities, and in recent years, there have been an increased investment in the so-called exchange traded funds that carry a moderately higher risk, but also a higher yield than investments in debt instruments. Private pension funds reported lower yields in 2017, compared to the previous year.

Insurance sector is modestly developed, particularly in the area of non-life insurance, which, although decreasing, is still high and accounts for almost 70% of the insurance companies' assets. Risks arising from the insurance sector to the financial stability are insignificant. On the one hand, this is due to the weak linkage of this sector with other financial institutions, particularly the high solvency and liquidity of the sector (high level of solvency margin and full coverage of technical reserves with permitted assets).

Other smaller institutional segments of the financial system, given their limited scope of activities, do not pose risk to the financial stability. Investment funds reported the fastest growth, and within them, investment funds investing in money market instruments, reflecting the preference of the domestic investment public to the short-term liquid investment alternatives. While the share of the overall financial system is very small (0.4% of the assets) and does not pose risk to the overall financial stability, the activities and growth of financial companies are distinguished, as they generate a high price debt for certain segments of households. The above can cause high indebtedness of those households, which is why the regulator announced measures primarily in the area of protection of consumer loan users.

To summarize, the financial stability was preserved in 2017, without any adverse risks. The financial system, above all the banking system, confirmed its stability and caution, surviving the "real stress test" in 2016 and the political uncertainty in the first half of 2017 without major backdrops. As before, the NBRM remains ready to take all necessary measures to maintain the exchange rate stability, so as to maintain price stability as its main objective, but also in support of the financial stability as its second statutory objective.

I. MACROECONOMIC ENVIRONMENT

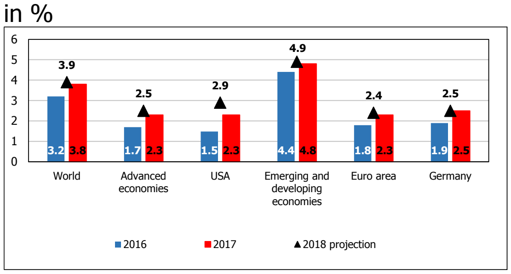
1. International environment

In 2017, risks to the financial stability deriving from the international environment reduced. The world economy was growing, with positive outlook for the future economic growth. The euro area economy recorded the highest growth rate in the past decade. Such conditions increased the creditworthiness and the ability of the government and the non-financial sector to absorb losses. Despite the decline in the share of government and private debt in GDP, indebtedness is still at historically high level.

Banks' profitability in the euro area strengthened primarily as a result of the improving assets quality and investment conditions, despite the low interest rates. Under the influence of the improved economic environment and the recommendations of the European authorities for proper non-performing loan resolution, in 2017, assets quality of the European banks improved and accelerated the reduction of nonperforming loans. Yet, the amount of nonperforming loans in the balance sheets of banks is high, which requires from regulators and banks to take actions for their reduction.

Despite the reduced risks to the financial stability of the external environment in 2017, mainly due to the global economic growth and the conductive global economic environment, in the medium term, there are geopolitical factors - based risks. They include high uncertainty arising from the new US policies, trade barriers globally, effects of the new relations between the EU and the United Kingdom, as well as other turbulent geopolitical developments. Given the openness of the European economy, the increasing trade protectionism and the tightening of global financial conditions can hamper economic recovery. Materialization of any mentioned risks will entail change in the international monetary policy environment as well as revision of the current forecasts. Cyber-risks, as well as risks associated with virtual currencies have increased their significance for the financial stability. The global nature of these risks requires international cooperation between the institutions and the competent authorities.

Chart 1
Real annual GDP growth, by country
in %

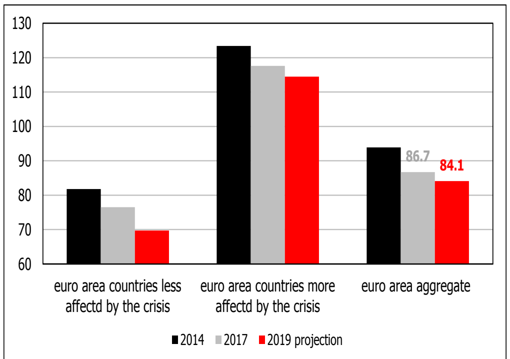


Source: World Economic Outlook, April 2018, IMF.

In 2017, risks to financial stability arising from the international environment reduced under the influence of the solid global economic growth. The world economy in 2017 was marked by increased confidence of economic agents, favorable financing conditions on the international market, which coupled with the growth of investment activity were a good basis for optimistic expectations in the future. It is expected that the positive movements in the global economy will continue to accelerate in 2018, followed by favorable trends in global trade, positive financial market developments and increased confidence among investors. According to the 2018 forecasts, the annual real GDP growth rate will reach around 4% globally and over 2% for advanced economies.

In 2017, the euro area economy reported the highest growth rate in the past ten years. Domestic demand was the main driver of growth, fueled by the increased level of confidence, stronger global growth, low financing costs, enhanced private sector activities and improved labor market conditions. It is expected that the growth dynamics will continue to be strong, at the expense of the sustainable consumption and strengthened exports and investments. As a result, the economic growth in the EU and the euro area would be 2.4% in 2018. German economy, as the largest economy in the EU and the country with the largest share in the foreign trade[1] of the Republic of Macedonia registered solid growth, with positive prospects for the period ahead.

Chart 2
Government debt* to GDP of the euro area countries
in %



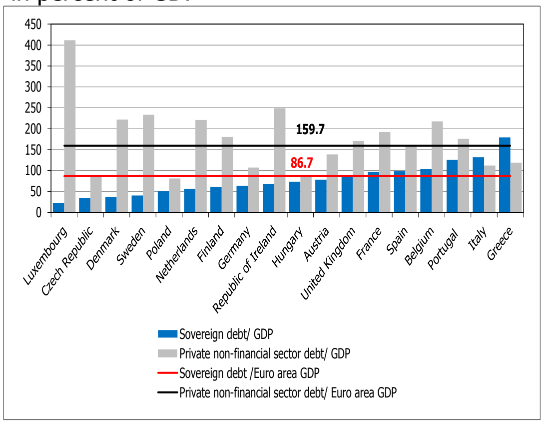
Source: Financial Stability Report, May 2018, ECB.
Note: Countries hit by the crisis the most: Cyprus, Greece, Ireland, Italy, Portugal, Spain and Slovenia.
*General government debt.

Despite the recovery, the economic growth is not even in all EU countries[2], and is particularly weak in countries with high levels of government and private debt. The euro area's total sovereign debt to GDP (when it reached its peak) has been decreasing since 2014; namely, at the end of 2017, it was 86.7%, and is expected to drop to 84.1% in 2019[3]. Debt is expected to reduce in almost all member states. There was also reduction in the budget deficit whose share in GDP fell from 1.5% in 2016 to 0.9% in 2017. Almost all countries (with the exception of Spain) reported budget deficit to GDP below the 3% threshold of the Maastricht Treaty.

Besides the overall budget balance, primary balance also improved, which increased the ability of countries to absorb shocks. The benefits of the positive structural and cyclical conditions turned the current account deficit of several euro area countries into surplus. All this suggests **improving euro area's resilience to any financial shock from the international environment.**

[1] In 2017, the share of foreign trade with Germany was 31.3% of GDP, while exports remained the component with the highest individual growth and contribution to GDP of the Republic of Macedonia.
[2] The three fastest-growing economies of the euro area include Ireland (7.8%), Malta (6.6%) and Slovenia (5.0%). On the other hand, the three slowest growing economies are Greece (1.4%), Italy (1.5%) and Belgium (1.7%). Source: World Economic Outlook, April 2018, IMF.
[3] Source: Financial Stability Report, ECB, May 2018.

Chart 3
Government and private debt in 2017, by country
in percent of GDP



Source: BIS.

Yet, despite the decline, the high indebtedness of countries and the non-financial sector (households and firms) in many EU countries remains a risk to financial stability. The deleverage of the government and the non-financial private sector takes place relatively slowly. As a result, debt to GDP ratio by sector is high and above the standard thresholds in most countries[4], even in conditions of limited credit growth. Particularly high is the indebtedness of the non-financial private sector in the euro area.

High indebtedness again raises concerns about debt sustainability, especially in the event of a rapid deterioration of growth prospects. There are also risks that, with the increase of weaknesses in one sector, could spill over to other sectors, with implications for the banking system[5].

Table 1
Economic indicators, by country
in %

Unemployment rate	2016	2017	2018 projection	2019 projection
USA	4.9	4.4	3.9	3.5
EU 28	8.6	7.6	7.1	6.7
Euro area	10.0	9.1	8.4	8.1
Germany	4.2	3.8	3.6	3.5
Inflation	**2016**	**2017**	**2018 проекција**	**2019 проекција**
USA	1.3	2.1	2.5	2.4
EU	0.9	2.6	2.7	2.6
Euro area	0.2	1.5	1.5	1.6
Germany	0.4	1.7	1.6	1.7

Source: IMF (World Economic Outlook Database), October 2017 and April 2018 and EEF spring 2018.

The labor market in the euro area improved, which reduced unemployment rates to the pre-crisis level, although this level is almost twice as high as the US unemployment rate. It is expected that this trend will continue in the next two years. The number of employees in the euro area is at the highest level since the introduction of the euro. However, unemployment in some member states most affected by the crisis is still high.

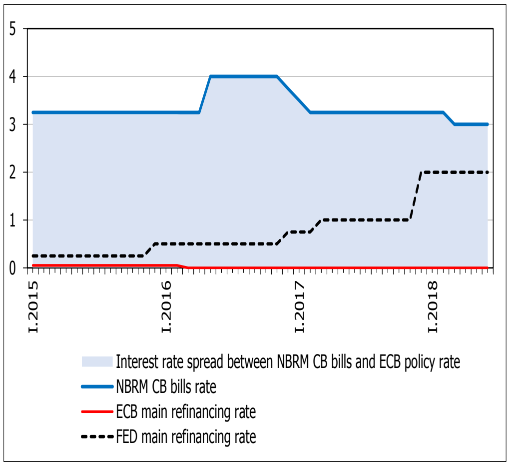
Although the inflation in the euro area grew in 2017, core inflation remained low and below the ECB forecasts, which contributed to further implementation of accommodative monetary policy. It is expected that inflation will grow gradually (1.5% in 2018 and 1.6% in 2019). **Such inflation developments in the euro area are following the global trend,** where growth emerged from the recovery of total demand and the rise in prices of primary

[4] The threshold of the non-financial private sector debt to GDP set by the European Commission's MIP Scoreboard is 133%, while the government debt to GDP is 90% based on non-empirical literature. Source: Financial Stability Report, ECB, May 2018

[5] The new requirements regarding the quality and the size of banks' own funds (the so-called Basel 3), as well as the requirements arising from the European Bank Recovery and Resolution Directive (BRRD), ensures better preparedness of the banks to deal with shocks and challenges in their operations, that is, it strengthens their loss absorption capacity. This also reduces the need for budget funds to cover bank losses.

commodities[6] in the developed countries, with an almost unchanged inflation rate in the fast-growing countries.

Chart 4
ECB and FED policy rates and spread
in %



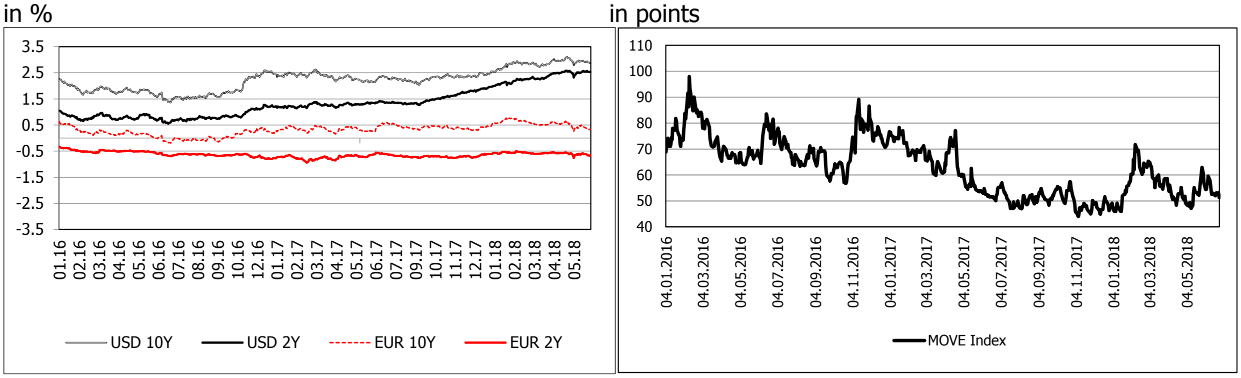
Source: ECB and NBRM.

In 2017, the diversity of monetary policies of the leading central banks has deepened, especially since the last quarter of the year. The European Central Bank (ECB) did not make changes to the policy rate in 2017, which remained at a record low (0.00%). It also extended the quantitative easing program until September 2018, to a lesser extent and without a termination date, with the intention of maintaining low policy rate environment, until the achievement of the targeted inflation. On the other hand, during 2017, the Fed raised the interest rate three times (ranging from 1.25% to 1.5%), which implied keeping the course of normalization of the monetary policy influenced by the Fed's assessment for acceleration of the economic growth, improvement of labor market conditions and possible inflationary pressures in the future.

Under the influence of the sustained monetary policy support and the positive expectations of enhanced economic activity globally, the international financial markets in 2017 were marked by record low volatility and favorable conditions. Government bonds yields grew, which was more pronounced in the US markets. Until the end of the first half of 2017, long-term government bonds yields in the United States were almost unchanged. After the fall in summer (due to lower than expected inflation, concerns about government debt growth and negative impacts on the economy of the devastating hurricanes in South Texas and Florida), ten-year government bonds yields rose in late 2017 and early 2018 influenced by the forecasts for solid economic growth and the announced tax reform in the United States. In the euro area, the yield trends were also conditioned by the favorable economic movements and consequently the increased expectations for normalizing the ECB monetary policy. After a longer period of decline, in 2017, government bonds yields in the euro area grew at a faster pace than in the first half of the year. At the beginning of the second half of 2017, the government bonds yields in the euro area declined due to political uncertainty[7] and increased geopolitical risks[8]. However, once the ECB announced the reduction in the monthly purchase of securities, short-term government bonds yields increased, whereas long-turn government bonds yields moderately declined.

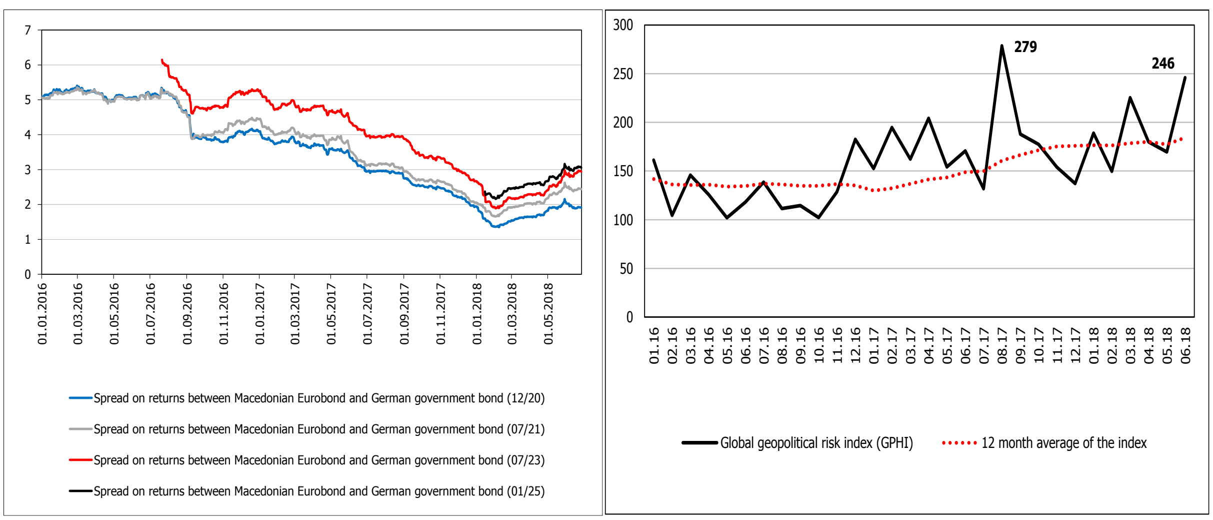
[6] This is particularly true for the period August-December, when oil prices increased, which contributed to a more pronounced rise in global inflation.
[7] In September, in the euro area, the regional parliament of Catalonia agreed to declare independence from Spain in a referendum, which was outlawed by the Spanish authorities, and in Germany there were federal elections.
[8] Tensions between the United States and North Korea.

Chart 5
Government bonds yield (left) and bond volatility (right)
in % in points



Source: Online publishing service
Note: the MOVE index is a weighted average of bonds with different maturity and shows the implicit volatility of government bonds for the next 30 days. The share of 10-year bonds is the highest.

Chart 6
Interest spread (left) and geopolitical risk (right)
in % in points



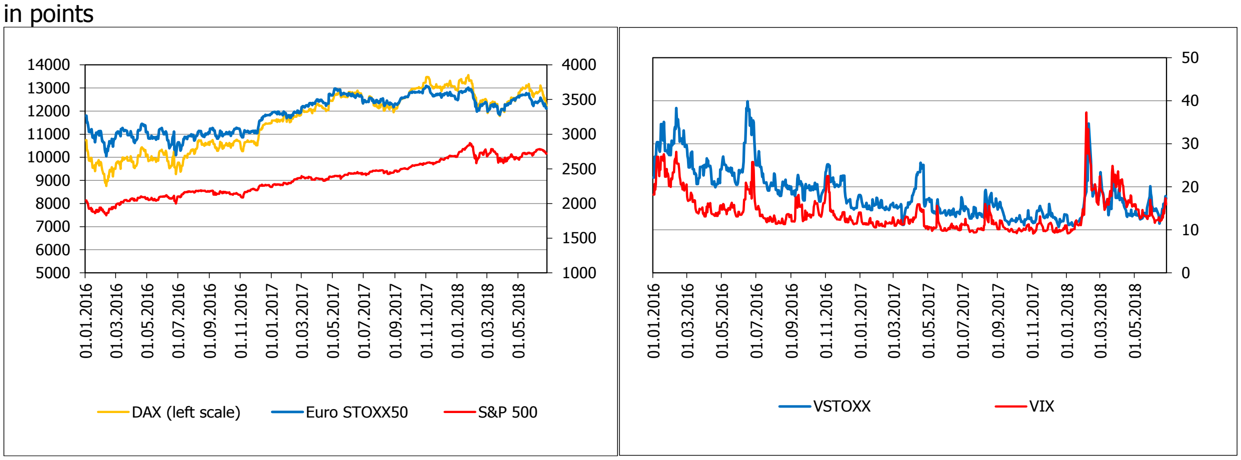
Source: Bloomberg

Source: *Measuring Geopolitical Risk* by Dario Caldara and Matteo Iacoviello

These authors create monthly index of geopolitical risk (GPR Index), considering the appearance of words related to geopolitical tensions in leading international newspapers. The Geopolitical Risk Index (GPR) measures the frequency of articles that mention the increase in geopolitical tensions. The Geopolitical Risk Index (GPR) uses 11 newspapers and started in 1985. Geopolitical risk is defined as "the risk associated with wars, terrorist acts and tensions between states that affect the normal and peaceful course of international relations."

The decrease in the Macedonian bonds yield during 2017 narrowed the interest rate spread between the Macedonian and the comparable German bonds, especially in the second half of the year. Since February 2018, the interest rate spread has expanded under the influence of the moderate growth in the Macedonian bonds yield, amid moderate decline in the German bonds yield.

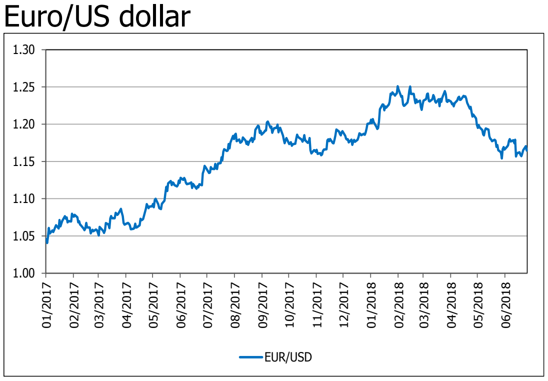
Chart 7
Stock indices (left) and implied volatility indices (right)
in points



Source: Online publishing service.

Stock prices in the United States and the euro area increased in 2017[9]**,** compared to 2016, under the influence of the improved macroeconomic environment and the relatively increased risk tolerance of investors and the search for yields given the low interest rates surrounding in the last years, despite the increased political uncertainty in the euro area and rising geopolitical tensions between the United States and North Korea. Concerns about the Fed's faster and stronger monetary tightening and the increasing trade tensions between the United States and China caused a short but sharp drop in share prices in January-February 2018, when stock prices in the United States and the euro area dwindled by 10.2% and 7.4%, respectively. Although this short-term crisis has not caused any unfavorable financial drawbacks for the financial stability, it nevertheless suggests that the **risk of sudden revaluation of the risk premium in the financial markets has been one of the greatest risks to the financial stability in the EU over the past few years**[10].

Chart 8
Euro/US dollar



Source: Online publishing service.

At the end of 2017, the euro appreciated against the US dollar by 14% annually, and reached US dollar 1.2005 per euro. This has been the highest annual depreciation of the US dollar since 2003. Such foreign exchange market movements were attributable to the geopolitical developments[11], as well as the ECB announcement for gradual adjustment of the monetary policy. Optimism about the recovery of the euro area economy, as well as the reduced political risk after France's presidential election contributed to the strengthening of the euro. In contrast, the slow

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[9] In both markets, the implicit volatility was low, low market variability could give a false sense of security to investors, which would make them take excessive risks. Also, low volatility can mean that financial market prices do not adequately reflect political risks.
[10] ESRB Risk Dashboard.
[11] Increased political tensions on the Korean Peninsula.

development of events around the tax reform in the United States contributed to a weaker US dollar.

Given the policy of fixed nominal exchange rate of the denar against the euro, as well as the low US dollar trade in the total foreign trade of the Republic of Macedonia, the depreciation of the US dollar against the euro, and consequently, against the denar did not cause any significant consequences for the Macedonian economy. The euro remains the currency that prevails in banks' balance sheets in the Republic of Macedonia, and hence, maintaining stable exchange rate of the denar against the euro is extremely important for the stability of the banking system i.e. for maintaining low probability for materialization of banks' exposure to currency risk. In the foreign reserves structure, euro prevails relative to the US dollar[12], whose share further declined at the end of the year in order to minimize currency risks. Also, the major foreign trade partners of the Republic of Macedonia are the countries of the euro area and the neighboring countries, with which the transactions are executed in euros. For these reasons, the depreciation of the US Dollar amid fixed euro/denar rate did not have a major impact on the Macedonian exports, nor did it contribute to a significant increase in the demand and import of US products in the Republic of Macedonia[13]. The depreciation of the US dollar against the euro and consequently, against the Macedonian denar, reduced the yield rates of the mandatory pension funds[14].

Bank profitability in the euro area[15] recovered in 2017, backed by the improvement in economic growth. After a long period of low profitability, the bank performance again increased in 2017. The total return on banks' capital in the euro area increased to around 6% in 2017, compared to 3.5% in 2016. The main drivers of higher profitability were the lower impairment costs, given the reduced amount of new non-performing loans. Also, the increased trading revenues, which were influenced by the increased stock prices and narrowed spreads, made a significant contribution to the increased profitability in 2017. Most of the improvement in the euro area was driven by banks operating in the countries most affected by the crisis[16]. The moderate increase in the medium and long-term interest rates ensures growth prospects for the net interest margin, which is expected to have a positive impact on the bank profitability. Nevertheless, in some banks, especially in the countries most affected by the crisis, the rate of return on equity is likely to fluctuate below the equity cost. When banks look for higher yields, investments in risk assets is an additional risk that can adversely affect the profitability and quality of EU banks' assets.

Recent bank lending surveys[17] point to further easing of credit standards, especially for corporate and housing loans. While credit standards are eased for increased lending, easing of credit standards for generating yield requires risk-based supervision. Against the background of improved macroeconomic environment, it is expected that the increase in net interest margin will exceed the potentially reduced net trading income.

[12] For more details, see the Annual Report for 2017, Foreign Exchange Reserves Management and Investment. Source: NBRM website.
[13] In 2017, total foreign trade with the United States accounted for 2.0% of GDP (2016: 1.9%). By comparison, in 2017, the share of foreign trade with Germany was 31.3% of GDP.
[14] For more details, see Fully Funded Pension Insurance.
[15] In this part of the analysis, the term "banks" applies to 103 significant institutions from the euro area.
[16] Countries most affected by the crisis include Cyprus, Greece, Ireland, Italy, Portugal, Spain and Slovenia.
[17] ECB, Lending Survey, Q 3 2017.

The quality of EU bank assets continues to improve. The non-performing loan rate decreased in 2017, but in some countries, it is still high. Many countries reported a decrease as a result of the activities of the supervisors and banks. In 2017, impairment coverage rates also increased, reflecting the improved ability of banks to absorb losses from non-performing loans. Despite the overall improvement in asset quality, the rate of non-performing loans is still high in some countries, which adversely affects the terms for financing and, ultimately, the prospects for economic growth. Hence, improving the assets quality remains the greatest challenge for the EU banks.

Review of the proposed measures for efficient non-performing loan resolution in the EU credit institutions

The global financial crisis hit the European banking system and increased the level of non-performing loans in the banking books. Non-performing loans on the one hand tend to hit bank profitability and capital position, while on the other hand, prevent banks from offering new loans and supporting economic development. Although the level of non-performing loans in the EU has not increased in the last year, it is still significant, and therefore the EU Council adopted an Action Plan for non-performing loan resolution, which should enable supervisory authorities and credit institutions to more effectively deal with these exposures. The Action Plan includes guidelines for amending the regulatory framework[18] and recommendations for managing and reducing non-performing exposures[19], as well as restricting new non-performing loans.

The most significant novelties to be introduced with the regulation include: (a) prescribing minimum percentages of impairment for non-performing loans depending on the days of default and on the collateral, in order to allow for their gradual full provision and to prevent accumulation of these exposures in the banks' portfolios[20]; (b) development of a secondary market for non-performing loans, in order to enable the sale of non-performing loans to entities that would have the capacity and opportunities for their resolution; (c) prescribing criteria for setting up and operating entities that will collect and monitor credit exposures on behalf of the credit institution, in order to optimize the collection process; (d) establishing a mechanism for out-of-court foreclosure of assets, to enable faster collection of credit exposures backed by real estate or other collateral; (e) setting up national asset management companies, in order to achieve economies of scale in the collection of certain non-performing loan portfolios and strengthening the stability of the banking system.

According to the guidelines given by the European Central Bank and the European Banking Authority, credit institutions are expected to undertake activities to strengthen the credit risk management process by establishing a strategy for collection of non-performing claims that would include a framework for identifying, monitoring and managing non-performing loans, as well as resolution activities. It is also recommended that banks establish a special organizational unit for managing non-performing exposures, which would be independent of the organizational unit responsible for taking credit risk. The proposed amendments and guidelines should come into force in 2019.

[18] In March 2018, the European Commission proposed amendments to the Regulation of the European Parliament and Council No. 575/2013 on the prudential requirements for credit institutions and investment firms for prescribing minimum percentages for nonperforming loan impairment, and proposed to adopt a new Directive on entities that perform collection and monitoring of credit exposures on behalf of the bank, entities that purchase credit exposures from the bank, and for foreclosing assets.. Also, in March 2018, the European Commission adopted a blueprint for setting up national asset management companies.

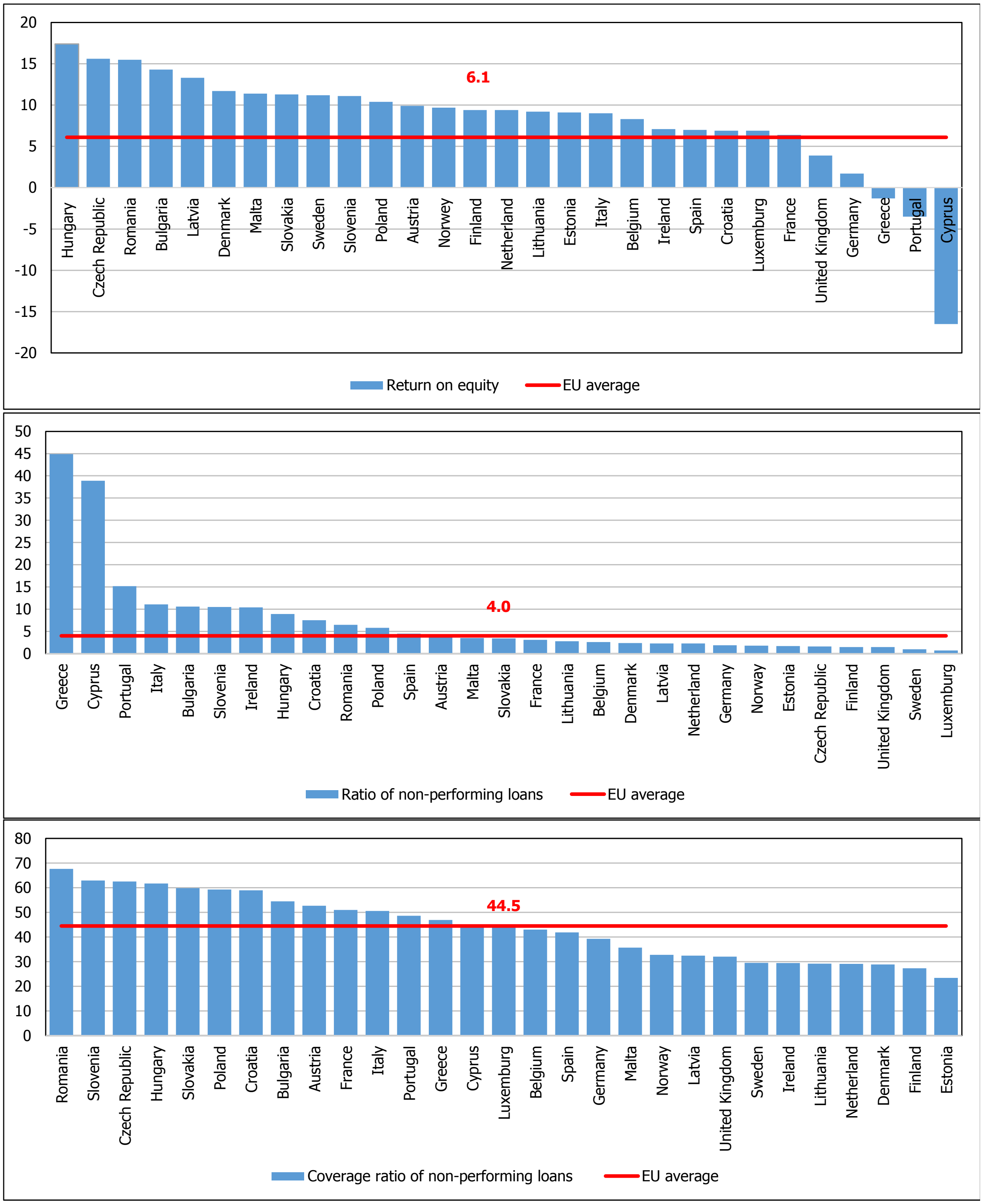
[19] In March 2018, the European Banking Authority adopted draft guidelines for managing non-performing and restructured exposures, while in March 2017, the European Central Bank adopted guidelines for credit institutions for managing non-performing loans.

[20] According to the proposal for amending the regulation, banks should allocate 100% impairment for unsecured credit exposures if credit exposures are non-performed for more than 2 years.

Chart 9

Bank performance ratios, by country and EU average

in %



Source: European Banking Authority (EBA)

In 2017, the euro area bank resilience continued to improve. The strengthening of the banks' capital position accelerated in 2017 after the modest improvement in 2016. Thus, at the end of 2017, the common equity Tier 1 ratio of the euro area banks was above 14% aggregately. Improving the solvent position is mainly due to the increase in equity. Regulatory liquidity rates are solid[21].

"New" risks arising from the global environment have gained increasing importance. Cyber-threats have become a crucial concern for the financial stability with the increased introduction of technologies in the financial sector and the increased level of technical interconnectedness of the financial markets. They are a kind of an operational risk that has become popular in recent years. These risks are increasing in size and are a significant threat to the security of investors, financial markets and their stability around the world. They are also a threat to data integrity and work continuity, and are particularly dangerous due to their risk multiplier effect. Risks associated with virtual currencies (cryptocurrencies) have recently started to occur, inter alia, caused by the high value volatility on financial markets. Due to the global nature of these risks, international cooperation and coordination between institutions and competent authorities is essential. Climate change and transition to a low-carbon economy are emerging risks that have recently received increased attention from national and international oversight and regulatory authorities, given that climate change and the transition to green economy can adversely affect the quality of assets through different transmission channels.

Climate risks and transition to low-carbon economy and their impact on the financial sector

For most of the financial sector, climate risks and the transition to low-carbon economy are relatively new. These risks have recently received increased attention from national and international supervisory and regulatory organizations. The Financial Stability Board, the G20, as well as the French, British and Dutch supervisory authorities have issued warnings about the potentially destabilizing effects of climate change, while the European Systemic Risk Board (ESRB) has set up a task force for scenario analysis and stress testing of the climate risk. Also in December 2017, a network of national European and global supervisory authorities[22] was set up, which, among other things, aims to identify the best supervisory and macro-financial practices for assessing the size of risks associated with climate change and the environment.

Although climate risk receives increased attention from supervisors, the general awareness of the impact of these risks on the financial sector is still relatively limited. For now, we are aware that the rising global temperature tends to increase the weather disasters, such as droughts, floods and storms. If the losses from these risks are insured, they can directly affect the financial position of the insurance companies, especially the re-insurers. For example, recently, some indicators of profitability and risk exposure in some re-insurers have deteriorated following the natural disasters in the third quarter of 2017[23]. If the losses are uninsured, the indemnification costs could fall on governments, households and corporations, which could deteriorate their ability to repay loans and bonds or to pay dividends. Accordingly, the above tends to affect the value of financial assets, impair the solvency of financial institutions and leads to losses for investors. The transition to low-carbon economy also imposes risks that need to be considered and covered. A shift towards low-carbon economy can lead to significant cost adjustment for high-carbon sectors, such as fossil-fuel facilities, utility and transport industries, as well as agriculture and real estate. This requires assessment of these risks and exposure of financial institutions and investors to these

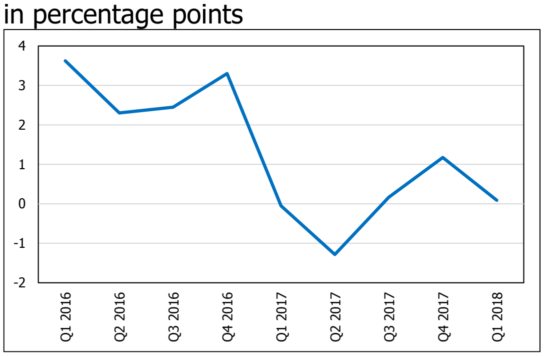
[21] The aggregate liquidity ratio of banks in the euro area reached 144% (at the end of 2017) from 136% in 2016.
[22] Central Bank and Supervisors Network for Greening the Financial System (NGFS).
[23] EIOPA 2017Q3 Risk Dashboard: https://eiopa.europa.eu/financial-stability-crisis-prevention/financial-stability/risk-dashboard

sectors. Although the possible climate risk transmission channels are known, there is a lack of integrated framework for assessing the direct and indirect effects of any weather disaster on the financial sector.

2. Domestic environment[24]

In 2017 the domestic environment has stabilized, registering less pronounced risks and enhanced confidence of the economic agents. However, after the four-year growths, the economy stagnated, reflecting the decrease in investments, in conditions of temporary cessation of the public investments cycle. On the other hand, the household consumption and the export activity continue to register solid growth, thus proving the sound foundations of the economy and the favorable perceptions. In such environment, accompanied with favorable external position, in 2017 the National Bank pursued the activities for normalization of the monetary policy, reducing the interest rate at the pre-crisis level in 2016. The stabilized environment, in combination with sound macroeconomic foundations, initiated structural changes and favorable external environment should enable getting the economy back on the tracks of solid economic growth. Of course, this is conditioned by the preserving the political stability in the country and successful dealing with the possible risks in the environment. Hence, the improved credit rating [25] of the country is a good signal for the investors.

Chart 10
Annual real GDP growth rate by quarter
in percentage points



Source: State Statistical Office.
Note: GDP data for 2016 are preliminary, and data for 2017 are estimated.

In 2017, the Macedonian economy stagnates as opposed to the solid growth in the last several years. The political uncertainty, especially evident in the first six months of the year, had negative influence on investors' decisions, which resulted in a fall in the investment activity, given temporary cessation in the public investments cycle. All of this, despite the rise in the private consumption and export, led to stagnation in the economic activity. Analyzed by quarters, the real GDP dropped in the first two quarters of the year, but in the following two quarters, the economic growth rate indicates gradual recovery of the domestic economy.

Almost all activities, except agriculture and several services activities had negative contribution for the trends in the economic activity in 2017. The construction sector, which in the past few years has been the main growth generator, registered the largest drop in activity (of 13.7%) in 2017, which is associated with the unfavorable environment, and in one part, also with the high comparison basis in the previous years, when more publicly funded infrastructure projects in the domain of civil engineering were carried out. In 2017, a decrease in the value added was registered, as well as in several service activities, but

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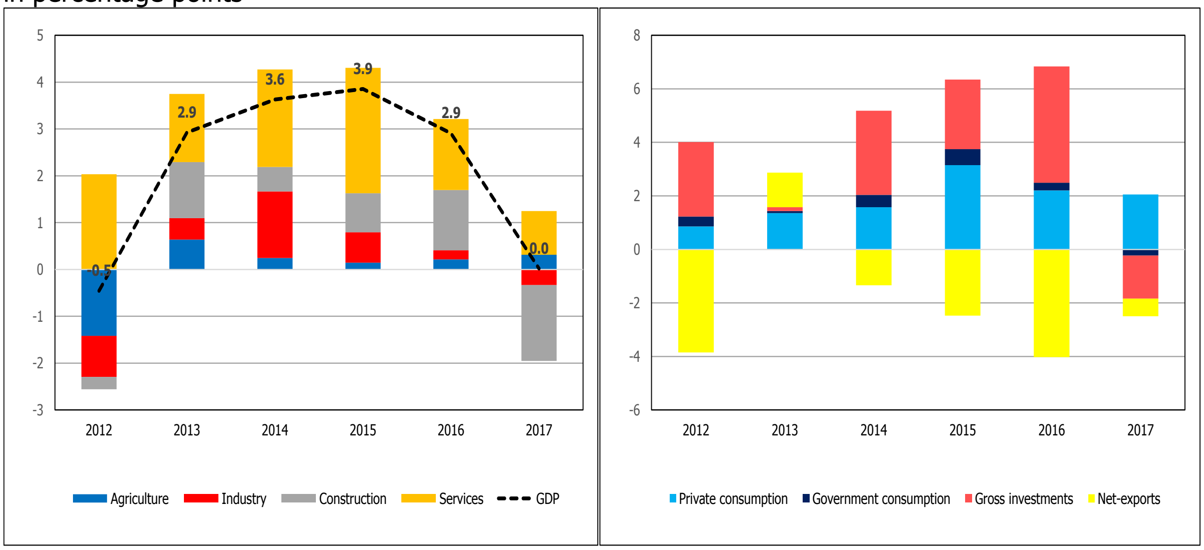
[24] More information on the domestic macroeconomic environment is given in the "Annual Report of the National Bank for 2017 ".
[25] At the beginning of 2018, after the political stabilization, the Fitch improved the country's credit rating in BB with positive perspective, while Standard and Poor's confirmed the rating from 2017, with an explanation that according to the economic performance the country should have higher rating, but the political crisis does not allows that.

in

Chart 11
Contribution of individual activities (left) and expenditures components (right) in the annual real GDP growth
in percentage points

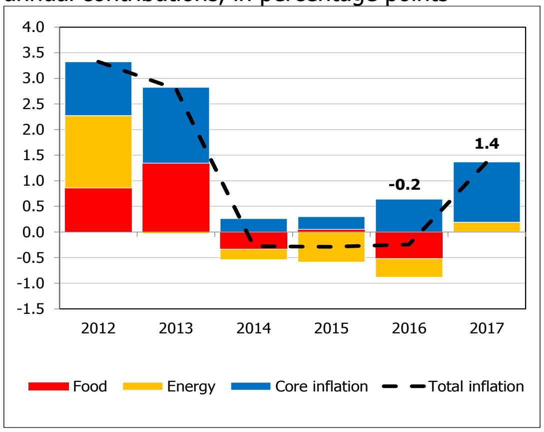


Source: State Statistical Office.
Note: GDP data for 2016 are preliminary, and data for 2017 are estimated.

On the expenditure side of GDP, in 2017, the contribution of private consumption, which increased by 2.9%, was positive, without creating more significant pressures on inflation or the external position of the economy. The growth of this component reflects the favorable trends in the labor market (decline in unemployment and employment growth), the growth in real wages and pensions, the growth of household lending, and private transfers[26] (which after the year-on-year decline registered growth in 2017 year, and still is a significant category for generating disposable household income). The incremented restraint for investments due to domestic political instability contributed to negative contribution of gross investments to GDP growth, just like in the previous year. The reduced gross investments were also the main reason for the significant decrease in the positive contribution of the domestic demand. In 2017, the intensified export activity, mainly as a result of the operating of the new export-oriented manufacturing facilities, as well as to the more favorable external environment. With the realized growth of the import of goods and services[27], the net export has a small negative contribution in 2017, which significantly decreased as a result of the higher export growth and growth of its contribution to GDP, relative to the growth and contribution of the imports of goods and services. Exports still have the highest contribution to GDP.

[26] Part of the balance of payments' category "secondary income", which increased its share in GDP by 0.5 percentage points, for the first time in the past five-year period. The larger surplus predominantly arises from the higher net inflows from private transfers, which reflect the increase in the purchase of cash from the currency exchange market (data used to estimate private cash transfers), in conditions of stabilizing expectations and increasing the confidence of economic entities after last year's political instability.
[27] The most significant factor for the imports in 2017 was the raw material components necessary for the operating of the new export-oriented manufacturing facilities, with a contribution also of investment imports, the import aimed at private consumption, as well as energy imports (given increase in the worlds stock exchange oil prices, and in conditions of reduced import quantities).

Chart 12
Dynamics and contribution of individual components in the creation of annual inflation rate
annual contributions, in percentage points



Source: State Statistical Office.

At the beginning of 2017, the average annual inflation went out of the zone of negative annual changes and during the year it registered a trend of gradual acceleration, reaching the level of 1.4%. The inflation movement was influenced by the higher baseline inflation, as well as by the higher prices of food and energy, which is mainly related to the movements of world prices of the primary products.

In the last three years, changes towards fiscal consolidation are registered, which is evident through the reduced share of the budget deficit in GDP, compared to the previous years. In 2017, the registered budget deficit (2.7% of the GDP) remained unchanged compared to the previous year and it is lower than planned initially for the 2017 Budget,[28] and the Budget revision[29] made in July 2017. In 2017, the budget deficit was financed from domestic sources (through net emission of government securities and use of government deposits with the NBRM).

The amount of the public debt and its sustainability are important for the financial stability, given the significant amount of financial system's funds that are invested in state-owned instruments. In 2017, the public debt[30] of the Republic of Macedonia continues to grow, although quite slower. On annual basis, the public debt increased by 1.6% (in 2016, the annual growth rate was 11.5%), but its share in GDP, after several years of growth, decreased by nearly 1 p.p. The external public debt, the share of which in GDP also declined in 2017, prevails in the public debt structure.

The increase in the total public debt fully arouse from the government debt growth[31] (and within it, the domestic government debt[32]), given decrease in the external debt (in July 2017 the debt towards the Deustche Bank and the liabilities based on interest for the third and

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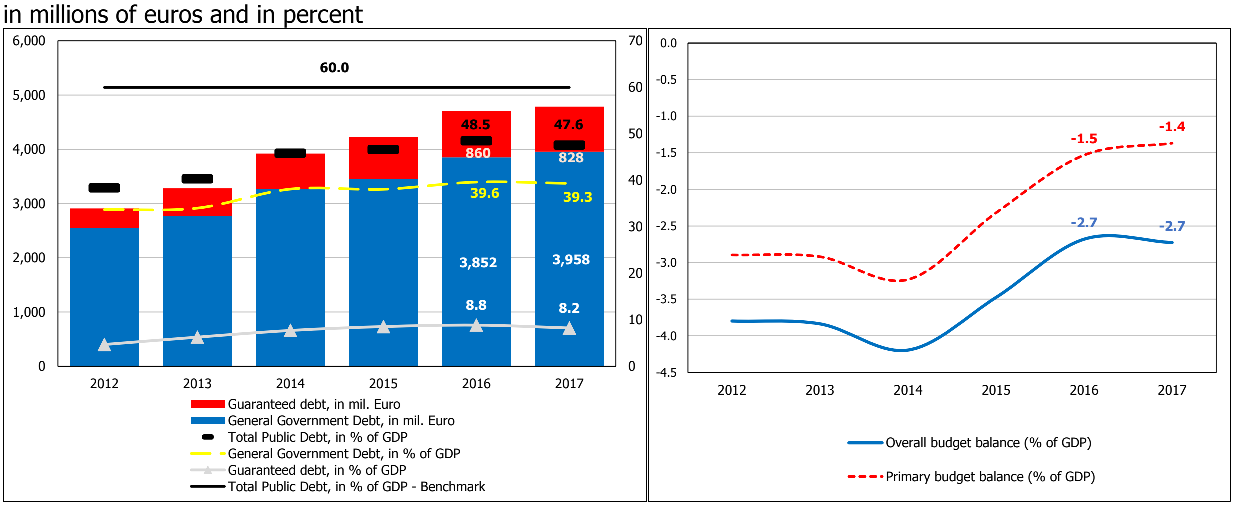
[28] Denar 18,607 million, i.e. 2.9% of the GDP.
[29] Denar 18,567 million, i.e. 2.9% of the GDP.
[30] The public debt is defined under the Law on Public Debt (Official Gazette of the Republic of Macedonia No. 165/14) , as a sum of the government debt and the debt of public enterprises established by 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.
[31] Government debt is the sum of debt of the central and the local government.
[32] During 2017, new government securities in the amount of Denar 11,214 million were issued on the domestic market, which is a higher domestic borrowing on a net basis compared to the previous year, when the stock of government securities increased by Denar 3,037 million. Most of the new issues of government securities had longer maturity than the maturities where treasury bills with maturity of 12 months dominated, which contributed to an increase in the average maturity of the issued government securities.

the fifth Macedonian bond were repaid). By residence, the public debt structure registered divergent movements in its main components, with the share of the external debt in the GDP being reduced by 2.1 p.p. (to 31.2% of the GDP), as opposed to the increase in the domestic debt by 1.2 p.p. (to 15.9% of GDP).

Chart 13
Public debt dynamics and structure (left) and dynamics of primary and total budget balance
in millions of euros and in percent



Source: NBRM, Ministry of Finance and State Statistical Office

The main investors in the government securities are the domestic financial corporations (the banks were the largest buyers of government securities until April 2017, when the pension funds took the lead, whereby their shares were balanced). The motives for investing in government securities are, on the one hand, based on the limited available financial instruments on the domestic financial market and the low yields on debt securities on the world financial markets, but on the other hand, these investments are treated as liquid and low risk or risk-free placements. Regulatory treatment in the EU and the required higher amount of capital requirement on a consolidated basis, for investments in the instruments of fiscal and monetary policy of subsidiaries of EU banks that are not part of the Union, in line with the credit rating[33], causes a risk for monetary and fiscal policy conduct in the Republic of Macedonia. Such treatment stimulates the EU-based parent entities, due to the need to ensure an adequate level of capital adequacy at the group level, to impose internal limits on Macedonian subsidiaries for investments in government securities and even in the instruments of the central bank. Considering that the EU-based banking groups prevail in the Republic of Macedonia, such regulatory provisions are a risk for the implementation of the monetary and fiscal policy in the country.

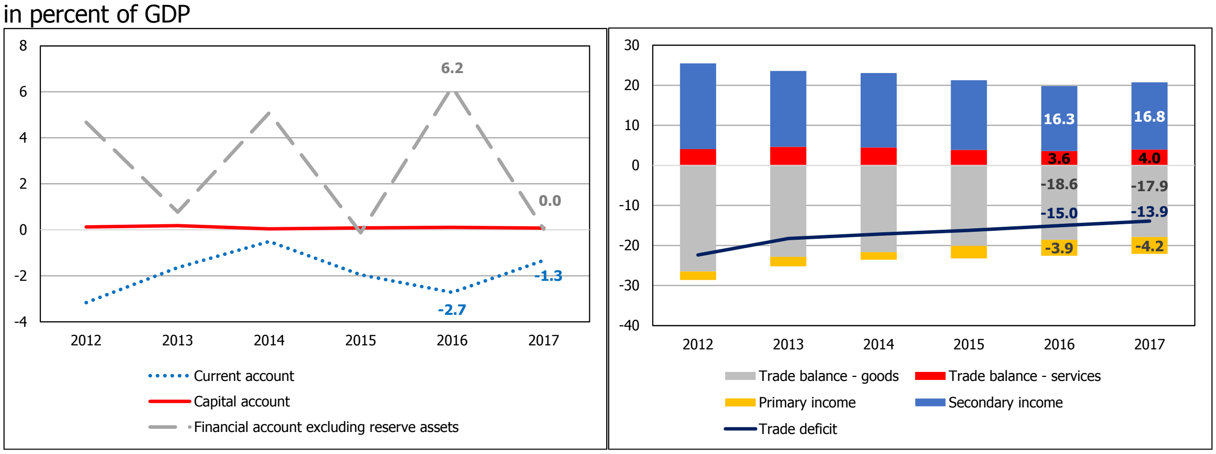
[33]The Basel rules for determining capital adequacy allow the national regulator to apply 0% weight to the banks' investments in domestic government securities and in domestic currency when calculating the capital requirements for covering the credit risk. The National Bank, as a national regulator of banks with head office in Macedonia, with the provisions in the Decision on the methodology for determining the capital adequacy ("Official Gazette of the Republic of Macedonia" no. 47/12, 50/13, 71/14, 223/15 and 218/16), prescribed a risk weight of 0% for those investments. However, in accordance with the EU regulations, when consolidating the placements of Macedonian banks in domestic government securities with EU-based entities, the risk weight is not 0%, but 100%. The application of a weight below 100% in the consolidated reports is possible only if the European Commission evaluates and determines the so-called treatment of the equivalence of domestic supervisory and regulatory standards with those applied in the EU.

In 2017 the favorable external position of the country was maintained. The changes in the balance of payments for 2017 indicate maintenance of moderate current account deficit, given further structural changes in the export sector, lower uncertainty and higher confidence and absence of imbalances. At the end of 2017, the current account deficit equals 1.3% of the GDP and registers a narrowing[34] by 1.4 percentage points, annually.

Chart 14

Structural features of the balance of payments and current account

in percent of GDP



Source: NBRM.

Estimated data for 2017.

Note: The calculations are made with data denominated in euros. The secondary income shows the current transfers among residents and non-residents.

In 2017, no significant external borrowing of the economy was registered[35], and the inflows based on foreign direct investments were neutralized by net outflows in some of the short-term financial flows. In 2017, the direct investments equaled 2.3% of the GDP and they were lower[36] compared to 2016 by 87.8 million, or by 27.7%. In such circumstances, part of the current account deficit is financed by foreign reserves[37], which declined on an annual basis, but remained at the appropriate level, providing an average coverage of the import of goods and services from the next year of about four months.

Indicators of the solvency and liquidity of the external debt show relatively moderate external indebtedness of the Republic of Macedonia. According to most indicators, the Republic of Macedonia is a moderately indebted country, although slight

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[34] The narrowing arises from the higher inflows on the basis of secondary income and the lower deficit in the trade of goods and services (strengthening of the positive effects of the new manufacturing facilities on the total export, with simultaneous positive movements and in the part of the traditional sector), while the deficit in the primary income expansion (transfers by domestic companies owned by foreign investors).

[35] Unlike the previous year when the issuance of the fifth Eurobond was the most significant source of financial inflows.

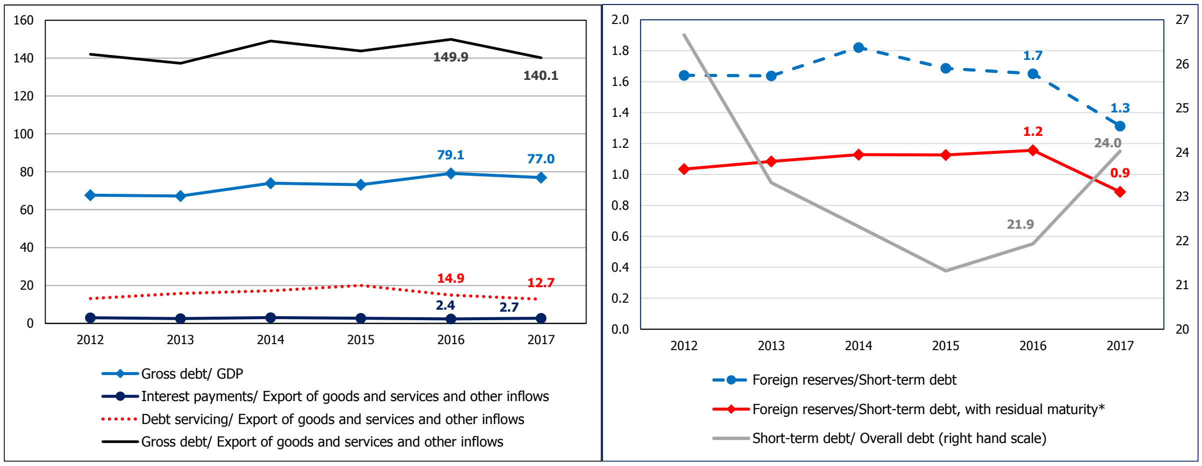
[36] The decrease is derived from net outflows based on intercompany debt, and amid lower net inflows in equity (partly due to prolonged political uncertainty) and reinvested gain (in conditions of significantly higher amount of paid dividends in the second and third quarter of 2017).

[37] The foreign reserves declined on annual basis, mainly due to transactions for the account of the government (repayment of foreign debt in the absence of external borrowing, which was moved for 2018), price and exchange rate differences and maturity of foreign currency deposits of banks with the NBRM. NBRM applied the instrument of auctions for the banks' foreign currency deposits, in the period May - October 2016. In this period, the banks had the opportunity to place foreign currency deposits with the NBRM on more favorable terms than those prevailing on the international financial markets. Considering the different maturity of foreign currency deposits, their balance in the first half of 2017 gradually declined, and deposits matured entirely in early August 2017.

deterioration is noted in some of the solvency and liquidity indicators. According to the amount of gross external debt, the Republic of Macedonia is higher indebted, however, the intercompany debt (with connected parties) and the debt on the basis of trade credits prevail in the structure of the gross debt.

Chart 15

Indicators of external indebtedness, solvency (left) and liquidity (right)



Source: NBRM.
Criterion for moderate indebtedness*:
Gross external debt/GDP: 30-50%
Repayment of interest / Export of goods and services and other inflows: 12-20%
Repayment of debt/ Export of goods and services and other inflows: 18-30%
Gross external debt / Export of goods and services and other inflows: 165-275%
Foreign reserves/ Short-term debt, residual maturity: 1
* The moderate indebtedness criterion is taken from the World Bank methodology for compiling indebtedness ratios, which implies using three-year moving averages of GDP and export of goods and services and other flows as denominators in the calculation of the ratios.

The monetary policy implementation ambiance was more favorable compared to last year, but with uncertainty regarding the developments on the domestic political scene, especially in the first half of 2017. In 2017, the NBRM continued **normalizing the monetary policy**, which started in December 2016. Thus, at the beginning of 2017, the NBRM reduced the policy rate from 3.75% to 3.25% in two occasions, thus reducing this rate to the level before May 2016[38]. By the end of the year, in conditions of sound economic fundamentals and absence of economic imbalances, when there were still present risks in certain segments of the economy, the NBRM did not make further changes in the monetary policy setup[39].

[38]As a result of the pressures on the foreign exchange market and deposits in the banking system due to the deteriorated political situation in the country, in May 2016 the NBRM increased the policy rate from 3.25% to 4.00%. In order to maintain the stability of the domestic currency, additional non-standard measures were taken, which were temporary.
[39] The favorable trends continued at the beginning of 2018, when in March 2018, the NBRM reduced the policy rate from 3.25% to 3.00%.

II. NON-FINANCIAL SECTOR

1. Household sector

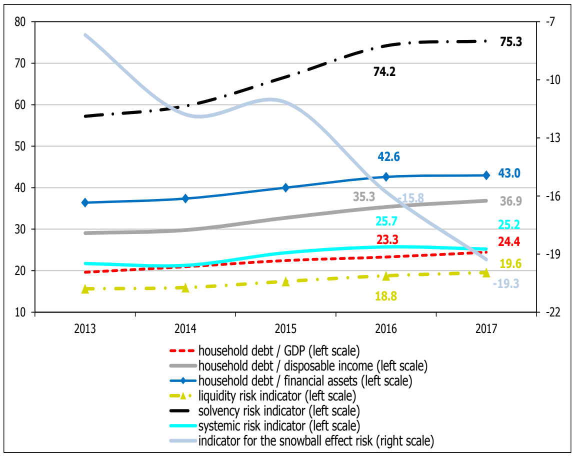
Households have a key role as the most significant creditor of the banking and the overall financial system, whose behavior largely depends on the liquidity of banks and their scope of activities. The changes in the behavior of households in the last three years, and primarily in the middle of 2016 under the influence of political instability, only confirmed the exceptional significance of this sector for financial stability. In 2017, a process of gradual stabilization of household expectations and return of deposits in banks took place. However, the relatively low interest rates on household savings are a limiting factor for greater savings, as a source of funding for the activities of domestic banks.

Households become increasingly important as debtor of the banking system. Considering the lower risk of household lending, compared to the corporate sector, as well as further improvement in banks' expectations and assessments of the risk profile of the credit demand, the banks continuously direct their lending strategies to households which also represents a lending segment that brings higher yields. Increasing banks' interest to support this sector is also underpinned by the higher loan demand, primarily within the housing lending domain, as well as the intensified private consumption, favorable labor market developments and increased consumption optimism primarily due to the favorable expectations in terms of unemployment and financial condition. The solid collection and consequently the good quality of the credit portfolio of banks to households is an incentive for greater lending to households. The satisfactory level of the indicators for the solvency and household liquidity position points to sector's small vulnerability to shocks and general maintenance, in a controlled frames, of already lower risks for the financial stability of this sector. The low level of indebtedness of the household sector, together with their sound creditworthiness, despite certain deterioration of the indicators for the ability for repayment of the total liabilities indicates that the opportunities for further growth of the household debt have not been yet exhausted. Yet, the debt concentration among lower income households, and the continued growth of debt and its maturity impose a need for closer monitoring of the risks of high indebtedness of some segments of this sector, in conditions of mainly eased lending standards. The ability to repay the household debt is potentially conditioned by their currency risk exposure due to the significant amount of debt with a currency component, as opposed to their revenues derived from the domestic currency. The present replacement of loans with adjustable interest rate with variable interest rate loans allows greater transparency towards households for the amount and possible debt replacement based on interest, but may also cause greater variability of interest payments.

1.1 Household debt and vulnerability

Household debt indicators signal a certain increase in the debt level in 2017, thus increasing also its share in disposable income and in financial assets. Although the increase in the disposable income accelerated in 2017, the higher household consumption was supported by the higher lending and growth of the debt of this sector, with the annual growth rate of its financial assets left behind. These developments caused **certain deterioration in the solvency position[40] of households**, i.e. the indicators for measuring the household creditworthiness[41]. **This sector's liquidity worsened as well**[42], as a result of more pronounced increase in the debt relative to the increase in the disposable income.

Chart 16
Household Debt and Vulnerability Indicators
in %



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

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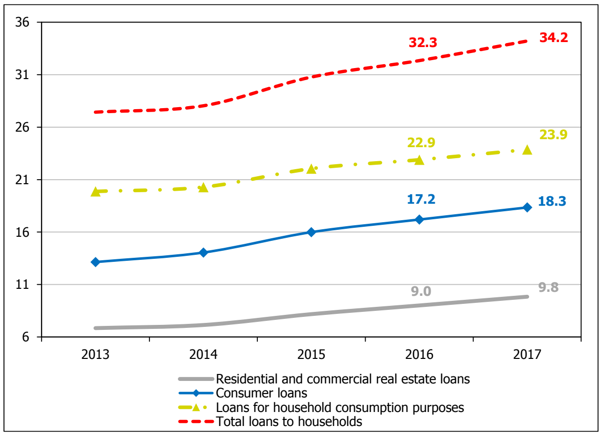
[40] Measured through debt to net financial assets ratio. Net financial assets represent the difference between financial assets and household debt.

[41] Measured through debt to financial assets ratio.

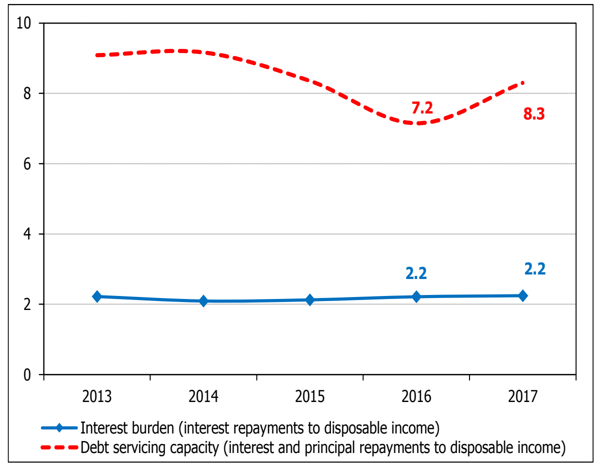
[42] $\text{Показател за ликвидносниот ризик}_t = 0{,}5\frac{\text{Долг}_t}{\text{Расположлив доход}_t} + 0{,}5\frac{\text{Отплата на камата}_t}{\text{Расположлив доход}_t}$. Higher value of this indicator denotes a higher ratio of debt to household disposable income.

Chart 17
Household debt on different bases to disposable income ratio
in %



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

Chart 18
Household creditworthiness indicators
in %



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

Despite the deterioration, these indicators are satisfactory and their amount does not cause concern over the relatively low indebtedness of the household sector as a whole. In addition, the system vulnerability of the households, presented through the aggregate system risk indicator[43] registers a decrease as a result of absence of "snow ball" effect risk.[44]. This is supported by the further increase in the negative value[45]of this indicator due to the higher growth in the disposable income than the growth in the share of interest payments in the average debt for the last four years. **Hence, the small systemic vulnerability of households as a whole, confirms their solid solvency and the possibility of further borrowing and at the same time does not cause bigger risks from the household sector.** However, one should have in mind that the reduction of interest payments can be associated with the current downward trend in interest rates, as well as the continuation of the maturity primarily in the case of consumer lending.

In addition to the low indebtedness, the indicators of household creditworthiness are also favorable. Although part of the disposable income used for repayment of interest and principal (8.3% in 2017 and 7.1% in 2016) increases, which indicates a certain deterioration in the creditworthiness, however, the level of this indicator is relatively low

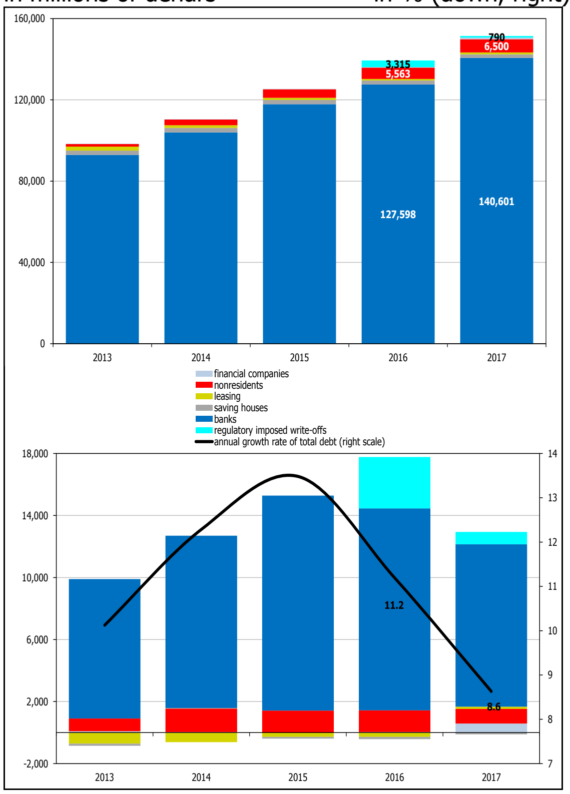
[43] The aggregate systemic risk indicator is the average of the analyzed liquidity risk ratios, the insolvency risk and the risk of snowball effect.

[44] Snowball effect risk ratio= $\frac{\text{Отплати на камати}_t}{\frac{\text{Долг}_t+\text{Долг}_{t-1}+\text{Долг}_{t-2}+\text{Долг}_{t-3}}{4}}$ - $\left(\frac{\text{Расположлив доход}_t}{\text{Расположлив доход}_{t-4}} - 1\right)$.

[45] The snowball effect indicator has a negative value given the fact that the share of the cost of funds received as debt (interest payments) in the average debt for the last four years is lower than the average growth of disposable income for the same period.

Chart 19
Household debt (up) and annual growth (down)

in millions of denars in % (down, right)



Source: NBRM's Credit Registry, based on data submitted by banks, savings houses and the MF.

Household debt growth [46] reflects the higher consumption of this sector, supported by favorable labor market developments and low consumer prices. At the same time, the higher indebtedness is triggered by the current financial situation of the households and the perceptions of the required level of monthly income for meeting the basic needs. The realized debt growth in 2017 of 8.6% is slower and is considered sustainable, compared to the realized growth in the pre-crisis period when household debt grew by about 50%, on average[47].

The rise in the household debt can be linked to the results of surveys[48] according to which around one third of households considers that their current financial situation worsened, while less than 60% consider that it remained the same as in the previous year. The unsatisfactory financial situation of the households and the inability to regularly service the basic payment obligations imposes a need for their further borrowing. Thus, about 88% of households are able to regularly pay utility bills, while the financial situation of only 28.4% of households allow regular payment of loan installments and loan repayment, and only 18.5% of households are able to pay a rent for an apartment. The increased indebtedness of households is a result of their perceptions for the amount of necessary monthly funds that could provide normal living. Thereby, about 40% of the households consider that a sum between Denar 25,000 - 45,000 is appropriate for a normal living. The regular surveys of the State Statistical Office estimate the level of household monthly income in the Republic of Macedonia in 2017 as unsatisfactory, and about 60% of households find that most or all of their monthly income do not cover their needs. Hence, regardless of the actual situation in this sector represented by indicators of their indebtedness,

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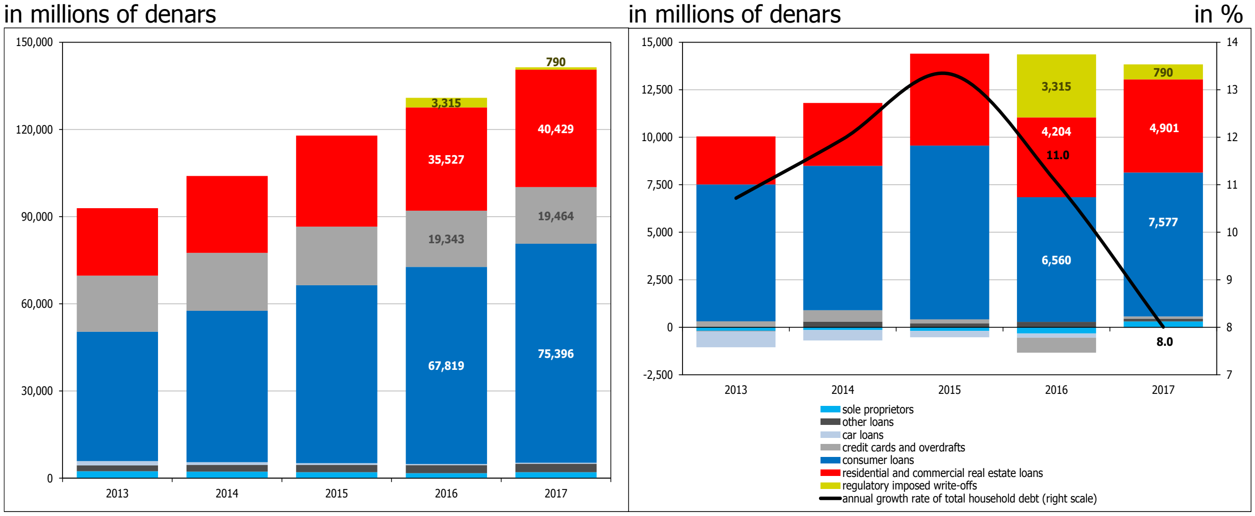
[46] The total debt of households does not include the effect of mandatory write-offs since the debt written off by the banks remains household debt, given the fact that the banks reserve the right to collect the written off claims. The National Bank holds data on mandatory write-offs only by sectors (households and non-financial companies), which makes it impossible to determine the effect of write-offs on the credit products for households. Therefore, the further analysis of household debt to the banking system excludes the effect of write-offs only in the total debt, but not in the analysis by currency, purpose, maturity, etc.
[47] The average increase in the household debt refers to the period 2006 - 2008. However, one should have in mind that before this period, lending was extremely low. The average growth rate of household debt in the post-crisis period, 2010-2017 was 9.2%.
[48] Presented in the statistical study Survey of households consumption in the Republic of Macedonia, 2017, Statistical survey: Income, consumption and prices.

vulnerability and financial position, the results of the surveys conducted on a selected sample of households show that households perceptions of their financial condition and debt burden are not favorable by referring to dissatisfaction about the financial situation and certain difficulties in covering the costs of living.

The financial support to households through bank credits is increasing with slower pace, despite the continuous and positive trends in the scope of lending to this sector.[49]. Banks are the most significant lender to households, accounting for 95% of the debt. In 2017, the household debt towards banks registered the highest increase (in absolute terms) (by 8.0%), with the increase in the debt to financial companies being also pronounced, as a consequence of the accelerated growth of this type of financial intermediaries that grant small loans, relatively fast and in short terms, but at a very high price (with exceptionally high fees in the form of interest, commissions and similar fees). However, despite the fast increase, the loans of financial corporations in the total household debt remains minimal (less than 1%). A symbolic rise was registered also in the household debt to leasing companies, after the last increase in this debt before the very bigging of the global financial crisis.

Increased risk perceptions from the corporate sector over the past few years have made the banks to target more their credit strategies towards households as less risky and more yield-bearing sector, due to risk dispersion from the aspect of the amount of loans and the number of clients. An additional factor for the solid credit support of the households is the

Chart 20
Household debt to banks by type of loan product (left) and annual growth (right)

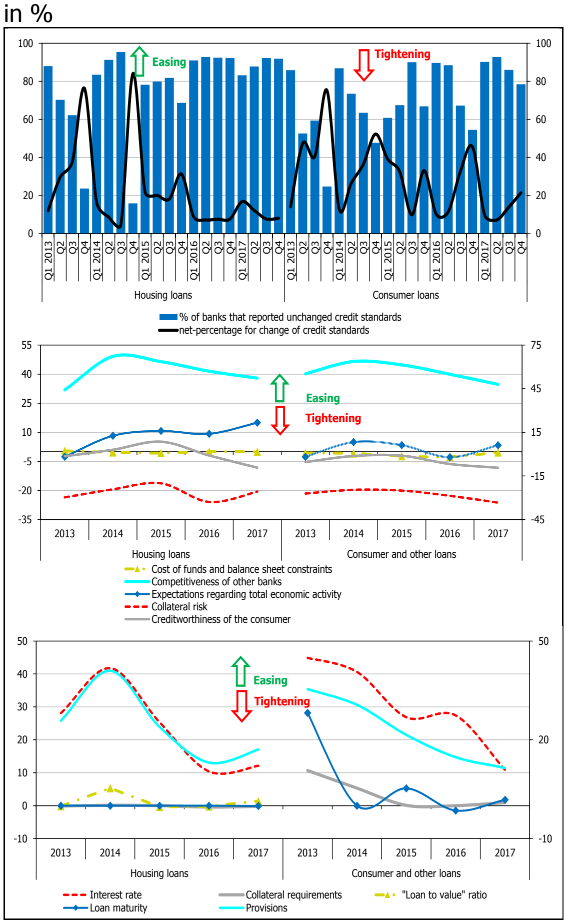


Source: NBRM, based on the data submitted by banks.
Note: This analysis of the household debt with banks does not include the household debt written off due to lack of detailed information, by product. This applies to the other analyzes by product and currency, in the text below.

further improvement of the banks' expectations and assessments for the risk profile of the credit demand, which is why considering the more favorable income from the crediting of the households in relation to the corporate clients (primarily in terms of the amount of interest rate), this segment is more attractive for banks, especially in conditions of low interest rates, an the so-called "search for yield".

[49] The slower growth of household debt in banks is a consequence of the significantly smaller amount, i.e. the exhaustion of the effect of the obligatory debt write-offs of this sector compared to the previous year.

Chart 21
Assessment of the conditions for lending to households (above), factors that influence the conditions for lending (environment) and change in the individual credit standards (below)
in %



Source: NBRM, based on data in Bank Lending Surveys.
Note: The percentage of banks is weighted by the share of each bank in total household loans on specific dates. The assessment of individual factors/credit standards is presented as average percentage of banks that responded that the given factor/lending term contributes to unchangeability of the credit standards in all surveys for the respective year. Net percentage is the difference between banks that have reported easing of the credit standards and banks that have reported tightening of the credit standards.

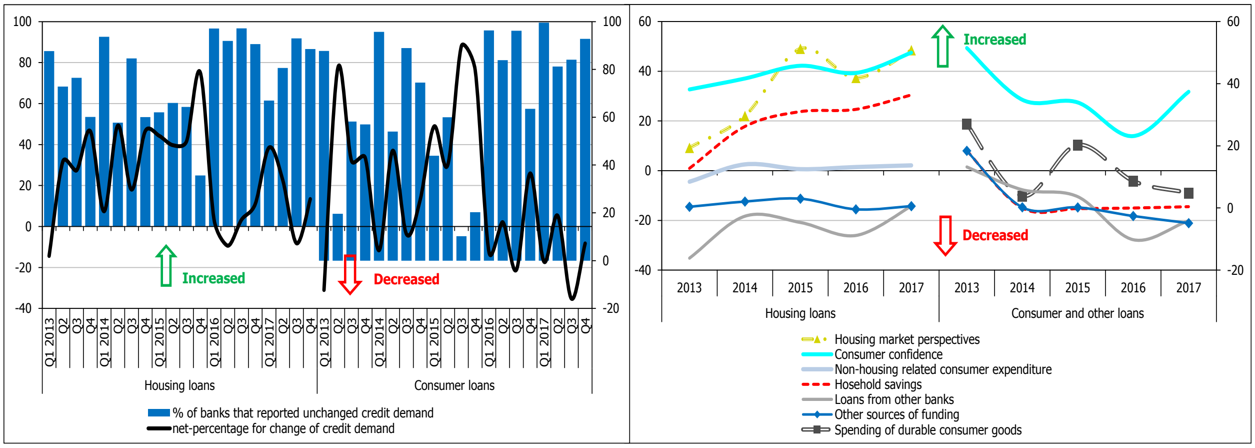
By the **type of debt**[50], consumer and housing loans registered the highest annual growth, and the structure of debt to banks is dominated by the debt for financing household consumption with 71.2%.

Indicator of the increased inclination of the banks for lending to this sector is also the stronger net easing of the credit conditions for the households in the past years. In 2017, this was particularly pronounced in the domain of housing loans as a consequence of further interest rates cuts, commissions and fees and some easing in the requirements for coverage of loans with collateral, with favorable banks' expectations for the total economic activity and lower default risk. The higher supply of housing loans was triggered by the intensified credit demand in conditions of solid savings of households and the growth of their financial ability, as well as increased confidence and perceptions of favorable performances and perspectives on the market for residential construction[51]. Despite the relaxation of credit standards amid approval of hosing loans, banks continue to be relatively prudent. This is also perceived through requirement for coverage of the loan monthly installment with the monthly income of the borrower, which in practice for this loan type, according to the established credit policies of the banks are at least twice higher.[52].

[50] Debt structure analysis by type of credit product does not exclude the effect of write-offs due to lack of data on write-offs by type of loan product.
[51] Source: Bank Lending Survey conducted by the National Bank. 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.
[52] The National Bank has not established a minimum threshold for the value of this indicator by individual credit products and does not have precise data on its value. In other types of loans, the usual practice of banks is to approve loans with monthly installments that account for about one third of the monthly income of the borrowers.

Chart 22
Assessment of loan demand from household (left) and factors influencing on the demand for loans (right)

in % in %

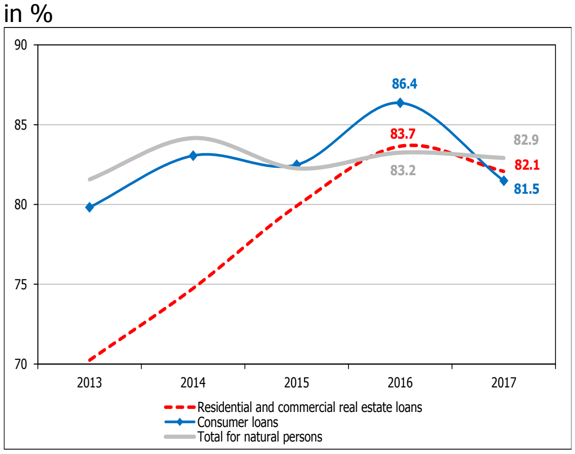


Source: National Bank, based on data from the Bank Lending Surveys
Note: Net percentage is the difference between banks that have reported increased demand and reduced loan demand by households.

The banks caution in lending to this sector, with a certain tightening of the credit standards for the needs of financing the consumption, **is also perceived through the weaker permeability of credit applications** (lower share of approved credit applications). This trend is present in all types of credit products, with the rate of approved loan applications (of the total number of received applications) for the first time being the highest for housing loans, which proves the eased terms for housing loans. According to the number of received loan applications, the biggest interest is for consumer loans (annual growth of 20.1%), while the received credit applications for credit cards and current accounts overdrafts have decreased as a result of the unfavorable credit standards (almost double the level of interest rates) for these loan products compared to consumer loans. The upward trend in the number of received and approved consumer loan applications (the approved applications increase by 13.3%) indicates that the slight relaxation of the credit standards and the reduced credit demand within lending for consumption funding purposes actually refers to credit cards and current accounts overdrafts.

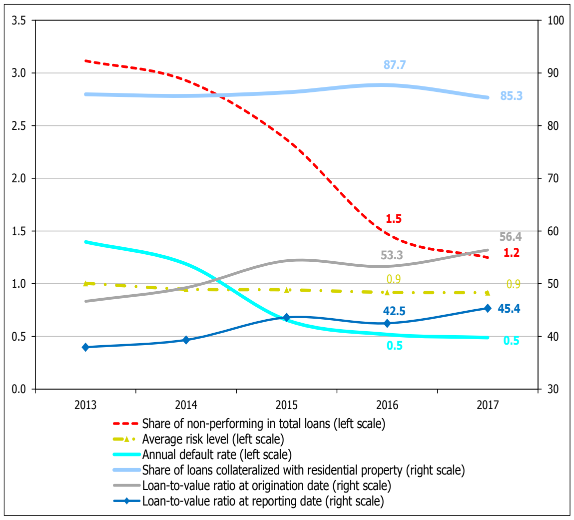
Chart 23
Share of approved in received loan applications of households

in %



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

Chart 24
Indicators of the housing lending quality
in %



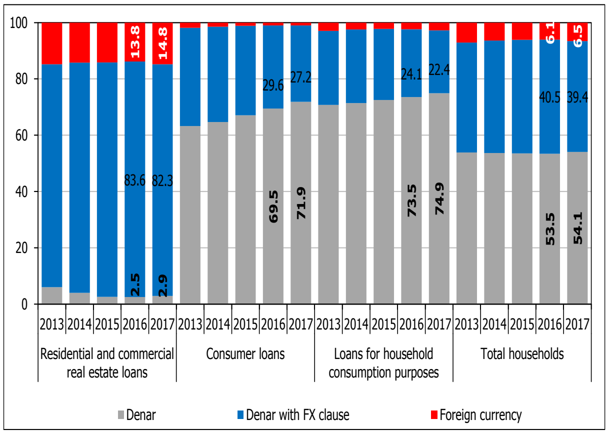
Source: NBRM's Credit Registry, based on data submitted by banks.

The housing loans are the most important segment of the banks' loan portfolio composed of households, with constant improvement in the quality in the last several years. Having in mind the low level of non-performing housing loans (1.2% as of 31 December 2017), the high collateralization of these loans with residential property [53] (85.3%) and the historical lowest level of the annual default rate[54] (0.5%), no signals for change in the trend were registered.

Housing loans are normally secured with the residential property which is bought by the client with the loan assets. At the same time, the residential property is considered a collateral of a higher quality, in accordance with the international and domestic standards in this area[55]. Survey studies show that according to the apartment use basis, only 1.1% of households are recorded as a tenant of an apartment in state or private ownership[56]. In addition, housing loans in the Republic of Macedonia are characterized by a relatively favorable ratio between the amount of the loan and the appraised value of the residential property pledged as collateral, which at the end of 2017 is 56.4% at origination date[57] and 45.4% at reporting date[58]. Hence, the value of the apartments should be reduced by more than one third to equalize the amount of the loans approved, or by more than one half to equalize with the residual debt to be paid in future. If there are no significant changes in the estimated value of collateral between the date of approval and reporting date, the value of the second indicator is usually lower due to the execution of partial debt payments

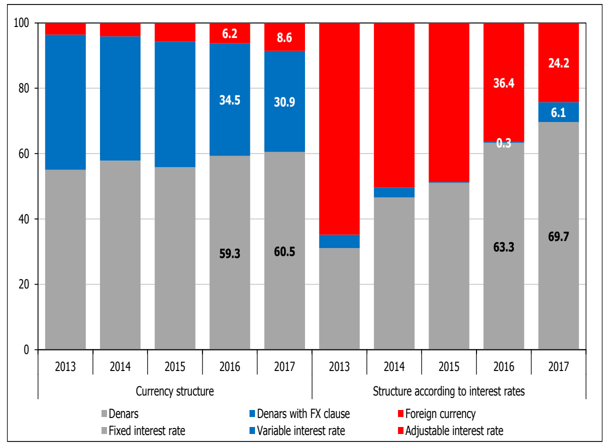
[53] Owner occupied residential property and lease of residential property and other residential property. The annual rate of default is calculated as a percentage of the credit exposures with regular status, which for a period of one year receive a non-performing status.
[54] The annual rate of default is calculated as a percentage of the credit exposures with regular status, which for a period of one year receive a non-performing status.
[55] According to the Decision on the methodology for determining the capital adequacy (Official Gazette of the Republic of Macedonia No. 47/12, 50/13, 71/14, 223/15 and 218/16) the banks use a risk weight of 35% to the claims that are secured with mortgage on a residential property, if it meets certain criteria prescribed by the Decision. Thus the capital requirements for covering the credit risk arising from lending secured by a residential facility are set at a lower level, which can be an additional incentive for the banks to approve such type of loans.
[56] Source: State Statistical Office, Household Consumption in the Republic of Macedonia, 2017, Statistical Survey Income, consumption and prices.
[57] This indicator represents the ratio between the approved amount of the loan and the estimated value of collateral at the date of the loan approval.
[58] This indicator represents the ratio between the balance of the remaining debt on the basis of the loan and the estimated value of collateral on the reporting date.

Chart 25
Currency structure of household debt to banks, by credit product
in %



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

Chart 26
Structural features of newly approved bank loans to households
in %



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

From the aspect of the certain structural features on the housing loans[59], it is important that almost half of the households[60] are users of an apartment with an area of over 80 m2, while most of the remaining part of the households (about 40%) live in apartments with an area of between 50 and 80 m2. One third of the households are users of a three-room or four-room apartment, while one quarter live in a two-room apartment.

However, the usual long maturities of these contract loans and the application of the adjustable interest rates are the most significant factors, which might represent the future source of materialization of risks associated with this lending. In case of possible inability to collect claims from households on this basis, creditors are at risk of unfavorable change in the market value of the collateralized residential property, therefore it is necessary to have a system established for monitoring the regularity of repayment of these loans, as well as to carry out a regular assessment of the market value of the residential property. Increased indebtedness for housing needs of households can have indirect transmission effects on the financial system and through other two potentially important channels, i.e. it affects the performances and the potential for further borrowing of the consumer sensitive sectors of the economy, as well as the volume of crediting of construction and activities in relation to real estate, which may adversely affect the rate of economic growth.

The quality of the banks' overall loan portfolio to households is good, which can be perceived through the low non-performing loans rate (2.4%), which is stable for a long period. The growth of non-performing loans to households is also low, although it is slightly higher (about ten percent) for individual products, primarily for loans intended for consumption. This

[59]Source: State Statistical Office, Household Consumption in the Republic of Macedonia, 2017, Statistical Survey: Income, consumption and prices

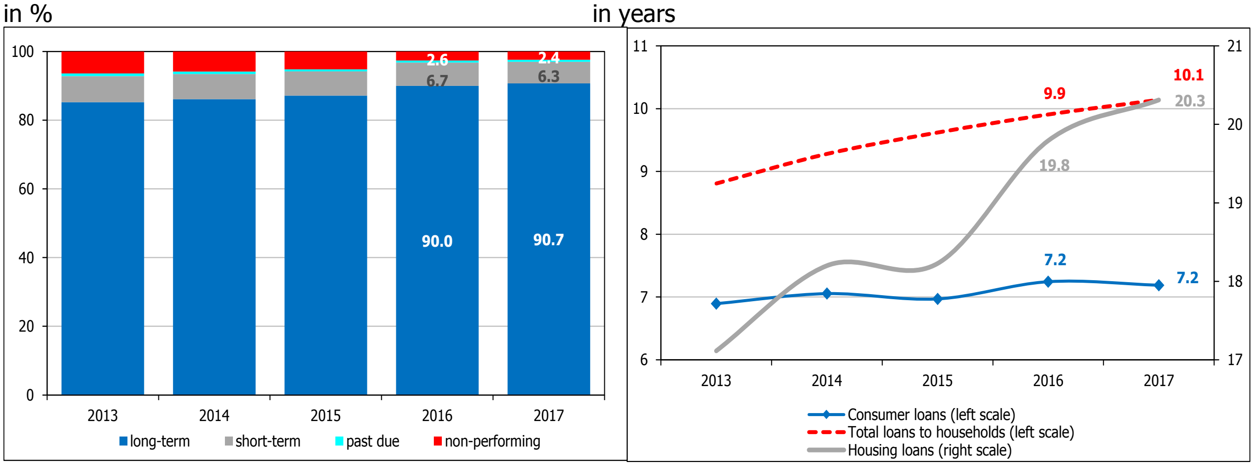
[60] For the purpose of the surveys of the State Statistical Office, a household is a family or a union of persons who live together and spend their income for settling the basic life needs (housing, food, etc.) jointly and any person who lives alone and who does not have their household elsewhere (single household). Household members are also considered non-family members, but they work, feed and live in the same household, as well as students.

growth in non-performing loans, although moderate, imposes a need for more careful monitoring of the trends in consumer loans.

The high share of the debt with currency component highlights the **households' exposure to currency risk.** This is a significant source of risk which can influence on their ability for debt repayment, and consequently, the stability of their creditors. The stability of the denar exchange rate is of exceptional importance for the maintenance of the households' ability to repay the debt, given the fact that households generate their income in the domestic currency. Despite the denarization of household deposits, which is a signal for the gradual return of the depositors' propensity to save in domestic currency, almost half of the household deposits are in foreign currency. However, most of the depositors are probably not the borrowers with the banks.

Chart 27
Maturity structure of household debt (left) and average weighted maturity of new household loans, and by credit product (right)

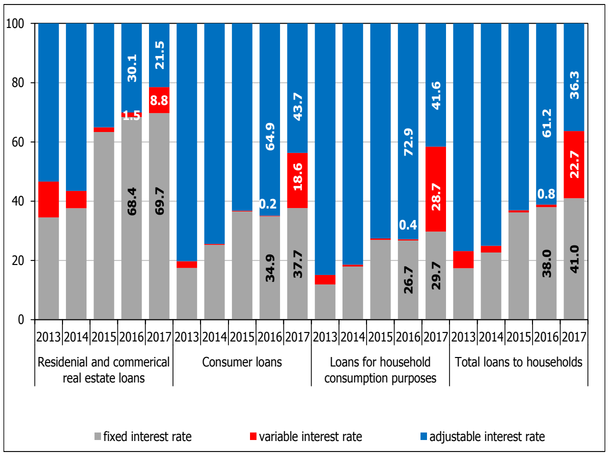
in % in years



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

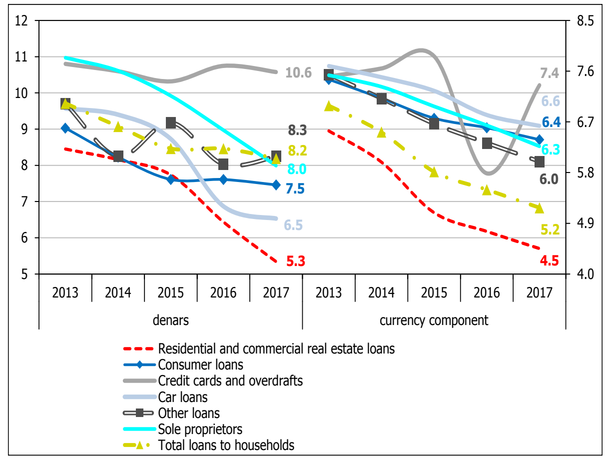
The increase in long-term debt enhances the sensitivity of households to interest rate and currency risk. Namely, the newly approved loans almost entirely (97.9%) are long-term, which highlights the propensity of the households to borrow in the longer term in conditions of relatively low monthly income and increased financial needs that can be met only with longer repayment period of the current and the new debt. The longer maturity could be interpreted as an indicator for a "weaker" creditworthiness of loan borrower (which in order to be able to pay the monthly liability due to the increased debt, distribute the repayment of the loan in more monthly repayment/installments). The average weighted maturity of newly extended household loans, including housing loans, is 10 years and 1 month, which is an increase compared to the previous year. The continuation of the average maturity of household loans in 2017 mainly arises from the housing loans. With the introduction of a higher capital requirement for consumer loans with maturity equal to or longer than eight years from the beginning of 2016, there was some slowdown in the rapid growth of these loans, which reduced the growth rate to a moderate level (from 39.1% as of 31.12.2015 to 12.8% as of 31.12.2017), and the growth was redirected to consumer loans with a maturity of up to eight years (9.3% as of 31.12.2017, as opposed to 1.7% as of 31.12.2015), about two-thirds on loans with a maturity of between five and eight years.

Chart 28
Structure of household debt by credit product, and by type of interest rate
in %



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

Chart 29
Average interest rate on household loans, by type of credit product
in %



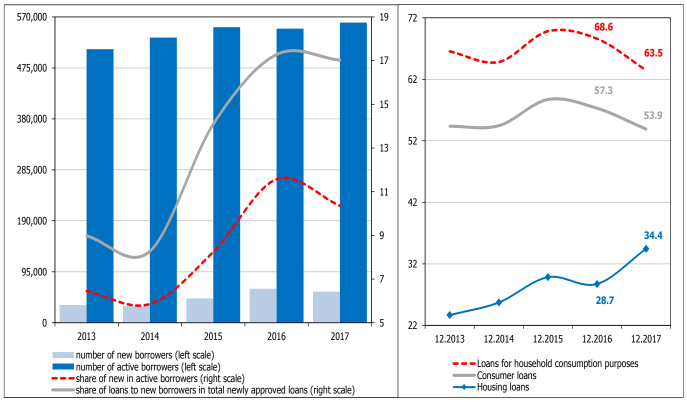
Source: NBRM's Credit Registry, based on data submitted by banks.

In the debt structure and the newly approved loans, the share of the adjustable interest rate decreased, due to the increased use of the variable interest rates by the banks. Stimulated by the recommendations of the National Bank, and for the purpose of reducing the legal and reputation risk, the banks "replaced" one part of the lending with adjustable interest rate with loans with variable interest rate[61]. Moreover, the connection of the change in interest rates with market factors allows for greater transparency and awareness of households for the amount of debt based on interest. In addition, the growth of long-term debt with fixed interest rate (mainly in housing loans) results from the 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.[62]. In such circumstances, the loan repayment costs in case of possible upward trend of the interest rates, are harder to predict.

In 2017, the downtrend of average weighted interest rates on new[63]and total household loans continued, whereby **the cost of total loans hit a record low.** The downward movement of interest rates is equally present in the new loans according to the individual currency features, whereby the spread between the denar loans and the loans with currency component was kept at the same level as in the previous year. However, the pronounced interest rate difference between the denar loans and the loans with a currency component highlights the importance of the cost factor (the amount of the interest rate) when selecting the currency of financing by households.

[61] This refers to new loan agreements starting on 1 July 2017, while for most of the existing loan agreements, the application of the adjustable interest rate is foreseen until the maturity or debt collection period.
[62] Starting from 1 January, for loans subject to different type of interest rate in different time bands up to the maturity date, the banks shall distribute the loan amount depending on the interest rate type applicable in the respective time band.
[63] Average interest rates are weighted for the share of each type of loans in total household loans.

Chart 30
New borrowers in the banking system of the household sector and share of loans granted to these clients in the total newly granted loans to the sector (left) and the structure of newly approved loans to new borrowers (right)
in number of clients in % in %



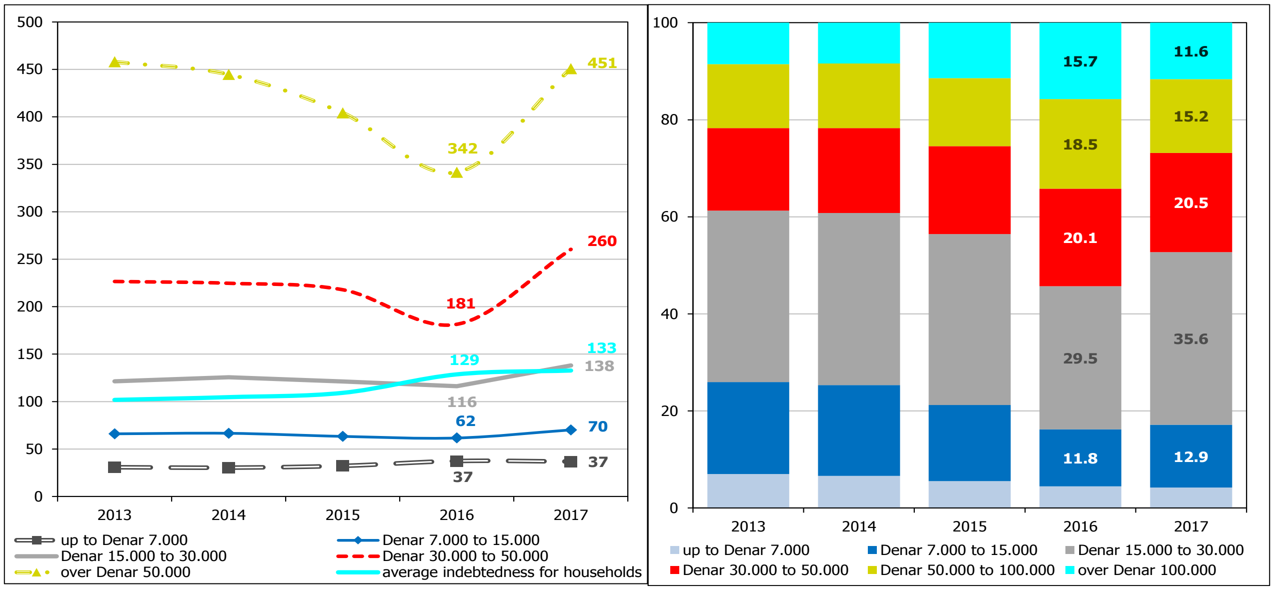
Source: NBRM's Credit Registry, based on data submitted by banks.

The lenders are exposed to higher default risk from the new borrowers[64], because there is no credit history for these clients. After the constant increase in the previous five years, the number of new borrowers from the household sector in the banking system, in 2017 is at lower level compared to the preceding year, although it exceeds the average for the past five years. The smaller growth in the number of new borrowers can be related to the competitiveness in the domestic credit market imposed by financial companies, whose main assets are the quick approval of loans and looser credit standards, and hence the easier procedure and opportunities for borrowing new of the new borrowers. The almost unchanged share of newly approved loans to new borrowers compared to the previous year is mostly based on favorable movements in the labor market and the credit market, as well as the solid creditworthiness of households. The interest of the new borrowers is most evident in the domain of lending intended for financing the consumption, with a share of almost two thirds of the new loans approved for these needs in the total number of newly granted loans, but to mark the one-third share of new users of housing loans. On the other hand, the high share of newly approved loans to current borrowers (over 80%) indicates the growth of their indebtedness and the need for more careful monitoring of possible over-indebtedness, compared with the financial power to repay the increased debt.

[64] Borrowers registered at the end of the analyzed period, not being present at the end of the previous year are considered new.

Chart 31
The average debt by household (left) and households' debt structure (right), according to the amount of the monthly income

in thousands of denars | in %

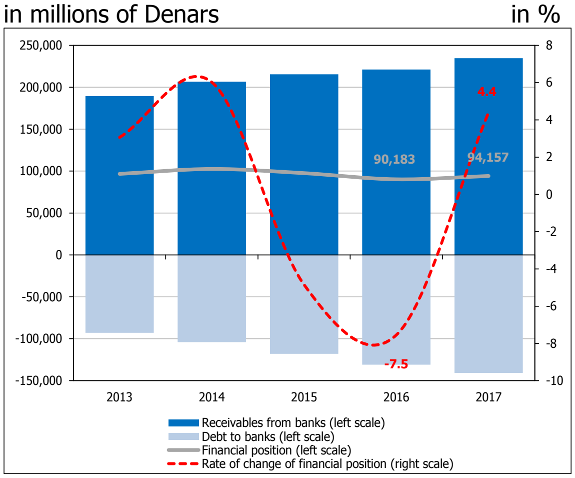


Source: NBRM, based on the data submitted by banks.

In the context of households' ability to service monthly installments on the basis of the debt towards banks with their monthly income, about one third of the total household debt and over 40% of the debt intended for consumption has been concentrated in households with a net salary equal to or less than the average net salary for 2017, who also have the lowest average indebtedness per household. On the other hand, slightly more than a quarter of household debt is attributed to persons with the highest monthly income (who have the highest debt per person). This is an indication that banks are adjusting the credit standards in conditions of the loan repayment period and the amount of the borrowing in accordance with the monthly income of the clients, which reduces the risks of possible high indebtedness of the individuals with lower incomes. Although the debt growth is moderate and does not give any signals of concern, the upward movement of the consumer prices by 1.4% and the weaker real growth of average paid net wages of 1.2% (as opposed to 2.3% in 2016) caused an increase in the share of household funds that is "spent" on repayment of debt.

Chart 32
Financial position of households, composition and growth rate

in millions of Denars | in %



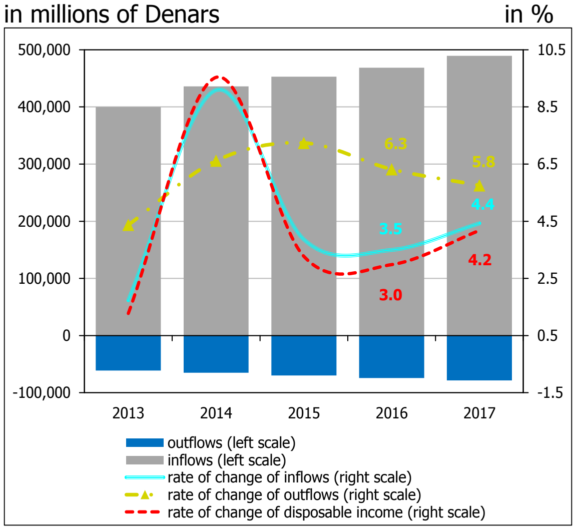
Source: NBRM's Credit Registry, based on data submitted by banks.

After the certain worsening of the financial position of the households in the previous two years, **the stronger deposit growth[65] compared to the debt of households resulted in improved positive financial position[66]** of this sector. In 2017, household deposits grew faster, with slightly stronger growth in the denar, compared to foreign currency deposits, which implies stabilization of household expectations and return of confidence in the domestic currency. The relatively low interest rates offered by deposit products can encourage households to seek alternative ways of saving, such as investments in voluntary pension funds, life insurance policies and shares in open-end investment funds. Under such circumstances and expectations for further household borrowing, further narrowing of the financial position of households can be expected.

1.2 Savings rate, disposable income and private consumption of the household sector

Chart 33
Dynamics of inflows and outflows of disposable income, and annual growth rate

in millions of Denars in %



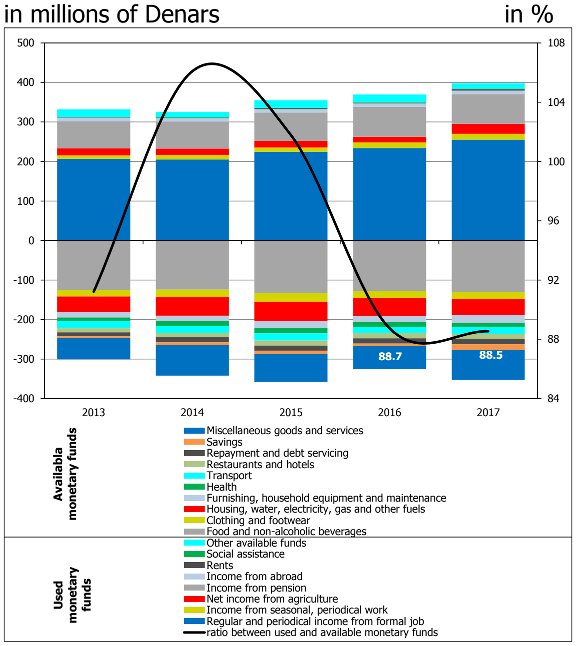
Source: NBRM's calculations, based on data from SSO, MF and CSD.

In 2017, household disposable income[67] increased rapidly and registered an increase of 4.2% or Denar 16,473 million. The increase of inflows is mainly related to labor market favorable developments, primarily the growth of employment and intensified growth of the average nominal wage by 2.6%, which is partially due to the legal provision for increasing the minimum wage starting in September 2017. The growth of total inflows accelerates due the increase of employee and social transfers funds, but we should also note the significant income growth of individual producers as a result of the increased payments of subsidies of current account products in the agriculture and growth of final agricultural output[68]. Dividend income also registers a solid growth due to the increased household investments in shares of entities that pay dividends to their shareholders, as well as predominantly higher dividend payments compared to the previous year. However, the

[65] At the end of 2017, the growth of household deposits in banks accelerated to 6.2%, compared to 2.6% in 2016.
[66] Financial position of households is the difference between claims on banks (deposits) and debt (loans) to banks. This debt analysis excludes the effect of write offs as required by regulations.
[67] Due to lack of data on disposable income in the official statistics, since 2007, the National Bank has been preparing the disposable income of households in the Republic of Macedonia, which is updated annually. For some disposable income components 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, income from copyrights, 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 disposable income components are nominal.
[68] Source: Economic accounts for agriculture (EAA), 2016. State Statistical Office.

growth rate of inflows is lower than the growth of outflows, which prevents higher growth of the disposable income. The intensified upward shift of total outflows, although slower than in the last year, is due to the higher amount of wage contribution due to the increased number of employed persons and growth of personal income tax and as a result to the higher income generated by households. Taxes towards the government account for most of the total disposable income.

Chart 34
Structure of available and used household monetary funds - annual average by household, and ratio between used and available monetary funds
in millions of Denars in %



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

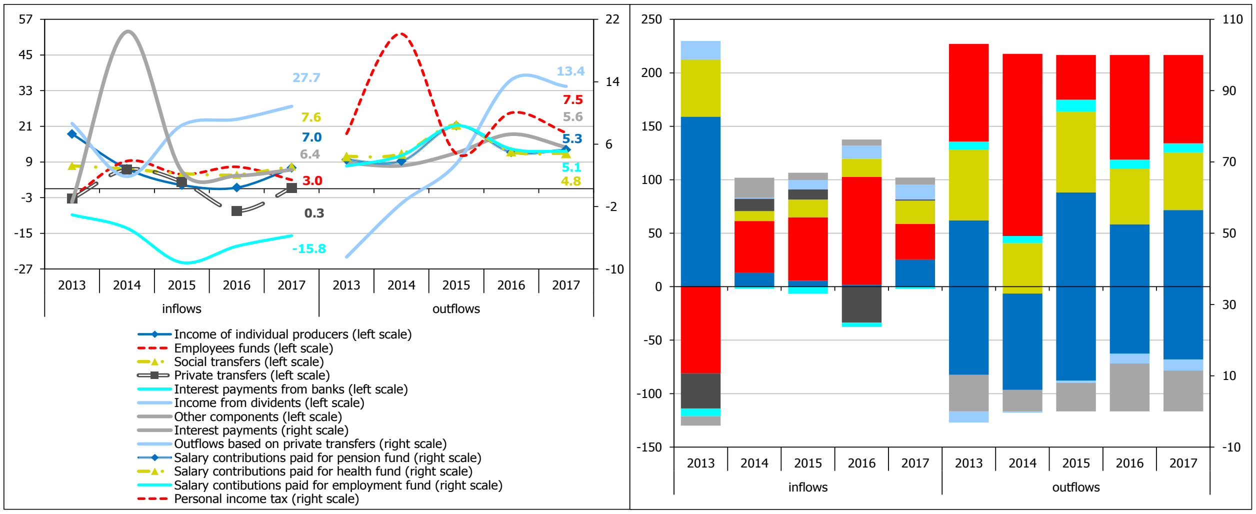
Similar to the basic components of disposable income inflows, household disposable funds mostly refer to regular and occasional income from employment and old-age, disability and family pensions. Income from permanent and occasional freelance activities and net income from agriculture account for a significantly smaller part. However, the significant growth of net income from agriculture (by around 75%) corresponds with the growth of individual producers' income, registered in disposable income inflows.

In terms of consumption, around two-thirds of household used assets account to food and non-alcoholic beverages, clothes and footwear, housing, household furnishings and utilities. Repayment of loans account for around 4% of used assets and register a growth compared to the previous year, which confirms the increased households' indebtedness. The ratio between used and available household assets[69] in 2017 is almost unchanged and for the second consecutive year used assets do not fully absorb the available asset, which creates room for higher savings.

[69] Differences in the level of available and used assets and the appropriate ratio between these two categories derive from the households sample used in the survey. Households covered in the 2017 sample are not the same as in the previous year. Namely, households surveyed in 2017 registered higher income and at the same time were more inclined for consumption, assessed through higher level of available and used assets.

Chart 35
Annual change rate of inflow and outflow components (left) and contribution of inflow and outflow components (right) to the growth of disposable income

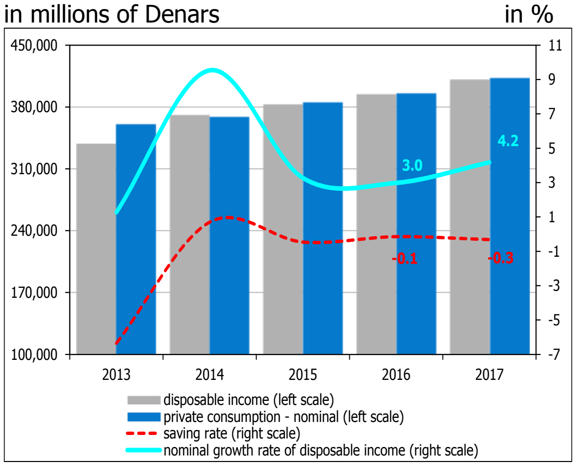
in % | in %



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

Chart 36
Disposable income, private consumption and savings rate of households

in millions of Denars | in %



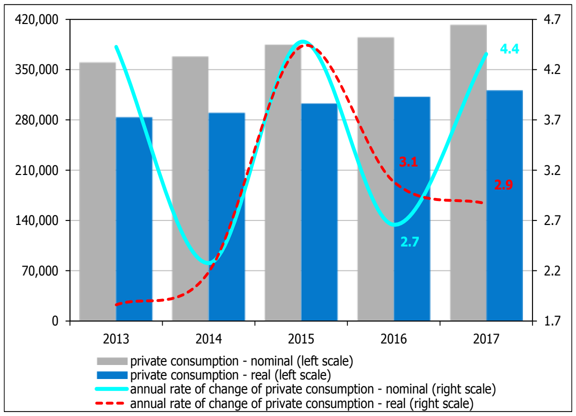
Source: SSO and NBRM calculations based on data from SSO, MF and CSD.

The dynamics of disposable income determines the capacity for household savings, as set by the so-called savings rate[70], which shows the proportion of disposable income which will remain for saving, after the settlement of private consumption. The savings rate maintains a negative value[71] for a certain period of time suggesting that the disposable income is not sufficient to fully cover household consumption. The further increase of the negative savings rate in 2017 is based on the rapid growth of private consumption from the growth of the disposable income.

One of the factors that have a critical impact on the household indebtedness growth is the consumption in this sector. Namely, household consumption registered a solid annual growth, making the highest contribution among all domestic consumption components to the overall GDP growth. The growth of personal

[70] Household savings rate = (disposable income - private consumption) / disposable income.
[71] Despite the accelerated increase of household deposits in banks, the negative value of the savings rate may derive from the fact that, in absence of the data for disposable income in the official statistic it is determined based on the internal calculation of the National Bank. In addition, part of the data which is not officially available is assessed and also the probability for some components which cannot be assessed may not at all be included in the disposable income. Hence, the determined disposable income is not exhaustive and its structure may lack certain components. The possible absence of some important components underestimates the amount of disposable income, and therefore the disposable income may be lower than private consumption and the savings rate may be negative.

Chart 37
Nominal and real private consumption and their annual growth rates
in millions of Denars in %



Source: SSO (State Statistical Office)

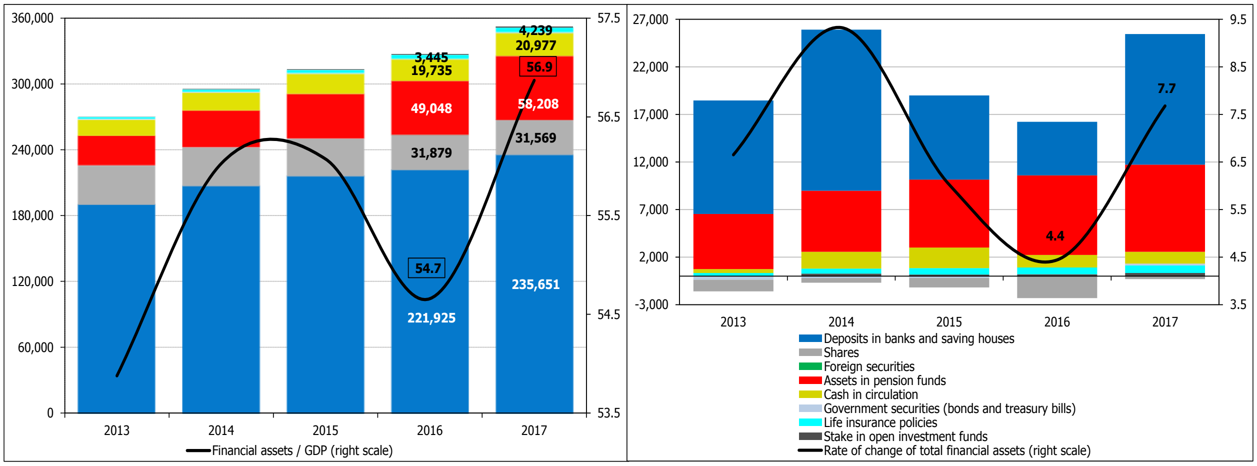
consumption is supported by favorable developments of the disposable income, in terms of wages, pensions and higher inflows based on private transfers, as well as solid credit support to this sector. The solid household consumption also derives from the increased consumer sentiment amid favorable expectations in terms of the general economic situation, unemployment, saving possibilities, as well as expected consumer financial situation[72].

1.3 Financial assets of the household sector

Financial assets of the household sector in 2017 increased rapidly, with a growth rate which exceeds the average for the post-crisis period 2010-2017 after its reduction to historic lowest in the previous year. Consequently, the share of financial assets in the GDP increased. Most of the financial assets growth was due to household investments in deposits (54.6%) and private pension funds (36.4%). The contribution of households deposits increased amid stabilizing the expectations of this sector, after the reduced contribution of this financial assets' component in the previous years was caused by the unfavorable developments in nearly two-year unstable political period. Household assets in pension funds[73] are an important component of financial assets[74], despite their continuous growth deceleration in the past five years and reduction below 20%. The absolute change of assets in pension funds in 2017 was similar as in 2016, when it exceeded the annual change of household deposits. Investments in shares declined, which corresponds with relatively weak activity in the capital market in the country despite the positive movements registered in 2017 and increased investment alternatives for households by joining the Banja Luka and Sarajevo Stock Exchange on the SEE Link platform[75]. The SEE Link system for order-routing now supports trading in a total of seven markets with over 1,200 tradable securities.

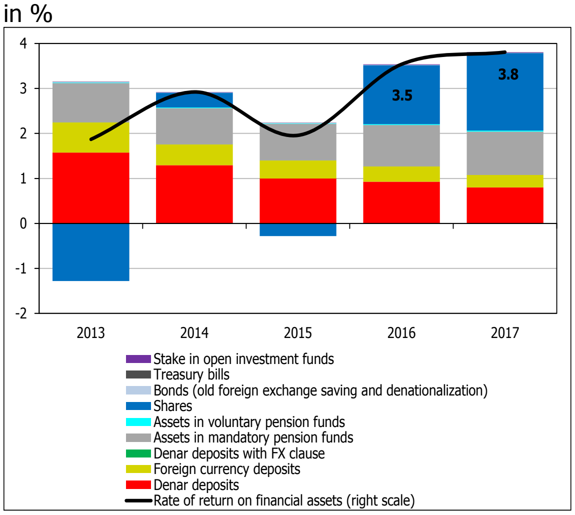
[72] According to the results of the consumer confidence survey. Source: European Commission's consumer sentiment survey.
[73]The relative increase of household shares in the open-end investment funds and life insurance policies exceeds the assets increase in pension funds, but their joint share in household financial assets is 1.5%.
[74]Clarification of certain financial assets components: 1) Cash in circulation - 70% of cash in circulation (outside banks) are included in households' financial assets; 2) Shares - Natural persons' investments in shares are the sum of listed and unlisted shares in the stock exchange, at par; 3) Life insurance policies - The amount of assets covering the mathematical reserves of insurance companies on the respective cut-off date is taken as an approximation for households' claims based on life insurance policies; 4) Foreign securities - Stock of natural persons' investments in foreign securities is approximated through the difference between inflows and outflows of transactions carried out through the SEE Link platform for investing securities abroad, performed through international payment operations. These transactions were made through brokerage houses in the Republic of Macedonia.
[75]The SEE Link platform currently supports trading securities in a total of seven markets with total market capitalization value of USD 52 billion, where, in addition of the three founding stock exchanges (Macedonian, Zagreb and Sofia) there are four other stock exchanges (Belgrade, Ljubljana, Banja Luka and Sarajevo).

Chart 38
Household financial assets (left) and annual change rate by component (right)
in millions of denars in % in millions of denars in %



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

Chart 39
Rate of return on financial assets and rate of return on each component in the total return
in %



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

The rate of return on household financial assets[76] increased by only 0.3 percentage points as a result of the capital gains[77] from investing in shares. Despite the cut in interest rates on denar and foreign currency deposits and rates of return on invested assets in mandatory pension funds, these components[78] still play a significant role in defining the return on total financial assets at the end of the year. Yet, amid decreased deposit interest rates and lower return of invested assets in mandatory pension funds, part of the households seek alternative ways of saving, such as investments in voluntary fully funded pension funds, life insurance policies or shares in open-end investment funds[79]. Analyzed by instrument, investments in shares, funds in mandatory and

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[76] The calculation of the rate of return of financial assets does not include the rate of return on life insurance policies due to the hypothetical nature of this rate i.e. its conditionality occurrence of a particular risk event. The return of households from life insurance policies are actually the assets that insurance companies will have to pay to insured based on claims or occurrence of a risky event determined by the age of the insured and contract content, and in accordance to the mortality tables of individual insurance companies. The calculation of the return on financial assets does not include household investments in continuous government bonds due to their small share (0.001%) in the ownership structure of the bonds.

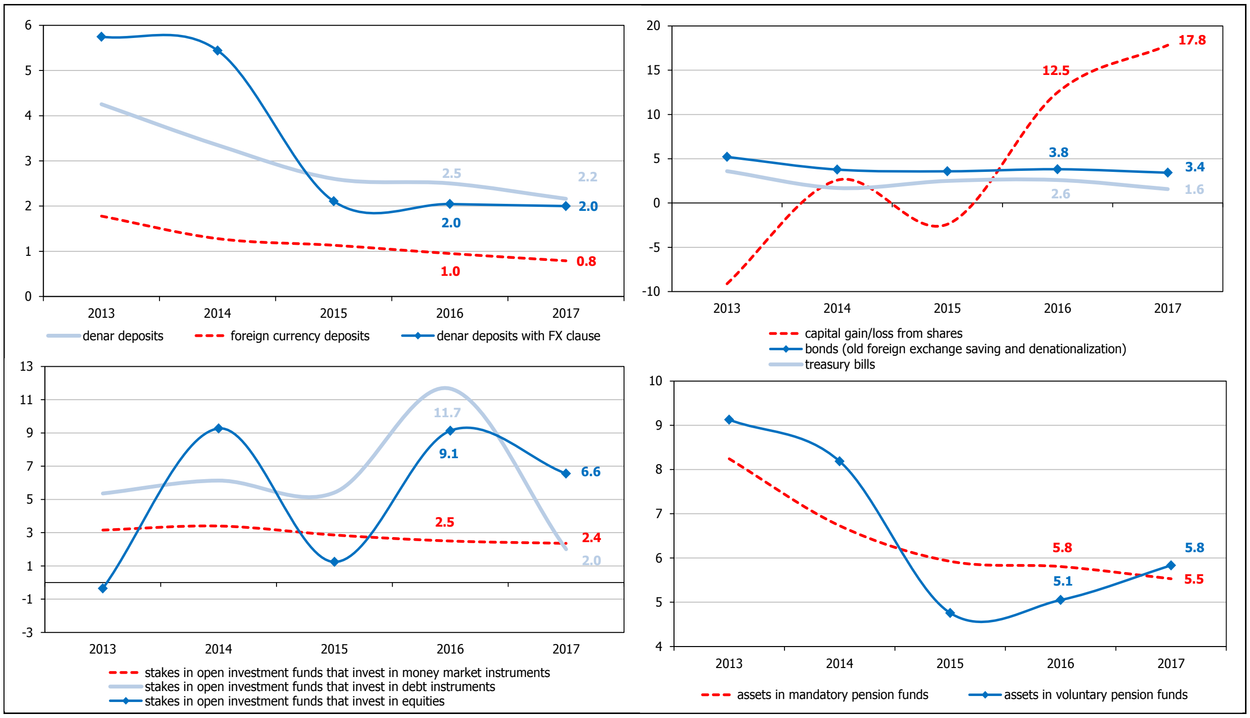
[77] The annual rates of capital gain/loss are calculated on the basis of the annual change in the market capitalization of shares.

[78] The rate of return on treasury bills is calculated as the average of interest rates on which the treasury bills were issued on the primary market for that particular month. The annual rate of return on denationalization bonds to maturity traded on the stock exchange represents the rate of return of denationalization bonds with a five-year residual maturity.

[79] Household investments in shares of open-end investment funds also register reduced rates of returns, which is particularly pronounced in funds that invest in debt instruments, since this type of investment funds registered a double-digit rate of return in the last year.

voluntary fully funded pension funds[80] и and shares in open-end investment funds[81] generated the highest annual rate of return. However, compared to the previous year, an upward shift in the rate of return was only registered in investments in shares and assets in voluntary funds.

Chart 40
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.

[80] The annual nominal rate of return of mandatory and voluntary fully funded pension funds is calculated on the basis of weighting the rate of return of the individual funds to their net assets.
[81] The nominal rate of return on open-end investment funds and individual types of investment funds (cash, equity and debt) are calculated using the weighted average daily selling price of shares of each investment fund, where the share of each fund in the net assets of investment funds i.e. individual types of investment funds is used as a weight.

2. Corporate sector

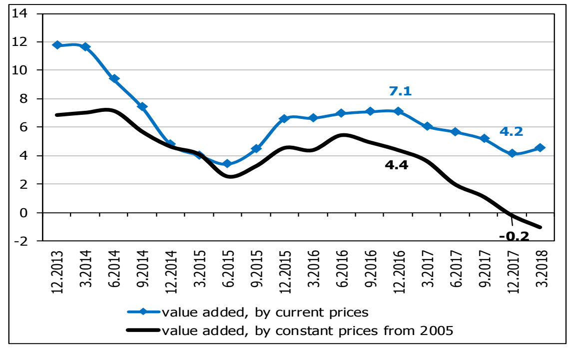
In 2017, despite the unstable domestic political environment, the domestic corporate sector registered better performances. On the one hand, this may be connected with the changes in the structure of domestic enterprises i.e. higher share of export-oriented entities, for which the developments in the global economy or international financial markets usually have a greater significance and impact on the performances, and through them the effects on the demand for their products or services. On the other hand, indicators regarding micro-entities, which usually due to the nature of selected business model are oriented to primarily work in the domestic market, for several years in a row show weak operational success and negative business activity results. However, we should be cautious regarding the accuracy and interpretation of the presented financial reports of micro-entities, since the gray economy phenomenon is usually far more prevalent precisely among these entities. Also, differences between indicators for subjects grouped by individual predominant activities are evident, which are mainly explained with the differences according to the level of business risk of the activity, operations heterogeneity or idiosyncratic elements associated with the business model selection by individual entities. The better performances of the corporate sector (according to the financial reports) amid reduced value added from the sector, leads to the conclusion that the improvement is mainly due to larger companies, above all the new production capacities.

The growth of the domestic corporate sector debt continued in 2017, but slower compared to 2016. At the same time, in 2017, for the first time after 2010, there is a reduction in the net indebtedness of the corporate sector towards external creditors, primarily due to slightly intensified growth of claims from domestic enterprises towards non-residents, which was mainly in the form of long-term loans. Also, in 2017, influenced by the initial changes in the manner of forming interest rates by part of domestic banks, there were significant changes primarily in the debt structure according to the interest rate type, namely the reduction of the domestic corporate sector debt with adjustable interest rate. In addition, there is a structural shift, more precisely increase of the Denar indebtedness share and short-term indebtedness. The short currency position of the domestic corporate sector in 2017 registered a narrowing. The favorable costs for financing remained an important driver of the domestic corporate sector performances, as confirmed by the continuation of the reduction trend of interest rates on loan approved by domestic banks in 2017, followed with further narrowing of the interest rate spread of loans granted to the domestic corporate sector compared to key interbank interest rates. Given the increase in the likelihood for changes in the key interest rate of the European Central Bank, in the upcoming period and amid already started monetary policy tightening by US Federal Reserves, it is of a great importance that those domestic enterprises that rely their operation on interest-sensitive and short-term debt financing, undertake activities for determining the size of the debt position to the level that will not jeopardize their operation amid potential changes in the key interest rates or risk premiums embedded in their cost for financing by creditors.

3. Corporate performance

The economic activity stagnation in 2017 was followed by a decrease in the annual changes of the value added[82] growth of the domestic corporate sector[83]. Thus, the value added of the corporate sector, expressed at current prices registered an increase of 4.2% at the end of 2017, which is a slowdown by 2.9 percentage points compared to the previous year. On the other hand, value added movements of the corporate sector calculated through the constant prices of year 2005 registered an annual decline of 0.2% mostly due to the decline of the value added of the construction activity. The domestic uncertain developments have an inevitable negative reflect on economic agents' perceptions and consequently their business, investment or consumer expectations.

Chart 41
Annual rate of change of the corporate sector value added
in %



Source: State Statistical Office and calculations of the National Bank of the Republic of Macedonia.
Note: The calculation is made using data at an annual level.

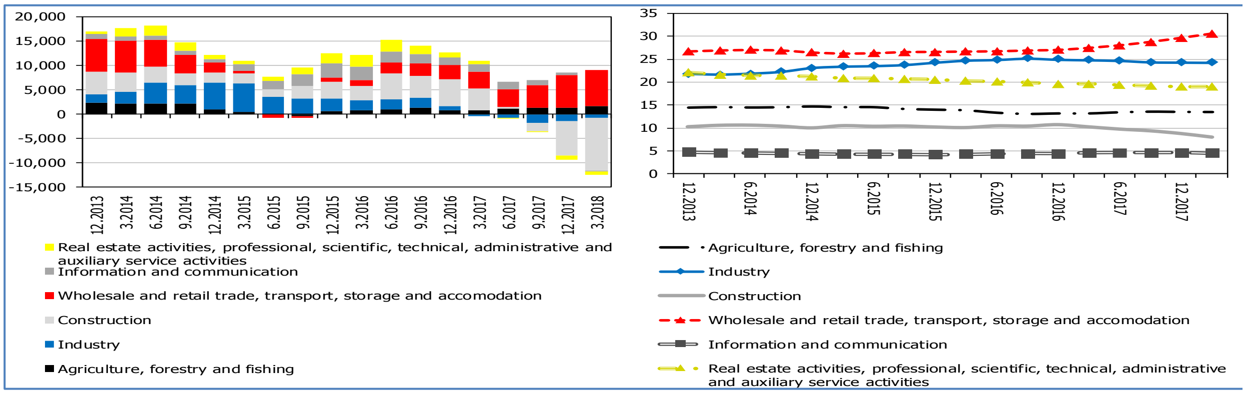
Observed by activity structure, the construction[84] made the largest negative contribution to the annual dynamics of corporate sector value added, while the wholesale and retail trade, transport, storage and tourism made a positive contribution in the formation of the growth of value added. Hence, the share of construction in the formation of the corporate sector value added in 2017 registered a decline at the expense of trade, whose share registered an accelerated growth.

[82] The Report uses preliminary data on the value added of the corporate sector for 2016 and estimated data on the value added of the corporate sector for 2017, disclosed by the State Statistical Office in June 2018.

[83] Corporate sector includes companies and sole proprietors whose main activity, according to the National Classification of Activities (NCA), 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.

[84] For more details about the contribution of activities to the structure of value added of the corporate sector, their absolute and relative growth and their contribution to the annual growth, both at current and at constant prices since 2005, see Annexes attached to this report.

Chart 42
Breakdown of the growth of corporate sector value added, by activity according to prices from 2005 (left) and value added structure, by activity of the corporate sector at current prices (right)
in %



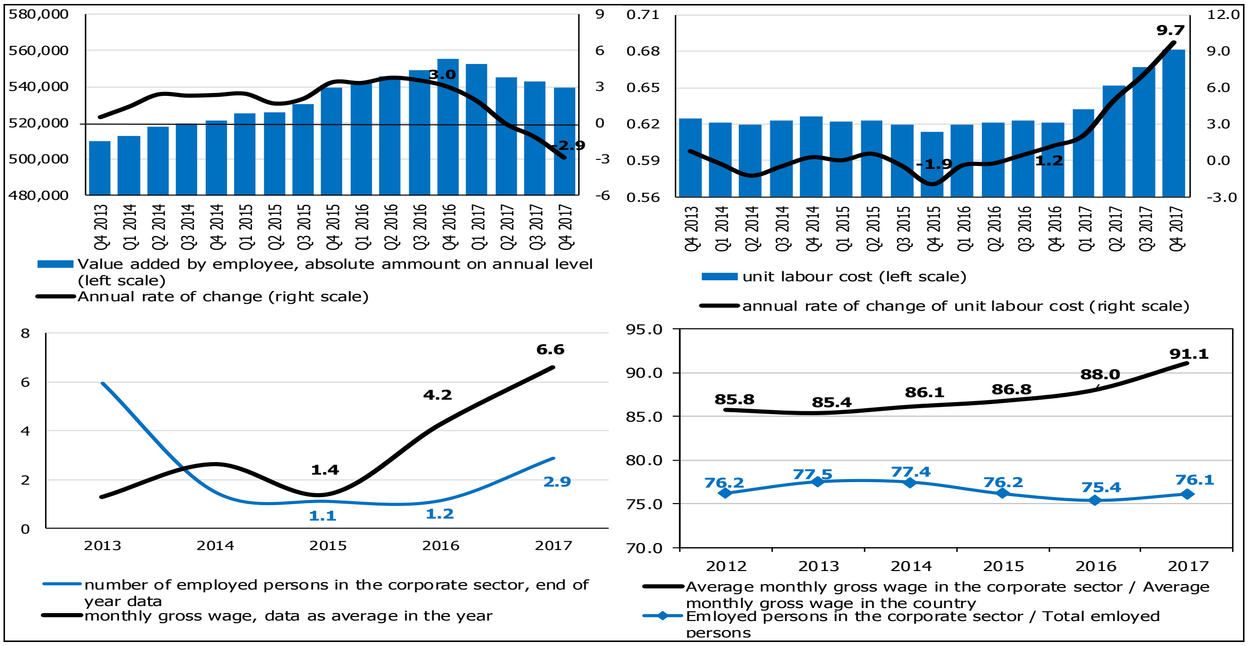
Source: State Statistical Office.

Maintaining the competitive ability of the international and domestic market is very important for the domestic corporate sector, given the competition it faces and objective factors that limit the possibility for restructuring in terms of changes in the the market conditions. Hence, **labor unit cost dynamics is extremely important for the domestic corporate sector**, as one of the key factors of production, but also due to the need for maintaining the ability to respond to challenges from the competition. A deteriorating trend of labor productivity indicators was registered in 2017. Thus, on an annual basis, the value added by employee on a corporate sector level[85] registered a decline by 2.9% amid further growth of employment and stagnation of economic activity, while labor unit costs increased by 9.7% mainly due to the growth of 6.5% of average gross wages paid to the corporate sector in 2017. The role of the corporate sector in terms of the developments and movements on the domestic labor market during 2017 strengthened, perceived thought slightly faster growth of average number of employed persons in the corporate sector of 2.9% compared to the growth of 1.2% during 2016. The share of the corporate sector in the total number of employed persons in the Republic of Macedonia was relatively high and reached 76.1% at the end of 2017. At the same time, in 2017, the corporate sector fully conditioned the growth of the total number of employed persons in the country, primarily due to the growth of persons employed in construction of

[85] Data on the movement of value added per employee and unit labor costs per sector are presented in Annex attached to this report.

12.5% and industry of 7.7% despite the decline in the value added of these activities. Weighted average gross wages of the employees in the corporate sector[86] in 2017 (of Denar 30,643) are lower than the average gross salary calculated for all employees in the country (Denar 33,687).

Chart 43
Movement of value added per employee (top left), movements of labor unit costs of the corporate sector (top right), change in the number of employment and wages (bottom left) and corporate sector importance indicators for the domestic labor market (bottom right)
in % and in denars



Source: State Statistical Office and calculations 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.

However, it should be noted that in 2017, the ratio between average gross wages of employed persons in the corporate sector with an average gross salary calculated for all employed persons in the country increased from 87.6% to 91.0%. This is due to the intensified growth of average gross wages of the corporate sector by 6.5% on an annual basis compared to the annual growth of average gross wage of 2.6% for all employed persons in the country.

The entrepreneurial initiative in the Republic of Macedonia perceived through annual change rate of the new formed economic entities registers a mild decline for the second consecutive year. The share of newly incorporated legal entities in the total number of active legal entities[87] continues to be at a stable level of slightly above 13%. The legal provisions for treating inactive entities[88], for the second consecutive year point to the **reduction of the**

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[86] The number of employees by activity that comprise the corporate sector is used as weight in the calculation. The average is calculated for gross wages paid during the whole of 2016. The calculation of weighted average gross salary of the corporate sector employees was made by the NBRM using data on average salaries, by activity and the number of employees, by activity, published by the State Statistical Office .

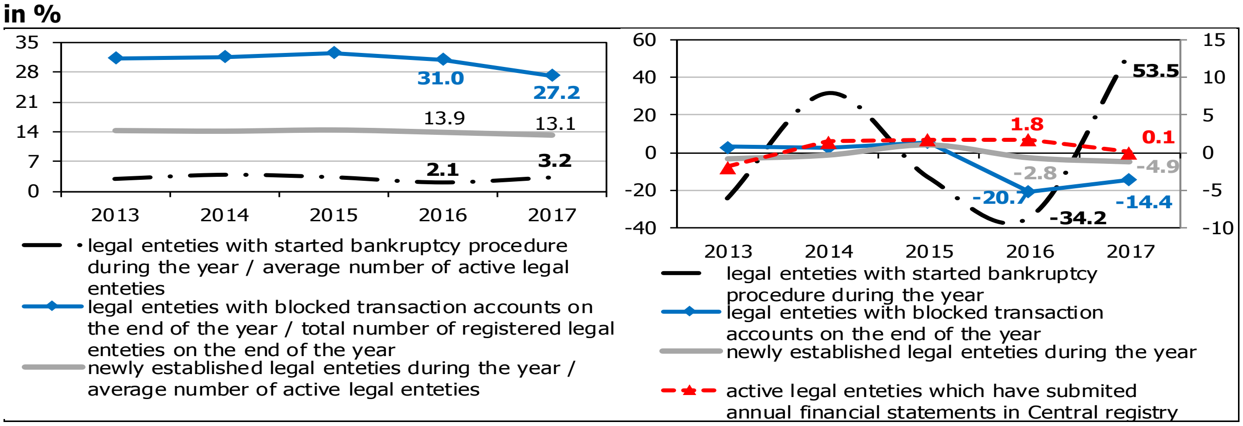
[87] At the end of 2017, the total number of non-financial legal entities registered in the Central Registry of the Republic of Macedonia was 111,307 (in 2016: 113,978 entities). Of these legally and formally existing entities, only 60,001 entities (59,959 entities in 2016) submitted annual accounts to the Central Registry, where 53,412 entities (53,446 entities in 2016) are included in the corporate sector activities.

[88] 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

number of entities with blocked transaction account. Thus, in 2017, the number of entities with blocked transaction accounts declined by 14.4%. Existing economic entities registered a slightly higher market exit rate, primarily through the increase of the employed person with started bankruptcy procedure. Hence, the bankruptcy rate of bankrupted entities[89] increased from 2.1% to 3.2% in 2017.

Total assets of the corporate sector in 2017 registered a modest growth compared to the previous years, which can be considered as a result of business agents' restraint from adopting investment decisions in conditions of political uncertainty. Hence, **the share of total assets of the corporate sector in the gross domestic product in 2017 decreased**. Analyzed by size[90], most of the domestic corporation sector are classified as small and micro entities whose joint share is 97.8% of the total number of entities of the corporate sector which have submitted final accounts to the Central Reigstry in 2017.

Chart 44
Relative importance (left) and annual growth (right) of newly incorporated, bankrupted and legal entities with blocked accounts
in %



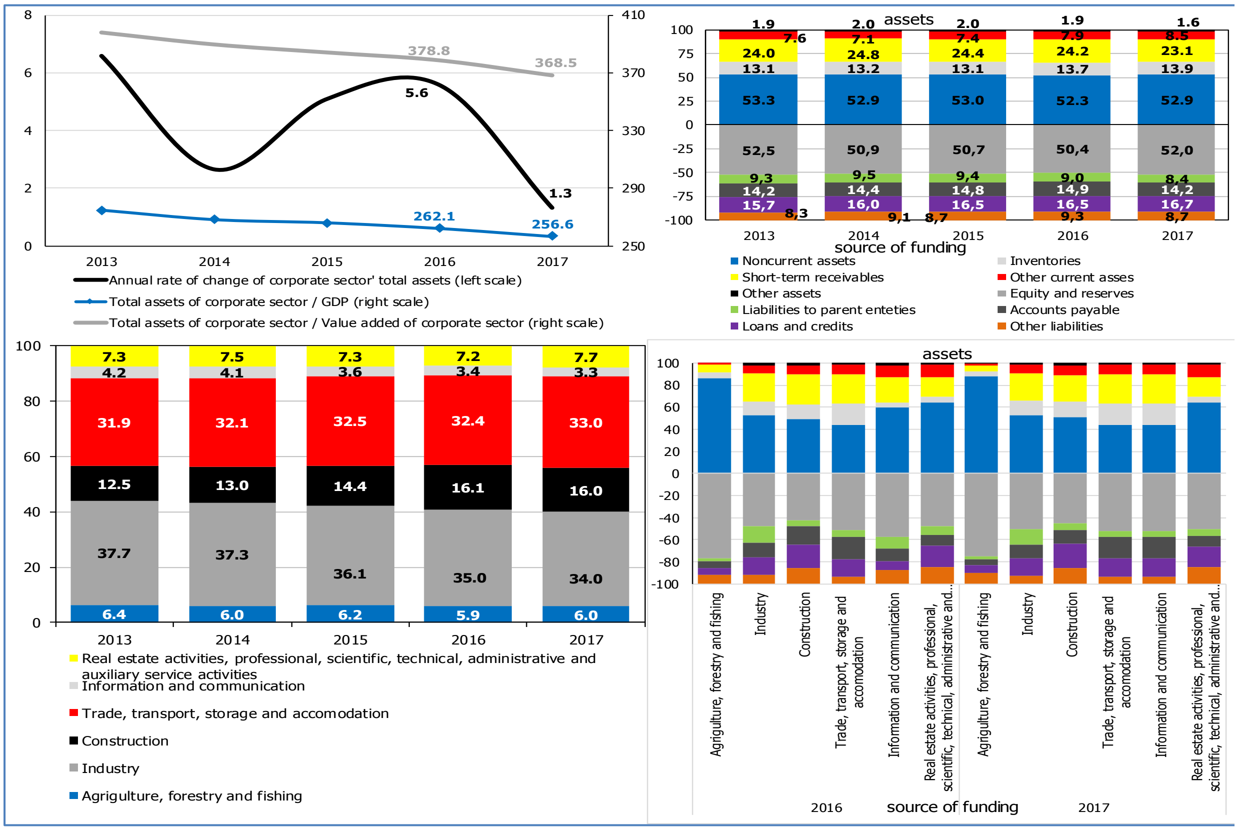
Source: Central Registry of the Republic of Macedonia and National Bank of the Republic of Macedonia for the number of blocked accounts

possibility of deregistration of such entities from the records of the Central Registry, including in case of failure to submit annual accounts.

[89] The rate of bankrupted legal entities is the ratio between the number of legal entities that entered into bankruptcy during the year (which is data from the Central Registry of the Republic of Macedonia) and the average annual number of active legal entities, which is the average of the number of active legal entities (registered entities that submitted an annual account to the Central Registry of the Republic of Macedonia) at the end and the beginning of the respective calendar year.

[90] 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. The distribution of the entities by activity, the size and the financial result are presented in the Annexes attached to this report, including the business indicators.

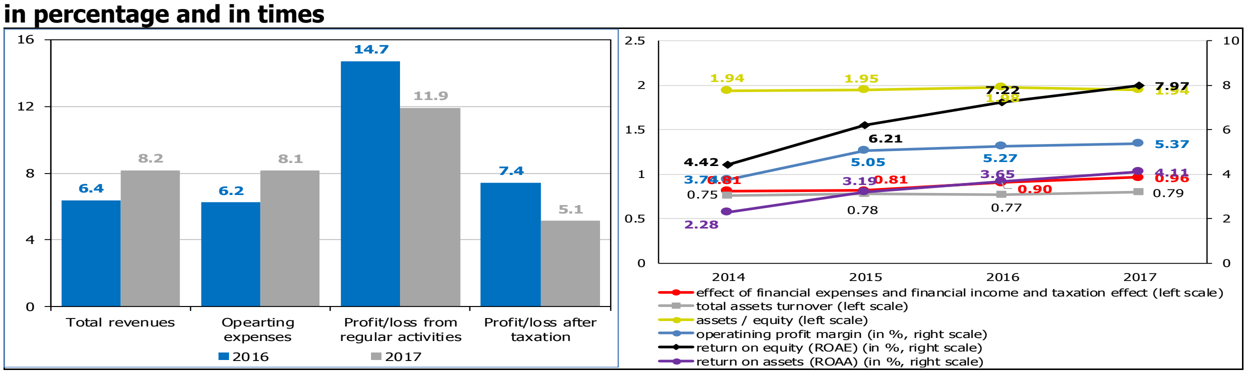
Chart 45
Relative importance and change of corporate assets (top left) and structure of assets and funding sources of the corporate sector, by item (top right), structure of corporate assets, by activity (bottom left) and structure of assets and funding sources, by activity (bottom, right)
in %



Source: The Central Registry of the Republic of Macedonia for assets and funding sources and State Statistical Office for GDP and value added.

In 2017, in the structure of the sources of funding of the domestic corporate sectors there was an increase of the share of capital and reserves and modest increase of liabilities from loans and credits. On the other hand, the structure of assets registered a modest reduction of the share of short-term claims. As expected, there are differences in the structure of assets and

Chart 46
Annual change of selected items from aggregate corporate income statement (left) and decomposition according to the DuPont analysis of indicators of return on average equity (ROAE) and return on average assets (ROAA) (right)
in percentage and in times



Source: Central Registry of the Republic of Macedonia.

sources of funding by certain activity, which is mainly due to the nature of activities themselves, but also to the business models of a predominant activity. Thus, it is evident that agriculture, forestry and fishing and and activities related to real estate, professional, scientific, technical, administrative and auxiliary services have reported a significantly higher share of non-current assets[91] compared to other activities. At the same time, agriculture, forestry and fishing relied on the significantly higher share of capital and reserves in the structure of sources of funding. Total income of corporate sector[92] registered an annual growth of 8.2% in 2017 which is mainly due to income from sales with a growth of 8.1%. Operating expenses also registered a similar growth of 8.1%. Hence, net gains from the domestic corporate sector and gains from regular operations (gains before financial expenses and taxes, as an approximation of operating profit) registered a growth of 11.9% and 5.1% in 2017, which compared to 2016 is a decline of the growth rates by 2.8 and 2.3 percentage points, respectively.

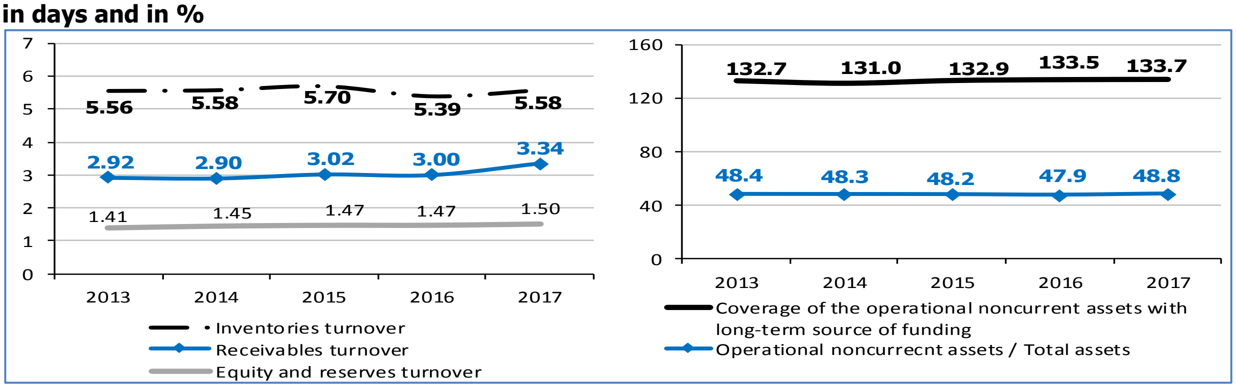
The corporate sector continued to improve its profitability in 2017. Namely, the past three-year trend of gradual increase of the indicators of return on average assets (so called ROAA) and the return on average equity (so called ROAE) also continued in 2017, registering an annual increase of these indicators by 0.46 and 0.75 percentage points, respectively. The analysis of the causative links between individual financial indicators that determine the profitability of the domestic corporate sector (so called DuPont analysis), shows that the improvement of indicators of return for 2017 is equally conditioned from changes in the operational and business performance of enterprises, as well as from the increased turnover of assets and positive effect of net costs for of financing and effective taxation. Thus, the

[91] Non-current assets include tangible assets, intangible assets, property investment, long-term financial assets and long-term claims.
[92] 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 deferred tax income. Sales income has the largest share in the structure of total income (above 95%).

operational profit margin, changes in the turnover of total assets and effect of costs for financing and taxation[93] register an increase compared to the previous year, which were directly reflected on the improvement of the return of assets i.e. return of equity and reserves. Only the ratio between assets and equity as a measure for the so called financial leverage[94] of the corporate sector in 2017 registered a moderate decline, contributing in the decrease of the indicators of return. Analyzed by size, the improvement of profitability indicators is slightly more expressed among corporate sector entities that are classified as large or small while by aspect of predominant activity[95], all activities except construction (which registered a decline in activity) register better profitability indicators, this being more noticeable among entities from the information and communication activity. More than one-thirds of the total number of corporate sector entities in 2017 operated at loss.

In 2017, an increase in the turnover of different categories of assets and consequently in the **efficiency indicators of using these assets** is registered. This is especially evident in the days of sales outstanding that were reduced from 122 in 2016 to 109 in 2017 and days required for payment of short-term liabilities that were reduced from 178 days in 2016 to 164 days in 2017. A slightly modest decrease was registered in days of inventory on hand (from 68 to 65 days). By improving assets efficiency indicators, the net operating cycle[96] was shortened in 2017. The reduced days of sales outstanding have the largest share in the reduction of net operating cycle of the domestic corporate sector. The scope for interpretation and qualitative assessment of changes in the indicators for managing certain asset categories is limited, due to the fact that their movements, especially current assets, are strongly influenced by the selected accounting policies of the enterprises, and in particular whether the presented accounting

Chart 47
Selected corporate sector turnover indicators (left) and significance indicators of the operational non-current corporate assets (right)
in days and in %



Source: Central Registry of the Republic of Macedonia. Turnover indicators are calculated using the average values of the corporate sector balance sheet for the respective calendar years.

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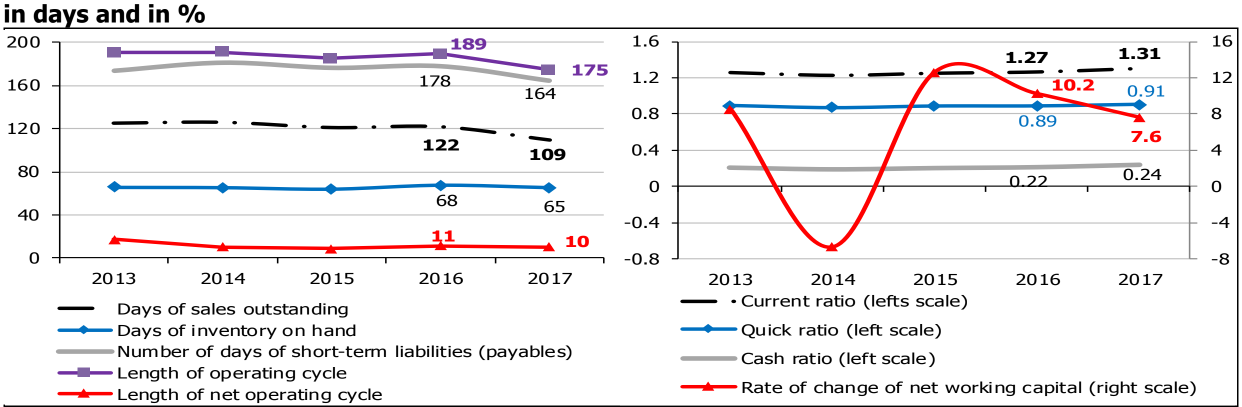
[93]The effect of the costs of financing and taxation is the ratio between the net profit after tax and the approximate operating profit, obtained on the basis of data submitted with the annual accounts to the Central Registry of the Republic of Macedonia.
[94]The use of financial leverage (i.e. presence of debt financing) by definition means a greater change in the profit per unit change from the previous sales, compared to the change of profit that will arise in the absence of debt financing. Financial leverage means that the individual enterprise has interest expenses in its income statement and as a result to that has adopted a higher financial risk while operating, which actually derives from the difference in the structure of sources of financing (interest-baring debt versus equity) of the enterprise.
[95]The corporate operations ratios, as measured by the main activity, by size, by operating result and whether the domestic banks have credit exposure towards them, are presented in Annexes attached to this report.
[96]Net operating cycle is the average time from the payment to suppliers to the collection of claims on customers, including the time needed for transforming raw materials into finished products through a production process.

values really reflect the fair value of different asset types. This is especially important for recognizing and valuating the current assets, primarily on inventories (if any obsolesce) and claims (regarding their uncollectability). However, given the relatively modest level of turnover indicators, there is room for further increase, and thus improvement of the process of asset management by business entities. Net operative assets[97], are fully covered by long-term sources of funding.

As a result to the changes, in order to increase the turnover of different categories of current assets and liabilities, **liquidity ratios of the domestic corporate sector registers a slight improvement** for the third consecutive year. However, liquidity ratios remain at a relatively moderate leve[98]l, thus the improvement of operational performance in domestic enterprises, reflected by improved assets management efficiency, shall directly contribute to their further increase. Differences in the liquidity ratios annual change levels among individual entities by activity, size or result from operation remain especially evident in the domestic corporate sector. In 2017, the improvement of the liquidity ratios was more expressed among

Chart 48
Days required for transformation of the items from net working capital (left) and liquidity ratio of the corporate sector (right)
in days and in %



Source: Central Registry of the Republic of Macedonia. Turnover indicators are calculated by using the average values of corporate sector balance sheet for the respective calendar year.

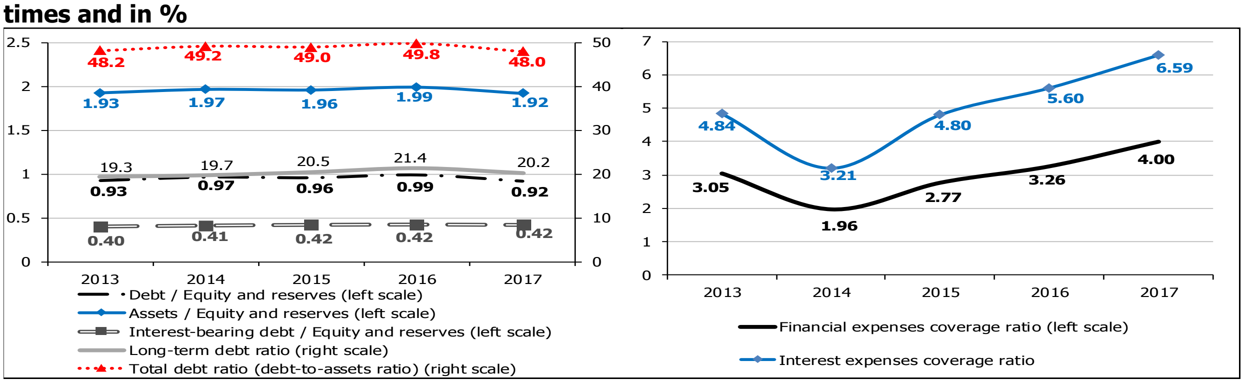
entities with main activities in industry and information and communication, while among entities with main activities agriculture, forestry and fishing and activities related to real estate; professional, scholar and technical activities and administrative and auxiliary services; administrative and support service activities, liquidity ratios in 2017 decreased. The aggregate net working capital[99] of the domestic corporate sector increased by 7.6% in 2017 which was primarily due to the intensified decrease of different categories of short-time liabilities amid moderate increase of different non-current asset categories.

Corporate sector debt indicators decreased in 2017. This is confirmed by the reduced reliance of the corporate sector on debt financing i.e. reduction of total debt. The long-term debt ratio with a decrease of 1.2 percentage points registers the greatest change compared to the previous year. Equity and reserves debt ratio, as well as the ratio of total

[97]The sum of tangible assets, intangible assets and investments in real estate is considered non-current working assets.
[98] The rule of thumb, which is considered satisfactory, usually uses 1 for moment liquidity, 2 for current liquidity.
[99] Net working capital is the difference between current assets and current (short-term) liabilities of companies.

assets with equity and reserves, as key indicators for financial leverage, are slightly reduced by 0.07 points on an annual basis. The indicators for coverage of interest expenses and financing expenses with profit from normal business activities[100] continue to increase for the third consecutive year, due to the increased corporate sector profitability in 2017 and effects from gradual reduction of the debt financing price.

Chart 49
Movement of selected corporate debt indicators
times and in %



Source: Central Registry of the Republic of Macedonia.

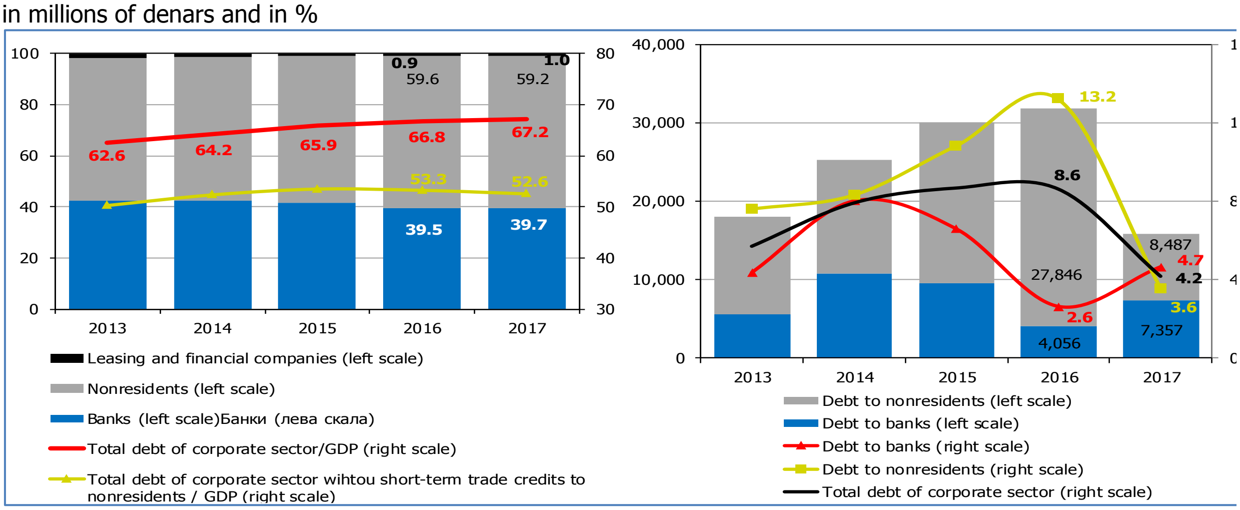
Debt ratios by activity are higher among construction entities, although they registered a certain reduction in 2017, followed by real estate activities, professional, scholar and technical activities and administrative and auxiliary services; administrative and support service activities. Information and communication registered the largest decline of 3.4 percentage points in the total debt indicator compared to the previous year. On the other hand, the relatively low indebtedness indicators are inherent for agriculture, forestry and fishing, which is the only activity which registered a moderate increase of the total indebtedness indicator of 1.1 percentage points in 2016. At the same time, significant differences in indebtedness ratios are registered between indebtedness indicators for entities grouped according to the financial result they have showed in 2017 as well as according to their size. Larger indebtedness is registered in entities which operate at loss, as well as in mico-size entities.

[100] Operating profit (profit from normal business activities) is calculated by taking operating expenses away from gross income of the domestic corporate sector.

4. Indebtedness of the corporate sector

The total debt[101] of the domestic corporate sector in 2017 registered an annual growth, but at a noticeably slower pace compared to the previous year, which can be considered as an expected phenomenon given the faster growth registered in 2016, but also due to the effects of the unstable political environment on the expectations of economic agents. The annual growth rate of the debt of the corporate sector of 4.2%, amid stagnation in the economic growth, increased **its share in GDP at the end of 2017 by 0.4 percentage points** compared with the end of the last year, reaching a level of 67.2%. If the debt of the domestic corporate sector is presented without short-term trade credits to non-residents[102], which should have a role of an instrument for financing trade and often do not include interest calculation, then the ratio of the domestic corporate debt to the gross domestic product at the end of 2017 is on a more moderate level and equals 52.6%. The absolute growth of the debt of the corporate sector in 2017 was equally distributed between the external component and the domestic component represented by the debt to the banks. The financing of the domestic corporate sector by issuing debt financial instruments in the financial markets, is completely absent. At the same time, also the contribution of the domestic non-bank financial institutions to the financing of the domestic corporate sector is insignificant.

Chart 50
Structure and relative share in GDP of corporate debt (left) and absolute and relative change (right), 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 2016 are preliminary data, and GDP data for 2017 is estimated data. External corporate debt data and GDP data for 2016 are preliminary data, and GDP data for 2017 is estimated data. The debt of the domestic corporate sector to domestic banks includes the cumulative amount of written-off debt, according to the banks' regulatory obligation for write-off of exposure, that have been fully booked for more than two years.

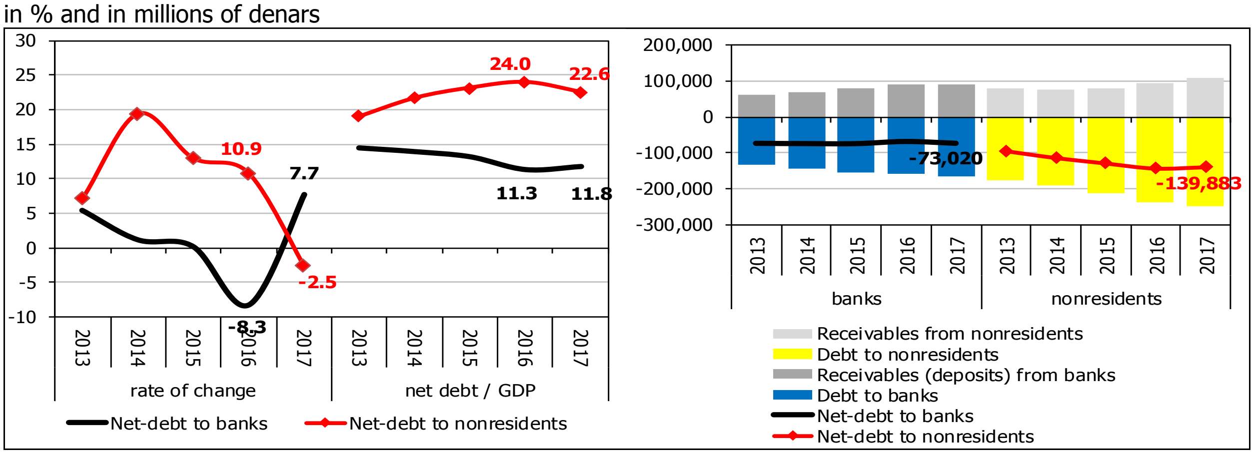
[101] For the needs of this analysis, the total corporate debt includes: liabilities to banks based on loans, interest and other claims of banks, external liabilities (non-residents), value of active lease contracts and liabilities based on active contracts with financial companies.
[102] At the end of 2017, short-term trade credits represent 21.7% of the total debt of the corporate sector and 36.7% of the debt of the corporate sector to non-residents.

In 2017, net indebtedness[103] of the corporate sector registered modest annual growth (0.8%), whereby its share in the gross domestic product compared with the end of 2016 reduced from 35.3% to 34.4%. The stagnation in the net debt of the domestic corporate sector was mainly caused by the fall in its net debt to external creditors. Namely, in 2017, claims of the domestic corporate sector on non-residents registered a significantly higher growth rate (12.7%), compared with the growth of the debt to non-residents (3.6%). Hence, also the share of net indebtedness to non-residents in gross domestic product reduced by 1.4 percentage points. At the end of 2017, the corporate sector liabilities to non-residents amounted to slightly over Euro 4 billion, while the total claims of the corporate sector on non-residents amounted to Euro 1.7 billion. Net debt of the domestic corporate sector to domestic banks, after the decline registered in 2016, increased by 6.8% in 2017. This increase stems from the faster growth in lending to the domestic corporate sector by banks in 2017 (4.7%), compared with the more modest growth of the total corporate deposits in the domestic banking system (2.4%). However, the share of the net debt to domestic banks in the gross domestic product is lower compared to the net debt to non-residents and equaled 11.8% at the end of 2017, which is an increase of 0.5 percentage points compared to the end of 2016.

Chart 51

Components of corporate net-debt (left) and growth rates and net-indebtedness to GDP ratio (right)

in % and in millions of denars

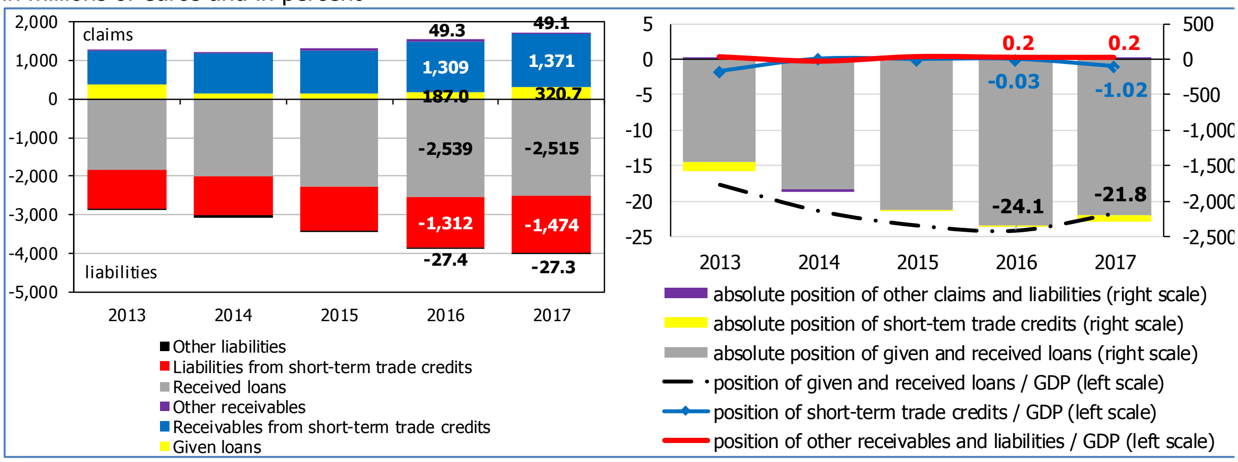


Source: National Bank of the Republic of Macedonia, Ministry of Finance and State Statistical Office.

*Note: External corporate debt data and GDP data for 2016 are preliminary data, and GDP data for 2017 is estimated data. The calculation of the net debt of the domestic corporate sector to domestic banks does not exclude the effect of the banks' regulatory obligation for write-off of the claims that have been fully booked for more than two years, i.e. the amount of the written-off debt is included in the calculation of the net corporate debt to domestic banks.

[103] Net debt of the domestic corporate sector shall be the difference between claims and debt of the corporate sector on and to domestic banks and non-residents.

Chart 52
Structure of claims and liabilities of the domestic corporate sector to nonresidents, by instrument (left) and position of the domestic corporate sector with non-residents based on type of instrument and relative to GDP (right)
in millions of euros and in percent



Source: the National Bank of the Republic of Macedonia,
*Note: Data for 2016 are preliminary, while for 2017 they are estimated.

The approved short-term trade credits[104] **have the largest share in the structure of the claims of the corporate sector on non-residents**, with a more modest share of approved loans[105] and an insignificant share of other claims. On the other hand, analyzing the **structure of liabilities of the domestic corporate sector to non-residents, the highest share was registered in loan liabilities**, followed by liabilities based on short-term trade credits. In 2017, the main driver of the growth of the foreign claims were the extended loans, with a share of almost 70% in their total growth, while in the liabilities to non-residents, the annual growth is completely due to the liabilities based on short-term trade credits, which increased by 12.3%. However, the net-position of the domestic corporate sector with external creditors mainly stems from the net-position based on the extended and received loans, which in 2017 decreased relative to the gross domestic product by 2.3 percentage points, as a result of the growth of the loans extended by domestic companies to foreign entities and the stagnation in the loans received from foreign creditors. The net position based on short-term trade credits is almost balanced, indicating that the aggregate share of the domestic corporate sector in the financing of the external trade is balanced with the role of the external trade partners as creditors.

In 2017, certain changes were observed in the structural profile of the debt of the domestic corporate sector. In terms of currency, it is notable that the Denar debt registered a pronounced absolute growth compared with 2016, i.e. 11.0% expressed as the relative change, compared to only 0.5% in 2016. On the other hand, the foreign debt still accounts for most of the total debt, but in 2017, the growth, expressed in absolute and in relative value, is reduced. The debt in denars with FX clause has reduced for three consecutive

[104] 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 works.
[105] 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.

years. In the maturity structure of the debt of the corporate sector, the annual growth rate of the short-term debt in 2017 is significantly higher, compared to the growth rate of the long-term debt. The growth of the short-term debt in 2017 was caused by the liabilities to non-resident creditors, which accounted for almost three quarters of the total growth of the short-term debt. At the same time, the sum of the non-performing and past due debt of the corporate sector has been declining for the second consecutive year, which, in circumstances of growth in the banks' non-performing exposure to companies in 2017, is actually completely due to the reduction in the past due debt. These changes in the maturity structure of the indebtedness of the corporate sector, in particular the fall in the cumulative share of the non-performing and past due debt and the modest growth of the long-term debt, to a certain extent, are also caused by the effects of the regulatory imposed write-offs by the domestic banks of the exposure that has been fully covered by allocated impairment or special reserve for more than two years[106]. Hence, the trend from the past two years of steady and moderate reduction in the share of the long-term debt of the corporate sector, at the expense of the increase in the short-term debt in the structure of debt, continued.

[106] The Decision on amending the Decision on credit risk management (Official Gazette of the Republic of Macedonia No. 223/15) required from banks to write off, i.e. transfer to their off-balance sheet record, the claims that have been fully booked for more than two years, by 30 June 2016. This requirement continues for non-performing claims that will meet the stated criterion.

Table 2
Structure and changes to components of the domestic corporate debt

	Type of debt	Structure (in %)			Absolute change (in millions of denars)			Relative change (in %)		
		2015	2016	2017	2015	2016	2017	2015	2016	2017
currency	Denar debt	22.7	21.0	22.4	11,804	431	9,283	16.4	0.5	11.0
	FX debt	70.2	70.1	68.7	19,879	21,796	5,740	8.3	8.4	2.0
	Denar debt with foreign exchnage clause	7.0	6.2	5.6	-2,292	-1,294	-1,080	-8.1	-5.0	-4.4
	Cummulative of regulatory imposed write-offs to domestic banks	n.a.	2.7	3.2	n.a.	10,807	13,541	n.a.	n.a.	n.a
maturity	Short-term debt	32.7	32.9	34.8	595	11,253	13,106	0.5	9.3	9.9
	Lonf-term debt	60.3	60.0	58.0	27,244	18,024	1,681	14.0	8.1	0.7
	Other debt (past due and nonperforming)	7.0	4.4	4.0	1,551	-8,344	-844	6.4	-32.3	-4.8
	Cummulative of regulatory imposed write-offs to domestic banks	n.a.	2.7	3.2	n.a.	10,807	13,541	n.a.	n.a.	n.a.
type of interest rate	Debt with fixed interest rate	24.4	27.8	32.9	5,680	15,387	17,727	8.6	21.4	20.3
	Debt with floating interest rate	29.5	25.6	29.7	7,053	-6,760	14,768	8.8	-7.8	18.4
	Debt with administrativly reviewable interest rate	42.0	39.0	28.6	12,331	-1,072	-31,157	11.1	-0.9	-25.5
	Other - debt without interes	4.0	4.3	4.7	2,087	1,664	1,488	21.4	14.0	11.0
	Cummulative of regulatory imposed write-offs to domestic banks	n.a.	3.2	4.0	n.a.	10,185	12,859	n.a.	n.a.	n.a.

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: 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 the principal of loans to nonresidents. The item for the cumulative for the debt written off by the domestic banks presents that part of the debt of the domestic corporate sector, which was written off by banks in the course of 2016 and 2017, in accordance with the regulatory obligation for write-off of exposure that has been fully covered by impairment and/or special reserve for more than two years. The structure of debt, by interest rates, takes into account only the cumulative amount written off by the domestic banks on the basis of principal of loans, in the course of 2016 and 2017, in accordance with the regulatory obligation for write-off of exposures.

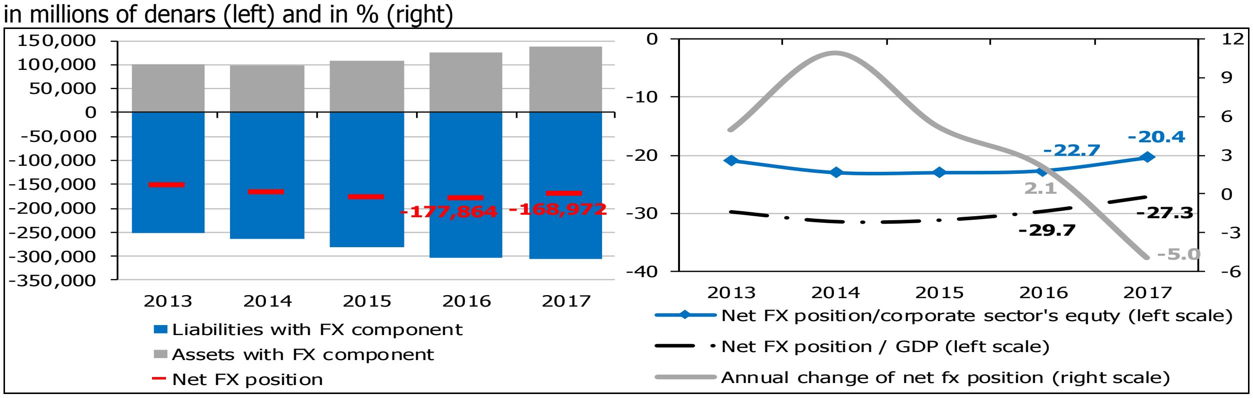
The largest changes in the structure of corporate debt in 2017 are observed in the structure by type of interest rate calculated on the principal of debt. The debt with an adjustable interest rate registered a significant decline, due to the activities that part of the banks undertook in the second half of 2017, for removing the clauses for adjustable interest rates in their new credit contracts[107]. Instead of adjustable interest rates, part of the domestic banks started using floating interest rates on new loans where the interest rate, in pre-determined intervals, is adjusted depending on the change in some selected reference interest rate (so-called variable interest rates). Given that the debt to non-residents with floating interest rates registered an annual decline in 2017 of 9.0%, this portion of the debt of the corporate sector completely grew as a result of the changes in the formation of interest rates on loans by domestic banks. In addition, domestic banks also contributed to over 80% of the annual growth of the domestic corporate debt with fixed interest rates, while the rest was due to loans from non-residents. Given that the existing debt of the domestic corporate sector with adjustable interest rates entirely results from loans from domestic banks, in the following period, it can be expected that as loans will fall due where the contracts include such clauses for unilateral change in the interest rate or as the number of banks that will change their policies and

[107] In October 2016, the NBRM sent a recommendation to the banks for increasing the level of transparency in the formation of the interest rates on loans and deposits, with an appropriate warning of the reputational and legal risks that banks take with the use of clauses for unilateral adjustment of the agreed interest rate and which expected that starting from 30 June 2017, banks, on their own initiative, will exclude the use of adjustable interest rates in the credit and deposit contracts, by adjusting practices and policies related to the manner of forming interest rates, including with additional building and increasing the capacity to manage the interest rate risk.

practices in this area, will increase, the structure of debt, by type of interest rate, will be further changed. In other words, it can objectively be expected that the structure of the domestic corporate debt to domestic banks will exclude the adjustable interest rates, whereby they will be replaced with fixed or with variable interest rates, as is actually the current structure of the domestic corporate debt to non-resident creditors.

Given the implementation of the strategy of a de facto fixed nominal exchange rate of the Denar against the Euro, **monitoring of the dynamics and changes in the exposure to currency risk of the domestic corporate sector** is critical for the financial stability of the Macedonian economy. In 2017, the exposure of the corporate sector to currency risk registered certain reduction, compared with the previous year, as shown through narrowing of its negative net currency position[108] of 5.0%. The annual change in the net currency position is primarily due to the faster growth of assets with currency component, compared to the growth of liabilities with currency component of the corporate sector, which to a certain extent is a consequence of the gradual changes in the currency structure of corporate debt and the annual decline in its net debt to non-resident creditors. The share of the negative net currency position of the corporate sector in the gross domestic product, as well as its ratio to equity and reserves of the corporate sector, decreased in 2017 by 2.4 and 2.3 percentage points, respectively.

Chart 53
Dynamics (left) and relative importance and change (right) of net currency position of the corporate sector
in millions of denars (left) and in % (right)



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

The Bank Lending Survey conducted on a regular quarterly basis by the National Bank[109] suggests a gradual increase in the credit demand by the domestic corporate sector, especially in the second half of the year, when the percentage of banks that assessed the demand as unchanged started to decline. In terms of the requirements for approval of loans

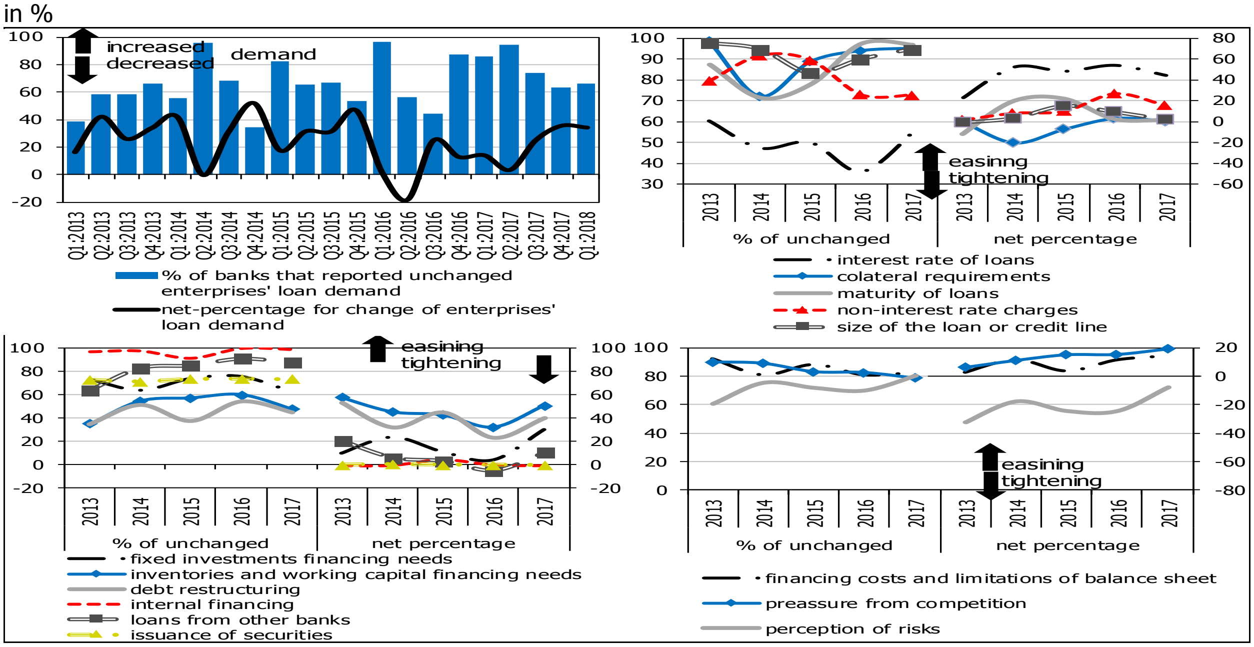
[108] Net currency position is calculated as the difference between assets and liabilities with currency component (in foreign currency and in denars with FX clause) of the corporate sector, which is positive, i.e. long, when the assets are greater than liabilities, and negative, i.e. short, when the liabilities with currency component exceed assets. 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 nonresidents. The stock of investments abroad as of 31 December 2017 is based on data as of 31 December 2016, since the data for 2017 becomes available in the second half of 2018.

[109] Surveys are conducted on a quarterly basis, and among other things, in them, banks give 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 from the individual lending surveys are available on the web site of the National Bank.

to businesses, banks, as the individually most important requirement that included easing in 2017, although on average somewhat weaker compared to 2016, emphasized the interest rate on loans, followed by the movement of fees and charges related to loans. The other terms of lending to the corporate sector on average were assessed as unchanged during 2017. From the factors[110] that determine the demand for corporate loans, during 2017 banks on average assessed three factors with a significant change, more precisely increased demand for loans by the corporate sector, as follows: the need for investments in inventories and working capital, the need for restructuring corporate debt and the investments in fixed assets. The results of the surveys during 2017 show that banks, as the most significant factor that caused a gradual change, more precisely easing of the lending conditions, emphasize the competitiveness pressure[111], followed by the impact of the cost of financing and the limits on their balance sheets[112]. At the same time, during 2017, the banks' risk perceptions associated with borrowers[113], although still on a net basis, also contribute to tightening the terms of lending to the corporate sector, however, on average, they significantly improved compared to 2016.

Chart 54
Results from Bank Lending Surveys are as follows: assessment of demand for loans by companies (up, left), assessment of the change in the terms of lending to companies (up, right), assessment of the factors affecting demand for loans (down, left) and assessment of the factors that affect the terms of lending (down, right)

in %



Source: NBRM, based on data in Bank Lending Surveys

*Note: Percentage of banks is weighted with the share of every individual bank in total loans to enterprises of particular date. Assessment of the factors is presented as average percentage of banks that responded that the given factor maintains the level of demand unchanged in all surveys of the specific year. Net-percentage is the difference between banks that reported increased demand and reduced demand for loans by companies, i.e. between banks that reported easing and tightening of the terms of lending to companies.

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[110] 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.

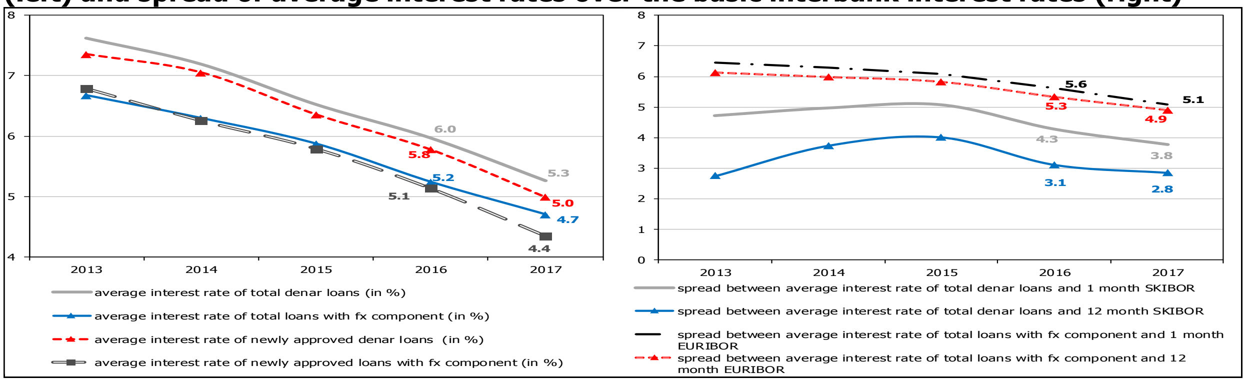
[111] This group includes competition from other banks, competition from non-banking sector and competition from market financing.

[112] This group includes bank's capital position, bank's access to market financing and bank's liquidity position.

[113] This group includes expectations for total economic activity, expectations for the perspectives of individual industries and corporations and risk associated with the provision of loans.

The average interest rates that banks charge from total loans to the domestic corporate sector in 2017 reached the historically lowest level. This applies equally to interest rates on new loans, as well as to interest rates taking into account the currency characteristics of the loans to the corporate sector approved by the domestic banks. This trend of reducing interest rates is due to the low interest rates that prevail in the international financial markets, but also to the relaxed domestic monetary policy.

Chart 55
Average interest rates on total loans to domestic banks granted to the corporate sector (left) and spread of average interest rates over the basic interbank interest rates (right)



in percentage points
Source: NBRM's Credit Registry, based on data submitted by banks and NBRM calculations and the web site of the European Money Market Institute for EURIBOR.

This reduction of the average interest rates on loans in 2017 led to a **slight reduction in the spreads of the interest rates on the loans granted to the domestic corporate sector in relation to the basic interbank interest rates**, indicating a decrease in the credit default swaps that banks embed in their interest rates. The spread over policy rates, as an indicator of the implicit credit default swaps, is usually slightly higher in loans with FX clause, compared to Denar loans. The decrease in the average interest rates on approved loans and thus the narrowing of the spread over the interbank interest rates and fall in the implicit credit default swaps, in 2017, although with different magnitude, was observed in all activities. Taking into consideration the expectations for gradual normalization of the monetary policy of the European Central Bank and the already existing increase in the interest rates of the Fed, objectively greater is the likelihood that in the coming years the cost of financing will be higher than the current level. In such circumstances, the possible changes in risk premiums on global financial markets and their effects on the domestic financial market are the most important source of risk, for both the income position of the domestic banks, as the main and the individually most important institutional creditor of the corporate sector, and those companies that have a high level of indebtedness and cannot operate without external funding.

III. FINANCIAL SECTOR

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

In 2017, the total assets of the financial sector grew, but at a slower pace, and its growth was mostly determined by the banking system[114] and mandatory pension funds. Given their important position, banks remain the most significant factor in maintaining the stability of the overall financial system and other financial institutions. Pension funds, as financial intermediaries, are important for the maintenance of the long-term financial stability, and the assets invested in the pension funds make up a relatively significant portion (16.6%) of the financial assets of the household sector. Similar is the long-term importance to the stability of households and life insurance, which, despite the growth, is still poorly developed.

Table 3
Structure of total assets of the financial sector in the Republic of Macedonia

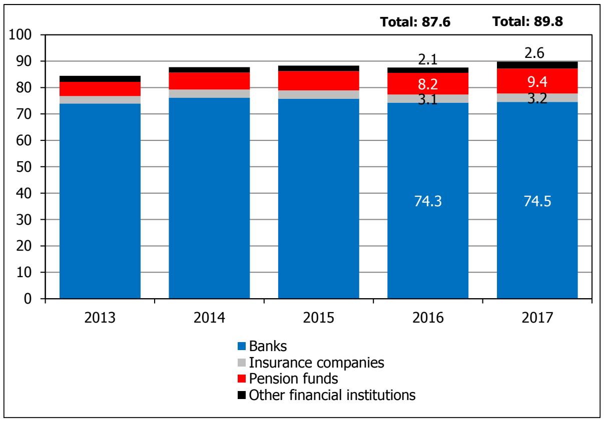
Type of financial institution	Total assets (millions of denars)		Structure %		Change 31.12.2017/31.12.2016		Number of institutions	
	2016	2017	2016	2017	Absolute change	In percent	2016	2017
Depositary financial institutions	**447.282**	**463.969**	**85,2**	**83,4**	**16.687**	**3,7**	**18**	**17**
Banks	444.680	461.992	84,7	83,0	17.312	3,9	15	15
Savign houses	2.602	1.977	0,5	0,4	-625	-24	3	2
Non-depository financial institutions	**77.438**	**92.642**	**14,8**	**16,6**	**15.204**	**19,4**	**112**	**124**
Insurance companies	18.480	20.030	3,5	3,6	1.550	8,4	15	16
Insurance brokers	842	1.533	0,2	0,3	691	82,1	33	37
Insurance agents	116	223	0,02	0,04	107	92,2	14	15
Leasing companies	3.287	3.941	0,6	0,7	654	19,9	6	6
Pension funds*	49.074	58.239	9,4	10,5	9.165	18,7	4	4
- Mandatory pension funds	48.076	56.938	9,2	10,2	8.862	18,4	2	2
- Voluntary pension funds	998	1.301	0,2	0,2	303	30,4	2	2
Pension fund management companies	834	970	0,2	0,2	136	16,3	2	2
Brokerage houses	116	121	0,0	0,02	5	4,3	5	5
Investment funds*	3.624	5.402	0,7	1,0	1.778	49,1	13	15
Investment fund management companies	69	115	0,0	0,02	46	66,7	5	5
Private equity fund management companies	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.	н.п.
Financial companies	996	2.068	0,2	0,4	1072	107,6	15	19
Total	**524.720**	**556.611**	**100,0**	**100,0**	**31.891**	**6,0**	**130**	**141**

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.

Investment funds are one of the fastest growing segments of the financial system and slowly impose themselves as an investment alternative, primarily for smaller investors. Financial companies are the "youngest" segment of the financial sector, which grows rapidly, but has insignificant share in the total assets of the financial system. However, granting loans by financial companies amid more relaxed lending conditions, but at extremely high prices, imposes the need for greater caution and supervision of these institutions by the competent regulatory and supervisory authorities, especially in terms of protection of consumers and borrowers.

[114] The term "banking system" refers only to banks, while the term "deposit institutions" also includes savings houses.

Chart 56
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).

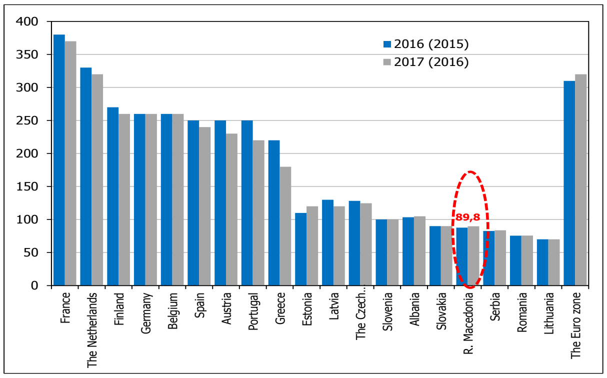
In the course of 2017, after the completion of the last status change[115] and the reduction of the number of savings houses to two, a further decline in their assets on this basis is not expected. Brokerage houses and leasing companies registered some growth in the scope of their activities, while their number compared to 2016 remained unchanged.

The slower growth in the total assets of the financial sector continued in 2017[116] and is mainly due to the slower growth in the assets of the banking system and the mandatory pension funds. Assets of savings houses decreased in 2017. On the other hand, the assets of financial companies grew rapidly compared to the previous year, mainly as a result of the increase in their number. Rapid growth of the total assets is observed also in the insurance companies, which is due to the growth of the capital positions of the newly formed life insurance company and the increased activities in the field of life insurance. Despite the reduction recorded in the last few years, in 2017, the assets of the brokerage houses and leasing companies registered a certain growth.

Banks retained the main position within the financial system, despite the decline (of 1.7 percentage points) in their share in the total assets of the financial system, at the expense of the increased share of the pension funds, as well as of the investment funds, financial companies and insurance companies.

[115] At the beginning of 2013, amendments to the Banking Law were passed, allowing the savings houses to transform into a bank or financial company (without conducting a liquidation procedure) or to make a status change for acquisition of a savings house by a bank. Consequently, in 2013-2017 the number of savings houses decreased from seven to two. The regulation does not allow establishment of a new savings house.
[116] The growth of assets of the financial system in 2015 and 2016 equaled 7.1% and 6.3%, respectively (2017: 6.0%).

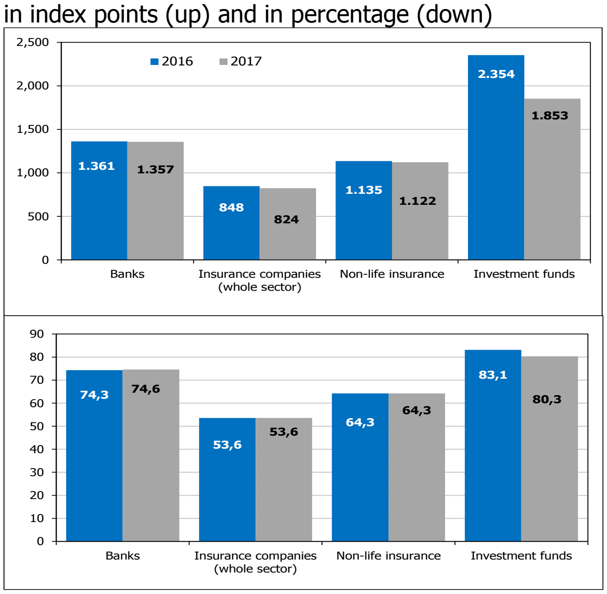
Chart 57
Total financial sector assets to GDP ratio, by country
in %



Source: ECB Report on Financial Structures 2017 and websites of central banks of countries.
Note: Data on Macedonia, Albania, Estonia, Serbia and Ireland are as of December 2017, and on other analyzed countries, they are as of December 2016.

In 2017, the annual growth of the total assets of the financial system, although slower, has an increased importance to the domestic economy (of 2.2 percentage points). The total assets of the financial system account for 89.8% of GDP[117]. However, compared to the analyzed countries, the degree of financial intermediation in the domestic financial sector is still low and is in the lower part of the list.

Chart 58
Herfindahl index (up) and CR5 index (down) 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 MAPAS, the ASO and the Ministry of Finance).

The concentration with the individual[118] segments of the financial system registered no major changes compared to the previous year. The concentration in banks and insurance companies is acceptable and is measured by the value of the Herfindahl index. The Herfindahl index[119] for investment funds came closer to the level for acceptable concentration.

[117] Data on GDP for 2017 are estimated data.
[118] For some of the financial institutions (financial companies, insurance and brokerage companies and insurance agencies), the indicators of concentration are not calculated due to lack of available data on the amount of the total assets of the individual companies. The concentration is not calculated also for the pension funds, given the small number of institutions (two mandatory and two voluntary pension funds).
[119] The Herfindahl index is calculated according to the formula $HI = \sum_{j=1}^{n} (S_j)^2$, where S is the share of each bank in the total amount of the analyzed category (e.g., total assets, total deposits, etc.), where n denotes the total number of banks in the system. When the index ranges from 1,000 to 1,800 points, the concentration ratio is considered to be acceptable.

Table 4
Ownership structure of financial institutions
in %

Owners	Banks	Saving houses	Insurance companies	Brokerage houses	Leasing companies	Pension fund management companies	Investment fund management companies	Financial companies
Domestic owners	***25.3***	***100.0***	***12.9***	***81.0***	***82.8***	***49.0***	***28.5***	***83.7***
Nonfinancial legal entities	8.6	90.3	5.1	48.2	1.3	0.0	0.0	66.0
Banks	0.1	0.0	0.0	0.0	3.6	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	0.8	0.0	1.7	0.0	0.0	0.0	4.4	0.0
Natural persons	10.1	9.7	6.1	32.8	78.0	0.0	3.8	17.7
Public sector	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign owners	***74.7***	***0.0***	***87.1***	***19.0***	***17.2***	***51.0***	***71.5***	***16.3***
Natural persons	2.3	0.0	0.1	9.1	0.0	0.0	0.3	4.2
Nonfinancial legal entities	14.8	0.0	0.0	0.0	7.5	0.0	9.9	0.0
Banks	50.7	0.0	0.0	1.6	9.6	0.0	0.0	0.0
Financial institutions	6.5	0.0	87.0	8.3	0.0	51.0	61.3	12.1
Unclassified	**0.3**	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***	***0.0***
Total	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***	***100.0***

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.

In 2017, there were no significant changes in the ownership structure of financial institutions. The prevalent participation of **foreign shareholders** in the ownership structure is still typical for most of the individual financial segments (banks, insurance companies and pension and investment fund management companies). **Domestic shareholders** have the largest share in the capital of the brokerage houses, leasing companies and financial entities, while savings houses[120] are the only segment of the financial sector which is fully owned by domestic entities.

2. Profitability and efficiency of the financial sector of the Republic of Macedonia

In 2017, financial institutions operated in conditions of political uncertainty that reflected with economic stagnation, amid positive developments in the second half of the year. In conditions of low interest rates, the analyzed[121] segments of the financial system (with the exception of brokerage houses and financial companies) achieved a positive financial result, and the rates of return on average assets and average equity remained solid. Maintaining the profitable operations in conditions of the low yields from financial investments requires constant improvement of the capacities, but also adjustment of financial institutions' business models, their information, technical and marketing promotion and improvement of competitiveness. Strategic risk is quite significant for certain segments of the financial system (mainly leasing companies, brokerage houses, including savings houses), which are faced with competition by banks.

[120] The regulation allows only Macedonian nationals to be owners of savings houses.
[121] For which data are available.

Table 5
Indicators of individual financial institutions' profitability and operational efficiency
in %

Type of financial institution	Return of average assets (ROAA)		Return of average equity (ROAE)		Operating expenses/Total regular income (Cost-to-income)	
	2016	2017	2016	2017	2016	2017
Banks	1.5%	1.4%	13.6%	13.5%	49.8%	48.7%
Saving houses	1.6%	0.8%	3.50%	2.2%	83.3%	85.0%
Pension funds management companies	19.1%	21.7%	20.1%	21.6%	59.6%	52.9%
Investment funds management companies	30.6%	38.1%	32.0%	49.2%	63.8%	55.9%
Insurance companies*	2.6%	2.0%	7.9%	6.1%	54.5%	46.5%
Leasing companies	1.7%	1.9%	9.9%	12.4%	83.5%	91.0%
Brokerage houses	-32.5%	-0.3%	-36.5%	-0.4%	н.п.	н.п.
Financial companies	-0.2%	-15.8%	-0.4%	-33.4%	94.8%	89.6%

Source: For each institutional segment, the competent supervisory authority (the NBRM, the SEC, the MAPAS, the ASO and the Ministry of Finance).
*The operating expenses/total regular income (cost-to-income) indicator for the insurance companies is an expense ratio, which is calculated as the ratio between net costs for conducting insurance activities and income based on premium.

Most of the financial system segments operated with profit in 2017. Moreover, as in the previous years, rates of return on assets and equity are the highest for investment and pension fund management companies[122], which improved further in 2017. The indicators of profitability decrease in banks, savings houses, leasing companies and insurance companies. In banks, this decline arose from the slower growth of the net interest income, while in savings houses, it is due to the reduced number of savings houses (if we exclude the effect of the reduced number of savings houses, according to the indicators, the profitability of the two savings houses is better by more than double compared with 2016). In the insurance companies, the decrease in return ratios is largely influenced by the reduction in the profit of the non-life insurance companies due to claims paid in 2017. Increased activities of leasing companies in 2017 contributed to improving the profitability of this segment. Brokerage houses and financial companies continue to operate at a loss, despite the growth of the total activities. The incurred loss of brokerage companies is significantly lower compared to last year, and the non-profitable operations of financial companies is due to the faster growth of other operating expenses and impairment costs. This shows that the credit risk materialized as a result of the "easy" conditions for approval of expensive loans by the financial companies.

Within the financial system, the operational efficiency is the highest in the banking system, which improved further in 2017. The operational efficiency of insurance companies also improved compared to the last year, which is evident from the reduction in the costs ratio compared to 2016, as a result of the faster growth in the income based on premium compared

[122] Pension and investment fund management companies have high profitability, which, in the pension funds management companies, is mainly due to the revenues from fees from funds' assets, and financial revenues are also significant, while in the investment fund management companies, the income from fees for asset management, is the most significant.

to the growth in the costs[123] for conducting insurance activities. The poor operational efficiency of savings houses, leasing and financial companies is primarily a consequence of the limited scope of activities, which also limits the amount of realized net interest income amid the necessary operating expenses. However, the indicator of the operational efficiency of financial companies improved on an annual basis, due to the more intensive growth in total regular income (67.0%) compared to the growth of operating costs (57.6%).

[123] The expenses for conducting the insurance include: staff costs, administrative costs, commissions paid and other expenses for conducting insurance.

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

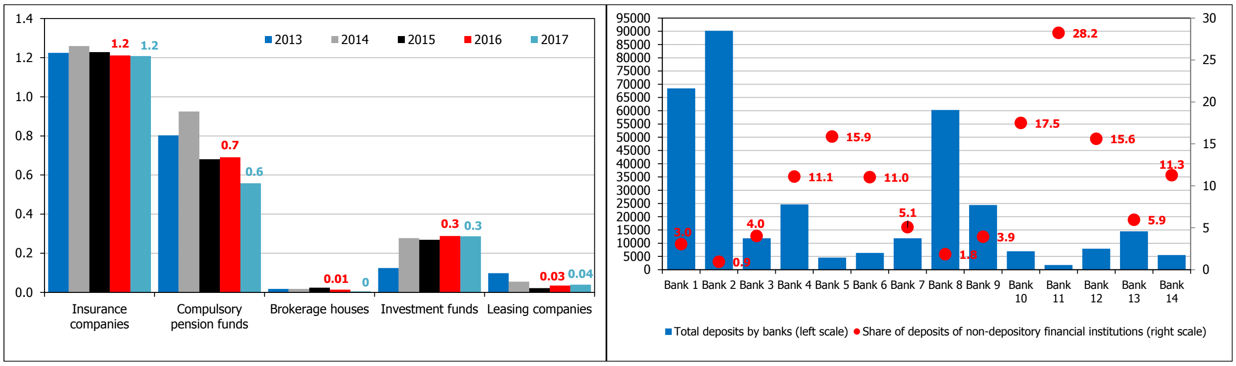
The financial system of the Republic of Macedonia has a relatively simple structure and minimal interdependence and dependence of activities of individual segments. The banking system, which is especially important for the stability of some of the other segments of the system, is an exception to this. Namely, deposits of other financial institutions are almost insignificant in the deposit base of the banking system, but are particularly important for some financial institutions. With the exception of this channel, there is minimal possibility of spillover of risks from one institutional segment to another, limiting the risks of disturbing the financial stability in the country of the banking system. There is no significant enrichment of the range of combined instruments and services that would increase the interdependence of the institutional segments, with the exception of the increased interest in combining insurance and banking products and services (banking insurance), the volume of which is still small.

Since the savings of the non-financial sector are concentrated in the banking system, the importance of the banks to the overall financial stability in the country is undeniable.

Amid still underdeveloped financial markets and limited supply of financial products and instruments, a significant portion of the assets of non-deposit financial institutions are invested with banks. At the end of 2017, the deposits[124] of non-deposit financial institutions invested with banks amounted to Denar 14,652 million and registered an annual increase of 16.4%. Amid an assumed decreased liquidity of non-deposit financial institutions, i.e. a need for withdrawal of their deposits from banks, there would be no consequences on the liquidity and stability of the banking system as a whole. Namely, their share in the total deposit base and total assets of the banking system equals only 3.2% and 4.3%, respectively. However, the share of invested deposits of the non-deposit financial institutions in the total deposits by individual banks ranges from 0.9% to 28.2%, suggesting that sudden outflows of deposits of other financial institutions can cause certain instability in the liquidity position in some banks.

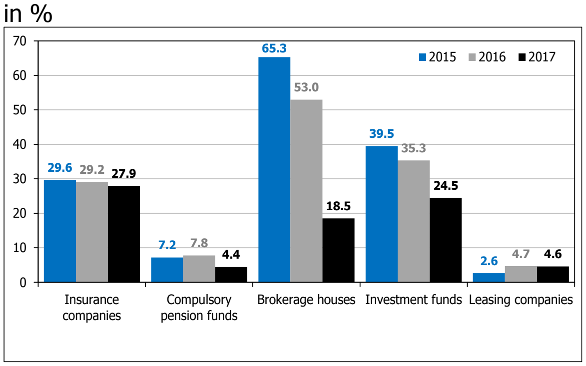
[124] Deposits also include transaction accounts of other institutional segments in the banks.

Chart 59
Share of deposits of the non-deposit financial institutions in the total assets of the banking system (left) and of individual bank (right)
In % in millions of denars in %



Source: NBRM, based on data submitted by banks.

Chart 60
Share of deposits of non-deposit financial institutions in banks in their total assets
in %

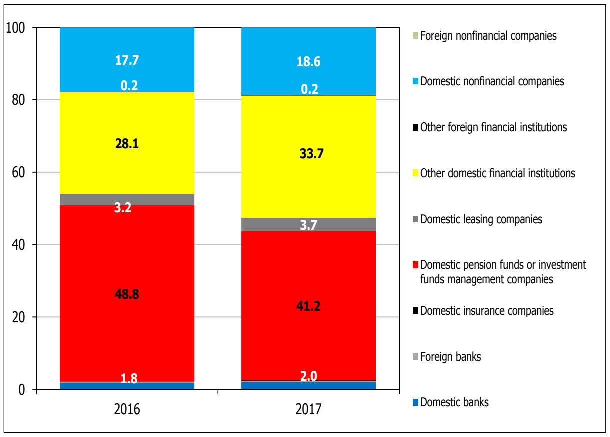


Source: NBRM, based on data submitted by banks.
Note: There are no available data on the amount of the deposits of financial companies placed with the banks for 2015.

Deposits with banks have a significant share in the assets of some financial institutions (18.5% in brokerage companies, 24.5% in investment funds and 27.9% in insurance companies). This is in line with the nature of the activities of these segments of the financial system, but also of the regulatory opportunities / limits and the facilities for investing in other financial instruments. Hence, the solvency and liquidity of the banking system are an important factor also for the stable operations of the non-deposit financial institutions and a key channel for spillover of risks from banks to these financial institutions. In financial institutions, the share of the deposits placed with the banks in their assets decreased.

Lending is yet another channel of spillover of risks among financial institutions. The threat of spillover of risks through this channel to banks is limited, given the minimal share of the loans extended to non-bank financial institutions (0.1%) in total loans of banks (by individual bank, this share ranges from 0.02% to 1.5%). Interbank loans accounted for only 2.6% of the total assets of the banking system (by individual bank, this share ranges from 0% to 89.4%, i.e. from 0% to 1.8%, if the analysis excludes MBDP AD Skopje). From the liabilities side, the share of liabilities based on the extended interbank loans and received deposits in total liabilities equals 7% (by individual bank, this share ranges from 0.1% to 79.1%, i.e. from 0.1% to 15.7% if the analysis excludes MBDP AD Skopje). Because of the weak activity on the interbank market for non-collateralized deposits and the satisfactory liquidity in the financial system, primarily of banks, the importance of this channel of spillover of the risks through the financial system is minimized. The exposure of Macedonian Bank for Development Promotion AD Skopje to the contagion risk on this basis is the highest, because of its main activity to market the loans from international financial institutions to end users, but through domestic banks, but this risk would materialize only in case of extreme scenario.

Table 61
Structure of banks' investments in equity instruments, in subsidiaries and associates, by the type of the legal entity
in %



Source: NBRM, based on data submitted by banks.

The threats of spillover of risks due to the ownership connection among segments of the financial system are also small. Banks' capital investments (in equity instruments, subsidiaries and associates) make up only 0.3% of their assets. Over 80% of these investments are investments in domestic financial entities, predominated by stakes in pension and investment fund management companies, as well as other domestic financial institutions (MSE, CSD, KIBS, CaSys). The capital links of banks to the second and the third pension pillar can be a potential channel for cross-sector spillover of risks, solely due to the reputational risk, given that two domestic banks are the custodians of the assets[125] of the pension funds in the country. These two largest segments of the financial system are extremely important for the financial security of the population, but also for the financial stability of the country.

Banking insurance, i.e. cooperation between banks and insurance companies based on an agreement for representation in insurance, was applied by only three banks in 2017. In 2017, gross written premiums charged through banks represented only 5.4% of total premiums of insurance companies. For banks, the exposure secured by life insurance policy is still insignificant (2% of the total credit exposure or 8.2% of the exposure to natural persons without credit cards and overdrafts). In addition, only 3.3% of the loans to non-financial entities approved by banks[126] are insured with some insurance company (against materialization of credit risk). **Another potential channel for connection between the insurance and banking sectors is the possible damage to the provision of loans, protected by property insurance policy** (as of 31 December 2017, 39% of the banks' credit exposure to households has collateral which is additionally protected by property insurance policy). However, the probability that a single event can cause great damage that could not be paid by an insurance company, thereby jeopardizing the collection of a certain large (non-performing) claim of some bank, is low and is mostly reinsured with other foreign insurance companies.

[125] According to the legislation, the assets of the pension funds are independent of the assets of the banks custodians of the assets of the funds.
[126] Six banks.

4. Deposit-taking institutions[127]

Banks[128]

Despite the reduced risks, in 2017, the banking system operations were surrounded by uncertainty, especially pronounced in the first half of the year. The uncertain domestic environment influenced the perceptions of economic agents who shied away from investment, as well as on the dynamics of the banks' assets that increased by 3.9% in 2017 (growth of 5% in 2016). The slower annual growth of assets of the banking system mostly results from the slower movement of the non-financial sector deposits, as the main source of financing the activities of domestic banks, which stalled in the first half of 2017, but recovered in the second half. In 2017, banks managed to maintain a satisfactory pace of lending activity.

In 2017, there was a certain increase in non-performing loans mostly to several larger clients in the corporate loan portfolio. Non-performing loans to households, primarily consumer loans, increased on an annual basis, though moderately, indicating partial materialization of risks in this segment of the loan portfolio. Furthermore, the percentage of impairment of non-performing loans is relatively high and their default, if any, would not deteriorate the bank solvency. On the other hand, in 2017, performing loans did not register unfavorable movements, and therefore there is no ground for expectations for significant growth of non-performing loans in 2018.

Liquid assets registered a modest growth in 2017, which somewhat decreased the liquidity ratios of the banking system, due to the faster growth of banks' activities. Yet, they remain satisfactory. The asset-liability maturity mismatch continued enhancing, which reflects the increasing maturity of liquid assets, amid growth of demand deposits.

The gradual abandonment of unilaterally adjustable interest rates on the new bank loans and deposits, which began in 2017, has required strengthening of banks' capacities to manage risks arising from this change. Banks will also face challenges of designing products and services, pricing suitable to the clients' risk profile and expectations for future economic developments, monitoring of clients' behavior and potential banks' response over the life of the business relations.

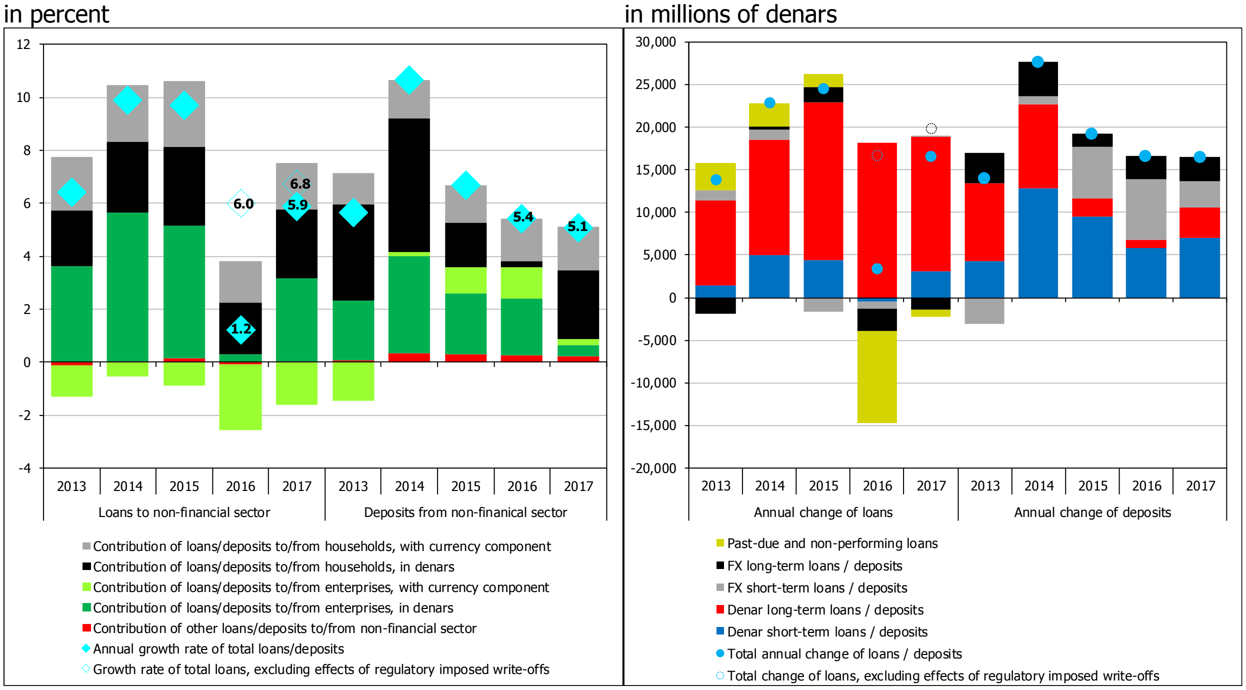
[127] Beside banks, savings houses are also deposit-taking institutions, but given their small scope of activities, they are analyzed in *Other Financial Institutions* of this report

[128] The National Bank prepares quarterly reports on the risks in the banking system of the Republic of Macedonia, which provides more details on the developments, activities and the exposure of the banking system to risks. The reports are published on the NBRM website, under Publications or Supervision.

Solvency ratios of the banking system increased in 2017. Their increase was expected, given the higher capital requirements for banks related to the capital component of Basel 3. In addition to the requirement for maintaining minimum levels of three solvency ratios (capital adequacy, Common Equity Tier 1 capital and Tier 1 capital), domestic banks are also required to maintain capital buffers (currently, capital conservation buffer and capital buffer for systemically important banks have been in effect). Also, the Supervisor (NBRM) determines and introduces a required equity supplement for each bank, above the requirement, in accordance with the risk profile. Domestic banks have successfully complied with the new capital requirements at an aggregate level; the banking system still has "free" capital over the regulatory and supervisory requirement.

Chart 62
Contribution of individual components to the annual growth of total loans and deposits of non-financial entities (left) and maturity and currency transformation of deposits in the financial intermediation process (right)*

in percent
in millions of denars

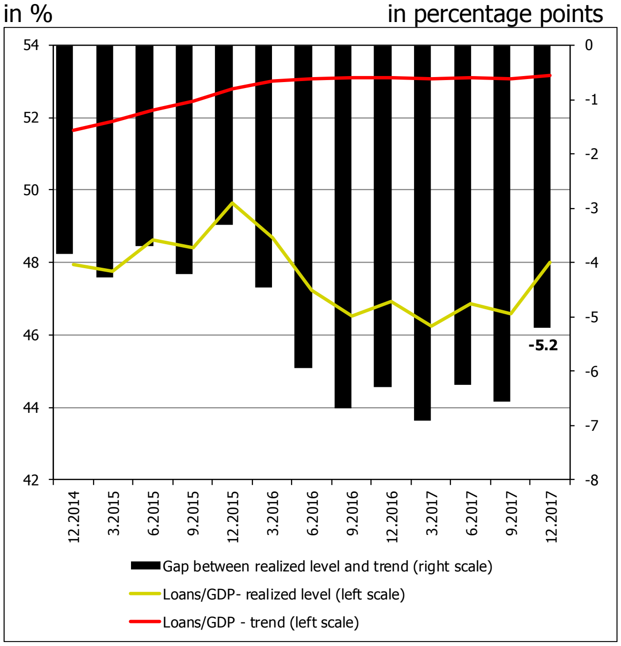


Source: NBRM, based on the data submitted by banks.
*In the right chart, denar deposits and loans include those with FX clause. Short-term deposits also include demand deposits and transaction accounts.

Despite the revival of household deposit activity last year, the growth in total deposits in the banking system has been decelerating for the third consecutive year. Against the background of political uncertainty, particularly pronounced in the first half of 2017, economic stall and falling interest rates, the non-financial sector deposits experienced slower annual growth. Yet, the annual growth of household deposits accelerated significantly (from 2% in 2016 to 6.2% in 2017), primarily in the second half of the year, upon stabilization of the political environment and the economic agents’ expectations. Household deposits remained dominating the funding sources of the banking system, with a share of 50.8%.

The annual growth of loans to the non-financial sector somewhat accelerated in 2017. The acceleration was solely due to the faster growth of lending to non-financial companies, although household lending continued to grow at a solid pace and contributed the most to total credit growth (with almost three quarters). Domestic non-financial sector loans to GDP ratio still dwells below its long-term trend[129] (by 5.2 percentage points). Household lending has registered relatively high and stable growth (about 10% a year) in the last 5-6 years, prompted by several factors, both on the supply and on the demand side of these loans. Most household loans have been intended to finance consumption of natural persons, accounting for about two-thirds of the total loans in this sector. However, from mid-2015, housing loans were the fastest growing segment of the household loan portfolio, whose share in total household loans increased to 28.4% as of 31 December 2017 (25% at the beginning of 2015). The higher banks' propensity to lend to households is due to the positive effects of the greater diversification of banks' credit portfolios and the solid repayment of loans by households (at aggregated level) and consequently, lower credit risk. However, one should take into account that growth is largely generated by longer-term household loans where clients' creditworthiness is uncertain[130], especially considering the high share of loans with currency component[131] and loans with variable and unilaterally adjustable interest rates[132]. In recent years, there has been a stronger trend of extension of the maturity[133] of household loans, their refinancing among banks, or the consolidation of several agreements, which may hinder the true creditworthiness of some households. Furthermore, consumer loan structure comprises loans without secondary source of repayment in the event of default, i.e. without any formal collateral[134]. However, most credit agreements with natural persons include a so-called executive clause[135] that in the event of default allows banks to collect the loan from the

Chart 63
Deviation of loan to GDP ratio from the long-term trend



Source: NBRM, based on the data submitted by banks.
*Note: The trend component of time series was determined using a one-sided Hodrick Prescott filter (λ = 400.000), covering a period of 13 years.

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[129] Calculated using the one-sided Hodrick-Prescott filter, λ=400,000.
[130] As of 31 December 2017, housing loans with 10-year maturity or more account for 92.9% of total housing loans, and those with 20-year maturity or more make up 59.5%. The structure of consumer loans is dominated by loans with 5-year maturity or more with share of 86.6% (as of 31 December 2014, this share was 81.3%). Consumer loans with 8-year maturity or more constitute 53.6% in total consumer loans (at the end of 2014, this share was 42.4%).
[131] As of 31 December 2017, household loans with currency component accounted for 46.1% of total loans in this sector, which is slightly lower compared to the end of 2014 (47%).
[132] As of 31 December 2017, loans with variable and unilaterally adjustable interest rates accounted for 58.9% of total household loans. Recently, this share has decreased significantly (77.2% at the end of 2014).
[133] As of 31 December 2017, prolonged loans accounted for 12.1% of total household loans. This share was only 0.5% at the end of 2014.
[134] As of 31 December 2017, uncollateralized loans accounted for 38.7% of total consumer loans. As of 31 December 2014, uncollateralized loans accounted for 36.9%.
[135] The National Bank does not have any data on the amount of loans with an executive clause included in the agreements.

borrower's property[136]. In the case of credit cards and overdrafts, the claims are mostly "backed" by the beneficiary's monthly income. Also, the NBRM internal analyzes[137] indicate that the Methodology for real estate market value estimation in the Republic of Macedonia (which arises from the Law on Estimation), which is binding on banks in estimating the collateral value, does not comply with the best international practices, making the banks to often overestimate or underestimate the collateral. Our country did not experience any major downward correction in the real estate market, and therefore, the potential behavior and responses of economic agents (including banks) in such circumstances is unknown. While in their credit policies banks often set relatively reasonable ratios between the monthly loan repayment and the income of natural persons (up to 33% for consumer loans and up to 50% for housing loans), there are still exceptions, with a tendency to increase.

The growth of loans to non-financial entities accelerated in 2017 (from 2.6% in 2016 to 4.3% in 2017), yet lagging behind the usual annual growth of household loans. However, loans to non-financial entities remained dominant (52.3% as of 31 December 2017) in total loans to the non-financial sector, though in recent years this share has been steadily decreasing (almost 6 percentage points compared to the end of 2014). About 80% of total loans to non-financial companies have been extended to three sectors (industry, wholesale and retail trade, and construction and real estate activities)[138], whose performances are particularly important for the quality of the banks' loan portfolio. Moreover, non-performing loan to total loan ratio is the highest in the credit portfolio comprised of banks' clients from these sectors[139]. Mainly, the loan demand from the corporate sector is of lower quality, seen through the lack of quality projects and ideas that would receive adequate credit support from the banks, but also through the weaker liquidity and efficiency ratios of the domestic corporate segment that requires domestic credit support. Hence, banks usually "back" the credit support for this sector by establishing collateral (about 98% of the loans to non-financial companies have been collateralized), whose appraisal can be even more complicated and less precise (compared to the appraisal of apartments), given the specificity of the collateral that can potentially be offered by domestic companies (equipment, tools, facilities, warehouse, etc.), that is, no liquid or functional market for this type of assets and property. Other features of the loans to non-financial companies include the relatively high and stable share of bullet loans (about 35% in the past three years), loans with a grace period longer than 1 year (about 18-19% in the past three years) and on prolonged loans (around 10%), which indicates that banks take into account the needs of companies in structuring the loan features, although they accept greater uncertainty about the timely repayment of the given loans. Also, the share of restructured loans in total loans to non-financial corporations was 6.6%[140], at the end of 2017, indicating that banks help companies to overcome their current financial difficulties by changing the features of approved loans. The establishment of technological and industrial development zones on the territory of the Republic of Macedonia, as free zones with respect to customs and tax laws, where in the last ten years, mostly foreign capital companies have been set up, gives new impetus to the domestic corporate sector. However, these mostly internationally active companies have an easy and

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[136] According to the Law on Enforcement (Official Gazette of the Republic of Macedonia No. 72/16 and the Law on Notarial Practice (Official Gazette of the Republic of Macedonia No. 72/16).
[137] Carried out for the purposes of drafting the Non-Performing Loan Management and Resolution Strategy.
[138] In 2017, most of the credit support was to these sectors; yet this year, the growth of loans to the transport and storage businesses was also significant (an increase of 13.4%).
[139] The share of non-performing loans in total loans to manufacturing industry (for example, this indicator in the production of metals, machinery, tools and equipment was 26.5% as of 31 December 2017) is the highest.
[140] 10.3% as of 31 December 2014.

quick access to low-cost sources of finance and for now, they cannot be considered major clients of the domestic banks.

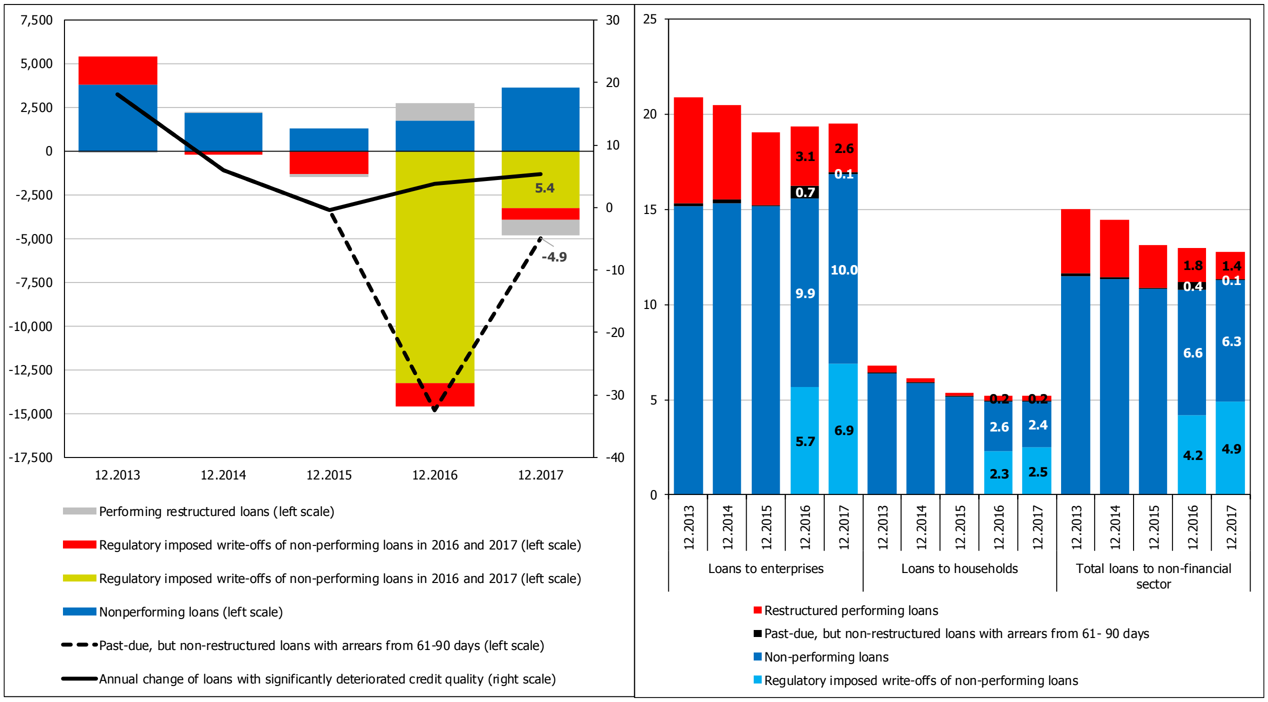
The maturity and currency transformation in the financial intermediation process continued, though less pronounced in 2017. Observing the maturity structure, the trend of high, double-digit growth in demand deposits continued, at even faster pace in the households (from 16% in 2016 to 19.1% in 2017). This has positive effects in the banks' income statements, but underlines the importance of liquidity risk management, given the fact that these deposits can be withdrawn at any time. Thus, the share of demand deposits in total deposits of non-financial entities increased by more than 10 percentage points in the last 3 years (from 31.12.2014) to 47.1% at the end of 2017. Yet, after two years of mostly weaker and slower growth of long-term deposits, in 2017, there was an acceleration of the growth of long-term savings (from 4.5% in 2016 to 7.5% in 2017) both of non-financial companies (from 14.4% in 2016 to 22.9% in 2017) and of households (from 3.9% to 6.3%). The acceleration of the growth of denar deposits is yet another positive signal after two years of slower growth, stemming from the faster growth of long-term denar deposits (from 2.2% in 2016 to 5.4% in 2017) of households (their growth accelerates from 0.9% in 2016 to 5.5% in 2017). At the same time, the growth of deposits with currency component slowed down from 7.2% in 2016 to 4.9% in 2017 and they contributed 35.9% to the total growth of the non-financial sector deposits (in 2016, this contribution was 59.1%[141]). On the side of loans, usually long-term loans determine most of the growth of the total loans to non-financial sector, although this year the contribution of short-term loans is also markable (18.9% to the total growth), despite the negative contribution in 2016. Denar loans have contributed most to the growth of total loans for a long time, and in 2017 their contribution was almost sole (97.7%). Analyzed by sector, foreign currency loans and denar loans with FX clause of non-financial companies have registered steady decline for a longer period of time, while loans with currency component of households have contributed around 40-45% to total growth. Such trends could be associated to the longer maturity of household loans approved recently[142], as opposed to the maturity of loans to non-financial companies. Usually, the sources of funds with shorter maturities are more used to finance working capital and ongoing activities of domestic companies, rather than to invest and support larger projects.

[141] Amid unstable political developments in 2016, the households' propensity to hold foreign currency cash and foreign currency deposits was more pronounced. Hence, the contribution of deposits with currency component to the growth of total deposits of the non-financial sector was slightly higher in 2016 (59.1%), and after the political stabilization, it was significantly decreasing in 2017 (35.9%). Analyzed in the period 2013-2015, the contribution of deposits with currency component to the annual growth of total deposits of the non-financial sector averaged 16.9%.

[142] As a rule of thumb, longer maturities bear higher uncertainty, also to the future movements in foreign exchange rates, so banks usually decide to transfer currency risk on their clients by using foreign exchange clauses in loan agreements.

Chart 64
Lower quality loans to non-financial entities*, annual growth (left) and share in total loans to non-financial entities (right)

in millions of denars in % in % of total loans

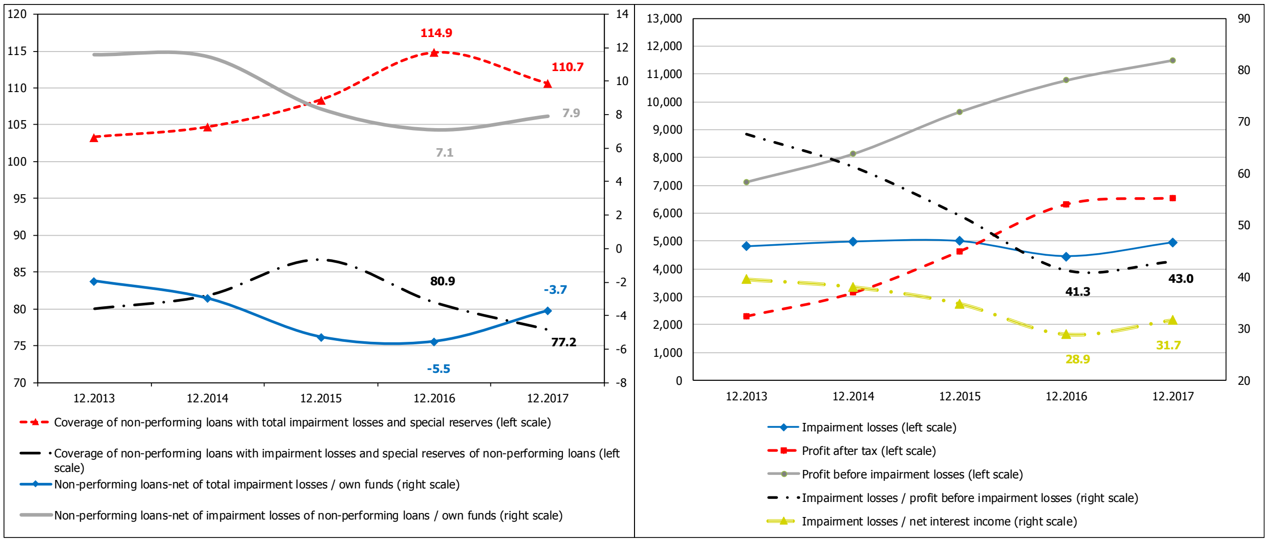


Source: NBRM, based on the data submitted by banks.
*Loans with poorer credit quality include non-performing loans, performing restructured loans and 61-90 past due non-restructured loans.

In 2017, total non-performing loans of the banking system increased by 2%, mainly due to the faster growth of non-performing loans to non-financial companies, which, in turn, was due to the default of several major corporate clients of the banks. The growth of non-performing household loans is slightly more moderate and derives from non-performing consumer loans, which is an indicator of partial materialization of risks arising from easing of consumer loan standards in the past. Performing loan categories with poor loan quality (performing restructured loans and 61-90 days past due loans) decreased in 2017.

Chart 65

Coverage of non-performing loans and share of net non-performing loans in banks' own funds (left) and ratio between impairment losses and financial result and between impairment losses and net interest income (right)



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

The risks to the banks' capital arising from full uncollectability of non-performing loans are limited, given the high coverage of these loans with impairment (77.2%). Thus, the non-provisioned portion of non-performing loans absorbs only 7.9% of the total own funds of the banking system, which would cover unexpected losses in a hypothetical extreme case of full uncollectability of these loans. In 2017, the amount of written-off loans is few times lower[143], compared to 2016 (excluding compulsory write-offs of fully provisioned non-performing loans). At the same time, the foreclosed assets increased[144] by 9.5% annually.

Currently, the percentage of impairment of performing loans (or the average risk level of performing loans as estimated by the banks) is higher than the (historical) annual rate of default of the performing credit exposure. However, losses due to credit risk materialization may exceed the banks' expectations, especially in unfavorable business environment, inter alia, due to the significant concentration in banks' credit portfolios, as well as the high costs or inability to realize loan collateral at favorable price.

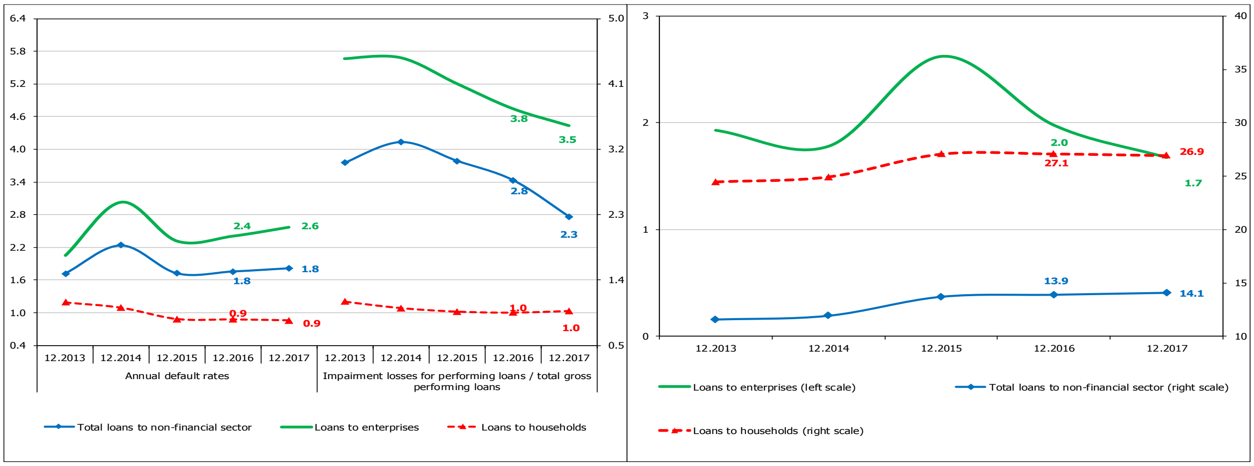
[143] More precisely, in 2017, banks wrote off loans to non-financial entities in the amount of Denar 373 million (in 2016, the write offs equaled Denar 2,237 million). Both amounts do not include compulsory written off non-performing loans of Denar 13.3 billion for 2016 and Denar 3.3 billion for 2017.

[144] In 2017, the foreclosed assets increased by Denar 480 million (9.5%). However, the net carrying amount of these assets registered an annual decrease (due to the higher impairment compared to 31 December 2016), thus reducing their share in total assets to merely 0.4%.

Chart 66

Annual rate of default* of the credit exposure and average risk level of performing loans (left) and share of uncollateralized performing loans in total performing loans (right)

in % in %



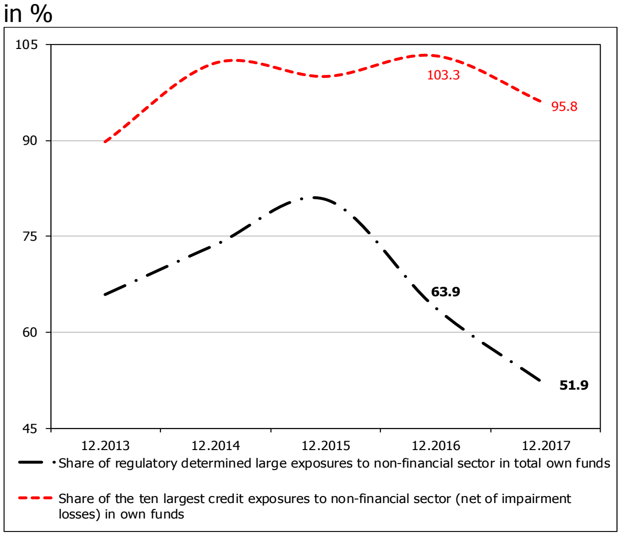
Source: NBRM, based on the data submitted by banks.

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

Chart 67

Concentration ratio of credit exposure to non-financial sector

in %



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

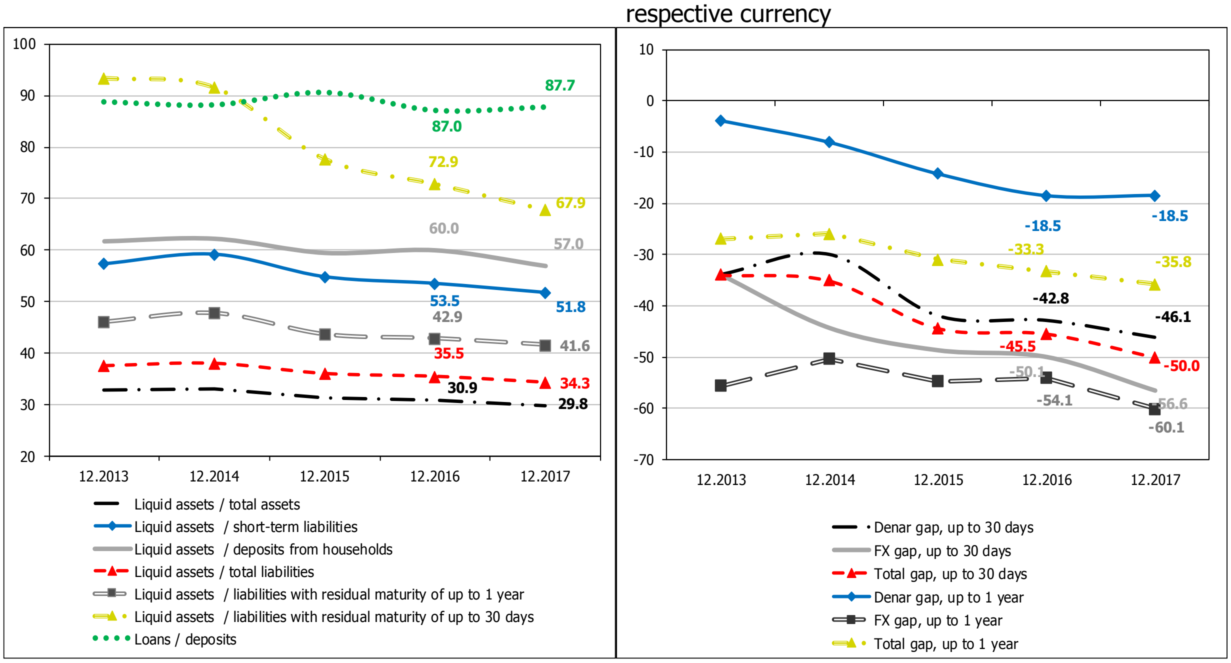
In 2017, the annual default rate of performing credit exposure[145] was 1.8%, which is slightly lower compared to the average risk level of the performing loans extended to non-financial entities as determined by the banks (2.3%). Also, as of 31 December 2017, 85.9% of performing loans to non-financial sector are collateralized, which "mitigates" the banks' credit risk due to the performing credit exposure. However, the relatively high concentration in the banks' credit portfolios (although declining in 2017) as per client and per other clients' features (such as by sectors), indicates a high level of correlation between the quality of credit agreements, which under unfavorable business conditions may incur losses due to the higher credit risk materialization than expected by the banks. Finally, despite the relatively high share of performing collateralized loans in total performing loans, there is still the risk of inability to sell (at favorable price) assets that would be foreclosed for collection of the outstanding claims.

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

Chart 68
Banking system liquidity ratios (left) and gap between banks' assets and liabilities that past due in the next 30 days and in the next year (right)

in %

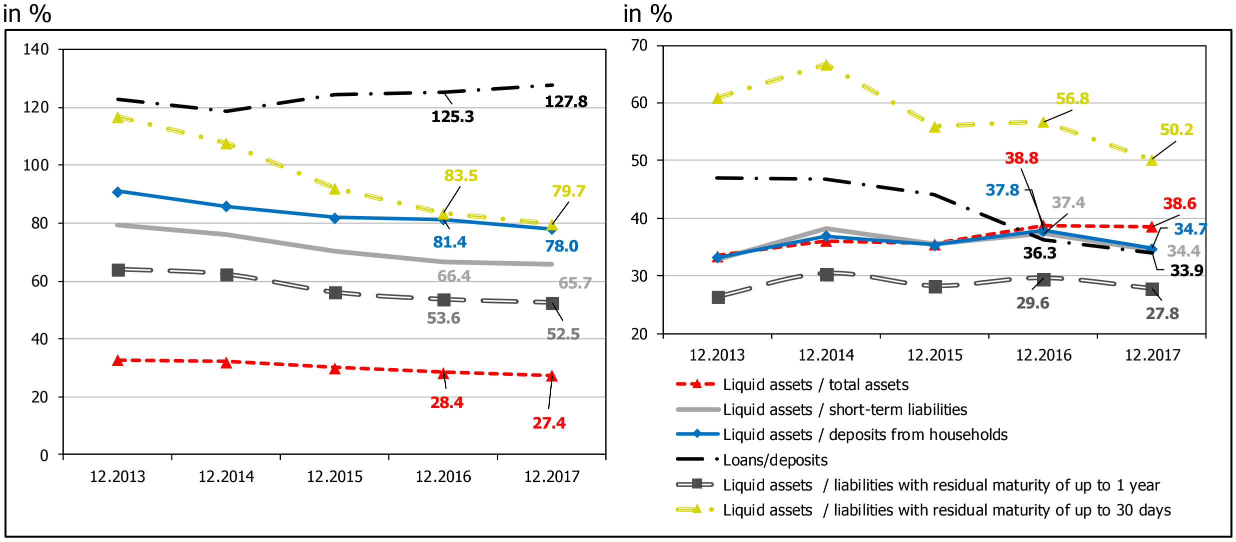
in % of liabilities with respective residual maturity and respective currency



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

The modest annual growth of liquid assets in 2017 (of 0.8%) decreased their share in total bank assets by around 1 percentage point (to 29.8% as of 31 December 2017). Coverage ratios of various categories of banks' liabilities with liquid assets mainly decreased in 2017, at a satisfactory level though, which allows for smooth operational liquidity management by banks. The increase in the maturity of banks' liquid assets deriving from the efforts for higher returns from their investment in long-term instruments, amid gradual increase in the share of demand deposits in the structure of banks' sources of financing, enhanced the gap between assets and liabilities according to their contractual residual maturity. Thus, 50% of banks' liabilities that past due in the next 30 days are not fully covered by assets with the same residual contractual maturity (up to 30 days). The gap in the maturity bucket up to 1 year, although smaller, is still significant, as almost 36% of liabilities with residual contractual maturity up to 1 year are not covered by assets from the same maturity bucket. Due to the currency transformation made by banks, the increase in the gap between assets and liabilities according to their contractual residual maturity is more pronounced in the foreign exchange gap (as of 31 December 2017, 60.1% of foreign currency liabilities with residual maturity up to 1 year were not covered by foreign currency assets from the same maturity bucket).

Chart 69
Banking system liquidity ratios by currency - denar (left) and foreign currency (right)



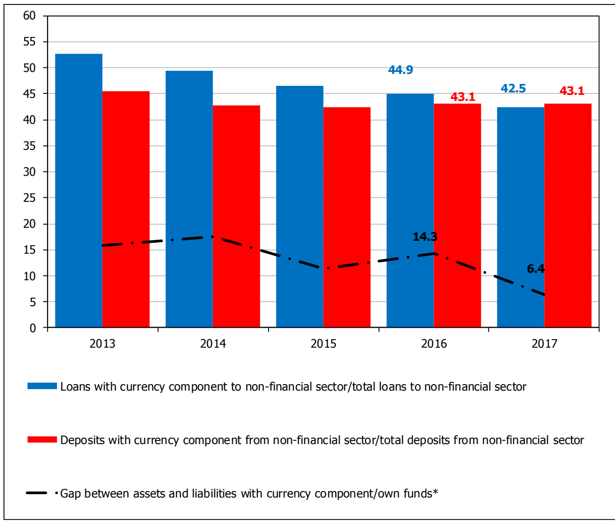
Source: NBRM, based on the data submitted by banks.

Direct exposure to market variable movements is low for the overall banking system and within the prescribed regulatory limits analyzed by bank. Indirect exposure to these risks arising from loans with currency component (42.5% of total loans to non-financial entities) and loans with adjustable (38.1%) and variable (27.3%) interest rates in the banks' portfolios is significant, yet decreasing. After last year's interruption of deposit denarization, in 2017, this process resumed, simultaneously continuing the trend of loan denarization. Unlike 2016, when the propensity for foreign currency was pronounced, in 2017, the exposure of the banking system to currency risk was reduced and the gap between assets and liabilities with currency component to own funds ratio dropped to 6.4% (14.3% as of 31 December 2016). Analyzed by individual bank, the aggregate foreign currency position to own funds ratio (ranging from 0.3% to 29.1%, by individual bank) is within the prescribed regulatory limit (30% of banks' own funds). The potential loss of economic value of the banking book at a presumably unfavorable interest rate shock of ± 2 percentage points registered certain absolute annual increase (of 7.8%), but its ratio to own funds was almost unchanged (8.4% as of 31 December 2017, as opposed to 8.5% as of 31 December 2016). Analyzed by bank, this ratio ranges from 0.6% to 16%. It is still below 20%, but if overpassed, the bank will have to propose measures to reduce this ratio and even to allocate capital for covering interest rate risk in the banking book, if ordered by the National Bank.

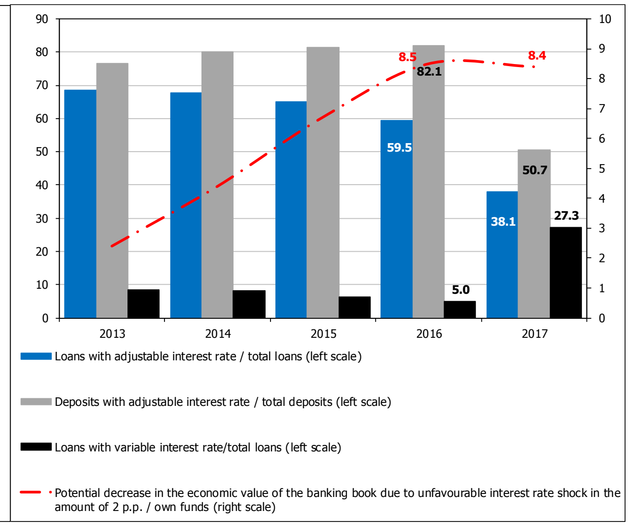
In 2017, banks reduced the use of adjustable interest rates, while increasing the use of variable interest rates (on claims) and fixed interest rates (on liabilities). Such switch towards variable and/or fixed interest rates requires banks' capacity building to identify appropriate level and type of interest rates at the time of loan approval or deposit acceptance, taking into account the maturity of contracts, client-based risks, etc. It also requires greater banks' capacity to forecast (or at least to create assumptions) future economic developments and the impact and effects of these movements on them and their customers.

Chart 70
Currency risk exposure and shares of loans and deposits with currency component in total loans and deposits (left) and exposure to interest rate risk in banking book and shares of loans with adjustable and variable interest rates and deposits with adjustable interest rates in total loans and deposits (right)

in %



in %

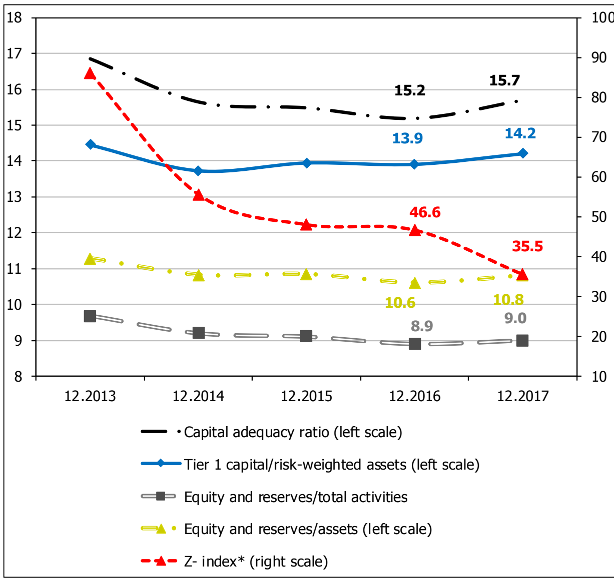


Source: NBRM, based on the data submitted by banks.
Note: * Data on Macedonian Bank for Development Promotion AD Skopje are not included in the calculation of the gap between assets and liabilities with FX currency component.

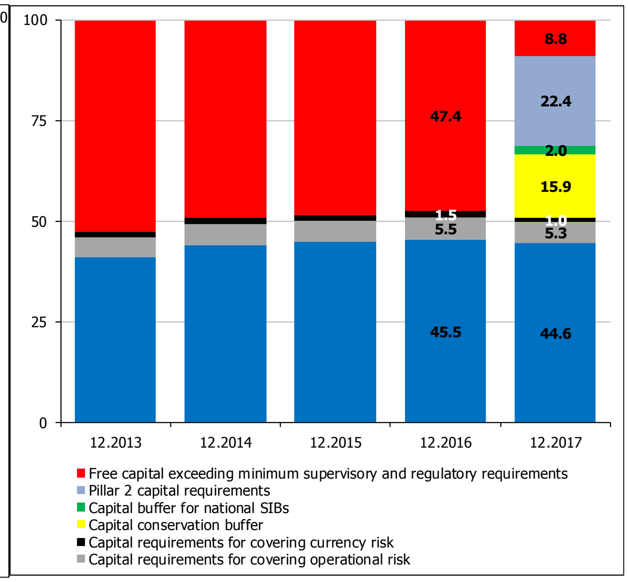
Solvency and capitalization ratios of the banking system somewhat increased in 2017, largely due to the faster growth of capital positions, mostly as a result of retained earnings and banks' issuance of new subordinated instruments. At the end of 2017, the capital adequacy ratio equaled 15.7%, which is by 0.5 percentage points higher compared to 31 December 2016. In 2017, there was no new issue of shares, which confirms the banks' predominant orientation towards internal capital formation (by retaining the profit in the equity funds) or issuing subordinated instruments.

Chart 71
Solvency and stability ratios of the banking system (left) and structure of own funds, by purpose

in %



in % levels



Source: NBRM, based on the data submitted by banks.
Note: * Z Index (left chart) is calculated as follows: $\boldsymbol{Z} = \frac{\boldsymbol{ROAA}+\boldsymbol{E}/\boldsymbol{A}}{\sigma(\boldsymbol{ROAA})}$, where *ROAA* is the rate of return on average assets, *E* is equity and reserves, *A* is assets and *σ(ROAA)* is the standard deviation of the rate of return on average assets, calculated for the last three years.

In 2017, banks in the Republic of Macedonia successfully met the challenge of complying with the new regulatory requirements that relate to the capital component of Basel 3. Thus, since March 2017, banks' have been required, besides capital adequacy ratio of 8%, also to calculate and maintain Tier 1 capital of 6% and Common Equity Tier 1 capital of 4.5%. In addition, all banks have been required to maintain a capital conservation buffer of 2.5% of the risk-weighted assets. Moreover, seven banks designated as systemically important banks by the NBRM have been required to fulfill the capital buffer for systemically important banks (in 2017, it ranged from 1% to 2.5%). The countercyclical and systemic capital buffers are two additional macro-prudential tools that are available in accordance with the regulation, but there is still no need to be introduced. Since the second half of 2017, banks have been reporting on the leverage ratio, which is also one of the new requirements set by Basel 3[146]. Finally, according to pillar 2 of the Basel Capital Accord, a capital supplement according to the risk profile of each bank has been determined throughout the supervisory assessment and evaluation process, which in 2017, ranged from 1.6 to 9.5% by bank. The relatively high amount and quality of banks' own funds ensured solid capacity for compliance with the new capital requirements. Thus, as of 31 December 2017, the share of "free" capital of the banking system over the minimum regulatory and supervisory requirements was 8.8% of total own funds.

[146] The average leverage ratio in the last six months of 2017 was 10.1%. Analyzed by bank, this ratio ranges from 4.9% to 17.4%. The regulation does not set the lower threshold of this limit, but only a requirement to report to the NBRM. According to the international standards, the leverage ratio should not fall below 3%.

5. Insurance sector

The insurance sector is the third largest segment according to the size of assets in the financial system of the Republic of Macedonia. Non-life insurance continues to prevail within its scope, whose slower growth in 2017 contributed to the deceleration of the growth of the overall insurance sector. Insurance sector risks for the overall financial stability are not high, primarily due to their low connection to the remaining segments of the system. The coverage of technical reserves with appropriate (permissible) funds is over 100%, although it registered a certain decrease in 2017. Also, only half of the net income from premiums is used to cover net claims, although the claim coefficient registers a certain deterioration in 2017. The high solvency of the insurance sector minimized the risk for creating and overflowing risks to the remaining segments of the financial system of the Republic of Macedonia. Like voluntary pension schemes, life insurgence is still underdeveloped, with the macroeconomic factors, primarily the volume and growth of household disposable income making their appropriate contribution.

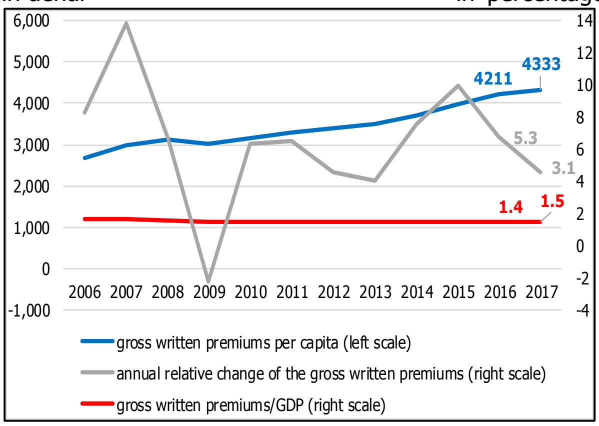
Insurance sector characteristics and risks

The Macedonian insurance sector is still small, with its total assets accounting for 3.2% of GDP (3.0% in 2016). In 2017, the sector's assets registered an intensified growth which reached 8.4% (5.2% in 2016). Around one-third of the growth of insurance sector assets is due to the capital positions of a newly-formed life insurance company (which started its operations in 2017), while half of the growth is due to larger activities in the life insurance domain.

Non-life insurance prevails in the insurance market of the Republic of Macedonia, which by the end of 2017 accounted 69.9% of the total assets of the insurance sector[147]. However, life insurance registers a continuous growth, whereby its share in the assets of the overall insurance sector, in the last five years has increased by 11 percentage points (from 19.1% in 2013 to 30.1% in 2017). Life insurance expansion is perceived through the number of newly-concluded contracts (increase by 25.1%). This growth however, is not accordingly accompanied with the growth of the contract values, for which macroeconomic factors, primarily the volume and growth of household disposable income play a key role.

[147]There are 16 active insurance companies in the insurance market, 11 of which perform non-life insurance activities, while 5 perform life insurance activities. The new life insurance company "Triglav osiguruvanje zivot" AD Skopje as part of the "Adria, Triglav osiguruvanje zivot" Group started its operation on 1.12.2017.

Chart 72
Insurance market development indicators
in denar in percentage

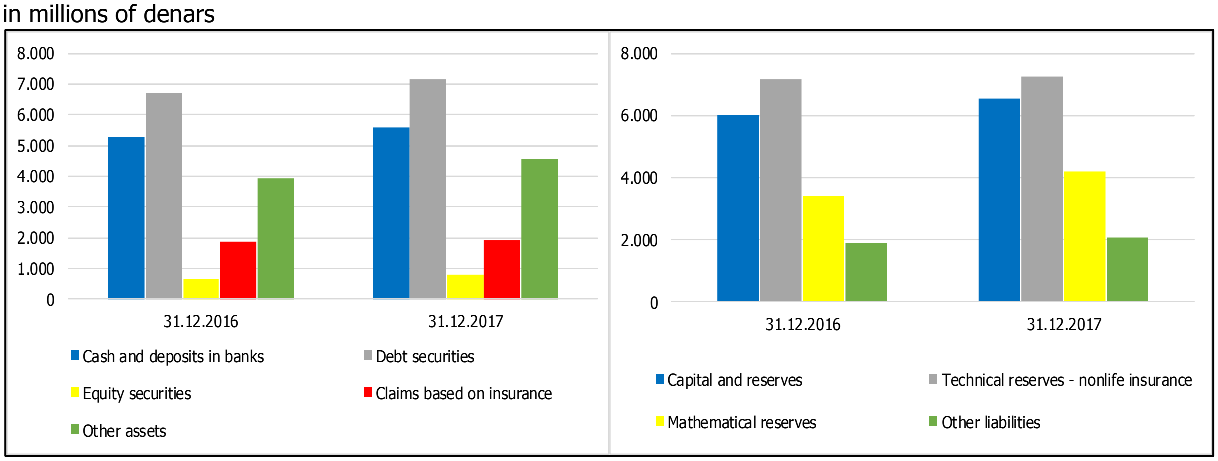


Source: Insurance Supervision Agency of the RM and NBRM's internal calculations

The structure of gross written premiums (GWP) is gradually changing, although auto liability insurance still prevails with around 45%, its share decreases (2016: 44.2%; 2015: 44.6%; 2014: 46.4%). On the other hand, life insurance approaches the share of GWP from property insurance. Striking signal for further expansion of the insurance product supply is the supplemental private health insurance, which still has a very small contribution to the total GWP but is constantly increasing (supplemental health insurance appears in 2013 by including it in the regulation), thus its share in the total GWP in 2017 reached 0.65% (0.52% in 2016 and 0.08% in 2015).

The insurance market development indicator is improving. This is perceived through the improvement of the insurance penetration and insurance density of its products in the market[148].

Chart 73
Structure of insurance companies' assets (left) and liabilities (right)
in millions of denars

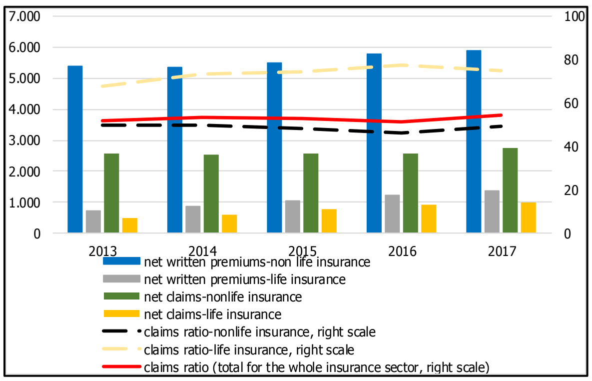


Source: Insurance Supervision Agency of the RM and NBRM's internal calculations.
*Other assets include balance sheet items related to: tangible assets, co-insurance and reinsurance, small inventory and active time limitations. Other liabilities include: subordinate liabilities, other reserves, other insurance liabilities, co-insurance and reinsurance and other liabilities.

[148] Insurance penetration is the ratio between gross written premiums and gross domestic product, and insurance density is the ratio between gross written premium and number of population in the country.

The low cross-sector connection reduces the risk from potential negative effects on the overall financial stability i.e. outflows of risks from the insurance to other segments of the Macedonian financial system. However, the investment structure of the insurance companies exposes insurance companies to concentration risk. Namely, 32.5% and 60.3% of companies' assets are placed in bank deposits and government securities whose stability and liquidity are key to the stability and smooth operation of the insurance sector. The connection with other segments of the financial system is insignificant. Based on the insurance regulation, life insurance companies can manage pension funds, but so far this possibility has not been used in practice.

Chart 74
Net premiums, net claims and claim coefficients by classes of insurance
in millions of denars in %

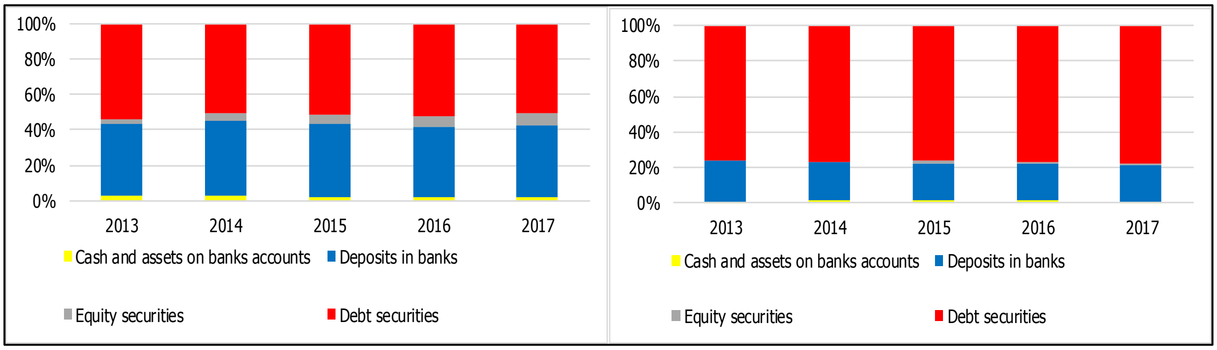


Source: Insurance Supervision Agency of the RM and NBRM's internal calculations
*Net claims = gross claims - change in gross reserves for claims
*Net premiums (or net income from premiums) are gross premiums reduced by sold premiums in co-insurance/reinsurance and changes in gross reserves for transferred premiums in co/reinsurance.

An important profitability and efficiency indicator for the insurance sector is reaching an appropriate claim coefficient[149] which shows the amount of net income based on premiums used to compensate the net claims incurred. Unlike the decline of this coefficient in the previous year, in 2017, the claim coefficient increased by 2.7 percentage points. However, only half of the net income based on premiums is used in order to cover net claims incurred (claim coefficient is 54.2%). For comparison, the claim coefficient in the developed countries rages from 50% to 60%. The claim coefficient is higher in life insurance (75.2%), but with a downward trend, while in non-life insurance amounts to 49.2% (increase by 2.9 percentage points as a result of the payment of greater claims in 2017).

[149] In terms of the financial position of the insurance company, it is unfavorable if the premiums do not entirely cover claims for damages or if this indicator constantly increases.

Chart 75
Investment of assets from the technical and mathematical reserves of non-life insurance companies (left) and life insurance (right)
in



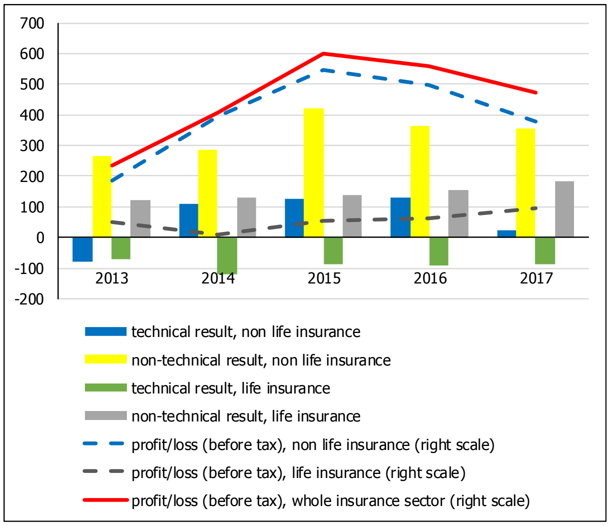
Source: Insurance Supervision Agency of the RM and NBRM's internal calculations.

The insurance sector is characterized by full coverage of technical reserves[150] (technical reserves and mathematical reserve in life insurance) i.e. future liabilities that arise from insurance policies and possible losses regarding risks related to performing insurance activities, with permissible fund categories. Although decreasing in 2017, the coverage of technical reserves is over the legal minimum of 100%[151] and amounts to 105.6% (106.2% in 2016). Thus, the coverage is higher in non-life insurance companies, 108.1% (108.6% in 2016), while in life insurance companies is only 2 percentage points over the legal minimum (101.4% in 2016). Such indicators show that the insurance sector has secured full coverage for future liabilities for claims determined by actuarial calculations through the technical (and mathematical) reserves.

Pursuant to the regulation[152], amid selecting the investment method of assets that cover the technical reserves, insurance companies are obliged to provide investment safety, profitability and liquidity as well as ensure their proper diversification, bearing in mind the possible risks due to the changes in the interest rate, exchange rate, credit risk etc. Thus, insurance companies have invested most of their assets or 60.3% in domestic government securities (49.3% and 77% in non-life and life insurance, respectively) and in bank deposits (32.5%).

[150]Net for reinsurance.
[151]According to the Law on Insurance Supervision (Official Gazette No. 27/02, 84/02, 98/02, 33/04, 79/07, 8/08, 88/08, 56/09, 67/10, 44/11, 112/11, 7/12, 30/12, 45/12, 60/12, 64/12, 23/13, 188/13, 112/14, 153/15, 192/15 and 23/16), Article 86, insurance companies are obliged to invest assets in the amount at least equal to the technical reserves i.e. the ratio of assets covered by technical reserves and total technical reserves shall be minimum 100%.
[152]The types and characteristics of the assets which cover the technical reserves and assets which cover the mathematical reserves of insurance companies i.e. reinsurance companies are prescribed by the Law on Insurance Supervision and relevant Rulebook of the Insurance Supervision Agency. The regulation includes the type of assets, their maturity, liquidity, currency, concentration, their valuation etc.

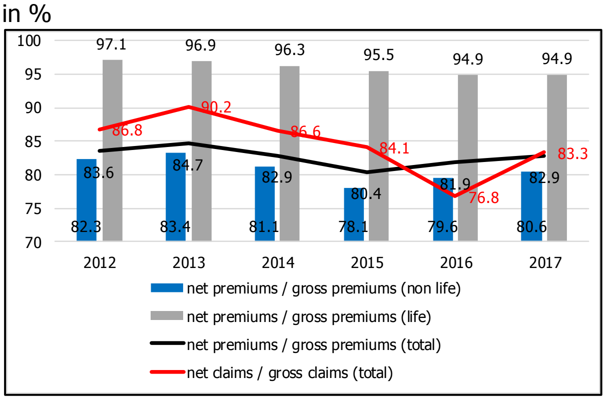
Chart 76
Gross premiums and profit of insurance companies
in millions of denars



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

The insurance sector operates with a profit which is by 15.6% lower compared to 2016[153]. The decrease of the profit is due to the significant decline, by 81.4% of the technical result[154] in non-life insurance as a result to the payment of greater amount of claims during the year. Life insurance still registers a loss from its basic activity (negative technical result). At the level of the sector as a whole, the technical result is negative, whereby the profit for 2017 is entirely due to activities related to the basic activity - insurance (from non-technical result[155]).

Chart 77
Transferred risk to reinsurers
in %



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations
*net premiums = gross written premiums reduced by sold premiums in co-insurance/reinsurance and premiums in gross reserves for transferred premiums in co/reinsurance.
*net claims, gross paid claims reduced by the reinsurance part.

In 2017, the reinsurance volume did not change in life insurance, while there was a slight decline in non-life insurance. On the other hand, the share of net paid claims of insurance companies in gross claims also increased to 83.3% which arises from non-life insurance.

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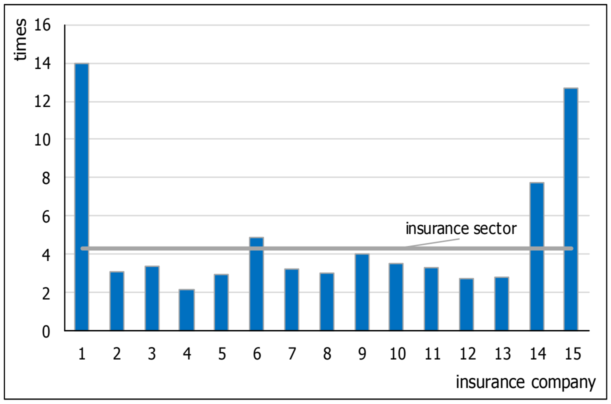
[153]Profitability indicators are displayed in the part "Structure, level of concentration and profitability of the financial sector of the Republic of Macedonia".
[154]The technical result is an indicator of the success of the insurance companies and arises from performing their basic activity - insurance. Other income and expenses of their operation represent the non-technical result. The sum of these two categories gives the total financial result before taxation.
[155]The non-technical result mainly consists of net income from investments and other income and expenses.

Chart 78
Ratio of the insurance companies' capital and the required level of solvency margin



Source: Insurance Supervision Agency of the RM and NBRM's internal calculations
The solvency margin does not include the newly-formed life insurance company (December 2017).

The insurance sector solvency as an indicator for the stability of the sector remains high, which is based on the high capitalization of the sector. Namely, the capital **exceeds the margin solvency (capital requirement) by 4.3 times (4.1 times in 2016).** As a result to the newly-formed life insurance company and its profit, the regulatory capital of the insurance sector as of 31 December 2017 increased by 8.0% compared to the previous year and reached Denar 5.987 million[156]. The high capitalization of the sector is expected to enable an easy transition of insurance companies to the new regulatory requirements when the Solvency II[157] Directive will be conveyed into the Macedonian legislature. This regulative will enable risk management improvement, strengthening the capital positions as well as increase the insurance companies' transparency.

[156]Data is obtained from ISA.
[157]In the EU it entered into force in 2016.

6. Fully funded pension insurance

Fully funded pension insurance increased its share in the GDP up to 9.2% at the end of 2017. This is the second segment by the size of assets in the financial system of the Republic of Macedonia, but with significantly smaller share than the banking sector. In their thirteenth year from their establishment, private pension fund assets register a slow growth in 2017. Private pension funds apply a conservative investment strategy, whereby most of their assets are still placed in domestic government securities. In the recent year (especially after the global crisis, as well as due to the need for the diversification of the portfolio and achieving higher yields) gradual changes in the risk toleration are registered i.e. growth of investments in equity instruments, in accordance to the legally prescribed limit. The positive MBI-10 index developments contributed in the increase of the placements in domestic shares. The high concentration of pension fund assets in government bonds emphasize the quality management and maintaining public finances as important stability factors to these funds. The structure of the pension funds investment portfolio exposes them to currency risk, interest rate risk, as well as to the risk of price changes in equity instruments. In 2017, private pension funds registered lower yield rates compared to the previous year, with the inflation rate causing nominal and real yield rates to diverge. In the first quarter of 2018, there was a change in the ownership in one of the companies for pension fund management[158].

6.1 Mandatory fully funded pension funds

In 2017, net assets[159] of mandatory pension funds continued to increase, but at a slower pace, as a result to the lower growth of paid contributions of fund's members compared to the previous year despite the growth acceleration of the number of members. Paid contribution continue to be the main engine of the value added to net assets, with a share of around 70%. The remaining growth of net assets is due to managing and investing the funds' assets. Compared to 2016, there was a slowdown of the growth of contribution[160] of both the gains from investing and managing the funds[161]. The decelerated growth of the total gain from investing and managing the funds is due to the decrease of unrealized net capital gain (which is lower by Denar 70 million compared to 2016). Investing in stakes of foreign investment funds (the unrealized capital gain from these investments is reduced by 31.7% i.e. Denar 304 million) has the largest contribution to the decrease of the unrealized net capital gain. On the other hand, in 2017, the realized capital gain[162] of mandatory pension funds gave a positive

[158]In December 2017, NLB d.d. Ljubljana and NLB Bank AD Skopje concluded a contract with the reinsurance company Sava Re d.d Ljubljana, for sale of 100% of the shares to NLB nov penziski fond AD Skopje. Pursuant to the contract, the sale of 21.200 shares was carried out through the Macedonian Stock Exchange on 13.3.2018, at a price EURO 921 per share in denar counter-value, or a total of around Denar 1.2 billion. On 9.7.2018, NLB New Non penziski fond a.d. Skopje completed the process of re-registering and will continue operation under Sava penzisko drustvo a.d. Skopje. The company will continue managing both pension funds in the future, the mandatory pension fund under the new name Sava penziski fond and voluntary pension fund, Sava penzija plus.

[159] Net assets of the pension fund are determined as the difference between the value of the assets and liabilities of the pension fund. Given the fact that liabilities are very small, the same changes that move the net assets apply to total assets.

[160]The growth in 2016 was Denar 638 million or 12.9%, and 9.8% (or Denar 548 million) in 2017.

[161]The growth in 2016 was Denar 557 million or 27.6%, and 8.6% (or Denar 222 million) in 2017.

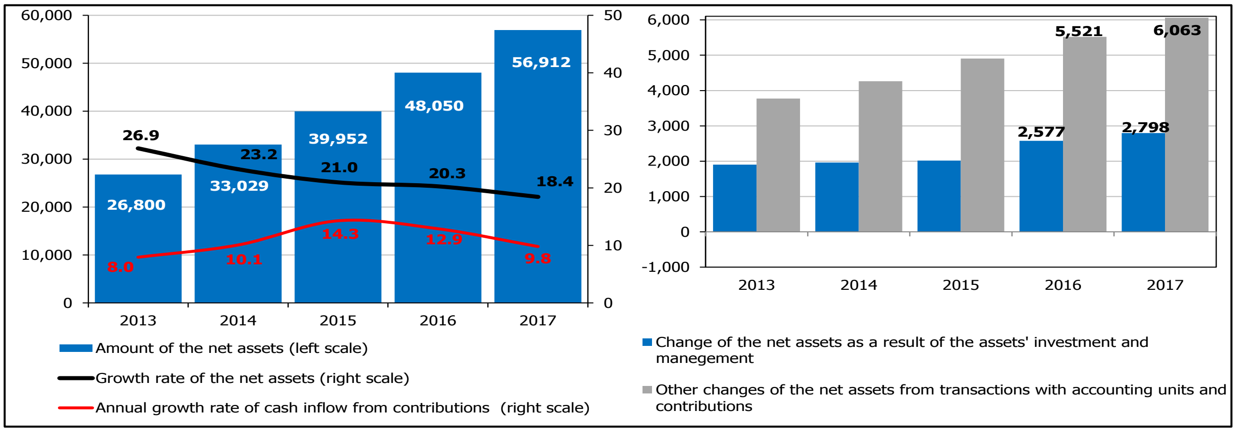
[162]In 2017, mandatory pension funds realized a total of Denar 22 million in losses and total gains of Denar 56 million, thus net capital gains were Denar 34 million. In contrast, in the previous year, funds registered net losses of Denar 6 million. Net capital gains arise from stakes in investment funds which registered a profit of Denar 38 million.

contribution in the growth of net assets and contributed for an increased net profit from investment in securities[163].

Chart 79

Net assets (left) and breakdown of the structure of the growth of net assets (right) of mandatory pension funds

in millions of denars and in %



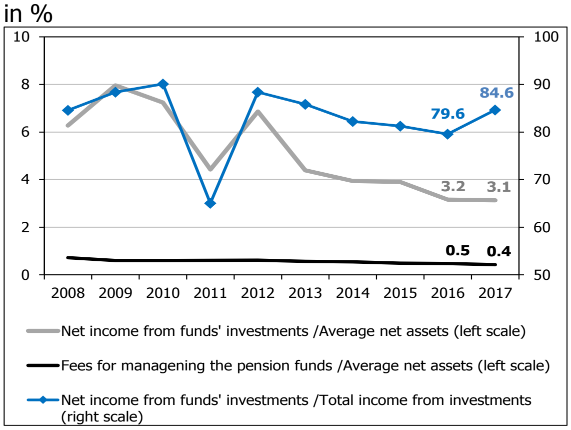
Source: Audited financial statements of mandatory pension funds

Note: Transactions with accounting units include: cash flows based on paid contributions, cash flows (outflows) of assets from (to) other pension funds from the change of membership and cash outflows based on paid pension/retirement benefits.

Chart 80

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

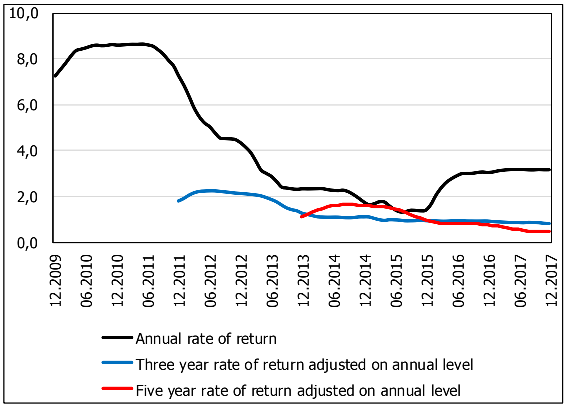
The structure of the investment portfolio of funds[164] reflects the conservative investment policy from companies that manage mandatory pension funds, which was mainly conditioned by the regulative[165]. Investment in debt securities continue to occupy a significant part in the total investments of mandatory pension funds i.e. have a share of over 60% in the total investments in pension funds. In 2017, they continue to grow, but at a slower growth rate of 18.3% (the growth was 22.6% in 2016). Most of them i.e. 99% are domestic government securities and only 1% are government bonds issued by foreign issuers. However, such investment strategy, where most assets are invested in domestic bonds considered as lower risk instruments, emphasizes the

[163]On 31 December 2017, the net profit from investments in securities was Denar 1,644 million and compared to the previous year it is higher by Denar 255 million. The increased income from interest (by Denar 181 million) had a positive influence on net profit, still remaining the most significant component in the income structure of mandatory pension funds with a share of 77.3%.

[164]More information regarding fully funded pension insurance in 2017 can be found in the MAPAS Report in the following link: http://mapas.mk/wp-content/uploads/2018/06/%D0%98%D0%B7%D0%B2%D0%B5%D1%88%D1%82%D0%B0%D1%98-%D0%9A%D0%A4%D0%9F%D0%9E-2017-%D0%B2%D0%B5%D0%B1.pdf

[165] According to 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 81
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.

significance of the risk concentration for mandatory pension funds.

The significant growth of investments in shares of 29.5% increased their share in the mandatory pension fund assets to 3.1% which is still far from the legally prescribed limit of 30%. Also, in addition to the decrease of the passive domestic interest rates, mandatory pension fund placements in deposits registered a high growth of 22.5%[166] for the second consecutive year and increased its share in assets for 0.3 percentage points (to 8%). Hence, despite the legal limits for investing in mandatory pension funds, their investment structure in which low-risk instruments prevail is mostly a result of their conservative policy and also the lack of investment instruments in the domestic financial markets.

Table 6
Rates of return on invested assets of fully funded pension insurance funds by type of instrument
in %

Type of the instrument	2014			2015			2016			2017		
	Net realized gain	Net unrealized gain	Total gain	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	0.4	10.1	10.5	0.5	8.8	9.3	1.7	9.1	10.8	-0.1	6.4	6.3
Bonds issued by foreign issuers					-0.3	-0.3	2.8	5.5	8.3	-0.6	-15.8	-16.4
Shares issued by foreign investment funds	0.2	9.7	9.9	1.9	5.0	6.9	-0.5	9.8	9.3	0.3	5.7	6.0
Stocks issued by domestic issuers	-1.3	7.3	6.0	-0.3	0.6	0.2	0.0	4.6	4.6	0.0	23.7	23.8
Deposits			5.3			4.2			3.2			3.0
Bonds issued by domestic issuers	0.1	0.0	0.1	0.1	0.1	0.2	0.0	-0.1	-0.1	0.0	0.0	0.0

Source: Audited financial statements of fully funded pension insurance funds for 2017, the Agency for supervision of fully funded pension insurance and internal calculations of the NBRM.

During 2017, the Macedonian capital market registered an increase in the value of the Macedonian Stock Exchange Index (MBI-10), a trend which is present from the second half of 2016 driven by the increased demand for securities, mainly by domestic investors. Consequently, mandatory pension funds registered a solid increase in the rate of return of shares from domestic issuers which arises only from the net unrealized gain from this shares. Contrary to that, the lower growth of the rates of return in stakes in investment fund and shares from domestic issuers arises from the lower unrealized gain, for which the depreciation of the US dollar against the Euro made its contribution despite the favorable developments in the global markets. Finally, the declining trend of the return of deposits continued in 2017, which corresponds with the reduction of passive interest rates in domestic banks. The largest decrease

[166] Mostly in one mandatory pension fund.

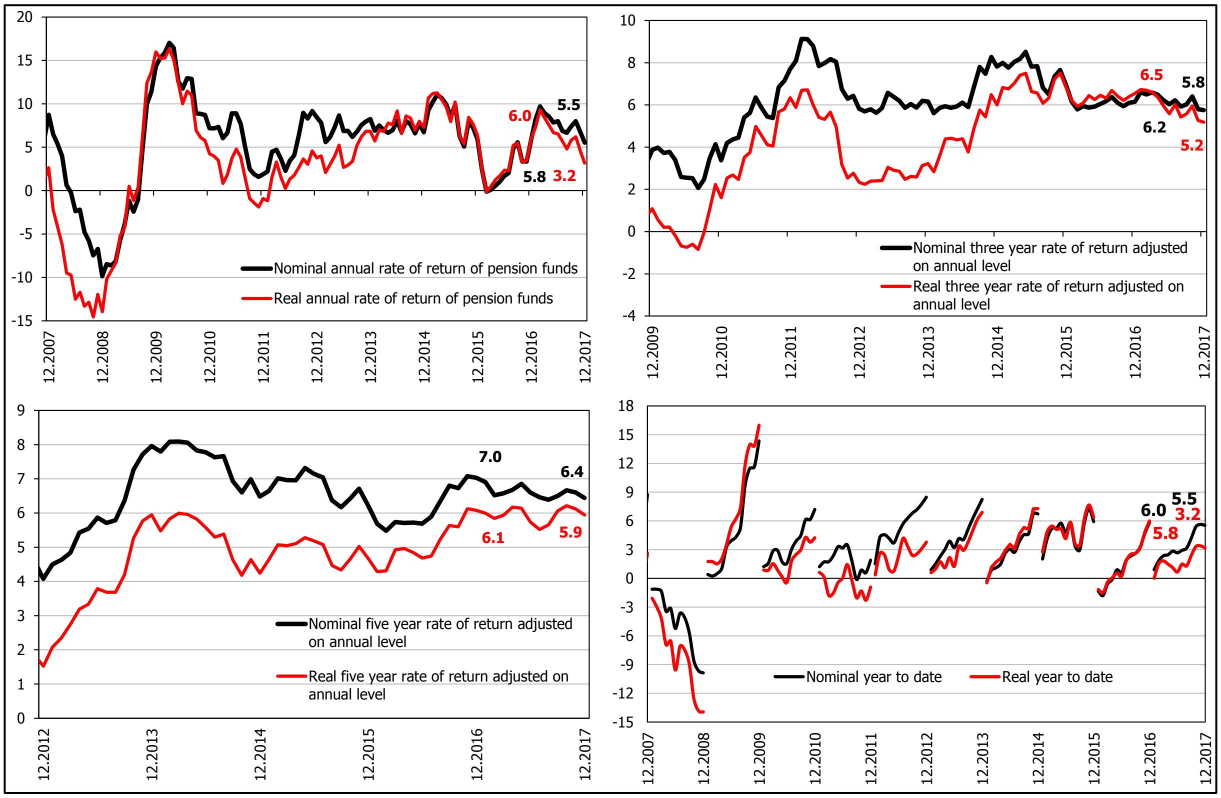
in the rate of return of assets is registered in bonds issued by foreign issuers[167] , which arise from the higher unrealized[168] and realized losses from these assets. However, the share of these instruments in mandatory pension fund assets is insignificant[169]and hence the reduced return of bonds from foreign issuers does not have a significant impact on the overall profit.

As a result of almost equal growth rates of the net profit from investments and average net assets, their ratio registered an insignificant downward change.

In 2017, rates of return[170] on mandatory pension funds are lower compared to the previous year. During 2017, the annual rates of return on mandatory pension funds registered an upward trend, but at the end of the year both the nominal and real return are higher compared to the previous year. Such trend also continued during the fist quarter of 2018. The increase of the value of accounting units and hence the upward movement of the rate of return during 2017 is due to the strong performances in the global and European stock exchanges despite the range of economic and political challenges during the entire year, including the European elections that could have caused instability, as well as the ongoing negotiations on Brexit. The turning point occurred at the beginning of February 2018, when share prices on the world stock exchanges decreased, mainly due to the investors' concern that the US economy, fueled by massive tax cuts could trigger an increase of interest rates amid increased inflation pressures and escalation of trade tension between USA and China. The depreciation of the US dollar against the euro and consequently the Macedonian denar had a contribution to the decline of the rates of return. The three-year rate of return moved upwards in the first half of 2017, followed by a change in the trend by the end of the year which continued during the first quarter of 2018. On the other hand, the five-year rate of return steadily declined and dropped to a lower level compared to the previous year. The nominal and real rates of return (one-, three- and five-year) diverged as a result of the lower rates of change in their prices.

[167] In 2017, mandatory pension funds invested assets in a thirty-year US government bond.
[168] The unrealized loss is due to the unfavorable exchange rate differences.
[169] Bonds issued by foreign issuers have a share of only 0.6% in the total assets of mandatory pension funds.
[170] The return of the mandatory pension fund is a change in percentages between the value of the accounting unit on the last day in the month and the value of the unit on the last day of the month that precedes the 12-, 36- or 60-month period, depending on the particular case.

Chart 82
Rates of return of the fully funded pension insurance funds
in %



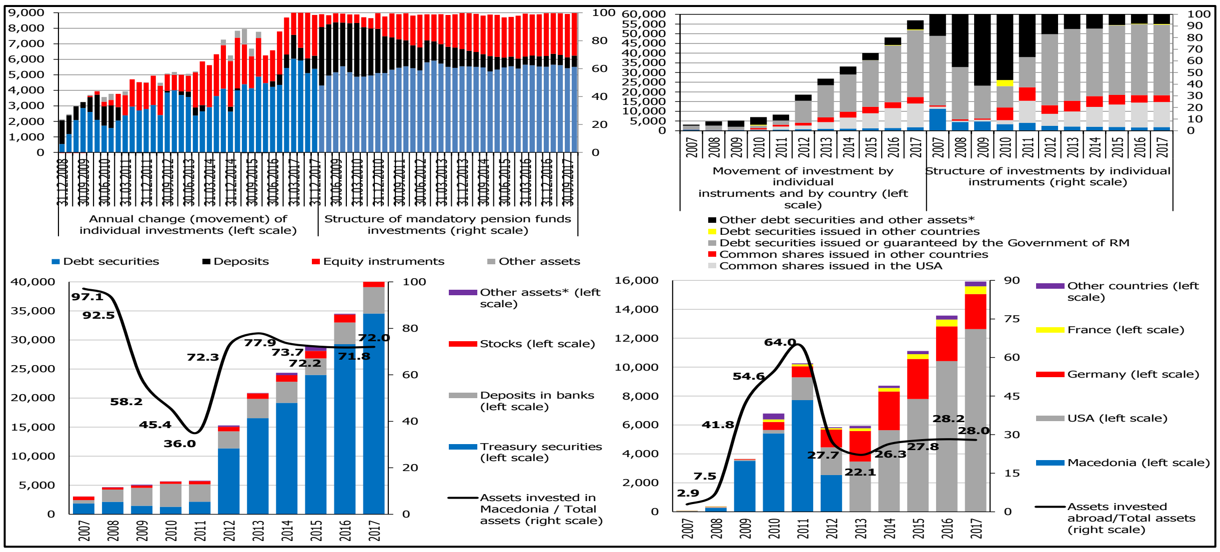
Source: MAPAS, NBRM
Note: The nominal yield is calculated by the percentage change in the value of the accounting unit between two consecutive accounting periods, converted into an equivalent annual rate when the accounting period is greater than one year. The real yield is calculated when the nominal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

In the last several years, within the total investments in mandatory pension funds, a constant share of foreign equity instruments of around 27% is evident (this share is 27.3% of net assets of mandatory pension funds in 2017 and 27.8% in 2016). Investments in stakes in investment funds[171], which are stakes in the so-called exchange traded funds (EFF)[172] prevail among foreign equity instruments (80%) and account for 21.9% of net assets of funds. The return of investments in exchange traded funds, often is followed by the movement of certain indices (of shares, bonds, goods, basket of assets) and at the same time they are traded as shares in stock exchanges. The fact that only 5.5% of net assets of mandatory pension funds are invested in shares of foreign companies with an appropriate credit rating[173] and insignificant 0.6% of foreign government bonds shows that investments in stakes are an attractive alternative regarding the return and the risk they offer. Thus, the largest share of investments in investment funds in the total placements of mandatory pension funds in equity instruments indicates the application of mostly passive investment strategy. Placements in shares of

[171]Total investments in foreign equity instruments in one the mandatory pension funds, is in investment fund stakes which points to the passive investment strategy of this fund. The other mandatory pension fund applies somewhat more active investment strategy by directly investing part of assets in shares of foreign issuers.
[172]A higher degree of diversification is achieved through investing in exchange traded funds compared to investments in shares of a single company, which is why the risk from these investments is usually lower.
[173] One of the funds has direct investments in shares in foreign companies.

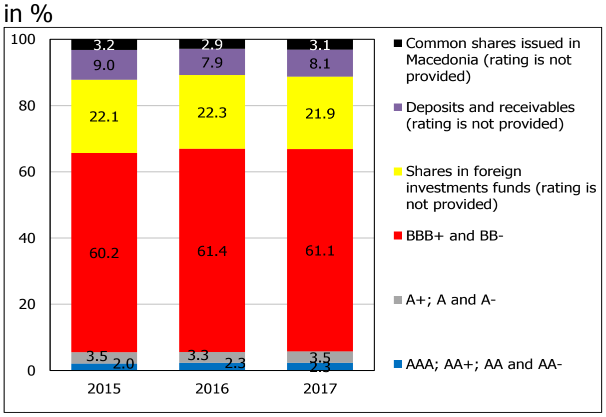
domestic issuers register the fastest growth within equity financial instruments with a growth rate almost five-times faster than last year.

Chart 83
The movement and structure of investment in mandatory pension funds (top left), movements and structure by instrument and by country (top right), movement of investments in the Republic of Macedonia (bottom left) and movements of investments abroad, by country of origin (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 84
Structure according to the credit rating of the issuer of instruments in which the assets of mandatory pension funds are invested
in %



Source: MAPAS, audited financial statements of voluntary pension insurance funds and Bloomberg.
Note: Financial instruments for which no credit rating is prescribed relate to investments in foreign investment fund stakes, deposits in domestic banks and claims of mandatory pension funds.

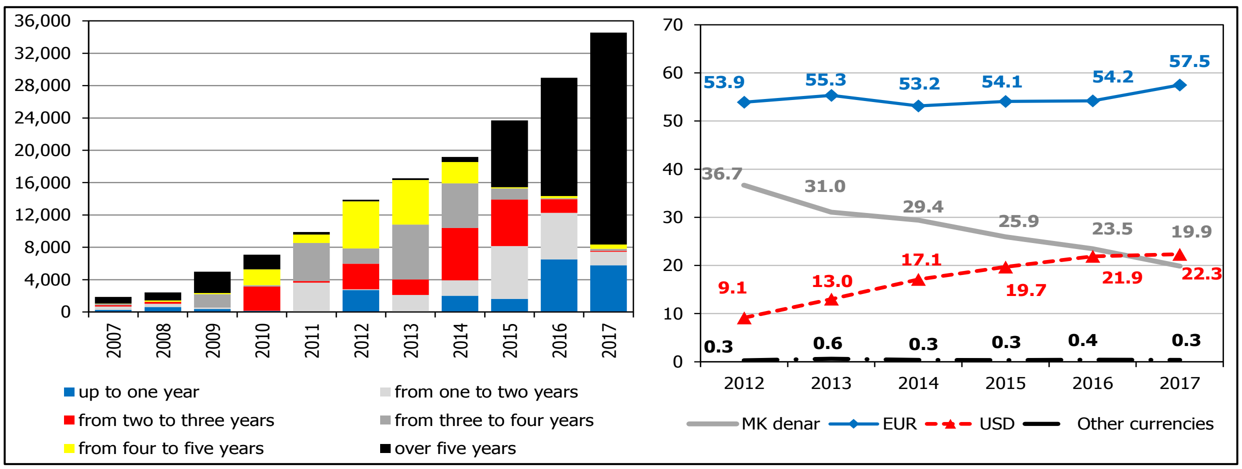
According to issuer's headquarters/country, investments in securities issued by issuers based in the USA prevail in the structure of placements in foreign financial instruments with a share of 79.3%[174]. In these placements, stakes in exchange traded funds prevail with 83.7%, while 13.5% are shares i 2.8% are US government bonds. Through investing in exchange traded funds, a transformation of the geographical exposure is ensured, because their assets continue to be re(invested) in different market sectors and instruments which are traded in global markets, which suggests that their market value does not directly depend from the developments in the US financial markets. Only 16.3% in the total investments of financial instruments issued in the US are in shares and bonds, whose price movements

[174]On 31 December 2015, 76.8% of total financial instruments issued abroad were financial instruments issued by issuers based in the US.

directly depend on the events in the US economy and developments in the US financial markets.

The exposure of mandatory pension funds to credit risk is almost unchanged compared to the previous year. Most investments are financial instruments with a credit rating BBB+ (grade for a lower medium credit investment rating) and BB- (grade for non-investment, speculative credit rating), whereas a small part (5.8%) of the assets of these funds are invested in financial instruments with the highest credit rating (from AAA to AA-), as well as in financial instruments for higher medium investment credit rating (from A+ to A-). In 2017, the credit rating deteriorated in two foreign companies[175] for one to two levels, while seven companies registered a slight improvement in the credit rating[176]. Investments in these companies account for 6.1% and 16.7% in the total foreign shares i.e. 1.2% and 3.3% of total assets invested abroad, respectively.

Chart 85
Structure of debt securities in which mandatory pension funds have invested, according to residual maturity (left) and currency structure of assets of mandatory pension funds (right)
in millions of denars in %



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

Assets with a residual maturity over five years prevail in the portfolio of total debt securities of mandatory pension funds, whose share increased significantly in the last three years[177] and reached three quarters of total bonds of mandatory pension funds. This highlights the existence of interest rate risk, especially the risk from reinvesting these assets.

The euro (including the positions in denars with euro clause) additionally strengthened its position in the currency structure of total assets of mandatory pension funds, whereby mostly or 90.4% of assets in euros are domestic bonds in denars with euro clause. The share of the US dollar in the currency structure of total assets continues to growth, which is mainly due to investments in investment fund stakes and the increased investments in one of the mandatory pension funds in US government bonds[178]. The

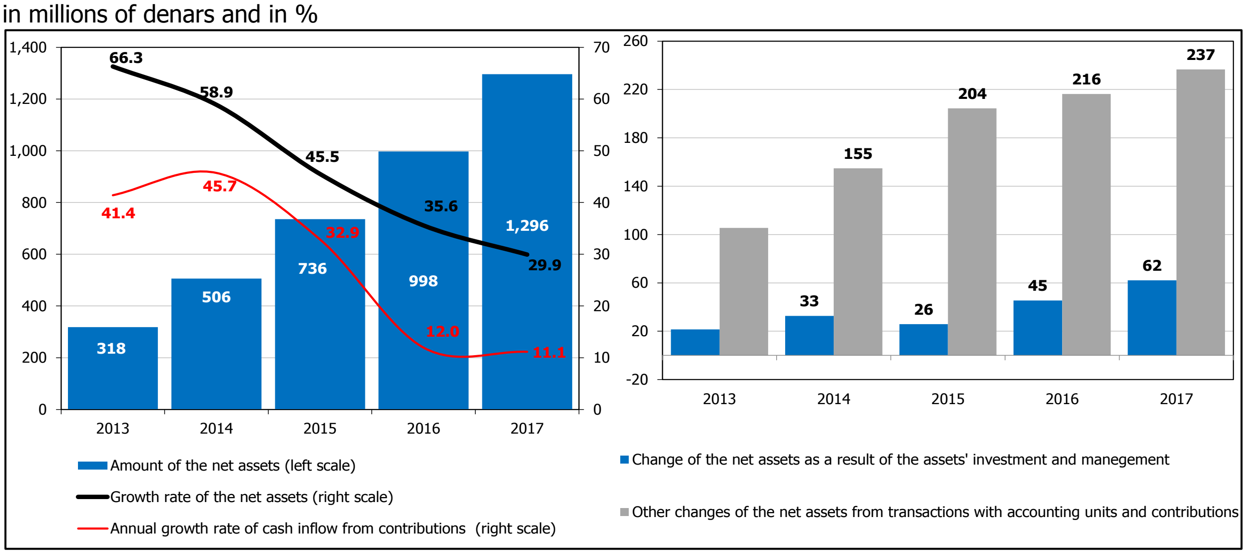
[175] Both companies are based in the USA.
[176] Six companies based in USA while one is based in Germany.
[177] On 31 December 2017, bonds with a maturity longer than five years registered a growth of Denar 11,580 million or by 79.2% compared to 31 December 2016.
[178] During 2017, one mandatory pension fund invested Denar 158 million in a thirty-year US bond.

depreciation of the US dollar against the euro made its contribution in the growth of investments in euros and consequently against the denar. Although during the first half of 2017, the value of the US dollar registered a fluctuating but relatively stable movement trend, by the end of 2017, the value of this currency started to depreciate (annual decline from 12.1% on 31.12.2017 compared to 31.12.2016).

6.2 Voluntary fully funded pension funds

In essence, voluntary fully funded pension fund is a type of household saving as an additional social security which should guarantee a decent standard living in old age. In the Republic of Macedonia, this insurance type is still underdeveloped and its role in the domestic financial system is still insignificant, especially if seen through professional pension schemes organized by employers. Analogously to the mandatory pension funds, net assets[179] and voluntary fully funded pension funds registered a slower growth compared to the previous year and at the end of 2017 their share in GDP[180] is unchanged.

Chart 86
Net assets (left) and structure of the growth of net assets (right) of voluntary fully funded pension insurance funds
in millions of denars and in %



Source: Audited financial statements of fully funded pension insurance funds
Note: Transactions with accounting units include: Cash flows based on paid contributions, cash flows (outflows) of assets from (to) other pension funds from the change of membership and cash outflows based on paid pension/retirement benefits.

Cash flows based on paid contributions made the largest contribution to the growth of net assets of voluntary fully funded pension funds[181]. Despite the doubled growth rate of profits from investing and managing funds during 2017, its contribution to the change of net assets is still significantly lower compared to the contribution of this profit in mandatory pension funds.

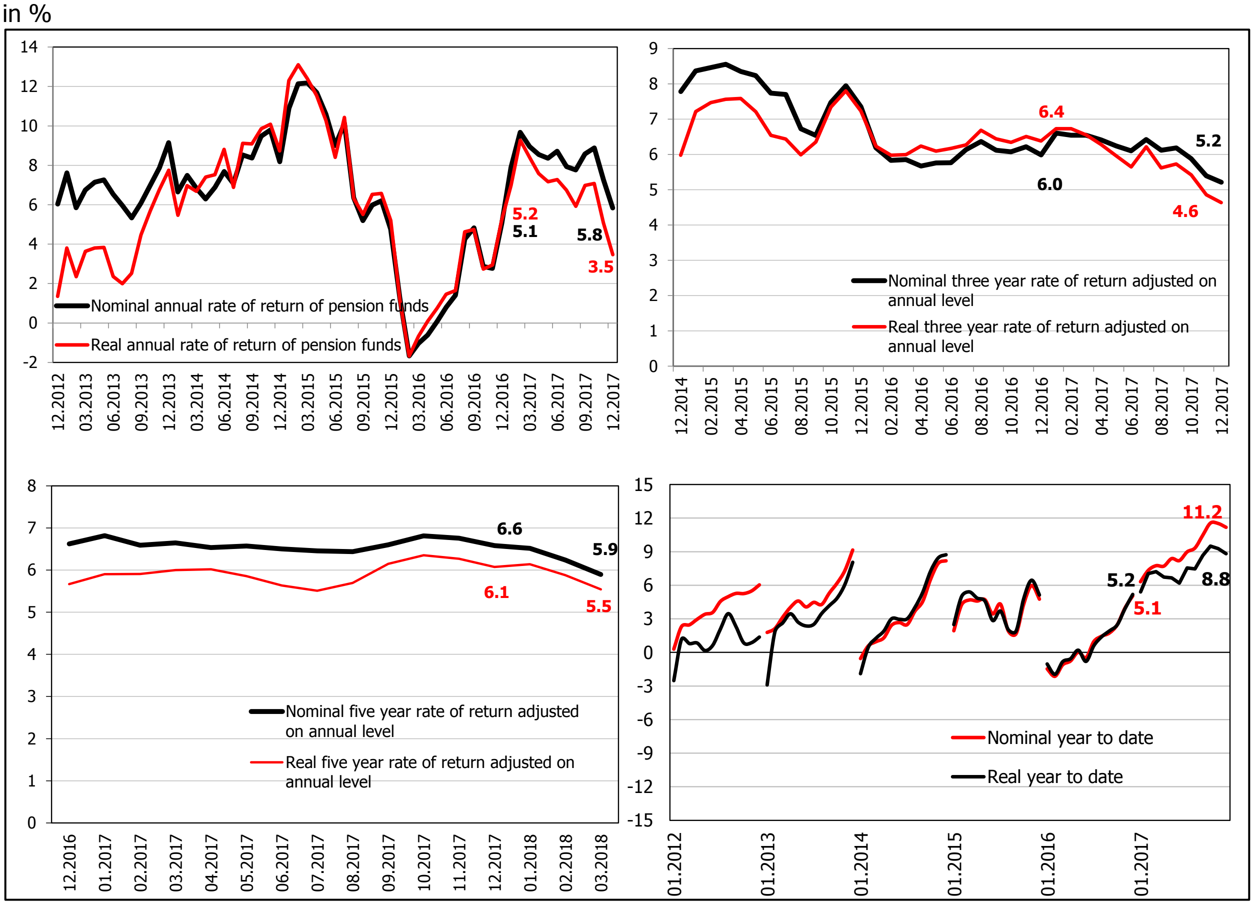
[179] As in mandatory pension funds, they are very small and the same changes that affect the net assets also apply to total assets.
[180] On 31.12.2017, voluntary fully funded pension funds have a share of a modest 0.2% in GDP.
[181] Cash flows based on paid contributions amount to Denar 238 million and Denar 265 million at the end of 2016 and 2017, respectively. The growth rate of paid contribution amounted to 12% at the end of 2016 and 11.1% on 31.12.2017.

The increase of costs for the payment of pension contribution[182] made its contribution in the acceleration of the growth of net assets.

Similar as in mandatory pension funds, during 2017, the annual (nominal and real) rate of return of voluntary pension funds registers an upward trend, but unlike mandatory pension funds this growth was maintained until the end of the year, exceeding the last years' level of return. In the first quarter of 2018, the change of the trend i.e. reduction (both in the nominal and real return) is evident.

There is an evident downward movement in both the three- and five-year (nominal and real) rates of return in 2017 and at the end of the year, the first registered a decline and the later registered insignificant growth compared to December 2016. In both rates, the decline continued during the first quarter of 2018. By the same analogy, there is a distancing in both nominal and real rates of return of mandatory pension fund funds and voluntary pension funds.

Chart 87
Rates of return of the voluntary pension funds
in %



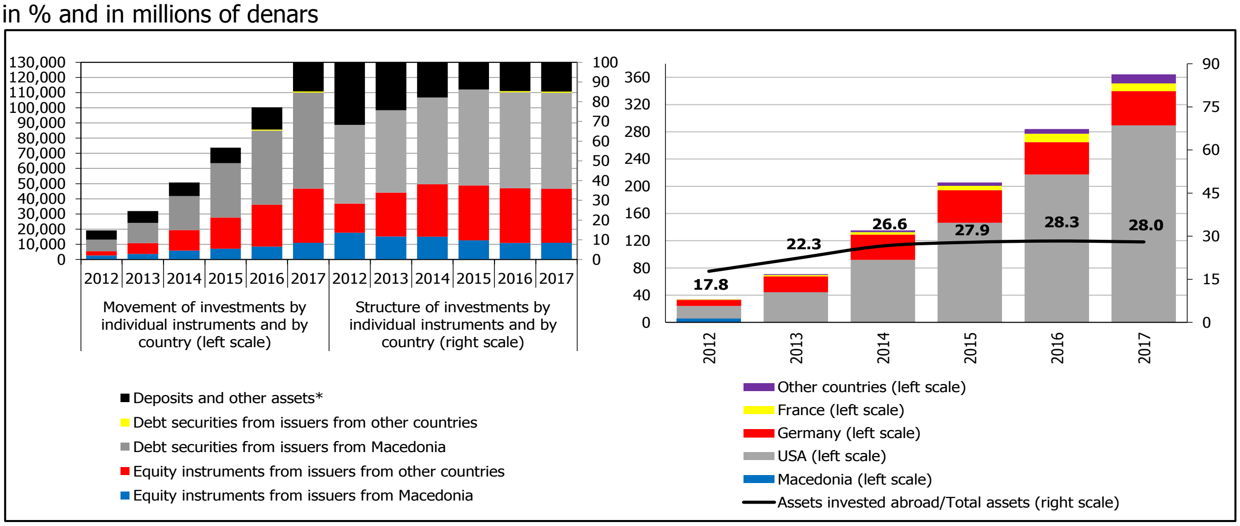
Source: MAPAS, NBRM
Note: The nominal yield is calculated by the percentage change in the value of the accounting unit between two consecutive accounting periods, converted into an equivalent annual rate when the accounting period is greater than one year. The real yield is calculated when the nominal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

[182] In 2017, cash flows based on paid pension contributions amounted to Denar 28 million.

Voluntary fully funded investment strategies resemble the mandatory pension fund investment policy, where most investments in voluntary fully funded pension funds are in domestic debt instruments (48.7%)[183], which emphasized the exposure of voluntary fully funded funds to the concentration risk of investing in one issuer. Investing in debt securities by foreign issuers is entirely due to the investment of one of the voluntary pension funds in US government bonds[184]. Analogously to mandatory pension funds, in the voluntary fully funded pension funds there is a larger share of domestic government bonds, due to the lower share of equity instruments, although these funds have higher placements in shares of domestic issuers.

Among foreign equity instruments, investments in investment fund stakes prevail, whose share in the total assets of voluntary fully funded pension funds decreased to 21.3% (this share was 21.8% at the end of 2016). Almost 87% of investments in stakes are in funds based in the USA, whereby these investments register an increase at the end of 2017, but slower compared to the previous year[185].

Chart 88
Movement and structure by instrument and by country (left) and movements of investments abroad, by country of origin (bottom right)
in % and in millions of denars



Source: MAPAS and audited financial statements of fully funded pension insurance funds.
*Deposits and other assets include deposits in domestic banks, cash and claims of funds.

In the structure of total assets invested abroad, placements in the USA prevail (83.0% stakes in investment funds, 14.2% shares and 2.8% government bonds), which points to a relatively high geographic concentration of placed assets abroad, while, as stated before in mandatory pension funds, exchange traded funds provide a transformation of the geographical exposure. Compared to the previous year, investments in instruments issued in other countries are twice as high (their share in total net assets of voluntary fully funded pension funds is 1.0%, on 31.12.2107) as a result of the investments in shares of companies in Netherlands and United Kingdom. Investments in France and Germany are almost unchanged. Placements in deposits of these funds amount to 13.1% of total assets.

[183] In 2017, 1.3% of total investments in debt of voluntary fully funded pension funds accounted for investments in foreign bonds.
[184] In 2017, one voluntary fully funded pension fund, invested in a three-year US government bond for the first time.
[185] On 31.12.2017, investments in investment fund stakes based in the USA increased by 32.2% compared to 2016, as opposed to the growth of 44.7% in 2016 compared to 2015.

7. Other financial institutions (savings houses, leasing companies and financial companies)

The importance of the savings houses to the financial system of the Republic of Macedonia, according to the volume of their activities, is small. However, savings houses cover a certain constant segment of the deposit market, and primarily of the credit market, which has easier access to sources of funding from the savings houses than to the banks. This is confirmed by the growth of the activities of the two savings houses that are active on the market in 2017 compared to 2016 (the activities of the sector as a whole reduce solely due to the decrease in the number of savings houses by one). By their nature as deposit institutions, savings houses are important for the overall financial stability as they collect deposits from natural persons, but the threat of potential spillover of risks is small. This is based primarily on the small volume of savings houses, but also on their high solvency and satisfactory liquidity, as well as on the appropriate prudential supervisory and regulatory framework, including deposit insurance.

The leasing sector also has a minor role and importance to the domestic financial system, due to both the small volume and the minimal connection to the other segments of the financial system. The decrease in the activities of the leasing sector in the past four years, indicated signals of its possible gradual extinction on the financial market. However, the high growth achieved in 2017 shows revival of these companies and may indicate their "return" to the market, which will be seen in the following period. The tax approach[186] in the performance of leasing activities has great importance to the further growth of the operations of leasing companies.

In recent years, the number and assets of financial companies, as the "youngest" segment of the financial sector, have constantly increased, but without significant changes in the relative importance to the financial system. These institutions perform limited scope of activities, which are aimed at lending to natural persons and legal entities, issuing and administrating credit cards, factoring and issuing guarantees. Financial companies, beside these activities, can give advice on financial activities, rent movable and immovable property and perform operational leasing. Basically, according to their activities, financial companies should be a kind of addition to the banks' credit activity, especially in the real sector segments that have harder access to bank loans. With the small volume of activities (share of only 0.4% in the total assets of the financial system) and the low cross-sector relation, these institutions do not pose a risk to maintaining of the overall financial stability. However, this segment should be closely monitored, taking into account the speed with which it incurs an expensive debt in certain household segments, which is why it is realistic to expect measures by the regulator primarily in the area of protection of consumers - borrowers.

[186] According to the regulations, the turnover tax with concluded leasing contracts for immovable items is paid twice: by the leasing company when purchasing the subject of the leasing, and by the leasing beneficiary after the expiration of the leasing contract and when transferring the property ownership.

7.1 Savings houses

In 2017, the number of savings houses reduced by one[187] compared to the previous year, as a result of which, the assets in this segment showed a significant annual decline of 24%. However, excluding the effect of the reduced number, the activities of the two active savings houses increased compared to 2016, by Denar 81 million, or by 4.3%. This growth was mostly due to the growth of the deposits collected from the households (of Denar 80 million), that were used for lending (loans increased by Denar 71 million). In accordance with the regulation, the activities of savings houses are mainly aimed at credit and deposit activities with households. The share of loans extended to non-financial legal entities is small (9.2% of the total loans to savings houses) and their amount decreased in 2017. The other changes in this segment of the financial system are insignificant. Despite the pronounced competition from other creditors (primarily banks) and the small share in the overall financial system, the two savings houses still cover a certain "own" segment of the household market.

Credit risk is the greatest risk the savings houses are exposed to. Given that lending to savings houses is mostly aimed at natural persons, consequently the credit risk due to default on the claims is dispersed among many users and at smaller amounts. In both savings houses that are active on the market, the credit risk, as measured by the share of non-performing to total loans, is low and equals 3% in 2017. In 2017, the credit risk exposure indicators of the two active savings houses registered minimal deterioration compared with the previous year (Annex 18). The share of non-performing to total loans in these two savings houses increased by 0.2 percentage points, as a result of the growth of non-performing loans of Denar 7 million (or 16.7%). However, with the savings houses there is a good coverage of non-performing loans with allocated impairment (73.7%), which given the high capitalization, indicates satisfactory capacity to absorb potential credit losses. **The solvency of the two active savings houses is high**, despite the slight decline in the capital adequacy ratio relative to 2016. The capital adequacy ratio equals 24.5%, whereby in the two active savings houses it is higher than the regulatory requirement (which is 20%). **Savings houses' liquidity is satisfactory,** amid an annual growth of liquid assets (of the two active savings houses) of 1.7%. The share of liquid assets[188] in the total assets (which is 12.1%) is twice lower than this indicator with banks, but liquid assets provide full coverage of short-term liabilities and coverage of the household deposits of nearly 30% (Annex 20).

The importance of the savings houses to the overall financial stability is very small and is confirmed by their weak links with the other segments of the financial system. The deposits of these financial institutions placed with the banks amounted to Denar 169 million and accounted for just 0.04% of the total deposit base of the banking system. Loans to savings houses approved by banks are 0.1% of total bank loans, while for the savings houses they are a significant source of funding, since bank loans are one fourth of their total assets.

[187] At the beginning of 2013, amendments to the Banking Law were passed, allowing the savings houses to transform into a bank or financial company (without conducting a liquidation procedure) or to make a status change for acquisition of a savings house by a bank. Consequently, in 2013-2017 the number of savings houses decreased from seven to two. The regulation does not allow establishment of a new savings house. The completion of the last status change from 2017 does not expect further significant changes in the number and scope of activities of the savings houses on this basis.
[188] Most (69.3%) of the liquid assets are cash.

7.2 Leasing (financial leasing)

In 2017, the number of leasing companies remained unchanged compared with the previous year. Unlike the past four years, when the scope of activities of this sector was continuously decreasing, in 2017, the total assets of the leasing companies increased by 19.9%[189]. This growth is due to the increased long-term liabilities of the leasing companies on credits and loans (from founders and banks) by 33.8%. The claims based on financial leasing, in accordance with the nature of the activities of these companies, had the largest share (of 83.8%) in the growth of assets (Annex 16). These claims increased by 22.5% or by Denar 548 million, with the largest contributors being the long-term claims based on financial leasing (up to 5 years)[190]. Short-term claims based on financial leasing registered a significant percentage growth (24%) compared to 2016, but their share in the total assets of leasing companies is small (14.3%), compared with the share of long-term claims (61.3%).

In 2017, the number of newly concluded leasing agreements decreased by 11 (totaling Denar 151 million), while the number of active agreements increased by 436 (totaling Denar 889 million). Legal entities are dominant users of leasing services and account for 78.6% of the total value of newly concluded contracts and 81.1% of the total value of active leasing contracts (Annex 21). Almost all (99.5%) active leasing contracts are in Denars with FX clause. On the other hand, the number and value of terminated leasing contracts decreased by 113 (totaling Denar 53 million), which, in conditions of growth in the leasing companies' activities, can result from the smaller materialization of the credit risk[191].

In the absence of regulatory requirements for the capital requirement for covering risks, the capitalization of leasing companies is monitored through the balance amount of equity and reserves[192]. The share of capital and reserves in the total assets equaled 14% as of 31 December 2017 and decreased compared to 2016 (17.3%). This is due to both the reduction in capital and reserves[193] and the growth of assets due to the increased indebtedness of leasing companies based on credits and loans. These developments increase the deleveraging (leverage) of leasing companies and reduce their capitalization. Cash and cash equivalents of leasing companies have a share of 2.9% in total assets and fully cover short-term liabilities, which are lower by seven times compared to short-term assets, indicating a solid liquidity position of this segment.

Despite the growth of the assets of the leasing sector and consequently, the increase in its share in the assets of the non-deposit financial institutions, it is still small and equals 4.3% and 0.7%, respectively. The small importance of the leasing companies to the overall financial stability is also perceived through their weak links with the other segments of the financial

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[189] In conditions of availability only of aggregate data for the entire sector, it cannot be determined whether the growth is due to the entire sector or only to certain leasing companies.
In 2016, the total assets of leasing companies decreased by 3.5%.

[190] The claims with contractual maturity between one and five years amounted to Denar 2,416 million and increased by 22.2% compared to 2016.

[191] Further analysis of the credit risk of leasing companies is not given, due to the absence of relevant data on the level of exposure to credit risk of this segment.

[192] According to the regulation, the capital of the financial leasing provider must not be reduced below Denar 6 million (which is also the legal minimum to establish a financial leasing provider).

[193] The National Bank has no data for the reason for the reduction in capital at a level of the sector. Given the unchanged number of leasing companies in 2017, with a positive financial result at a level of the sector in 2016 and 2017, the reduction in capital is probably due to the covering of losses with some leasing companies.

system. Deposits of leasing companies in domestic banks occupy insignificant 0.1% of the total deposit base of the banking system. There is a certain interconnectedness and dependence between leasing and insurance sectors, since the subject of the leasing is insured[194], and it, by its nature, is important for the financial stability. This conclusion cannot be substantiated by available data, but given that the assets of leasing companies are lower by five times compared to the assets of the insurance sector, no threats to the financial stability from this connection are expected.

7.3 Financial companies

In 2017, the number of licensed financial companies increased by four (and amounted to nineteen). The total assets of these institutions amounted to Denar 2,068 million and registered a more significant growth of Denar 1,072 million, or 107.6% compared to 2016. The growth of financial companies' total activities is mostly supported by the growth of capital and reserves, the amount of which is slightly more than twice larger compared to last year (given the increased number of companies). Financial companies finance most of their activities with their own capital, but loans are also a significant source of funding (short-term liabilities based on loans, credits and other liabilities, which represent 34.2% of total liabilities). The growth of the sources increased the claims based on approved loans, whose annual increase amounted to Denar 794 million or by 280%[195] (Annex 16). The capitalization ratio[196] of financial companies, determined as the share of capital and reserves in the total assets is high and amounts to 47.2% in 2017 (37.1% in 2016). According to the regulation, financial companies can approve loans up to ten times the amount of core capital and reserves. Given that this ratio at the end of 2017 is slightly above 1, it means that these companies still have great room for further lending. In 2017, impairment costs of active balance sheet claims registered a more significant growth (by twenty times). This points to materialization of credit risk and worsening of the quality of the credit portfolio of financial companies (in the absence of data on the amount of correction from the balance sheet, the relevant data from the income statement are used, with the allocated impairment in 2017 being 18% of the balance of net loans approved by financial companies).

The increase in the scope of work of financial companies is shown through the significantly increased number and value of newly concluded contracts. The threefold increase in the number of newly concluded contracts in 2017 is mostly due to natural persons. Also, the number and value of active contracts moves to the upside with both natural persons and legal entities, with the increase among natural persons being more significant. Natural persons are dominant users of the services offered by the financial companies, accounting for 79.3% of the total value of active contracts, while in the total value of newly concluded contracts, natural persons occupy almost 53% (Annex 22).

The importance of the financial companies to the overall financial stability is very small, in terms of the volume of their activities[197] and the links of this sector with the other segments of the financial system (which are almost absent). By the type of activities they perform, financial

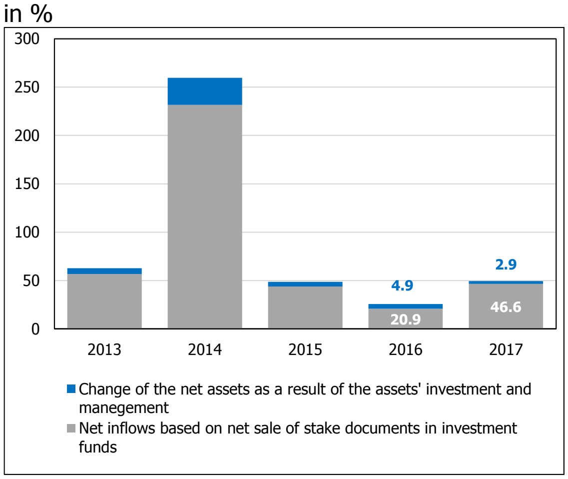
[194] Unless otherwise set under the leasing contract, from the moment of receipt of the subject, the beneficiary is obliged to insure the subject against any risk or impairment.
[195] In the absence of more accurate data, the amount of loans is presented on a net basis for the impairment.
[196] According to the regulation, the capital of the financial company must not be reduced below Denar 6 million (which is also the legal minimum to establish a financial company).
[197] The assets of financial companies make up 0.3% of GDP.

companies should be a kind of addition to the banks' credit activity, especially for customers who have limited access to banks' loans due to the more conservative credit policies of the banks. On the other hand, the accelerated growth of the segment of the financial companies that approve loans at small amounts with extremely high costs for users of these products (in the form of interest or fees and similar commissions), imposes a need for greater attention of the competent institutions and strengthening of the supervision over the financial companies, especially in terms of protection of consumers - borrowers.

8. Investment funds

In 2017, investment funds[198] in the Republic of Macedonia still had very little importance within the Macedonian financial system. Despite the upward trend of their share in total assets of the financial system, it was small and equaled barely 1.0%. The net inflows from the sale of unit documents in 2017 contributed to increasing the open-end investment funds' assets. Investment funds reported positive yield (weighted rate of return) throughout the year, particularly equity (share) funds. The index of the movement of prices of unit documents in open-end investment funds (MOFI) increased during 2017.

Chart 89
Growth structure of net assets of investment funds
in %



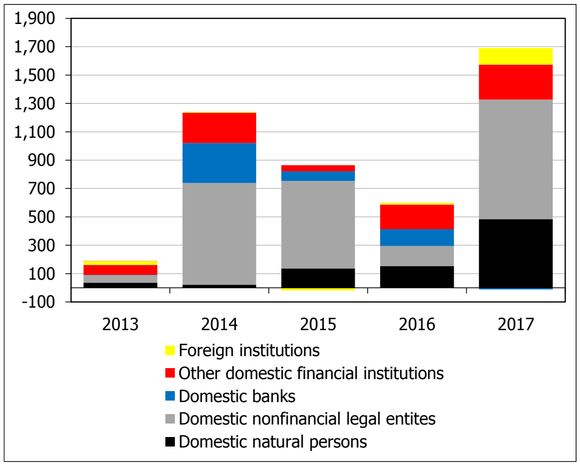
Source: Securities and Exchange Commission (SEC)

Investment funds[199] are the smallest segment among institutional investors. However, their share in total assets of non-banking institutional investors is constantly growing and reached 7.9% in 2017 (only 0.9 percentage points less than the share of life insurance companies). Thus, **in 2017, the assets of the open-end investment funds reached Denar 5,402 million, which is by 1.5 times more compared with the previous year[200].** The growth of open-end investment funds' assets almost entirely (94.5%) resulted from the net inflows from the sale[201] of investment fund units, which in 2017 were higher by Denar 1,081 million, or by 180.5%, compared to the previous year, mostly due to the increased interest of domestic investors, as the main investors in the funds, and to a lesser extent to the increased number of investment funds[202].

[198] 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, 188/2013, 145/2015 and 23/2016) does not require supervision of private funds, i.e. of the companies authorized to manage private funds in the Republic of Macedonia.
[199] Considering the absence of closed-end investment funds in the Republic of Macedonia, the entire analysis in this section of the report refers to open-end investment funds and the companies that manage them.
[200] The growth rate of the funds' assets was almost doubled (from 25.7% in 2016, to 49.0% in 2017).
[201] The net inflows from the sale of investment fund units include inflows of funds (payments by unitholders) and outflows of funds (payments to unitholders) to/from open-end investment funds.
[202] In 2017, fifteen open-ended investment funds operated in the Republic of Macedonia, or two funds more compared to 2016.

Only a very small contribution to the growth of open-end investment funds' assets in 2017 was made by investments in and management of the funds' assets. Also, the net assets[203] of these funds registered higher growth rate (49.5% in 2017, compared to 25.8% in 2016), which, in addition to the larger net inflows, was also due to the funds' liabilities[204], which reduced by 34.1% annually.

Chart 90
Structure of net inflows from transactions with unit documents
in millions of denars



Source: Securities and Exchange Commission (SEC)

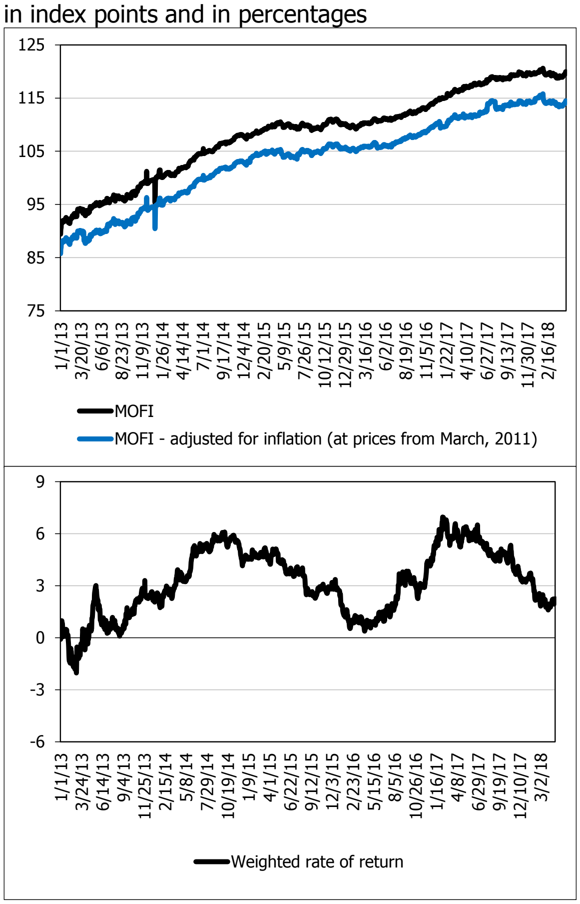
Monetary funds[205] continued to account for most of the total value of investment funds' assets, with a share of 62.8%[206].

Investment funds demonstrated vigilance when investing assets also during 2017, with the most pronounced one being registered in cash funds. They invested most of the assets in deposits in domestic banks[207], which on annual basis were higher by Denar 705 million, or by 36.8%. At the same time, there was a significant growth in equity financial instruments (by Denar 648 million, or by 94.0%) and bonds issued by the RM (by Denar 397 million, or by 72.9%).

In 2017, **the turnover of investment funds' units[208]** registered a more significant growth. The largest contribution to increased trading in investment funds unit documents was that of the domestic entities, primarily banks and non-financial legal entities, which had high participation in both purchasing and selling of unit documents. The net inflows from the sale of unit documents reached Denar 1,680 million, which is almost three times more compared to the previous year. The increased interest in trading in documents for stakes from the open-end investment funds is due to more factors, and one of the most significant ones is the downward trend in the interest rates in the banking sector and the gradual familiarization of the households and the corporate sector with the opportunities for investing in the funds as one of the alternatives to generate higher yields.

[203] Net assets of investment funds are obtained when the value of the fund's assets will be reduced by the value of its liabilities.
[204] The Funds have liabilities to fund management companies, deposit-taking banks, liabilities on allowed costs of the funds and other costs. These liabilities exclude net assets of the holders of redeemable units.
[205] Cash funds are open-end investment funds which invest funds in instruments that can quickly and easily be turned into cash, mainly deposits, and less into government securities. The investment strategy of these funds includes investing in the short term without a pre-defined period of investment. Domestic and foreign institutional and individual investors who are allowed to invest in accordance with the regulation can be holders of units in these funds.
[206] For more details about the assets of open-end investment funds and the structure of assets of certain categories of open-end investment funds by investment strategy and by type of invested financial instrument, see the Annexes to this Report.
[207] More than 87% of the time deposits up to one year of investment funds with domestic banks are monetary funds' deposits, and the remainder are share and equity funds' deposits.
[208] The turnover of investment funds' units includes inflows of funds (payments by unitholders) and outflows (payments to unitholders) to/from open-end investment funds.

Chart 91
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

In 2017, the index for the movement in the prices of open-end investment funds unit documents (MOFI)[209] continued to grow. As of 31 December 2017, its value was higher by 4.3% of the value achieved on the last day of the previous year. On the other hand, the weighted nominal annual rate of return on open-end investment funds[210] grew in the first half of the year, while in the second half of the year, it began to move downwards. However, it was positive throughout the year and equaled 3.4% as of 31 December 2017. Equity (share) funds registered the highest annual weighted rate of nominal return in 2017 of 6.6% at the end of the year (9.1% at the end of 2016), which results from the appropriate choice of equity instruments in which these funds invest. In circumstances when interest rates on deposits of banks for saving in banks decrease, cash funds, that fertilize money investing in deposits and government securities, also generate solid yields for investors (2.4% as of 31 December 2017). The yields generated from debt investment funds, which amounted to 2.0%, were slightly lower.

[209] 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 unit documents in each fund. So 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.
[210] Calculated as the sum of weighted nominal annual rates of return on each type of investment funds (monetary, equity and debt). The nominal annual rate of return is calculated using the weighted average daily selling price of units of each investment fund, grouped by type. The weight is the share of each fund in the net assets of the investment funds.

The information ratio - IR almost of each analyzed fund has been increasing since 2014[211]. This rate is investors' tool to select the assets in which they invest, in terms of the yield they bear. An increase in the information ratio suggests that the choice of equity instruments in which it was invested in 2017 improved (and this trend continued in the first few months of 2018).

9. Domestic financial markets

In 2017, the domestic financial markets still have a moderate effect on the financial system, and consequently on the financial stability in the country. The interbank market of unsecured deposits remained the major segment of the financial markets, despite its reduced trade during the year. This market segment was mainly aimed at meeting the liquidity needs of the banks in the shorter term, and the banks provided a portion of the necessary liquid assets also through the secondary trade in securities. Positive developments in the secondary securities market (over-the-counter markets) in 2017 were mainly prompted by increased trade in the market of collateralized deposits (repo - market), and, although in reduced volume, trade in CB bills was also relatively high. In 2017, the value of new long-term securities on the primary capital market doubled, mainly due to the increased issuance of government bonds, while secondary trading was also higher than the previous year.

Table 7
Information ratio - IR
in %

	Fund 1	Fund 2	Fund 3	Fund 4	Fund 5	Fund 6
2014	-175.2	-150.1	-166.3	-82.5	-126.9	-87.8
2015	-37.6	-81.9	-85.8	-14.2	-63.0	-36.7
2016	25.6	-19.8	-13.0	105.9	-28.4	11.6
2017	85.2	61.8	-5.2	132.6	4.4	-0.4

Source: Web site of the Macedonian Stock Exchange, MSCI index and NBRM calculations.
Note: The information ratio for each investment fund for each year is calculated as the ratio between the three-year average active return of the fund and the standard deviation of the active return of the last three years. The active return of the funds is the difference between the nominal annual return, by fund (calculated using the selling price of the unit) and the annual change in the selected benchmark index in the MSCI World Index). The funds for which the calculation was made are equity (share) funds, that is, funds that, according to their investment strategies and policies, can invest and actively manage portfolios of equity financial instruments.

The foreign exchange market and the implementation of the strategy of the National Bank for maintaining stable exchange rate of the denar against the euro are crucial for the maintenance of price stability, but also of the economic balance and stability in the financial system. The foreign exchange market turnover in 2017,

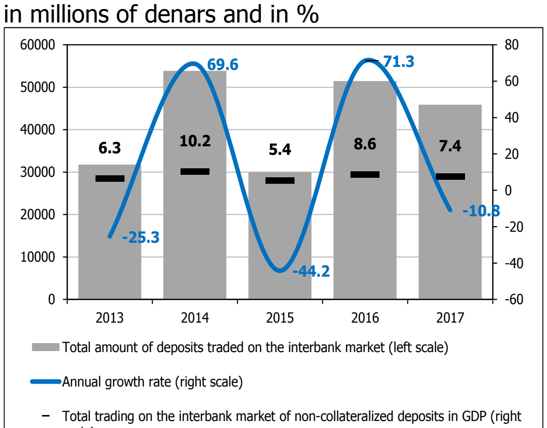
[211] Due to the availability of data required for the calculation, the information ratio (IR) is calculated only for open-end investment funds that have been operating in the Republic of Macedonia for more than five years. All six funds for which an information ratio was calculated are equity (share) funds.

as before, was at a significantly high level (over 80% of GDP), compared to other financial market segments.

9.1 Uncollateralized deposit market

Traditionally, the interbank market for unsecured deposits remains the major driver of the turnover on the money market and is the basis for the functionality of all its other segments. In 2017, the banks' activity in the interbank market for unsecured deposits decreased (by 10.8% on an annual basis) and registered a share in the gross domestic product[212] of 7.4% (8.6% in 2016). Unlike the previous year, when the growth of the total trade in unsecured deposits was due to the banks' increased liquidity needed for the withdrawal of deposits by households in the period of the shock from the political crisis, in 2017 the turnover of this market segment is mainly explained by the need for offsetting the occasional, short-term liquidity needs of the banks. The banks provided most of the necessary funds through trading with deposits with maturity up to one week and for the first time exceeded the amount of traded overnight deposits, which had the largest share in the total turnover in the deposit market in the past ten years. However, in conditions of satisfactory liquidity of the banking system, the propensity of banks to offset only the occasional lack of liquidity through trading with short-term deposits poses a modest systemic risk for domestic banks, i.e. it reduces the threat of contagion and spillover of liquidity problems from one bank to another.

Chart 92
Trading volume and annual growth of the interbank unsecured deposit market, and its share in GDP
in millions of denars and in %



Source: NBRM.

In 2017, the interest rate movements on the unsecured deposit market in the Republic of Macedonia were influenced by changes in the interest rate on CB bills as the main monetary instrument. Namely, amid gradual stabilization of expectations of households expressed through the absence of negative trends in the banks' deposit base, as well as through the favorable movements in the foreign exchange market, at the beginning of 2017, the National Bank cut the interest rate on the CB bills by 0.5 percentage points on two occasions (in January from 3.75% to 3.5% and in February to 3.25%), reducing it to the level of before the crisis. On the other hand, the interest rates on both the overnight deposit facility and the seven-day deposit facility remained unchanged throughout 2017[213]. Along with these developments, banks moderately reduced the indicative interest rate on interbank

[212] Source: The State Statistical Office of the Republic of Macedonia (for 2016 - preliminary data, and for 2017 - estimated data).
[213] In March 2018, the National Bank reduced the interest rate on the CB bills from 3.25% to 3.00%, and the interest rates on both the seven-day deposit facility and the overnight deposit facility were also reduced by 0.20 and 0.10 percentage points, at a level of 0.3% and 0.15%, respectively.

trade in deposits (SKIBOR[214]), while the interbank interest rate on overnight transactions (MKDONIA[215]) remained at 1%. During 2017, the Fed made changes to the policy setup, so that in the course of 2017 it increased the interest rate on three occasions (March, June and December 2017). Thus, the Fed's policy rate at the end of 2017 was higher by 0.75 percentage points compared to 2016, i.e. it ranged from 1.25% to 1.5%, which adequately contributed to increasing LIBOR[216] for US dollars during 2017. The tightening of the monetary policy in the USA continued in the first few months of 2018, when the Fed further increased the interest rate[217]. In contrast, the European Central Bank in the course of 2017 did not make changes to the monetary policy setup, keeping the interest rate on the main re-financing operations at the level of the last change in March 2016, when it was reduced from 0.05% to 0.00%. Thus, EURIBOR[218] and EONIA[219] remain in the zone of negative values. In 2017, the interest rate spread between market indicative interest rates in the Republic of Macedonia and in the euro area were almost unchanged, as opposed to the slight expansion of the interest rate spread between market indicative interest rates in the Republic of Macedonia and in the USA.

The decrease in the interest rates on the interbank market in 2017 was also noticed through the spot-curve movement of the interbank interest rate on the deposit market - SKIBOR, as well as through the movements of the slope of the implicit forward curves[220] of SKIBOR, which in 2017 showed a decrease in forward interest rates[221], for all three maturities. The SKIBOR spot yield curve had a small positive slope, which has seen a downward trend in the past few years - a gradual correction, i.e. it showed expectations for an increased uncertainty in the economy, as expected, particularly in times of economic stagnation and further political turmoil and risks from external environment. Given that forward yield curves are used to perceive the market expectations (banks) for the level of interest rate in the future, the rectification of forward yield curves indicates that banks will in the future expect low inflation for the analyzed period, which actually corresponds with the low inflation rates. It should be noted

[214] SKIBOR (Skopje Interbank Offer Rate) - interbank interest rate 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.

[215] MKDONIA is the interbank interest rate for concluded overnight transactions by reference banks as sellers of denar deposits. It is calculated as the weighted average interest rate, so the interest rate on each transaction is weighted by the appropriate amount of cash.

[216] LIBOR for US dollars (London Interbank Offered Rate) - interest rate at which reference banks on the London money market are ready to sell US dollar deposits to another reference banks and it is calculated on the basis of an average of the quoted interest rates of selected banks.

[217] At the regular meeting in March 2018, the Fed made a decision on new increase in the target range of the policy rate by 25 basis points and it equaled 1.5 - 1.75%.

[218] 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 an average of the quoted interest rates of selected banks.

[219] EONIA (Euro OverNight Index Average) - interest rate on 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.

[220] Forward-forward yield curve is the ratio between the forward rates and the corresponding periods to maturity.

[221] Forward interest rates are calculated using the current spot rates through mathematical principles that reflect the amount of rates which do not allow for arbitration and which relate to an expected period in the future. The general formula used to calculate forward-forward rates is as follows:

$Fm_{1,}\, m_2 = (\frac{(1+\text{спот за } m_2)^{m_2}}{(1+\text{спот за } m_1)^{m_1}})^{\frac{1}{m_2-m_1}} - 1$, where m_1 is the number of months in the future when the forward-forward rate is calculated (shown on the horizontal axis of Chart **Error! Reference source not found.**93), and m_2 is the maturity in months of the forward-forward (three, six or nine months). The current spot yield curve should incorporate all available current information, both economic and political, from domestic or external sources, to show the consensus of market participants (for interbank interest rates - consensus among banks). This current information is, in fact, incorporated in the calculation of the forward rates and for obtaining forward yield curve.

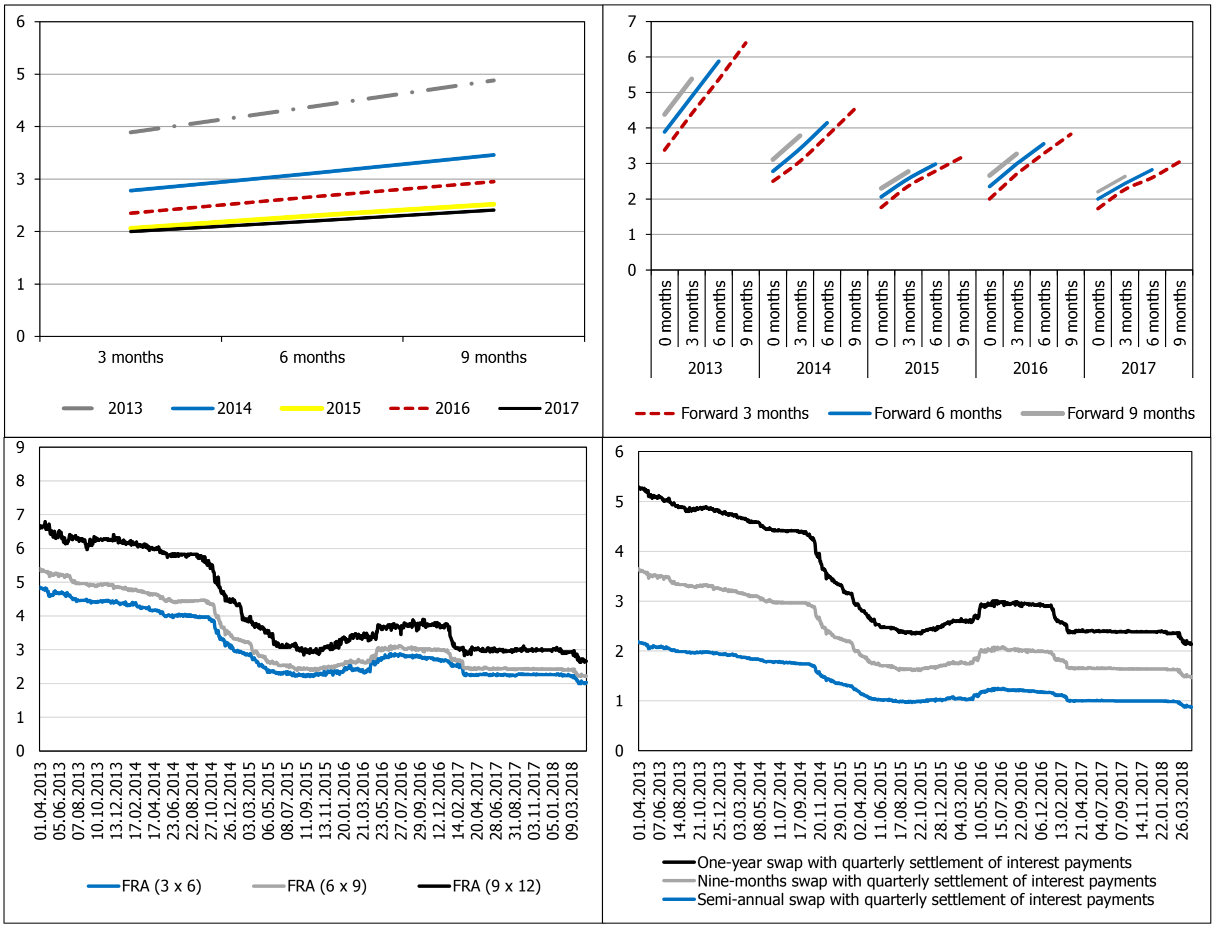
that forward interest rates are not a prediction of the level of future spot rates[222], which means that the banks' expectations at the given moment of observing forward yield curve do not have to be accurate.

[222] For a period of three, six or nine months, to which the respective forward yield curves relate, there will be new information and events that will change the market participants' perceptions and cannot be known in the calculation of forward interest rates.

Chart 93

Spot (upper left) and implicit forward curve (upper right) on the interbank interest rate on the deposit market - SKIBOR and movement of forward rates on 3-month SKIBOR (down left) and implicit swap rates on SKIBOR with quarterly settlement of interest payment (down right)

in %



Source: NBRM internal calculations.

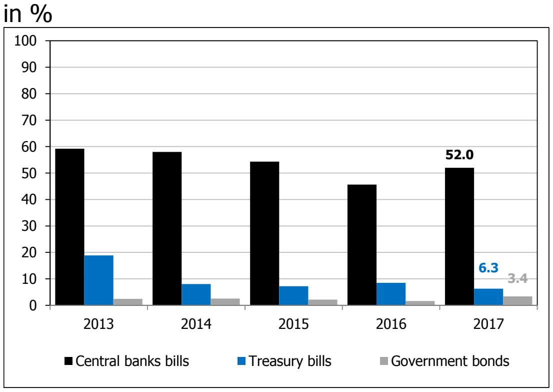
Note: Forward rate agreement for 3-month SKIBOR - an agreement between two parties wishing to protect themselves against any future interest rate movements (the buyer to be protected against any increase, and the seller from any interest rates reduction in the future) constitutes a forward rate agreement SKIBOR when a party pays a fixed interest rate and receives a variable interest rate (i.e. when it has a long position of SKIBOR), while the counterparty receives a fixed interest rate and pays a variable interest rate (i.e. when it has a short position of SKIBOR). FRA is designated as FRA (X x Y), where X and Y are designations of the number of months, where X signifies the period (in months) in which the agreement expires, and Y-X indicates the maturity of SKIBOR (in months) to which SKIBOR refers (for example: FRA (9x12) denotes FRA of SKIBOR of 3 months (obtained as 12-9), which is settled in 9 months (X = 9)). The forward interest rates are calculated using the standard calendar number on the days of the month and actual/360), which is used to calculate SKIBOR (to simplify, the calculations assume that each month has 30 days, i.e. actual = 30). Forward-forward curves begin with spot rates for each appropriate maturity, followed by the forward-forward rates calculated for each maturity. The implicit swap rates for SKIBOR are rates that could, without arbitration, be used to conclude interest rate swap transactions between two contractual parties, with a future date of swap transaction submission and future periodic settlement of interest payments. A party will pay a fixed rate - an estimated swap rate, the movement of which is presented on the chart, and the counterparty will pay SKIBOR as the reference variable interest rate at which the swap transaction was concluded.

9.2 Primary market

Basic financial instruments issued on the primary market in the Republic of Macedonia are the short-term securities of the National Bank (CB bills - available only for banks) and government securities (treasury bills and government continuous and structural bonds) that are available for investors. Financial institutions and non-government economic agents barely use the financial markets as a possible source for financing their activities, because of which the issue of non-government bonds and shares is very rare and incidental (98.5% of the total value of realized long-term securities issues account for long-term government securities). In 2017, the main investors in the issued government securities are domestic banks and pension funds. Hence, primary market movements have great significance for the performance of these institutional segments of the financial system. In 2017, the bid/ask ratio of the primary market instruments was mainly balanced. Slightly more pronounced oscillations in the bid/ask ratio of the primary market instruments occurred in the first half of 2017, as well as in the first months of 2018, when the offer of government securities was reduced, given the previous issue of Eurobonds on the international markets.

CB bills are the most important instrument on the primary money market in the Republic of Macedonia. In 2017, the realized amount of CB bills reached Denar 322,130 million annually (an increase compared to the previous year of 17.9%[223]) and accounted for 84.3% of the total realized amount on the Macedonian primary market. In conditions of gradual stabilization of the households' expectations evident by the absence of negative trends with the banks' deposit base, as well as by the favorable developments on the foreign exchange market, at the beginning of 2017, the National Bank reduced the interest rate on the CB bills on two occasions by a total of 0.5 percentage points (in January from 3.75% to 3.5% and in February to 3.25%)[224]. Thus, the interest rate on CB bills was normalized and restored to the level of pre-April events (in 2016) and the turbulence on the deposit and foreign exchange market caused by the political instability. The changes in the CB bills interest rate were followed by multiple increases in the offered amount of CB bills at the beginning of the year amid increase in the banks' liquidity potential[225]. However, consequently with the reduction of the banks' liquidity potential at the mid-year (as a result of the intensified financing of the government on the domestic market, as well as the National Bank's interventions for providing

Chart 94
Share of the amount of each primary market instrument in GDP
in %

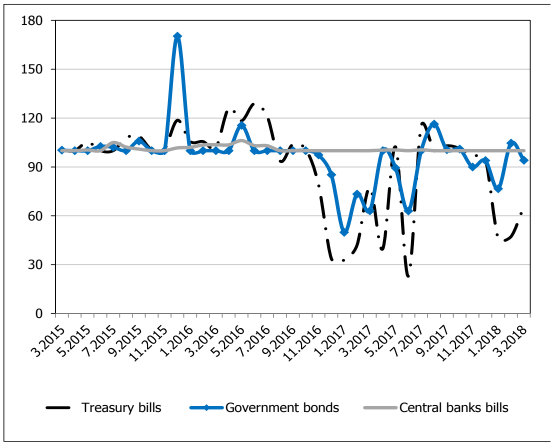


Source: NBRM.

[223] The short CB bills maturity contributes to a larger cumulative amount of realized CB bills.
[224] In conditions of further stabilization of the confidence and expectations of the economic agents, visible through the favorable movements in the foreign exchange market and the gradual acceleration of the deposit growth without major imbalances in the domestic economy, in March 2018 the National Bank has lowered the interest rate on the CB bills from 3.25% to 3.00%, while the offered amount of CB bills remaines unchanged (Denar 25 billion).
[225] In January 2017, from Denar 23,000 million to Denar 25,000 million, and in March 2017 to Denar 30,000 million.

foreign currency to banks), the National Bank adjusted the offered CB bills amount by reducing it for a total of Denar 5,000 million[226].

Chart 95
Bid-to-cover ratio, by month
in %



Source: NBRM.

During 2017, large part of the new issues of government securities, in line with the demand, were with longer maturity[227]. Thus the total amount of issued **treasury bills** (Denar 39,077 million) was lower by Denar 11,913 million, or by 23.4%, compared to the last year. Thus, the banks' investments in treasury bills also decreased annually (by Denar 3,308 million or 13.7%). The structure of total treasury bills remained almost unchanged, dominated by 12-month bills in domestic currency[228]. Treasury bills auctions were conducted through a volume tender with fixed interest rate set by the issuer, which in 2017 ranged from 1.45% to 2.2%, depending on the maturity and the currency component of the offered treasury bills.

During 2017, the government was the most active issuer of long-term securities, issuing **government bonds** to provide funding sources for budget purposes of the government and for the purposes of public debt management. Almost all issued long-term securities were continuous government bonds with different maturities (two, three, five and fifteen years), and traditionally, denationalization bonds were issued[229]. The total newly issued amount of government bonds during 2017 was higher more than twice compared to the previous year[230] and reached 3.3% of GDP (for comparison, 1.5% in 2016). The stock of the total issued continuous government bonds constituted 32.3% of the total government debt as of 31 December 2018, i.e. 81.3% of the central government debt[231].

In 2017, there was virtually no significant movements on the primary capital market in the segment of issue of non-government securities, given that equities in the amount of only Denar 249 million (compared to Denar 1,111 million in 2016 year), mostly issued by banks. Thus, even the small share of issued equities in GDP has further decreased (to only 0.04%). In 2017, for the first time after a long period, a corporate bond (with characteristics of a capital

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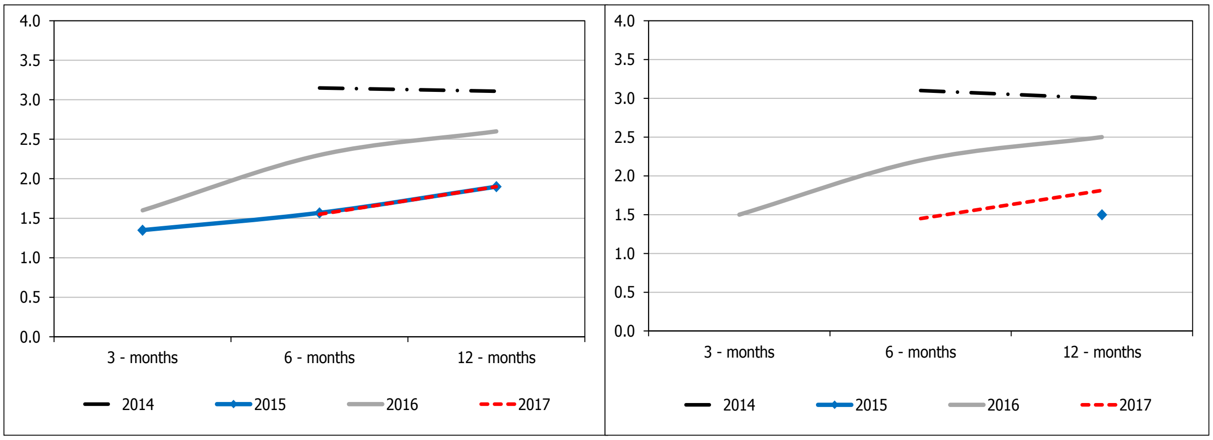
[226] In July 2017, from Denar 30,000 million to Denar 27,500 million, and in August 2017 to an additional Denar 2,500 million, or Denar 25,000 million. In the first three months of 2018, the offered amount of CB bills amounted to Denar 25,000 million.
[227] More details on the maturity structure of government securities are given in the Annual Report of the National Bank for 2017 part 3.3. Public finance http://www.nbrm.mk/ns-newsarticle-godisen-izvestaj-za-2017-godina.nspx.
[228] Almost all treasury bills were issued in domestic currency (89.3%).
[229] Denationalization bonds are registered securities, denominated in euros and unlimitedly negotiable. The bonds bear an interest rate of 2% per annum, and the nominal value and interest are paid for a period of 10 years. The denationalization bonds of the sixteenth issue were issued on 28 December 2017, in denar equivalent of Euro 8 million.
[230]The total value of new issues of long-term securities made in 2017 reached Denar 21,293 million, which is an increase of Denar 10,334 million, or 94.3%, compared to the previous year.
[231] The total government debt includes debt of the central government, public funds and municipalities, and the National Bank debt is not included. Ministry of Finance is the source of data on the total government debt and the central government's internal debt.

Chart 96
Interest rate on treasury bills on the primary market set by the issuer, in denars (left) and FX clause (right)
in %



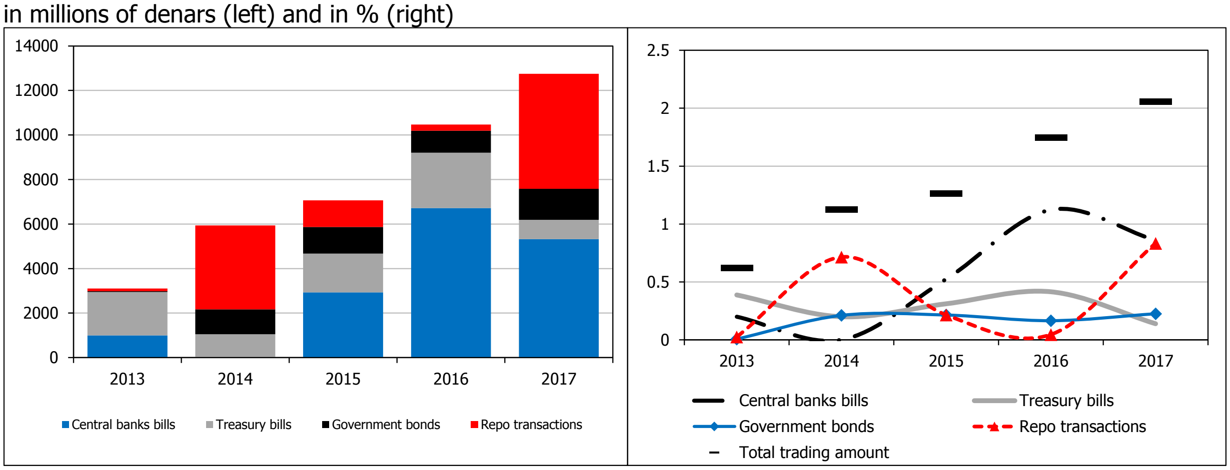
Source: NBRM.

instrument, as part of the Tier 2 for the capital adequacy needs) was issued for known buyers by one bank[232].

9.3 Secondary trade in securities (Over-the-Counter)

The activity of economic entities on the secondary securities market (over-the-counter market) is motivated mainly by the need for managing their liquidity. In 2017 the turnover of this market segment continued upwards (an increase of Denar 2.3 billion), although its scope remains moderate (2.1% of the GDP). The highest growth, which at the same time was the driver of the total growth of the realized turnover from

Chart 97
Traded amount of securities OTC (left) and share in GDP (left)
in millions of denars (left) and in % (right)



Source: NBRM.

232 It is the first issue of 1,000 bonds with an individual face value of Euro 1,000 and a total value of Euro 1,000,000. The bond issue is long-term with interest yield (coupon) in non-materialized form, non-convertible, it is on the behalf of and is unlimitedly transferable. The bonds are issued for the purpose of increasing the capital and own funds of the company, improving the profitability, expanding the offered services portfolio, as well as for investments in IT solutions for building digital platforms for internet services of the bank.

secondary trading of securities (over-the-counter markets), realized the turnover in the interbank repo transactions, which is almost twenty times higher than in the previous year[233]. Namely, the increased interest of banks for using funds through the secured deposits market (repo market) in 2017 is mainly explained by the need for compensation of occasional lower-costs liquidity shortages. CB bills trading was also relatively high, given the fact that the banks participated with the maximum set amounts at the CB bills auctions, and later during the reserve requirement period they were financed through the outright sale of CB bills to other banks. However, unlike the previous two years, when the positive movements on the over-the-counter markets resulted mostly from the increased trading in CB bills, in 2017 the secondary trading in short-term securities (CB bills and treasury bills) dropped significantly. Even the very low level of the correlation between the traded amount of short-term securities on the over-the-counter markets and GDP markets has further decreased (from 1.5% in 2016, to 1.0% in 2017), which points to the still low activity on the secondary market. Contrary to the downward movements on the secondary market of short-term securities (the lowest volume of trading in treasury bills in the last six years), in 2017, secondary trading in long-term securities (government bonds) increased significantly and reached the historical peak of Denar 1.396 million. However, the correlation between the traded amount of long-term securities on the over-the-counter markets and the GDP remained almost the same, i.e. at the level of the last four years (0.2%). During 2017, given the solid liquidity position, the banks did not use funds from the National Bank through repo operations for creating liquidity in the banking system. Despite the positive over- the-counter developments, this market segment is still marked by insufficient activity, compared to its potential, which is mainly due to the high liquidity in the banking system, as well as giving priority to other instruments in liquidity management.

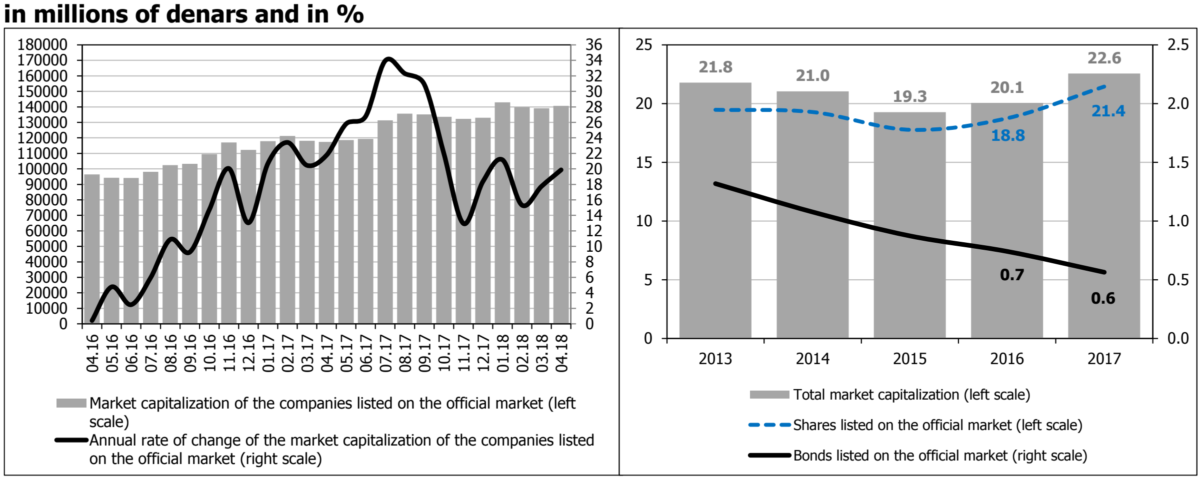
9.4 Secondary trading on institutionalized segments

The turnover from secondary trading on the Macedonian capital market in 2017 registered an increase, but it was not sufficient to elevate the role of the secondary capital market in the Republic of Macedonia more pronouncedly, compared to the other segments of the financial system. The significance of the secondary trading in long-term securities in the total financial system, measured through the share of the turnover of the standard stock market trading in GDP, remains very low of 0.5%. This market segment continued to be characterized by modest investment alternatives and low liquidity, and low interest of the wider domestic investment public, as well as absence of foreign institutional investors. In 2017, despite the economic stagnation and evident consequences of the prolonged political crisis on the domestic economy, the turnover from standard trading (stocks and bonds) on the secondary capital market[234] increased and reached Denar 2,908 million, which is an increase of Denar 575 million, or 24.7%, compared with the previous year. This is due to the increased trade in shares, while the annual trade in bonds declined for the second consecutive year. The increased stock market turnover had a corresponding influence on the movements of the stock market indices[235]. Thus, on the last trading day in 2017 (28 December 2017), the Macedonian

[233] The turnover of interbank repo transactions in 2017 reached Denar 5 billion (for comparison, the turnover in 2016 amounted to Denar 272 million).
[234] The turnover in standard trading does not include block transactions, turnover on public stock exchange auctions and public offerings of securities.
[235] The methodologies for calculating the individual indices and information on their structure are available on the website of the Macedonian Stock Exchange - www.mse.mk

stock exchange index MBI-10[236] equals 2,538.86 index points, which means an increase of 18.9% compared to the index value registered on the last day of trading in 2016 (29 December 2016, 2,134.91 index points). In 2017, MBI-10 did not show high volatility and generally ranged within its average value. The interest of foreign investors in investing in securities on the Macedonian Stock Exchange was still lower than their interest in selling, so that traditionally, the only net buyers of securities, and therefore the main long-term investor on the capital market in the Republic of Macedonia, remained domestic legal entities[237], whose net purchase in 2017 was almost twice as high as in the previous year.

Chart 98
Market capitalization of listed companies on the official stock market (left) and its share in GDP (right)
in millions of denars and in %

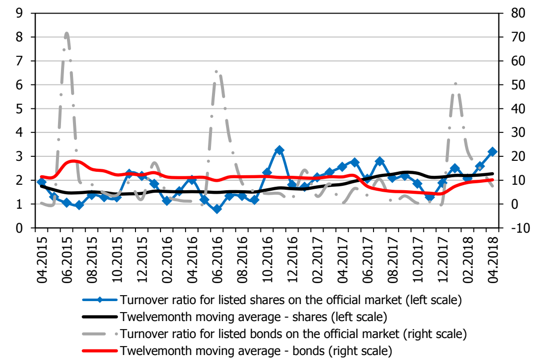


Source: Web site of the Macedonian Stock Exchange and National Bank calculations.
Note: The total market capitalization covers the shares listed on the official market, the shares on the market of joint stock companies with special reporting obligations and bonds listed on the official market.

The share of **market capitalization** of securities listed on the official market of the Macedonian Stock Exchange continued increasing in 2017. The market capitalization of shares of companies listed on the Macedonian Stock Exchange as of 31 December 2017 was Denar 132,942 million, which is an increase of Denar 20,628 million, or 18.4% compared to the same period in the previous year. At the contrary, the market capitalization of bonds decreased on an annual basis (by 21.3%), mainly due to the fact that the denationalization bonds are depreciating bonds (i.e. on a regular annual basis, 10% of their principal is due).

[236] On December 15, 2017 a regular revision of the MBI-10 index was performed. The MBI-1- index is composed of common shares of the following 10 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; NLB Bank AD Skopje and Ohridska Bank AD Skopje.
[237] For more details about the volume and annual change in the stock exchange turnover in standard trading, its share in GDP, structure of the total turnover of the stock exchange by type of investors, as well as the concentration ratio on the secondary capital market in the Republic of Macedonia, see annexes enclosed to this Report.

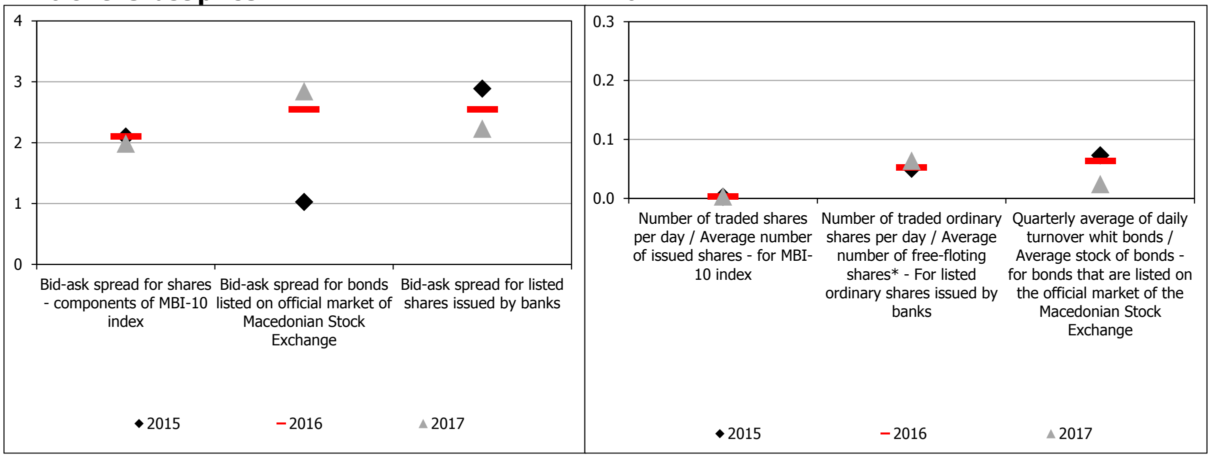
Chart 99
Securities trade ratios in standard trading
in %



Source: Web site of the Macedonian Stock Exchange and National Bank calculations.
Note: The larger deviations of the turnover index of bonds listed on the official market from its twelve-month moving average relate to the months when the denationalization bonds were issued.

In 2017, the value of **turnover indicators of shares and bonds listed** on the official stock market generally ranged within their twelve-month moving average. However, the value of these indicators was relatively low, which confirms the limited liquidity of the Macedonian secondary capital market (which in turn prevents rapid and easy sale of securities), which was a limiting factor relative to the activities of some of the brokerage houses[238] on the market, amid absence of sufficiently attractive investment alternatives.

Chart 100
Annual average of the bid-ask spread (left) and of the turnover ratio (right) of shares that constitute MBI-10 index, of bonds listed on the official market and of shares issued by banks listed on the official market
in % of the last price **in %**



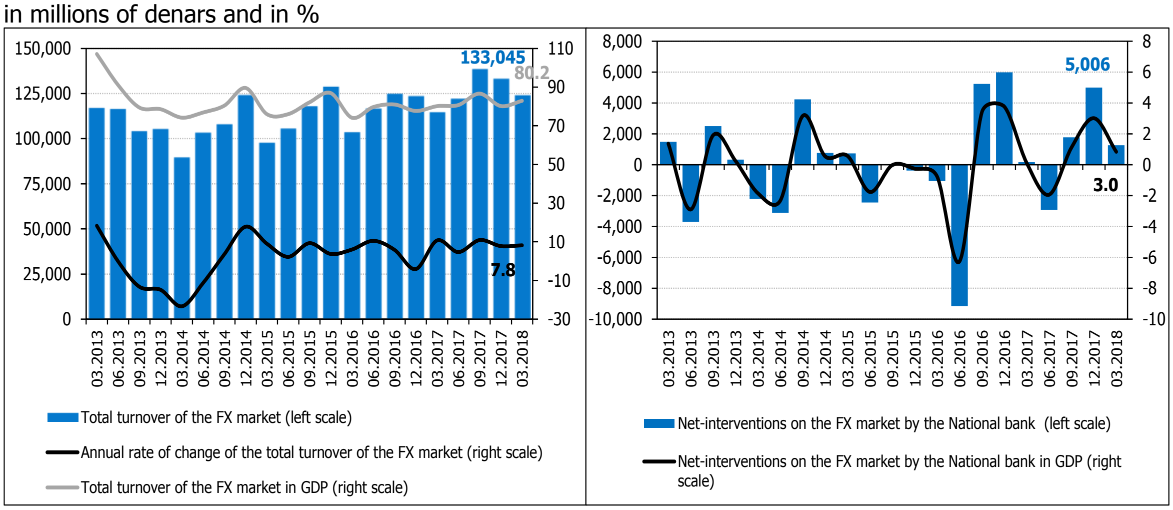
Source: Web site of the Macedonian Stock Exchange and National Bank calculations
Note: The annual averages of the spread between the last bid and ask price are obtained from the weighted average of MBI-10 (the share of trade in each stock in the total trade in stocks is used as a weight), the weighted average for all bonds (the share of trade in each bond in the total trade in bonds is used as a weight) and the weighted average for all stocks issued by banks (the share of trade in each stock in the total trade in stocks is used as a weight) for the dates for which there are quotations.

[238] During 2017, the number of brokerage houses remained unchanged. In 2017, brokerage houses reported a loss of Denar 0.4 million, which is significant decrease relative to the loss reported for 2016 (Denar 27 million). The total assets of the brokerage houses increased (at the end of 2017 they reached Denar 121 million), with the capital and reserves of the brokerage houses (down by Denar 6 million, on an annual basis) being also higher. The total income was by Denar 7 million lower than the income generated in 2016.

9.5 Foreign exchange market

Overall, in 2017, the movements on the foreign exchange market were relatively favorable, and the National Bank intervened to overcome the occasional mismatch between supply of and demand for foreign currency. The total turnover on the foreign exchange market[239] in 2017 amounted to Euro 8.3 billion, which is over 80% of GDP, and compared with the previous year it increased by 8.5%. Thus, the foreign exchange market remains the most significant segment for both the domestic financial markets and the economy as a whole. In conditions of constant stabilization of the economic agents' expectations and positive estimations for stability of the economic bases amid lower political uncertainty in the country, the foreign exchange market developments in 2017 did not deviate much from the usual seasonal dynamics. Thus, in order to maintain the stability of the denar exchange rate against the euro[240], in May and June 2017 the National Bank intervened on the foreign exchange market by selling foreign currency and provided the banks with the required foreign currency liquidity in the amount of Euro 49.1 million (which is 2.1% of the average amount of foreign reserves during 2017), while since August 2017, favorable movements on the foreign exchange market have been registered, which resulted in improved foreign exchange liquidity of the banks and National Bank interventions for the purchase of the foreign currencies surplus, which exceeded the amount of sales realized in the first half of the year. Thus, through transactions with market makers, the National Bank on an annual basis registered the highest net purchase of foreign assets in the last five years, in the amount of Euro 65.6 million, representing 2.7% of the average foreign reserves during the year (for comparison, in 2016, the National Bank made a net purchase on

Chart 101
Total trade and share on the foreign exchange market in GDP (left) and NBRM net interventions on the foreign exchange market and their share in GDP (right)
in millions of denars and in %



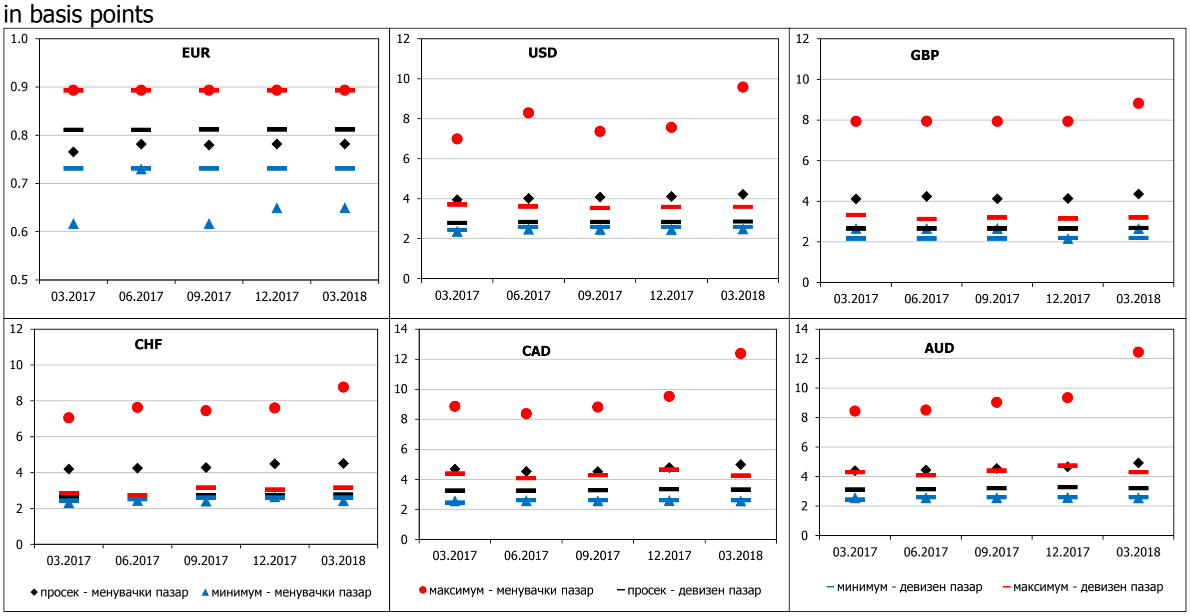
Source: NBRM.
Note: NBRM net interventions on the foreign currency market include NBRM transactions with market makers.

[239] The total turnover on the foreign exchange market encompasses the banks' transactions with the companies and natural persons and the interbank transactions, including the net-interventions of the National Bank with the market makers.
[240] In 2017, the nominal exchange rate of the denar against the euro averaged 61.57 denars per euro (only 0.02 denars less than the previous year). In addition, one American Dollar was exchanged for 1.04 Denars less, one British Pound was exchanged for 5.19 Denars less, one Swiss Franc was exchanged for 1.05 Denars less, compared to 2016.

the foreign exchange market in the amount of 0.7% of the average foreign reserves in 2016).

The monetary strategy selected for maintaining a stable exchange rate contributes also for relatively low bid-ask spread on the foreign exchange market and the domestic currency exchange market for the euro. In contrast, significant spreads are noticed against other major currencies, which indicates a more modest liquidity (for the foreign exchange market) of other currencies. 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 of 1.1 to 1.8 percentage points, depending on the currency, which is actually an indicator for the additional margin that banks incorporate in the prices of currencies to cover cash management costs.

Chart 102
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 calculation of bid-ask spread on the currency exchange market uses publicly available data of all banks in the Republic of Macedonia, except the Macedonian Bank for Development Promotion, and on the foreign exchange market, only of the the market makers.

ATTACHMENTS

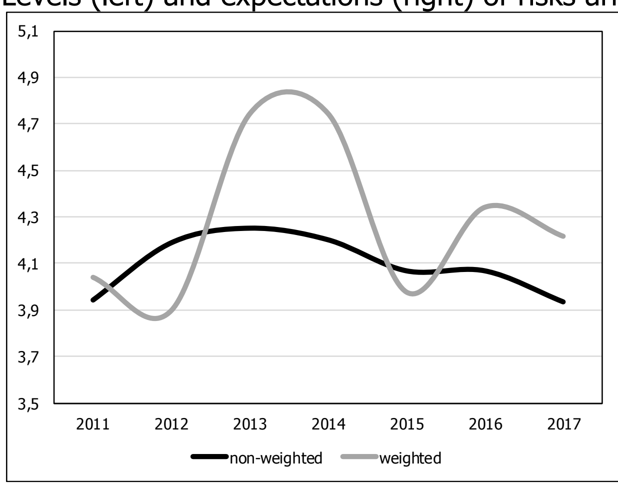
Annex 1 Survey of banks' risk perceptions

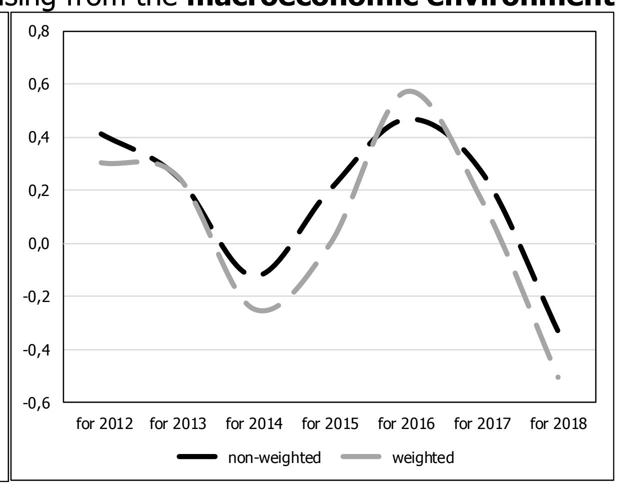
This survey aims to provide information on the banks' perceptions of the main sources of risks they face with in their operations, that is, the risks they consider important and current. The survey divides the risks in five groups. Those are risks arising from: macroeconomic environment, financial markets, banking sector, strategy of the bank or the banking group and amendments to the regulatory framework. Moreover, the Survey requires from banks to adequately rank risks that they faced with in 2017 by their significance and to express their expectations for the next calendar year. Banks assess the significance level of each of the five groups of risks in the range from 1 to 5 (1 means that the risk group is of little significance for the bank, and 5 means that that risk group is extremely important for the bank at the time), while expectations are expressed by qualitative assessment of the risk direction (growing "+1", decreasing "-1", or unchanged “0”).

The summarized results of the Survey conducted in the beginning of 2018 are given below.

I. Banks point out the risks arising from the macroeconomic environment as risks with the greatest significance and impact on the operations.

Levels (left) and expectations (right) of risks arising from the **macroeconomic environment**





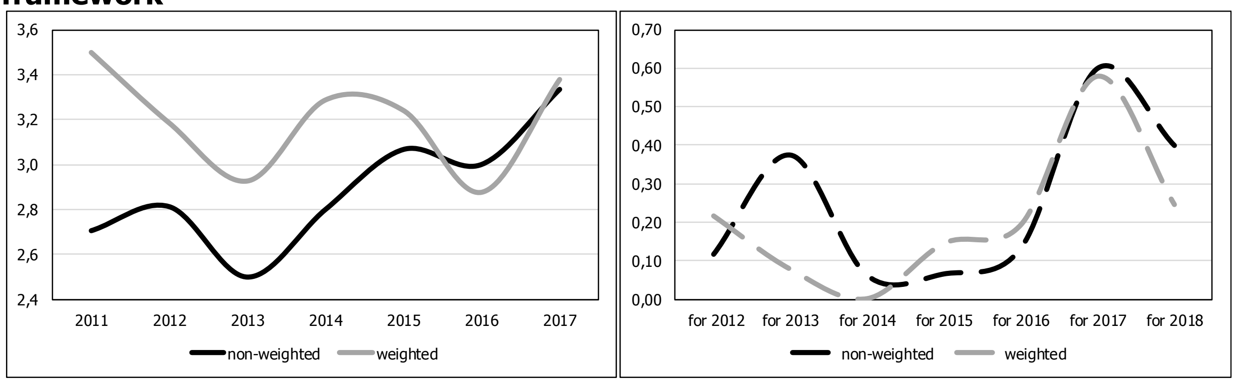
The share of the banks' assets in the total assets at a level of the banking system is used as a weight for calculation of the weighted average grade.

According to the Survey's answers, the risks from the macroeconomic environment have a relatively high potential for unfavorable impact on banks' operations. In conditions of prolonged uncertainty caused by non-economic factors (first of all, expressed in the first half of 2017), banks pointed to the risks arising from fiscal policy, as well as the sustainability of the external position. The internal political situation remains one of the main factors, which as pointed out, still has a pronounced influence and contributes to the insecurity of foreign investors, as well as to the unfavorable results of the industry. In favor of the negative impact of the political crisis, according to the banks, is the fact that the economic growth realized in 2017 was significantly lower than initially projected as a result of all the circumstances in which the national economy was operating.

In 2018, banks expect to reduce the significance of the macroeconomic risks, which, according to them, (will) have a significant contribution to the absence of inflationary pressures and pressures on the foreign exchange market, timely repayment of the liabilities of the state abroad as well as towards banks, the projected positive growth of the economy for 2018 and the like.

II. Banks assessed risks arising from changes in the regulatory framework as a second risk group in terms of significance.

Levels (left) and expectations (right) of risks arising from **changes in the regulatory framework**



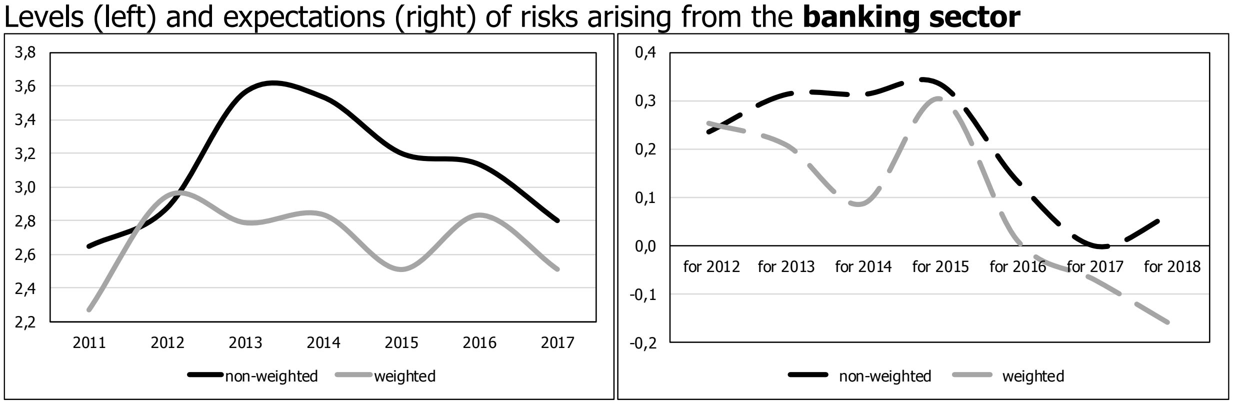
The share of the banks' assets in the total assets at a level of the banking system is used as a weight for calculation of the weighted average grade.

The significance of this group of risks, according to banks, stems from the implemented regulatory amendments, applied since 2017, in the domain of capital requirements, which were aligned with the requirements of Basel 3. Namely, these regulatory changes require from the banks to maintain higher solvency indicators, and they are accompanied by additional costs for implementation in the operations and changes in banks' information systems.

In the future, banks expect reduced significance of this group of risks, despite the expectations for amending the bylaws related to credit risk management, primarily to comply with the International Financial Reporting Standard IFRS 9.

III. Risks arising from the banking sector are the third group of risks relevant to the bank operations

Levels (left) and expectations (right) of risks arising from the **banking sector**

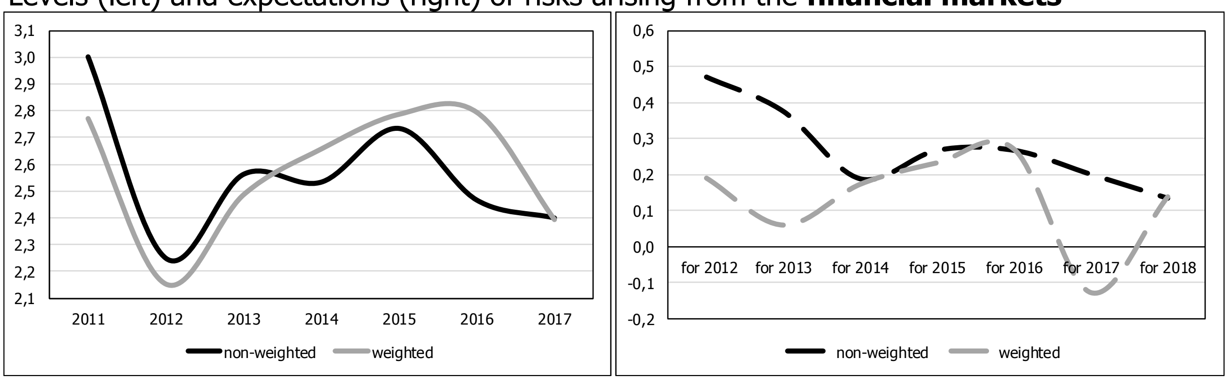


The share of the banks' assets in the total assets at a level of the banking system is used as a weight for calculation of the weighted average grade.

In 2017, banks, especially those with higher market share, indicate that this group of risks is less important, given high and stable liquidity and solvency of the banking system, which, in conditions of a more stable macroeconomic environment, would have realized bigger credit and deposit activity. However, banks expect this group of risks to increase their influence on their operations due to the need to develop capacity for better management of the interest rate risk (considering the termination of application of unilaterally adjustable interest rates), especially in conditions of expectations for a future gradual tightening of the monetary policy in the euro area. Also, banks expect stronger competitive pressure from non-bank financial institutions, which could contribute to loosening of lending standards, which can affect the loan portfolio quality.

IV. Banks rank the risks that arise from the developments in the financial markets in the fourth position in terms of the importance they have on the operations.

Levels (left) and expectations (right) of risks arising from the **financial markets**

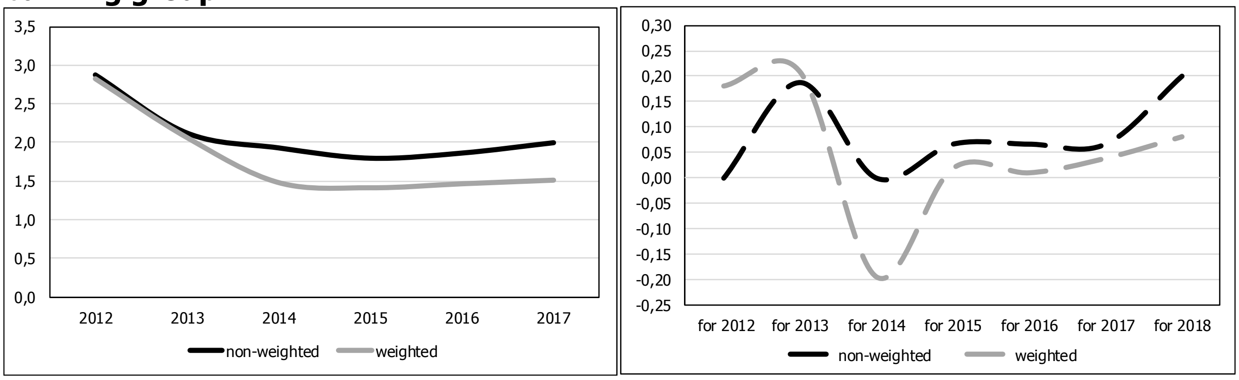


The share of the banks' assets in the total assets at a level of the banking system is used as a weight for calculation of the weighted average grade.

The banks assess the group of risks from the financial markets as less important, and in 2018 they expect the importance of this group of risks to reduce. The diminished importance of this group of risks in relation to the previous groups reflects the simple structure of the Macedonian financial system and the somewhat underdeveloped financial market, which is also reflected by the predominant orientation of banks towards standard banking operations (deposit collection, lending).

V. The banks assessed the risks which arise from the strategy of the bank or the banking group as risks with the least importance.

Levels (left) and expectations (right) of risks arising from the **strategy of the bank or the banking group**



The share of the banks' assets in the total assets at a level of the banking system is used as a weight for calculation of the weighted average grade.

As in the previous years, the banks rated the group of financial market risks as less significant, and in 2018 expect the significance of this group of risks to reduce. However, at the level of the banking system, on average, in 2018 this group of risks is expected to become more important, as a result of the limited possibilities for introduction of new products, the oversize client base, etc.,

Usually, the Survey also raises some additional questions of topics that are considered current and important. Thus, with respect to the announced changes in the regulation pertaining to payment services and the application of relevant EU directives and regulations, the banks expect that compliance with the new regulations will impose the need for changing contracts with clients in this domain, followed by harmonization of the information system, which will ultimately lead to additional costs for the banks. Moreover, increased competition in payment services, through the possible inclusion of new "market players" (payment institutions) would directly contribute to reducing the prices of these services and consequently to reducing the banks' income from commissions. In response, banks will have to boost the operating efficiency and cost management. Regarding the banks' perceptions regarding the trend of introducing **digital innovations in finance,** banks expect increased competition on the market from the emergence of the so-called Fintech companies. On the one hand, it can pose a risk to the current bank operations if the banks are not ready for this process. However, the entry of new companies Fintech is perceived as a new opportunity for introducing additional, better and more efficient services by offering new Fintech services.