

**National Bank of the Republic of Macedonia**



**Annual Report of  
the National Bank of the Republic of Macedonia  
for 2017**

Skopje, April 2018

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## Governor's foreword

The year behind was one of the specific years from the economic viewpoint, a year when the drawbacks of the protracted political crisis on the domestic economy were brought to the fore, as seen through economic stall. It is worth noting that the risks and uncertainty were more pronounced in the first half of the year, while in the second half, the expectations stabilized and the economy gradually accelerated. In such macroeconomic setup, in 2017, the National Bank of the Republic of Macedonia (NBRM) successfully achieved the monetary policy objectives of maintaining price stability by preserving stability of the denar/euro exchange rate, and further strengthening of the financial stability in the economy.

The first half of the year was marked by political instability that resulted in economic contraction, restraint of domestic and foreign investors and variable currency preferences for household savings. However, in the second half of the year, the political landscape and the expectations of the economic agents stabilized which in turn enhanced the macroeconomic performance, increased the foreign exchange market inflows and improved the deposit structure in favor of denar deposits. Overall, the Macedonian economy stalled in 2017, seen through the falling investment due to the investor restraint and the delay in large infrastructure projects, while private consumption and exports continued to be more growth conducive. Yet, the positive developments at the end of the year are worth to mention, as well as the retained macroeconomic fundamentals and the structural transformation in recent years, which along with the conducive external environment gave a firm ground for rapid reversal to solid economic growth. It rests mainly on the export sector that continued to record solid results. In addition, unemployment continued to decline in 2017 (to 22.4%), supported by active labor market measures. The positive labor market developments, together with the growth of private transfers and household lending were major drivers of the private consumption.

In 2017, the current account deficit was low (1.3% of GDP), which is narrower compared to the previous year and the forecast, thus confirming the solid external sector performance. Such results mainly reflect the improved balance of goods and services, and private transfers. Export growth was mainly supported by the new companies with foreign capital as well as some traditional export facilities. In 2017, the financial account registered lower foreign direct investments of 2.3% of GDP, mainly reflecting the restraint of investors, as well as the higher dividend payments to foreign shareholders. Yet, in the last quarter, there was an improvement in this segment, as expectations stabilized. On the foreign exchange market, unlike the first half when net sale of foreign currencies was made given the increased outflows mainly for dividends, in the second half, as the environment improved, there was a net purchase that completely exceeded the sale, ensuring a solid net purchase of foreign currency for the entire year. In 2017, the NBRM continued applying active foreign reserves management and against extremely volatile international market conditions, registered positive return on foreign reserves investment.

Inflation gradually increased in 2017, fed by the movements of the world primary commodity prices, especially fuel. On average, inflation was 1.4%, as forecasted. Core inflation accelerated partly due to one-off factors (including excise taxes on tobacco products). The policy rate normalization that started in December 2016 (after the increase in May 2016 in response to the political crisis and speculation), continued in the first two

months of 2017. In February 2017, it was cut back to the pre-crisis level (3.25%). By the end of the year, this interest rate remained unchanged amid low inflation, favorable balance of payments position, stable foreign exchange market developments and gradual positive developments in banks' deposits since the mid-year, but also uncertainty in the first half of the year, and need for attentiveness.

In 2017, banks' deposits and credits registered favorable movements. Total deposits increased by 5.4%, given the growing contribution of denar deposits in terms of currency (mainly in the second half of the year) and long-term deposits in terms of maturity, which indicates a further gradual stabilization of expectations. Total loans increased by 5.7%, with the largest contribution of household loans, along with the positive developments in the corporate lending. The banking system remained sound, with solid liquidity and capitalization, and moderate and stable level of non-performing loans of around 6%. This year, we continued to make efforts to improve the banking regulations and adopt Basel standards in the field of new capital requirements, which additionally contributes to the stability of the banking system.

Last year, the NBRM continued to strengthen institutional capacity by adopting standards in various business areas, including statistics, payment systems, operational risk management, and information security. It is noteworthy that the NBRM upgraded its payment system MIPS with the option for euro payments abroad. In 2017, the NBRM took active part in the process of initiating economic reforms by developing three draft strategies in the area of NPL management and resolution, reducing euroization and cash in circulation. Active involvement of other competent institutions in the implementation of these strategies could improve these areas in the future.

In 2017, we continued hosting regular conferences and other public events, as forms of spreading knowledge and increasing interaction with the domestic expert public. We also intensified the financial education activities as a way to improve financial literacy in the country. We continued enhancing transparency and strengthening public relations through various channels of communication in order to get closer to the public.

In 2017, we marked the 25th anniversary of the monetary independence of the Republic of Macedonia and we recalled numerous challenges that were overcome in the period of creating the Macedonian denar and building trust in the domestic currency. In recent years, marked by political instability, we have faced some of the challenges of the new era, which we have successfully addressed, thus strengthening the trust in the institution and the Macedonian currency. In this context, in 2017, we preserved the price stability, the denar stability and strengthened the financial stability of the economy. Moreover, we made efforts to upgrade and develop the financial system, and to strengthen the international reputation of the institution. The resolution of the protracted political crisis, and the healthy economic fundamentals, including sustained macroeconomic stability, open up perspectives for further economic growth through implementation of sound macroeconomic policies. Here, the contribution of the central bank is indisputable. The NBRM will remain committed to its objectives and dedicated to institutional strengthening as a precondition for taking up new challenges in the future.

26 April 2018  
Skopje

Governor  
President of the NBRM Council  
Dimitar Bogov

## I. Monetary policy in 2017

### 1.1. *Monetary policy objectives*

*Maintaining price stability is the main legally defined objective of the monetary policy of the National Bank of the Republic of Macedonia (NBRM). Another objective of the NBRM, which is subordinate to the main objective, is to contribute to a stable and competitive market-oriented financial system. The NBRM supports the general economic policy without jeopardizing the achievement of the primary objective, in accordance with the principle of an open market economy with free competition. From a strategic point of view, since October 1995, the NBRM has applied the strategy of maintaining stable nominal exchange rate of the denar, first against the Deutsche mark (until 2001) and then against the euro.*

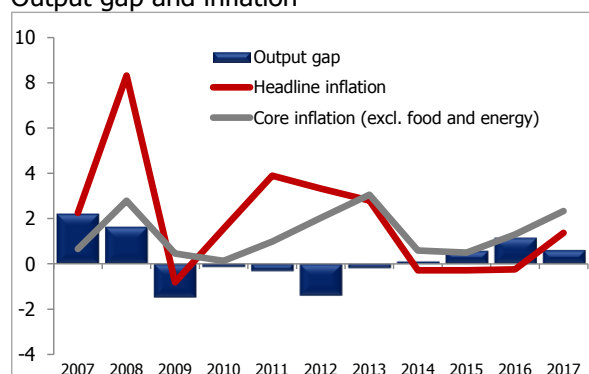
In 2017, the NBRM successfully achieved the legally defined objectives. The exchange rate of the denar against the euro was stable, while the foreign reserves remained in the comfort zone, as appropriate. Regarding price stability, domestic prices in 2017 registered a small growth, amid upward movement of core inflation (partially due to one-off factors) and energy component of inflation (pursuant to the movement of world energy prices). In 2017, the financial stability was successfully preserved as additional support to the achievement of the primary objective. In the first two months of 2017, the NBRM continued normalizing the monetary policy, cutting the policy rate back to the level prior to May 2016, when as a response to the effects of the political crisis, it was increased. The monetary policy normalized with the stabilization of the environment and the improvement of the economic agents' perceptions, present since mid-2016 and during 2017. Until the end of the year, the monetary policy setup did not undergo any changes.

During the year, the indicators pointed to sound economic fundamentals, absence of imbalances, stabilization of environment and reduction of uncertainty, but certain risks were still present. Thus, during the first half of the year, the NBRM sold foreign currency on the foreign exchange market, partly as a reflection of larger outflows of paid dividends to foreign investors. Changes in the currency structure of the new savings, although mainly in favor of the domestic currency, were relatively moderate and pointed to the time needed for sustainable stabilization of expectations. In the middle of the year, foreign exchange market developments notably improved, and amid foreign currency inflows in the country, further favorable expectations and solid foreign exchange position of the banking system, the NBRM purchased foreign currency in the second half of the year<sup>1</sup>.

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<sup>1</sup> The favorable trends continued at the beginning of 2018, when in March 2018, the NBRM loosened the monetary policy and cut the policy rate from 3.25% to 3.00%.

Chart 1  
Output gap and inflation<sup>‡</sup>



\*Productivity gap is an indicator of the cyclical position of the economy and it is calculated as the deviation of the actual from the potential level of GDP relative to the potential level of GDP (output gap = (actual GDP - potential GDP)/potential GDP). Headline and core inflation represent an average annual growth.  
Source: SSO and NBRM.

Chart 2  
Gross foreign reserves

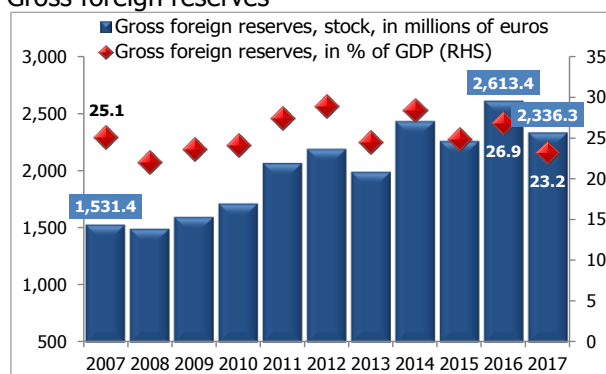
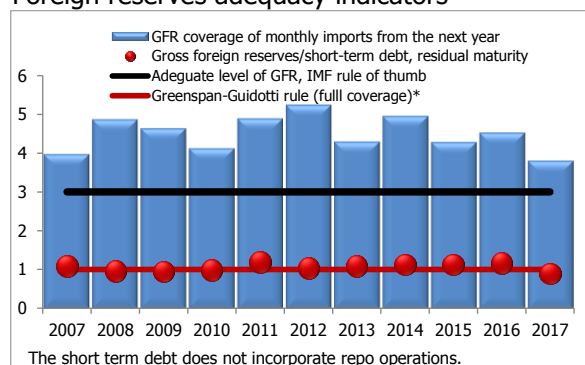


Chart 3  
Foreign reserves adequacy indicators



The short term debt does not incorporate repo operations.

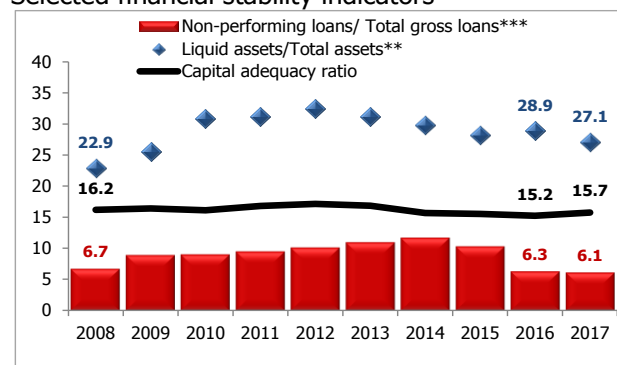
\* According to the Greenspan-Guidotti rule, the country needs to keep full coverage of short-term debt (residual maturity) with foreign reserves.

\*\* Liquid assets consist of highly liquid assets and short-term deposits with foreign banks. Total assets do not include assets with domestic banks.

\*\*\* The indicator refers to loans to the financial and non-financial sector, with data for 2016 including changes arising from regulatory changes.

Source: NBRM and SSO.

Chart 4  
Selected financial stability indicators



## 1.2. Monetary policy setup

In early 2017, the NBRM continued normalizing the monetary policy, which started in December 2016. In January and February, the NBRM cut its policy rate by 0.50 percentage points on two occasions i.e. from 3.75% to 3.25%. Thus, the policy rate was reduced to the level before May 2016, when the NBRM tightened the monetary policy<sup>2</sup>. By the end of the year, in conditions of sound economic fundamentals and absence of economic imbalances, but still present risks in certain segments of the economy, the NBRM did not make further changes in the monetary policy setup.

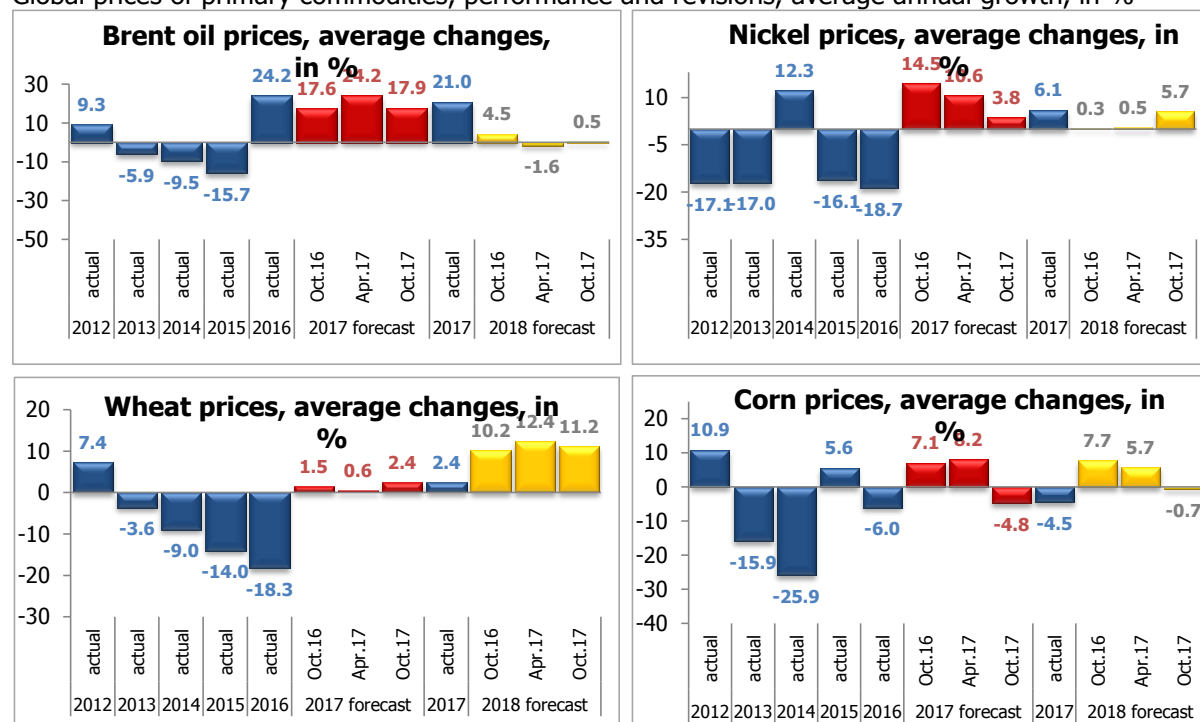
The environment of monetary policy conduct in 2017 was much more conducive compared to the previous year, but with lingering uncertainty from the domestic political context and present but gradual stabilization of the economic expectations. On the foreign

<sup>2</sup> In May 2016, the NBRM increased the policy rate from 3.25% to 4.00%. The increase in the policy rate reflected the pressures on the foreign exchange market and deposits in the banking system from the deteriorated political situation in the country. Also, in order to maintain the stability of the domestic currency, besides the sale of foreign currency on the foreign exchange market and changes in the reserve requirement, additional non-standard measures were taken, which were of a temporary nature.

exchange market, in the first half of the year, amid present risks and significant outflows for dividends abroad, the NBRM sold foreign currency. In the absence of economic imbalances and amid sound economic fundamentals, currency market developments improved in the second half of the year. In such circumstances, the NBRM purchased foreign currency by the end of the year, which significantly exceeded the amount of net foreign currency sold since the beginning of the year. The uncertainty affected household savings. Namely, during the year, household savings continued to grow, but with variable dynamics and changes in the currency preferences of households. However, at the end of the year, there was a noticeable improvement in this segment, in favor of denar deposits.

Chart 5

Global prices of primary commodities, performance and revisions, average annual growth, in %

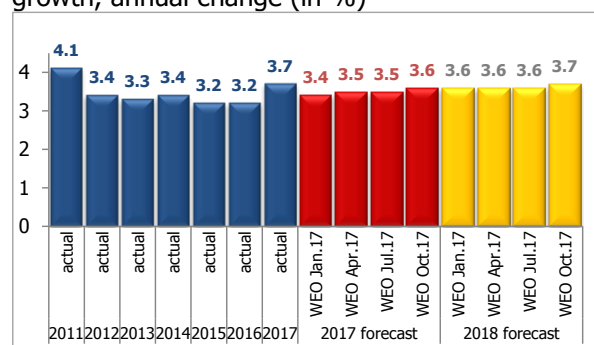


The external environment developments were marked by uncertainty and volatility, which additionally imposed the need for prudent domestic monetary policy conduct. While the global economy continued to recover, the risks associated with global protectionist tendencies, the effects of Brexit, the risk of a sudden tightening of global financial conditions and geopolitical tensions were current and continually present. Volatility of world prices of primary commodities that affected domestic inflation and the terms of trade were yet another hallmark of the environment in 2017. During the year, the forecasts for international prices of oil, metals and food were corrected in various directions, thus increasing the uncertainty and changing the assumptions that underlie the expectations for the domestic economy. Leading central banks continued to implement divergent monetary policies<sup>3</sup>. Namely, they actively used the policy guidance tool in the communication with the public in order to maintain stable conditions on the financial markets, which in turn stabilized the financial markets volatility indexes.

<sup>3</sup> Fore more information on this issue, see international environment section.

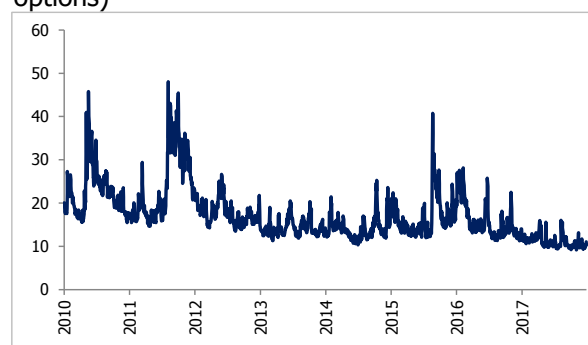


Chart 6  
Performance and revisions of the global economic growth, annual change (in %)



Source: IMF WEO Data base.

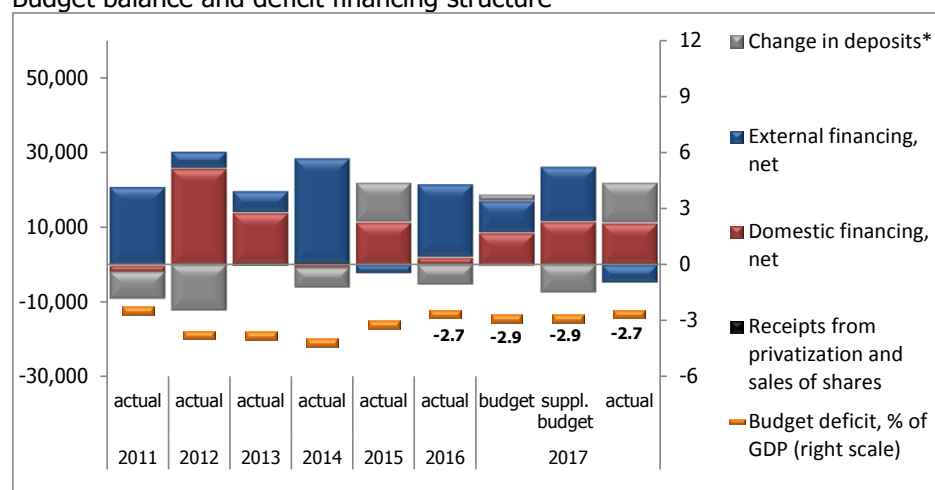
Chart 7  
VIX Index (implied volatility of S&P500 index options)



Source: www.cboe.com

Fiscal policy in 2017 was assessed as cautious, with the budget deficit in 2017 remaining at the level of the previous year. However, the risks surrounding the dynamics of achieving the planned budget revenues and the uncertainty associated with the structure of financing the budget deficit had an impact on the environment of monetary policy conduct. By the middle of the year, the budget was revised, whereby budget revenues and expenditures were revised downwards, without any change in the budget deficit indicator compared to the original plan (2.9% of GDP). Yet, the budget revision included a change in the deficit financing structure. Thus, contrary to the original plan for combined financing of the budget deficit with almost equal amount of domestic and external government borrowing, the budget revision anticipated a significantly higher amount of deficit funding from external sources, with assumption for allocating one part of the funds from the new borrowing as deposits on the account with the NBRM. The 2017 performances differed from both the initial budget and the budget revision. Namely, at the end of the year, the budget deficit was 2.7% of GDP, which is less than the initially planned and the revised one with the budget revision for 2017. Moreover, the planned deficit financing through external government borrowing was rescheduled for the beginning of 2018, and the needs for deficit financing were provided from domestic sources, through the issuance of government securities and using the government deposits with the NBRM.

Chart 8  
Budget balance and deficit financing structure



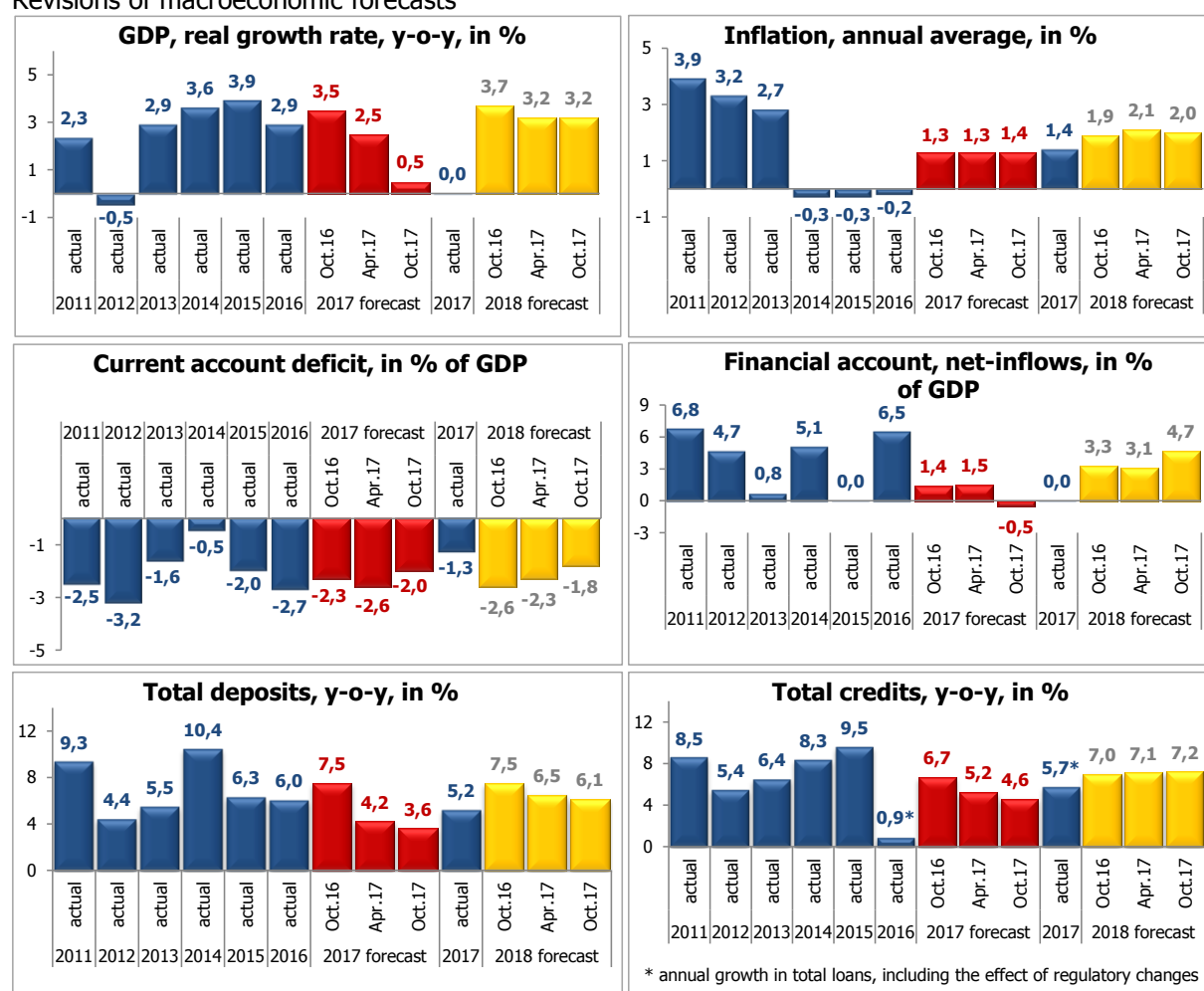
\*Positive change- deposits withdrawal; negative change-deposits accumulation.

Source: Ministry of Finance.

Domestic political context that created uncertainty in 2017 was also a risk factor for the macroeconomic forecasts underlying the monetary decision-making. The lingering uncertainty from the political environment affected the GDP growth forecast for the year, which was revised downwards. In 2017, the economy stagnated, reflecting the decline in investment. On the other hand, private consumption continues to increase, but without creating significant pressures on inflation or the external position of the economy. Besides, in 2017, export activity was a significant growth source, supported by the more stimulating external environment and the activities of new production facilities in foreign ownership. The favorable trends in the export sector significantly improved the current account deficit that was smaller than expected.

Chart 9

Revisions of macroeconomic forecasts



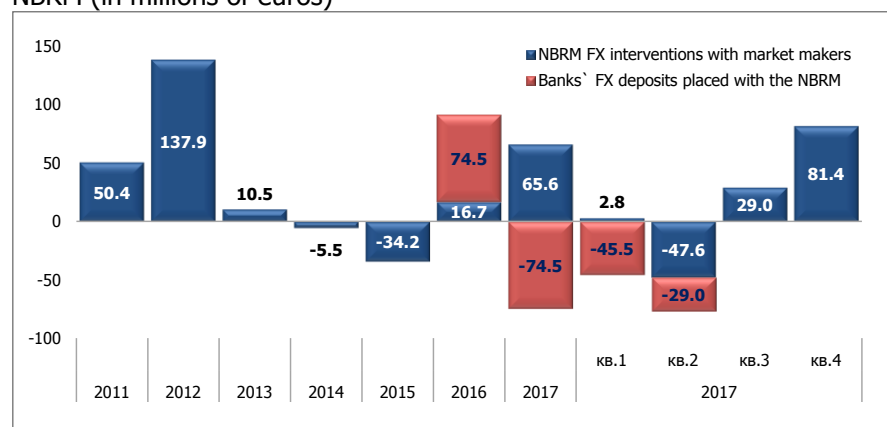
Source: NBRM and SSO. Forecasts for all indicators refer to the macroeconomic forecasts of the NBRM.

Foreign reserves decreased in 2017, but stayed in the comfort zone during the year. Observed by factor, the reduction of foreign reserves was mostly influenced by financial outflows from government transactions. Namely, in the absence of a larger external government indebtedness (the financing was rescheduled for the beginning of 2018), and regular repayment of the due liabilities, the government transactions contributed to the reduction of foreign reserves in 2017. The banks' foreign currency deposits with the NBRM contributed to the decrease in the reserves, which fully matured in the third quarter and the

official reserves increased foreign exchange potential of the banks<sup>4</sup>. On the other hand, the foreign exchange interventions of the NBRM had a positive contribution to the change in the foreign reserves. Thus, in the foreign exchange market in 2017, the NBRM purchased around Euro 66 million. Analyzing the dynamics, the foreign exchange market movements significantly improved in the second half of the year, stabilizing the expectations of domestic and foreign investors and lenders. Such performances, on the one hand, reflect the sensitivity of the foreign exchange market in periods of increased uncertainty, and on the other hand, they are a clear indicator for rapid stabilization of the movements of this segment amid healthy economic fundamentals, absence of imbalances in the economy and solid foreign exchange potential in the system.

Chart 10

NBRM interventions on the foreign exchange market and foreign currency deposits of banks with the NBRM (in millions of euros)



Source: NBRM.

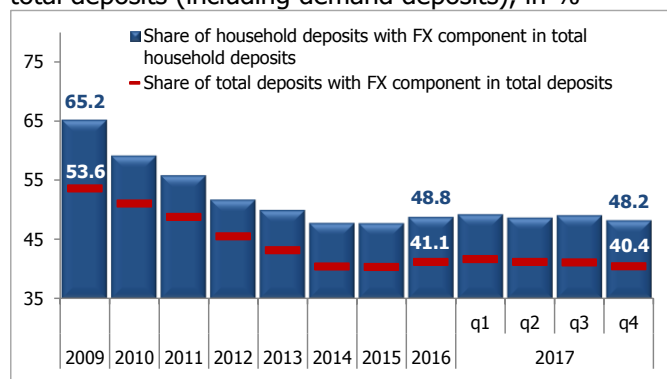
After three years of decline, the general price level in 2017 registered an average annual growth of 1.4%, which was almost entirely due to the increase in core inflation, with a neutral contribution of food prices and a minor positive contribution from energy prices. During the year, the NBRM did not make significant revisions in the inflation forecast, and the results of the inflation expectations surveys did not indicate significant changes in the dynamics expectations and the inflation trajectory. Core inflation (without food and energy) during the year registered a moderate growth trend and stood at 2.3% for 2017, on average, partly influenced by one-off factors (including excise tax on tobacco products).

The dynamics of savings of households and its maturity and currency structure during the year were partly influenced by changes in the domestic environment. Thus, household deposits had a rising trend, with the exception of certain periods of pronounced uncertainty due to the domestic political environment. Regarding the maturity structure of household deposits, in 2017 there was almost constant growth of long-term savings, showing stable expectations of economic entities. Overall, despite the slower growth since the beginning of the year, household savings significantly accelerated in the second half of the year, with this sector in 2017 making the largest contribution to the growth of total deposits.

<sup>4</sup> The NBRM held auctions of bank's 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.

Chart 11

Euroization level, share of foreign currency deposits in total deposits (including demand deposits), in %



Source: NBRM.

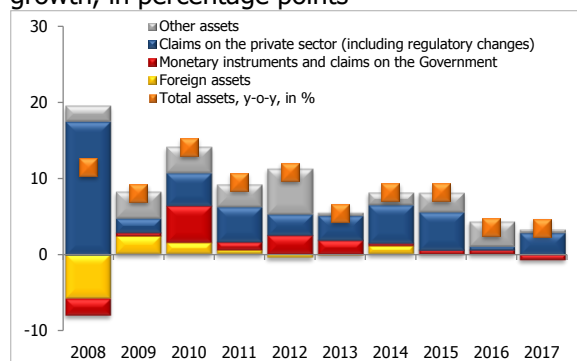
The degree of euroization, measured by the share of deposits with foreign currency component in the total deposits in 2017, despite the variable dynamics during the year, amounted to 40.4% at the end of 2017 and was lower, compared to the end of the previous year (41.4%).

Solid solvency and liquidity position of banks, growth of funding sources, increased competition in the banking sector, stable environment and changes in the monetary policy are contributing factors for banks to

increase supply of loans. Analyzing the dynamics, in the second half of the year, lending activity enhanced with favorable shifts in the sectors, given the mitigation of the risks arising from the domestic political environment and the improved expectations of the banks for the total economic activity. Thus, in 2017, the credit flows registered faster growth compared to the previous year, thus exceeding expectations with the October forecasts<sup>5</sup>. Such performances were in line with the results of the lending surveys, according to which in 2017, the demand for corporate loans normalized after the significant slowdown in the previous year, the loosening of credit standards and improvement of the banks' risk perceptions. The NBRM non-standard measure in the reserve requirement supported the corporate lending, and at the end of 2017, its application was extended for the next period<sup>6</sup>.

Chart 12

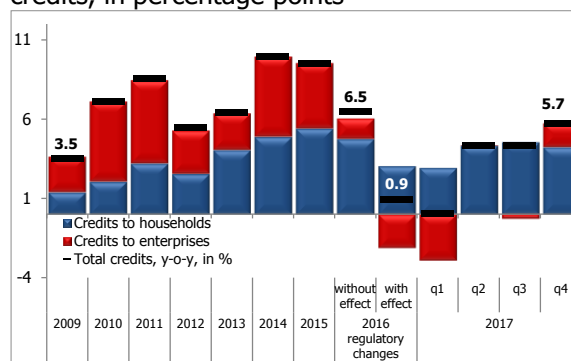
Bank assets structure - contribution to the annual growth, in percentage points



Source: NBRM.

Chart 13

Contributions to the annual change in total credits, in percentage points

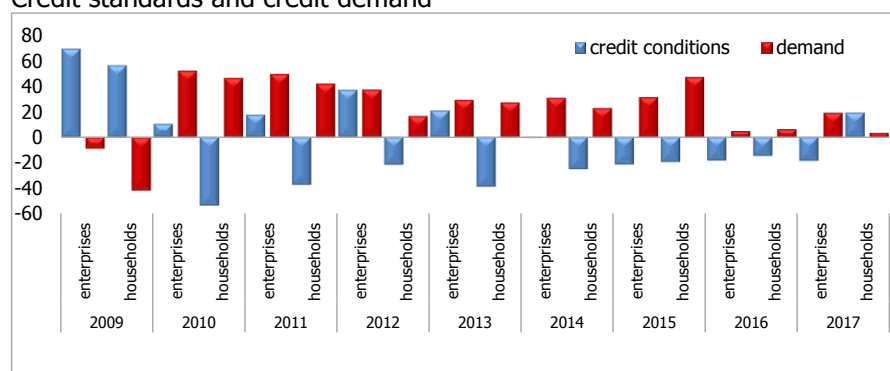


Source: NBRM.

<sup>5</sup> Credit flows corrected for the effect of regulatory changes.

<sup>6</sup> At its regular meeting held on 21 December 2017, the NBRM Council decided to extend the application period of the non-standard measure for reducing the reserve requirement base in denars of the commercial banks for the amount of newly approved loans of net exporters and domestic producers of electricity for two additional years. This measure reduces the denar reserve requirement base of banks for the amount of newly approved loans to net exporters and domestic producers of electricity and banks' investments in debt securities denominated in national currency without currency clause issued by net exporters and domestic producers of electricity. The measure was introduced in 2012, and has been applied since 2013. Since the introduction of the measure, this is the third extension of its application period for additional two years, that is, until the end of 2019.

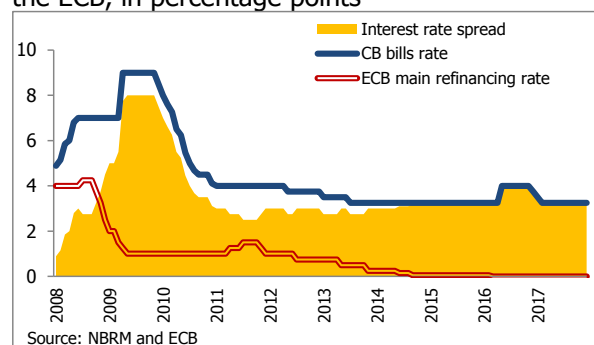
Chart 14  
Credit standards and credit demand\*



\*In terms of credit standards, negative net percent means easing of the credit standards. In terms of demand, negative net percent means reduced demand.  
Source: Bank Lending Survey, NBRM.

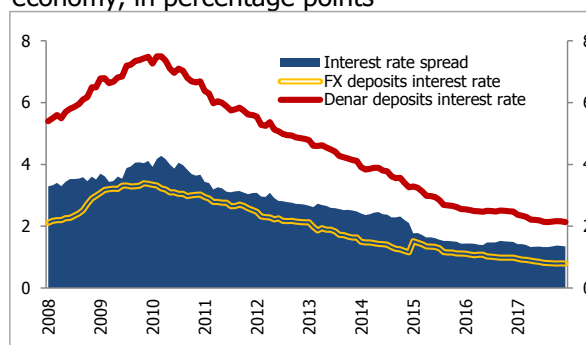
Given the application of fixed nominal exchange rate of the denar against the euro, changes in interest rates in the euro area, as the anchor economy, play an important role in the monetary policy setup in the country. In 2017, the European Central Bank (ECB) did not make changes to the policy rate, which remained at a record low (0.00%). Nevertheless, at the beginning of the year, the NBRM cut the policy rate twice, reversing it to the level before May 2016 when, in response to specific domestic factors, the interest rate was increased. These changes narrowed the spread between the policy rates of the two central banks from 3.75 percentage points to 3.25 percentage points. Observing the banks' interest rates in the domestic economy, the spread between the denar deposit interest rate and the foreign currency deposits interest rate in 2017 had a downward trend and at the end of the year, it reduced to 1.3 percentage points, which was lower, compared to the end of the previous year (1.5 percentage points). Thus, in 2017, the interest rate spread continued narrowing after being temporarily ceased in the previous year. The interest rate spread narrowed largely due to the decrease in the denar deposit interest rate (from 2.5% to 2.1%), with a smaller decline in the interest rate on foreign currency deposits (from 1.0% to 0.8%).

Chart 15  
Spread between the policy rates of the NBRM and the ECB, in percentage points



\* NBRM policy rate: interest rate on CB bills.  
\*\* ECB policy rate: interest rate on ECB's main refinancing operations  
Source: NBRM and ECB.

Chart 16  
Interest rate spread of the banks in the domestic economy, in percentage points



Source: NBRM.

## II. International environment<sup>7</sup>

The global economic surrounding in 2017 was conducive, with a moderate acceleration of the global real GDP growth of 3.6%, versus 3.2% in the previous year. Thus, the process of cyclical global recovery continued this year, supported by the investment activity and the enhanced trade, amid favorable financial conditions, accommodative monetary setup, further increase in the confidence worldwide and increase in the prices of primary commodities. Growth in 2017 was relatively synchronized, reflecting the recovery of both developed and emerging economies, particularly concerning investment. Analyzing the developed economies, there was a significant improvement in economic performance in the United States, where the real GDP grew by 2.2% (1.5% in 2016), supported by the increased confidence of households and private businesses. A solid annual growth of 2.1% was also registered in the euro area, which is the highest growth rate in the last seven years, under the influence of intensified domestic demand, amid favorable financial conditions and alleviated political risks, and to a certain extent, of net exports driven by favorable movements in global trade. Emerging and developing economies also reported a moderate growth acceleration to 4.6% (from 4.3% in 2016), but at different pace of recovery from one country to another. Despite the favorable performances in the short term, seen in the medium term, there are still some unfavorable risks to global growth, attributed to the possibility of tightening financial conditions, increasing protectionism in trade, uncertainty of negotiations on future relations between the UK and the EU and others geopolitical risks.

The average annual inflation rate in the world in 2017 was 3.1%, which shows a certain acceleration of inflation compared to last year when it was 2.8%. Inflation accelerated particularly in the developed countries, where the inflation rate rose from 0.8% in 2016 to 1.7% in 2017, reflecting the recovery of total demand and growth in primary commodity prices. This is particularly true for the period August-December, when oil prices sharply increased, which contributed to a more pronounced rise in global inflation. On the other hand, in the emerging economies in 2017, the inflation rate remained almost unchanged of 4.2% (4.3% in 2016).

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<sup>7</sup> The analysis is based on the IMF's 'World Economic Outlook, October 2017 and January 2018; the World Bank's World Economic Outlook, January 2018; the quarterly reports of the National Bank of the Republic of Macedonia.

Chart 17  
Global economic growth (in %)

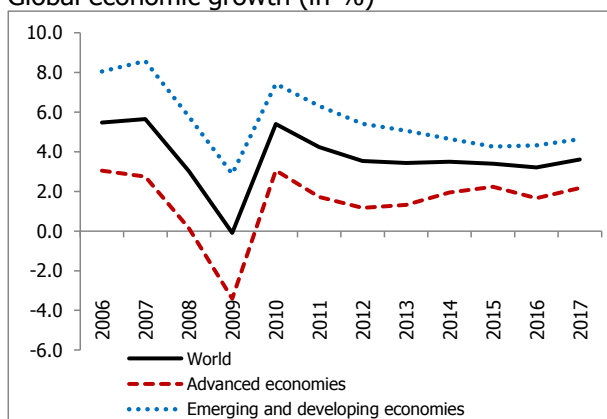
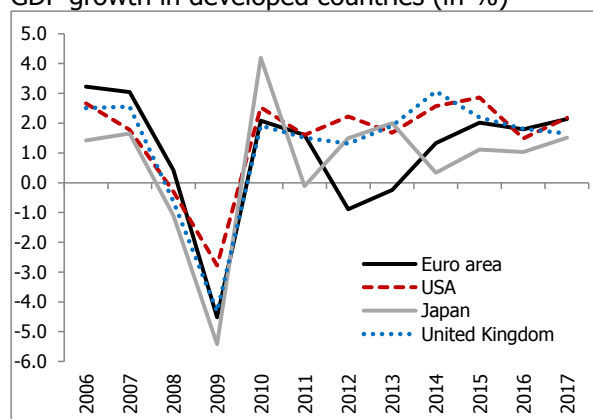
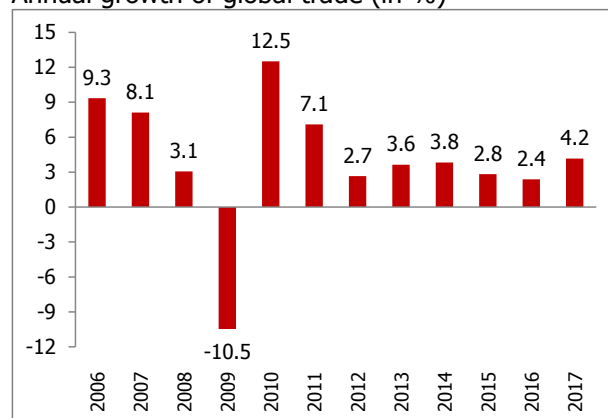


Chart 18  
GDP growth in developed countries (in %)



Source: World Economic Outlook, October 2017 and update January 2018, IMF.

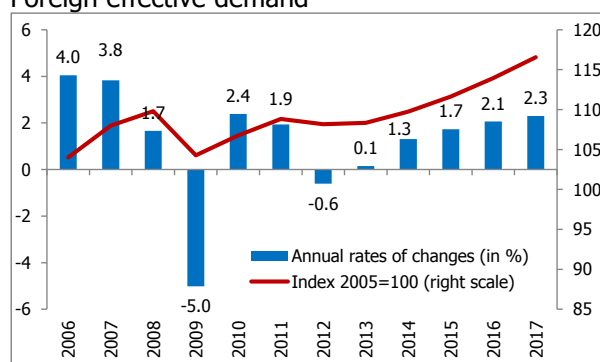
Chart 19  
Annual growth of global trade (in %)



Source: World Economic Outlook, October 2017 and update January 2018, IMF.

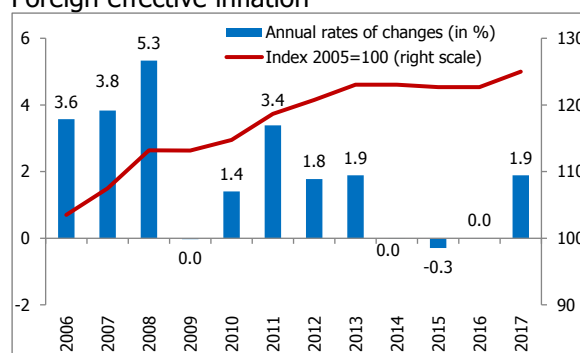
Analyzing specific quantitative indicators that depict the external environment of the Macedonian economy, the growth of foreign effective demand and foreign effective inflation in 2017 accelerated. Namely, the foreign effective demand increased by 2.3% (2.1% in 2016), and continued to gradually recover. The greatest positive contribution to the annual performance was made by the economies of Germany, Bulgaria and Serbia, while other countries made positive yet moderate contribution. Foreign effective prices in 2017 increased by 1.9%, on average, although they remained unchanged in 2016. Observed by country, prices in Germany and Serbia made the highest positive contribution, while the contribution of other countries was positive, yet moderate.

Chart 20  
Foreign effective demand



Source: NBRM calculations<sup>8</sup>.

Chart 21  
Foreign effective inflation



In the primary commodity markets, in 2017, energy and metal prices significantly increased, while food prices moderately declined. As for the entire 2017, the average oil price was higher by 21.1% than the average price in 2016, reaching 54 US dollar per barrel. Observed by dynamics, oil prices increased throughout the year, largely reflecting the growing global demand, reduced level of inventory<sup>9</sup> and extension of the OPEC and Russia agreement on oil production cuts<sup>10</sup>. The price of metals in 2017 significantly increased by 21.5% compared to 2016. Observed by dynamics, metal prices were increasing all year round, with more pronounced growth in the first nine months of 2017. Price growth largely reflected the increased demand by China and the United States. On the other hand, food prices in 2017 slightly increased by 2.0%.

<sup>8</sup> Foreign effective demand is the sum of weighted GDP indices of the major trading partners of the Republic of Macedonia. The index calculation includes Germany, Greece, Italy, the Netherlands, Belgium, Spain, Serbia, Croatia, Slovenia and Bulgaria. The weights are calculated using the share of exports to these countries in the total export. The foreign effective inflation is the weighted sum of consumer price indices of the countries that are major partners of the Republic of Macedonia in the field of import of consumer goods. The weight structure is based on the normalized shares of nominal imports from each country in the total nominal imports in the period 2013 - Q3 2016. The calculation of this indicator includes Bulgaria, Germany, Greece, France, Italy, Austria, Slovenia, Croatia and Serbia.

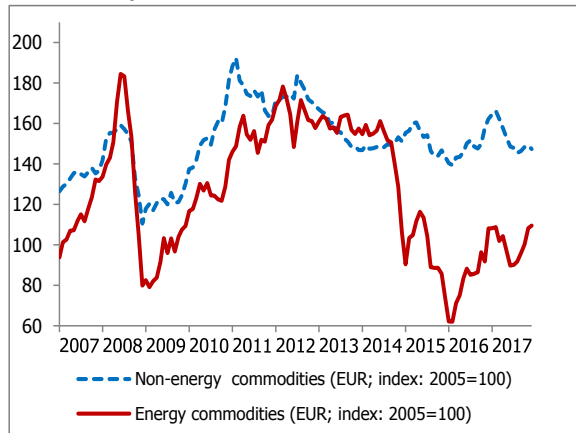
<sup>9</sup> In the first half of December, one of the major pipeline in the North Sea was shut down after defect identified. It took about three weeks to carry out repairs, ceasing the supply of about 10 million barrels of oil.

<sup>10</sup> OPEC and Russia extended the oil cut agreement twice during 2017. On 25 May 2017, OPEC agreed to extend the oil cut agreement by nine months (March 2018), which on 30 November 2017, was re-extended to the end of 2018. This agreement was intended to cut oil inventories globally. The agreement was also supported by non-OPEC, including Russia, when the oil production was cut by 1.8 million barrels a day until December 2018. In November 2017, this measure was welcomed by Nigeria and Libya, countries that were not part of the agreement initially.



Chart 22

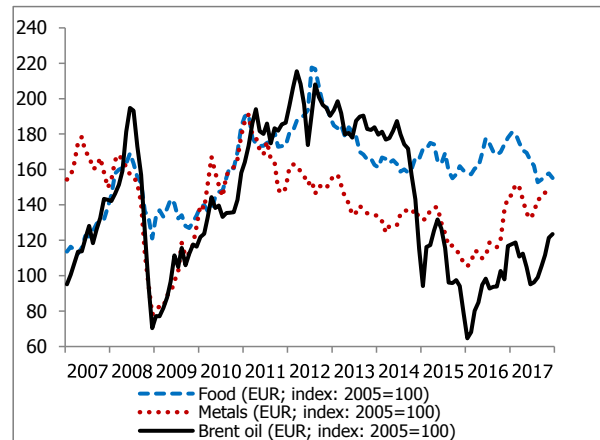
Monthly movement of prices of primary energy and non-energy commodities (euro, index: 2005=100)



Source: World Bank's database on primary commodity prices.

Chart 23

Monthly movement of prices of crude oil, metals<sup>11</sup> and food (euro, index: 2005=100)



In 2017, central banks of developed countries pursued divergent monetary policies. In the United States, amid solid economic performance, Fed continued to normalize the monetary policy. Thus, in 2017, Fed raised the policy rate three times, which at the end of 2017 was higher by 0.75 percentage points compared to 2016, i.e. ranging from 1.25% to 1.5%. The increase in the interest rate is largely due to the Fed's estimates for improved labor market conditions, acceleration of economic growth, and possible inflationary pressures in the future. Bank of England also made changes to the monetary policy in 2017. Namely, the Bank of England at the November meeting raised the policy rate by 0.25 percentage points for the first time since July 2007, and at the end of 2017, it reached 0.5%. The increase in the interest rate reflects the Bank of England's expectations for an increase in inflation above the target of 2% in the period ahead. On the other hand, the ECB decided to extend the quantitative easing programme by September 2018, but to a lesser extent, and without definite date for its termination, with recommendations to retain low policy rates for a longer period in the future, until sustainable adjustment of inflation to the target inflation.

<sup>11</sup> Metals Price Index is a composite index, which includes prices of copper, aluminum, iron ore, tin, nickel, zinc, lead and uranium.

### III. Macroeconomic developments in 2017

#### 3.1. GDP and inflation

After four years of steady solid growth of the Macedonian economy, in 2017, the economic activity stalled. The protracted political uncertainty affected the investment cycle, which, despite the stable growth of private consumption and strengthened exports, the total activity in the economy remained unchanged. Observed by dynamics, the real GDP decreased in the first half of the year, while the domestic economic activity recovered in the second half registering a growth of 0.7% on an annual basis.

Chart 24

GDP and foreign effective demand (annual real growth rates, in %)

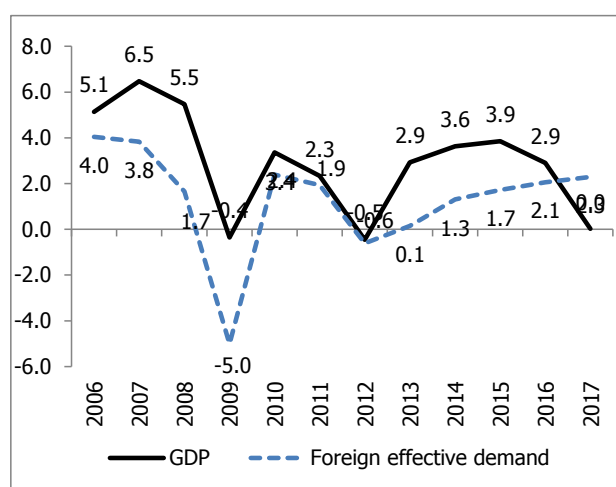
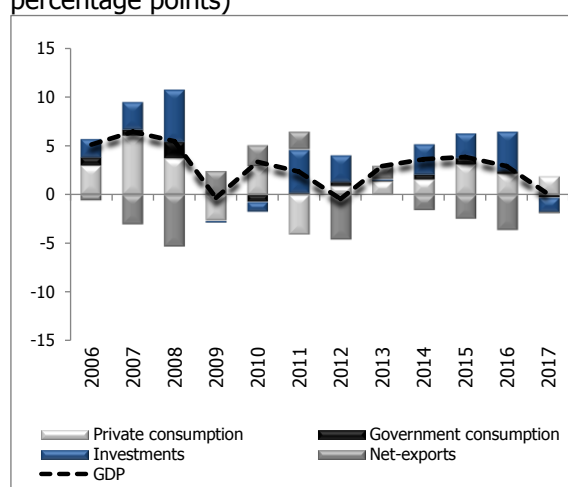


Chart 25

GDP (real growth, in %) and GDP expenditure components (contributions to growth, in percentage points)



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

In 2017, most of the economic activities, seen as a whole for the year, made a negative contribution to the economic growth. Construction, the main driver of growth for several years, reported the fastest decline. Besides the unfavorable environment, the changes in construction are partly attributed to the high base effect of the previous period of large number of publicly funded, mainly civil engineering, projects. Besides the construction, drop in value added in 2017 was also reported in the industry, as well as in most of the services sector<sup>12</sup>. On the other hand, trade, transport and catering, information and communications, as well as agriculture sectors enhanced in 2017. The growth of the value added in trade is of particular significance, which, according to the trade value data is mainly a result of the wholesale trade<sup>13</sup>, while the retail trade registered a decline.

<sup>12</sup> Within the services sector, in 2017, lower value added was registered in finance and insurance, real estate, professional, scientific and technical activities and administrative and auxiliary services, public administration and defense, social security, education and health, and social work, as well as arts, entertainment and recreation, and other services.

<sup>13</sup> Trade movements were analyzed using high frequency data on turnover in the trade (SSO).

Chart 26  
Contribution to the real annual GDP growth  
(in percentage points)

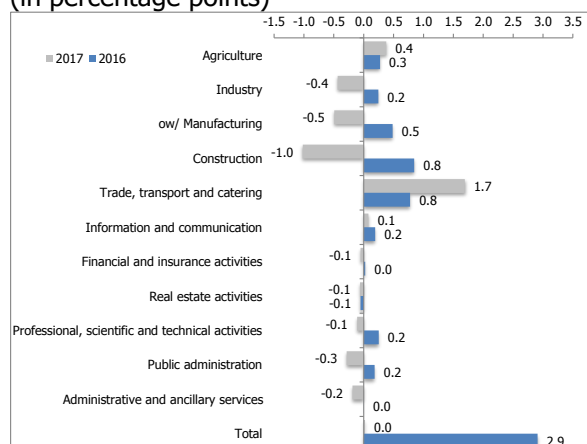
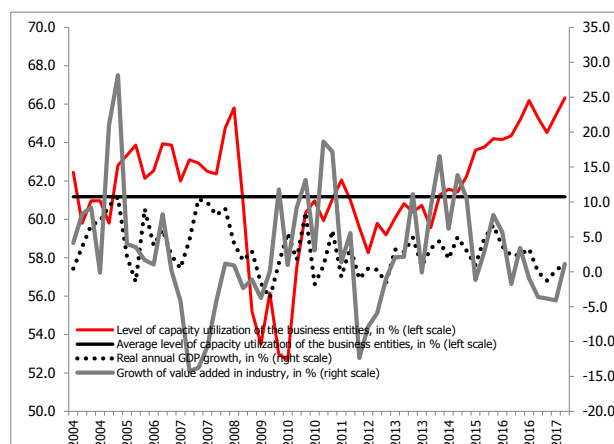


Chart 27  
GDP, industry and capacity utilization

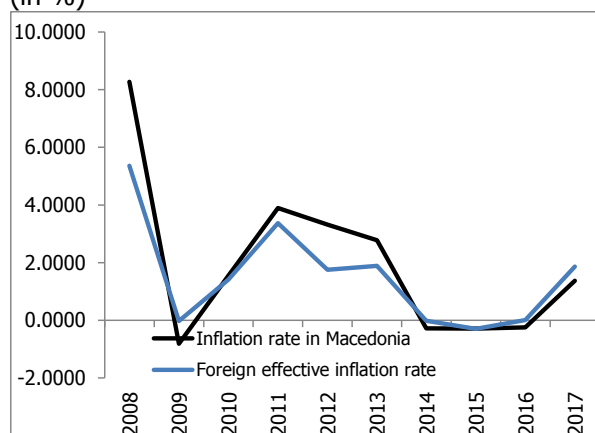


Source: State Statistical Office and NBRM calculations. GDP data for 2016 are preliminary, and data for 2017 are estimated.

Analyzing the expenditure side of GDP, in 2017 there was a significant decrease in the positive contribution of domestic demand, mainly due to the fall in the investment demand. The present uncertainty and worsened perceptions in the first half of the year reduced gross investments for the first time after six years of steady growth. On the other hand, the growth in real wages and employment rate, the rise in pensions, and the solid household lending supported the growth of private consumption throughout the year. Analyzing net export demand, in 2017, export activity increased mostly due to the operation of the new export-oriented production facilities, but also as a reflection of the more conducive external environment. In addition, exports remain the component with the highest individual growth and contribution to GDP. Along with the shifts in exports, imports of goods and services also enhanced, with net exports having a small negative contribution in 2017.

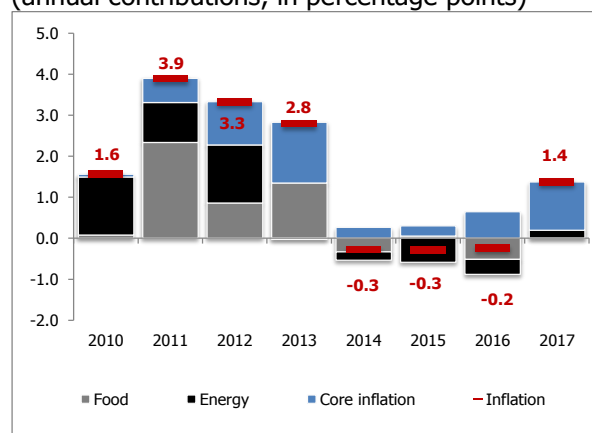
In 2017, for the first time in three years of constant decrease, consumer prices in the Republic of Macedonia increased by 1.4%, which is a result of the movements of all three inflation components. Namely, shifts in world prices of primary commodities in 2017 also affected domestic energy and food prices, where their negative contributions were narrowed. Additionally, core inflation growth accelerated (price component without food and energy), reflecting the effects of one-off factors (tobacco excise), higher prices of telephone services, certain secondary effects of the dynamics of the energy and food component on other prices, amid small pressures from the demand side (positive production gap and increasing unit labor costs).

Chart 28  
Domestic inflation and foreign effective inflation,  
annual growth rates  
(in %)



Source: State Statistical Office, Eurostat and NBRM calculations.

Chart 29  
Volatile (food and energy) and long-term  
component of inflation  
(annual contributions, in percentage points)



The core component made the highest positive contribution to inflation in 2017 (2.3% growth and contribution of 1.2 percentage points to the headline inflation). Shifts in this component were mainly influenced by higher prices of tobacco<sup>14</sup> and services<sup>15</sup>. In 2017, domestic energy prices increased (1.4% increase and 0.2 percentage points contribution) in 2017, for the first time after three years of constant decrease, which is mainly due to the rise in domestic prices of oil derivatives amid high average annual growth in the oil price on the world stock markets<sup>16</sup>. Divergent trends in prices of some food products are observed throughout the year, but overall, the prices of the food component of inflation remained unchanged in 2017.

### 3.2. Labor market

In spite of the weaker impulses from the real economy, in 2017, most of the labor market indicators point to retention of favorable trends.<sup>17</sup> In addition, active employment measures continued to be implemented in 2017<sup>18</sup>, as additional support for the employment growth. The number of employees increased by 2.4% in 2017, which is almost the same as in 2016. Moreover, the employment rate increased by 1 percentage point, to 44.1%. Analyzed by sectors, as in 2016, employment growth mostly related to *services*, which reported a significant increase in employment in the trade and in accommodation facilities and food services. Employment growth in *industry* continued in 2017, largely reflecting the positive developments in the manufacturing industry. At the same time, after two years of decline, the number of persons employed in agriculture in 2017 was almost unchanged compared to 2016.

<sup>14</sup> The growth of tobacco prices is a mix of the increase in the price of a specific type of cigarettes in April and June 2017. In July 2017, the cigarette excise was increased (from 1 July 2017 to 1 July 2023, the excise duty will increase by 0.20 denars each year), but the monthly and quarterly changes in tobacco prices do not show any price adjustment.

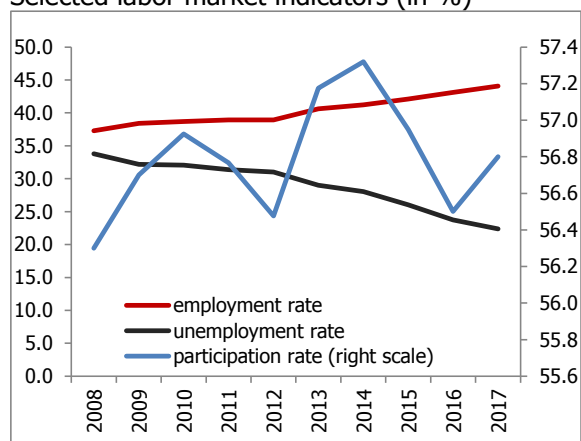
<sup>15</sup> Analyzing services, the highest positive contribution to the growth was made by prices of air transport, communication services, and catering services.

<sup>16</sup> In 2017, the crude oil Brent price, in euros, recorded an average annual growth of 21%, compared to the average oil price in 2016.

<sup>17</sup> Labor market analysis was made using quarterly labor force surveys, that is, the annual indicators for 2017 were derived as an average of the published quarterly data.

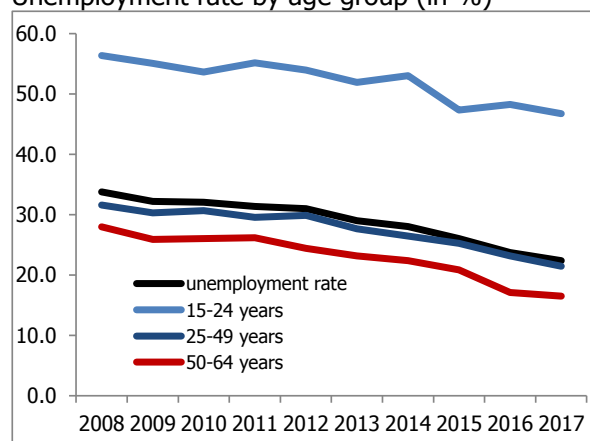
<sup>18</sup> In 2017, the Government of the Republic of Macedonia through the Ministry of Labor and Social Policy and the Employment Agency continued to implement active measures and programs aimed to increase employment.

Chart 30  
Selected labor market indicators (in %)



Source: State Statistical Office and NBRM calculations.

Chart 31  
Unemployment rate by age group (in %)



As on the labor demand side, during the year, labor supply was adjusted slightly upward. The total active population increased by 0.6%, which amid a decrease in the inactive population of 0.6%, resulted in a small upward adjustment of the activity rate (of 0.3 percentage points) to 56.8%. The positive developments both on the demand and on the supply side of the labor supply reduced unemployment to 22.4% in 2017 (a decrease of 1.4 percentage points). Thus, analyzing by age group, the reduction in overall unemployment rate is explained by the lower unemployment in all age groups.

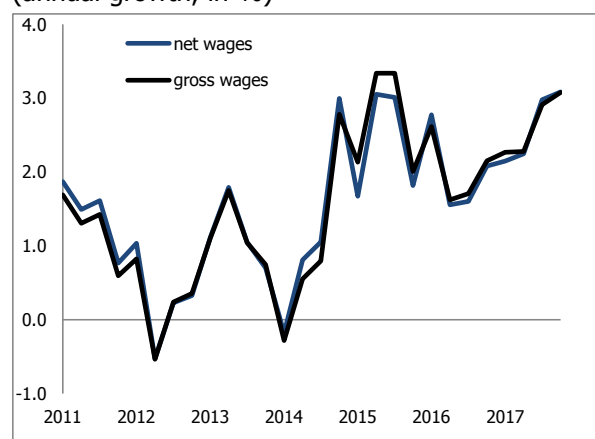
The increase in average paid salaries continued in 2017, but somewhat faster compared to last year, which in part is due to the legal provision for increasing the minimum wage level<sup>19</sup>, which started to apply in the last quarter of the year. Thus, nominal net and gross wages<sup>20</sup> registered an annual growth of 2.6% (2016: 2%). Upward correction of net wages was registered in almost all sectors<sup>21</sup>, with especially high growth in mining and quarrying (10.5%), manufacturing (5.9%) and information and communications (5.2%). Also, wages increased in real terms for the fourth consecutive year. Given the moderate growth of the general level of consumer prices of 0.3%, net and gross wages registered an identical real growth of about 1.2%.

<sup>19</sup> On 19 September 2017, the Assembly of the Republic of Macedonia adopted the amendments to the Law on the Minimum Wage of the Republic of Macedonia. According to the amendments, the minimum wage in the Republic of Macedonia, starting with the payment of the wage for September 2017, was determined for all sectors in the economy at a gross amount of Denar17,300 or Denar12,000, net.

<sup>20</sup> Total gross wages paid include net wages paid for the reporting month, paid income tax and paid contributions (pension and disability insurance, health insurance, employment, occupational disease and water supply). The data concern wages paid.

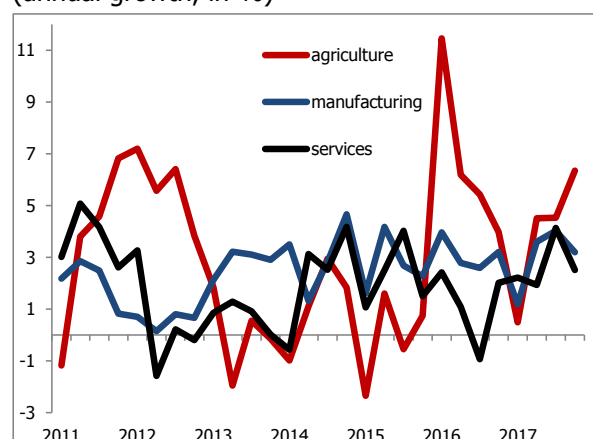
<sup>21</sup> Lower wages were paid in the construction sector.

Chart 32  
Average gross and net wages  
(annual growth, in %)



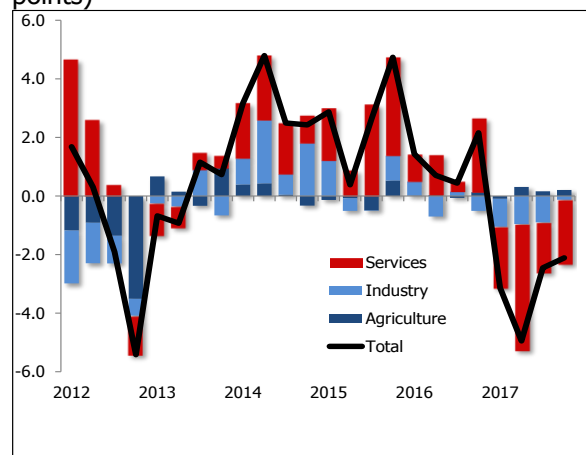
Source: State Statistical Office and NBRM calculations.

Chart 33  
Average net wages, by sector  
(annual growth, in %)



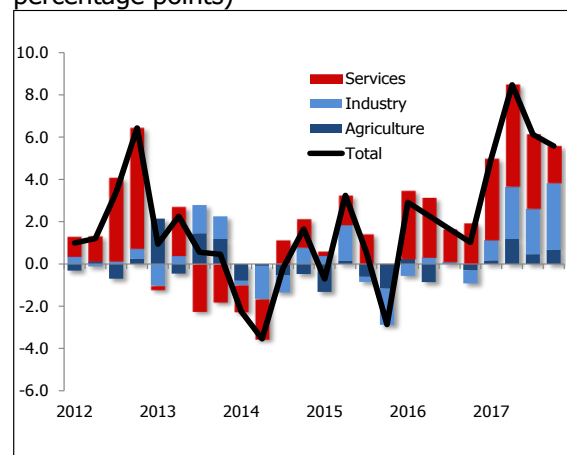
Competitiveness indicators showed deterioration in 2017<sup>22</sup>. Namely, in the course of the year, labor productivity registered a negative trend (by 3.1% lower) in 2017, which corresponds to the weaker economic performances. Observed by sectors, the largest contribution to the fall was made by services sector that reported a greater decrease in the value added amid decelerating growth in employment. Unit labor costs in 2017 registered a stronger growth (6.3%), amid increased costs in all three sectors, with greater contribution of the services sector and the industry, and minimum growth in the unit labor costs in agriculture, after three years of consecutive decline.

Chart 34  
Labor productivity  
(contributions to the annual growth, in percentage points)



Source: State Statistical Office and NBRM calculations.

Chart 35  
Unit labor costs  
(contributions to the annual growth, in percentage points)



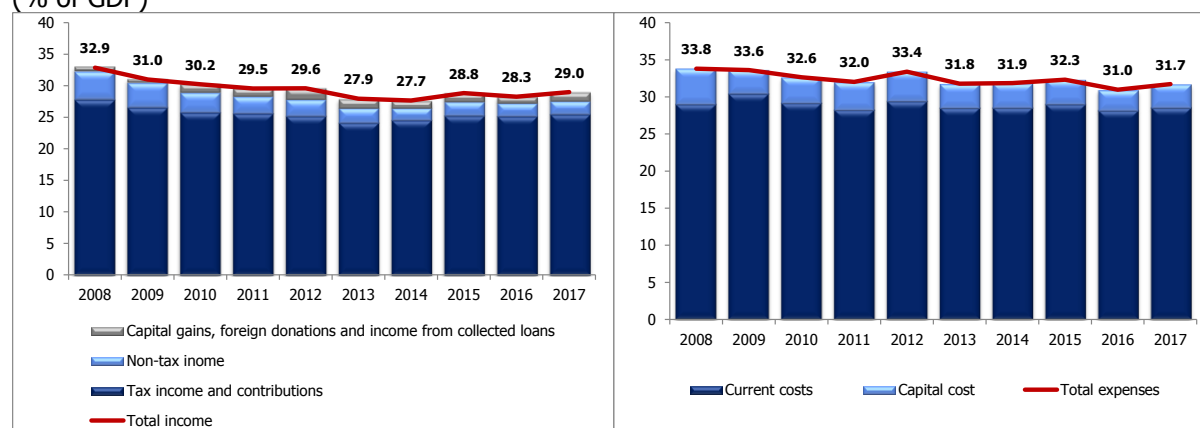
### 3.3. Public finance

In 2017, the total budget deficit remained unchanged compared to the previous year and equaled 2.7% of the GDP. The share of total budget revenues in GDP in 2017 was 29%,

<sup>22</sup> Productivity and unit labor costs for the overall economy are calculated using SSO's data on GDP, number of employees and average gross wages. Total productivity is a weighted sum of productivity of each sector. Within each sector, the productivity is calculated as a ratio between the value added in that sector and the number of employees.

which is a moderate increase compared to the preceding year. Budget expenditures also registered slight upward movement on an annual basis, which reached 31.7% of GDP, given the stagnation of current costs and increase in the share of the capital expenditures.

Chart 36  
Total budget revenues and expenditures  
(% of GDP)



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

The budget deficit in 2017 was lower compared to the initial Budget (Denar 18,607 million or 2.9% of GDP), as well as relative to the budget revision from July 2017 (Denar 18,567 million, or 2.9% of GDP)<sup>23</sup>. Namely, despite the lower realization of budget revenues relative to the budget revision (97.3%), the budget expenditures registered more pronounced downward deviation, as a result of the deviations in the capital expenditures, as well as current expenses. There were also certain deviations in the financing structure, having in mind that the planned external funding of the budget deficit for 2017 was rescheduled for the beginning of 2018, so the financing needs were covered through larger use of deposits with the National Bank relative to the plan.

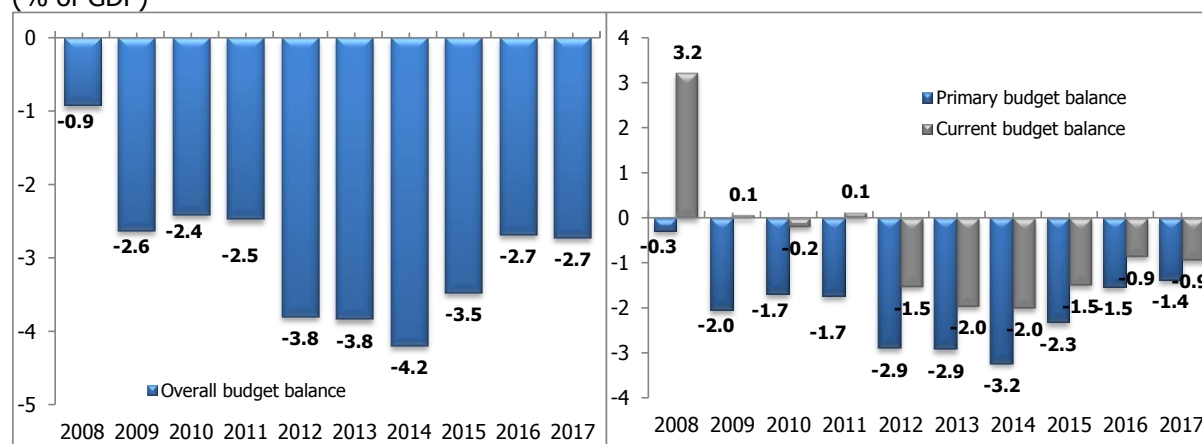
The changes in the current budget deficit<sup>24</sup> and in the primary deficit<sup>25</sup> in 2017 are similar to the ones in the total deficit. Thus, the current budget deficit in 2017 was 0.9% of GDP, which is the same as in the previous year, while the primary budget deficit at the end of 2017 was 1.4% of GDP, and it is slightly lower, compared to the previous year (1.5% of GDP).

<sup>23</sup> With the budget revision from July 2017, the total budget revenues and expenditures were reduced almost equally (by Denar 2,867 million and Denar 2,907 million, respectively), whereby the budget deficit (Denar 18,567 million) registered no significant change from the initially planned amount. The budget revision made changes in the sources for financing the budget deficit, i.e. greater domestic and external borrowing was envisaged, and unlike the previously adopted budget, it was envisaged part of the secured funds to be retained as deposit on the account with the NBRM.

<sup>24</sup> Current budget balance is the difference between current revenues (tax revenues and non-tax revenues) and current budget expenditures (for wages and fees, goods and services, transfers and interests).

<sup>25</sup> Primary budget balance is the difference between total budget revenues and total budget expenses, less repayment of current loan (interest) liabilities. This fiscal indicator is considered more appropriate for the analysis of the current policy course, since it does not include fiscal costs related to past conduct of fiscal policy relative to the public debt.

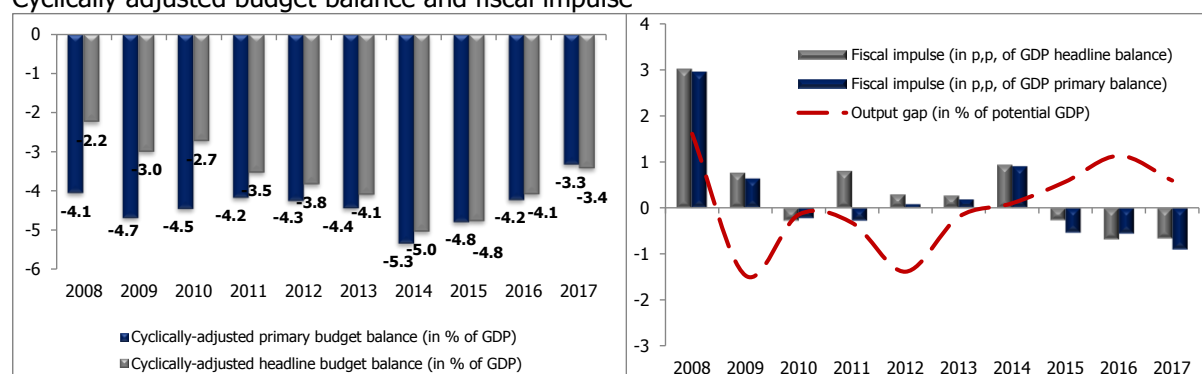
Chart 37  
Fiscal indicators  
(% of GDP)



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

The cyclically adjusted budget balance (structural balance) in 2017 continues to narrow for the third consecutive year, showing consolidation of public finances through the discretionary component. Thus, the fiscal impulse, which represents the difference between cyclically adjusted balance of the current and the previous year, was negative in 2017, given the lower structural deficit<sup>26</sup> (3.4% of GDP, compared to 4.1% of GDP in 2016). Similar movements are characteristic for both fiscal impulse and structural primary deficit.

Chart 38  
Cyclically adjusted budget balance and fiscal impulse



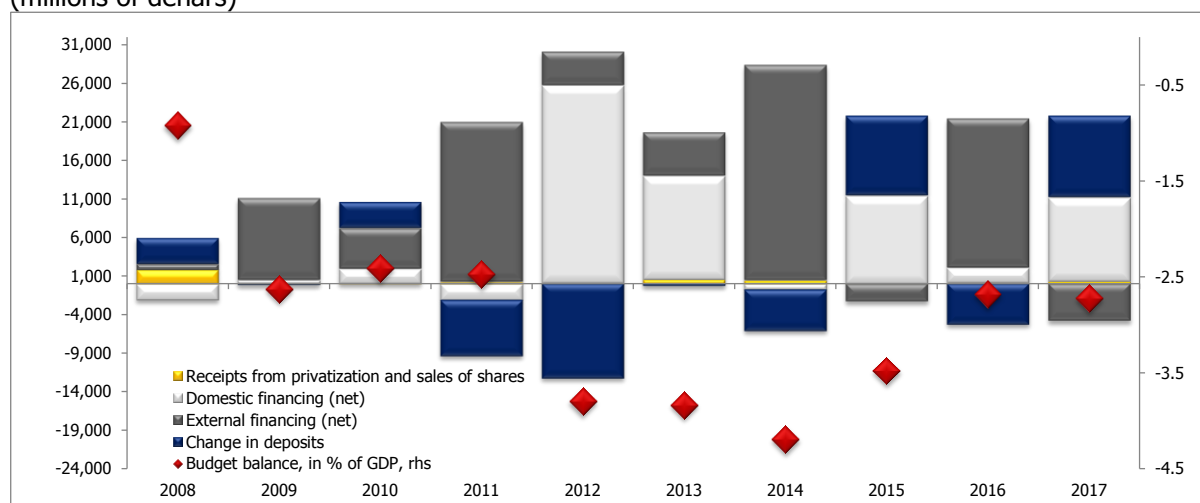
Source: Ministry of Finance of the Republic of Macedonia and NBRM calculations.

The budget deficit in 2017 was financed by domestic sources, through net issuance of new government securities and using the government deposits with the NBRM. Namely, the share of these two domestic sources was different throughout the year. Namely, in the first half of 2017, the budget deficit was largely financed by government deposits with the NBRM, while in the second half of the year, the deficit was more often financed through issuance of new government securities on the domestic market.

<sup>26</sup> The total structural deficit is obtained when the cyclical budget component is removed from the actual budget deficit. It is calculated as the difference between the actual budget revenues adjusted for the effect of the deviation of the potential from the actual GDP with elasticity of 1 and actual budget expenditures adjusted for the effect of the deviation of the potential from the actual GDP with elasticity of 0. The structural primary deficit is equal to the total structural deficit reduced by the effect of the interest expenses.



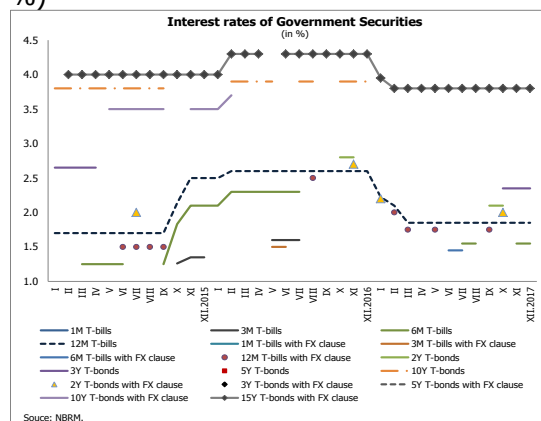
Chart 39  
Budget balance financing structure  
(millions of denars)



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

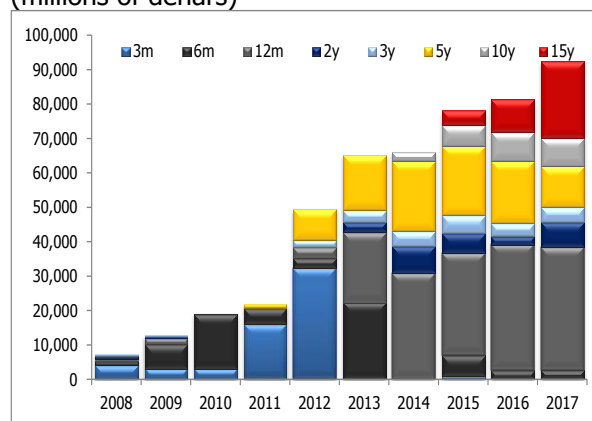
During 2017, new government securities in the amount of Denar 11,214 million were issued, which is a higher net domestic borrowing compared to the previous year, when the stock of government securities increased by Denar 3,037 million. In 2017, most of the new issues of government securities were with longer maturity, compared to the maturities where 12-month treasury bills prevailed. Thus, in 2017, the trend of diversion of liabilities based on due short-term securities to long-term securities continued, thus increasing the average maturity of issued government securities. Analyzed by maturity, in 2017, the increase in the total amount of government securities resulted entirely from the growth of the government bonds, while the stock of treasury bills declined on an annual basis. Regarding the currency structure of the domestic government debt, in 2017, the portfolio of government securities with a currency clause moderately increased. However, the government securities in national currency remained dominant in the total amount of government securities. In 2017, the Ministry of Finance cut the interest rates on government securities, along with the entire yield curve, for the maturities of securities that were offered for sale during the year.

Chart 40  
Interest rates of the government securities (in %)



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

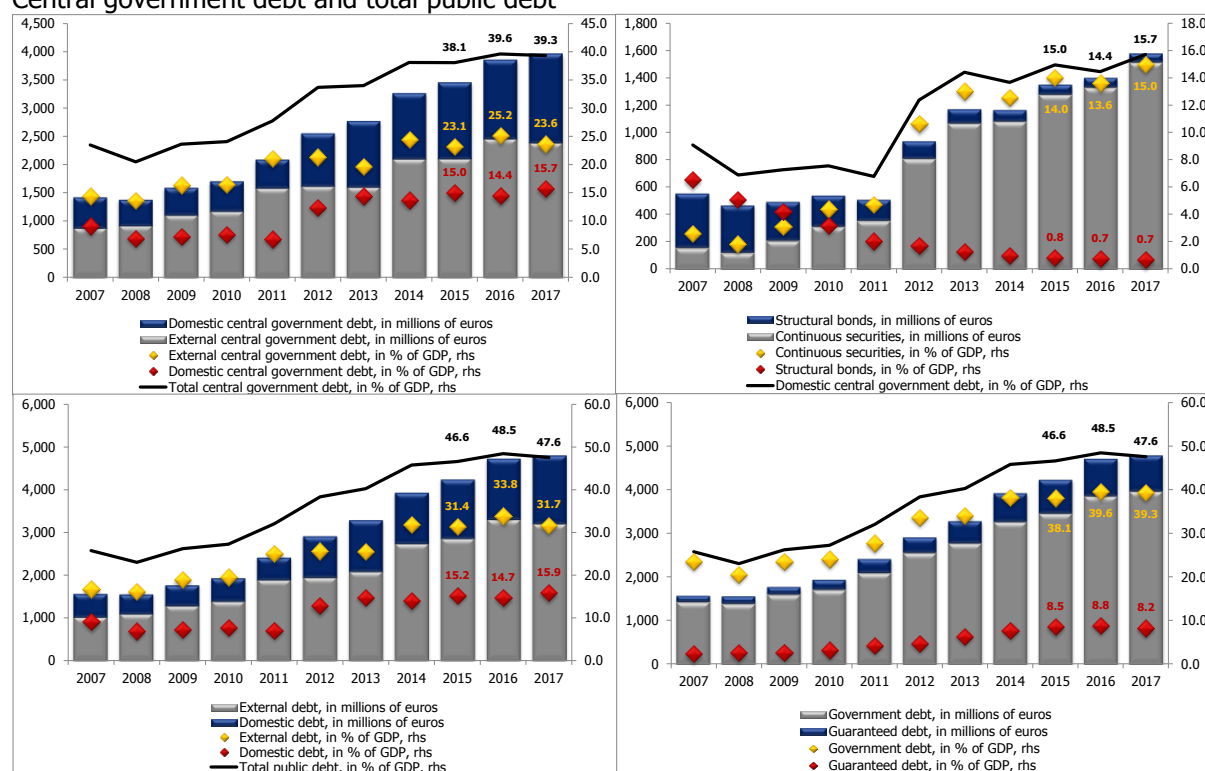
Chart 41  
Maturity structure of government securities  
(millions of denars)



At the end of 2017, the central government debt<sup>27</sup> totaled Euro 3,958.5 million, which is an annual increase of 2.8%, given the decrease of its share in the GDP from 39.6% to 39.3%, annually. The domestic debt increased (from 14.4% to 15.7% of the GDP), given the fall in the external government debt (from 25.2% to 23.6%)<sup>28</sup>. At the end of the year, the total public debt<sup>29</sup> equaled Denar 4,787 million and annually, it is higher by 1.6%, given its decreased share in GDP on annual basis from 48.5% to 47.6%. The annual rise in total public debt is due to the higher government debt<sup>30</sup> (given the increase in the domestic debt of the central government), while the guaranteed debt of the public enterprises and state-owned joint stock companies registered slight decline. Consequently, the guaranteed debt to total public debt decreased from 18.3% in 2016 to 17.3% in 2017, with an annual decrease of its share in GDP from 8.8% to 8.2%. Analyzed by the public debt structure by residence, in 2017 there were divergent movements in the two main components of total public debt. Namely, the share of external public debt in GDP decreased by 2.1 percentage points annually, accounting for 31.7% of GDP, while the share of domestic debt increased by 1.2 percentage points, accounting for 15.9% of GDP.

Chart 42

Central government debt and total public debt



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

### 3.4. Balance of payments, IIP and external debt

The analysis of movements in the balance of payments for 2017 indicates maintenance of moderate current account deficit, in conditions of further structural changes

<sup>27</sup> Refers to central government debt including public funds, excluding municipalities.

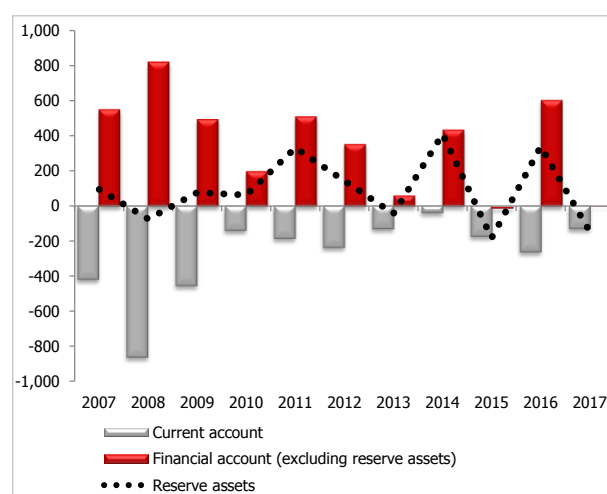
<sup>28</sup> The government liabilities based on long-term financial loan at Deutsche Bank (of Euro 77 million) and interest-based liabilities for the third and fifth issued Macedonian Eurobonds (in the total amount of Euro 45 million) fell due in July 2017.

<sup>29</sup> The public debt is defined under the Law on Public Debt (Official Gazette of the Republic of Macedonia No. 165/14), according to which it is the sum of the government debt and the debt of public enterprises established by the state or municipalities, municipalities within the City of Skopje and the City of Skopje, and companies that are entirely or predominantly owned by the state or by the municipalities, the municipalities within the City of Skopje and the City of Skopje, backed by a state guarantee.

<sup>30</sup> Government debt is defined as a sum of the debt of the central government and the local government.

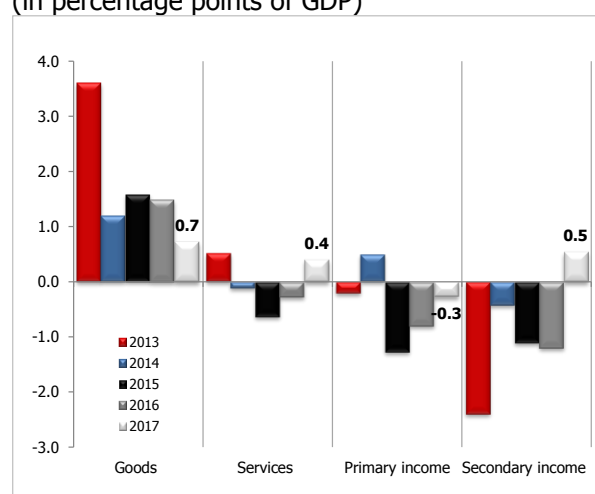
in the export sector, lower uncertainty and higher confidence and absence of imbalances. The current account deficit equaled 1.3% of GDP, thus narrowing by 1.4 percentage points of GDP on annual basis. The pronounced improvement in current transactions reflects the lower deficit in the trade in goods and services, coupled with higher inflows of secondary income. From the aspect of financial flows, no significant external borrowing of the economy was noted in 2017, and the positive effects of the inflow of foreign direct investments were offset by net outflows in some of the short-term financial flows. In such conditions, part of the current account deficit was financed through foreign reserves, which in 2017 decreased on an annual basis, but remained adequate.

Chart 43  
Current, capital and financial account and change in the foreign reserves  
(in millions of euros)



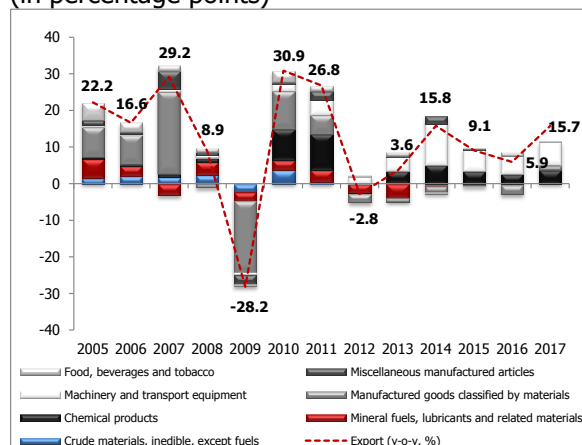
Source: NBRM.

Chart 44  
Contribution of individual components in the annual change in the balance of the current account  
(in percentage points of GDP)



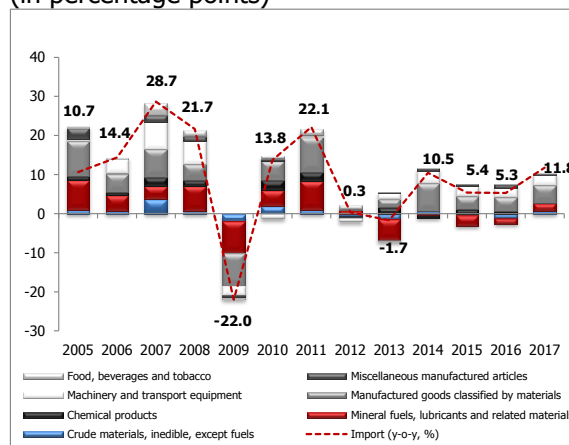
The analysis of foreign trade in 2017 indicates a solid increase in both components, with moderately faster growth in export compared to import of goods. In 2017, the driver of the positive export performance was the export activity of the new industrial facilities in foreign ownership, mostly evident through the high growth of export of machines and transport equipment. Also, some of the traditional sectors, especially the export of metal industry, made positive contribution to the export growth, unlike the previous five years when this industry registered negative growth rates. The export performance influenced imports, with the raw materials component for the metal processing industry and for the new foreign facilities being the most important factor for import growth. Investment imports, imports for private consumption, as well as energy imports mainly due to the higher nominal import of oil derivatives, caused by the increase in world oil prices and in conditions of drop in imported quantities, contributed to the import growth.

Chart 45  
Contributions to the annual export growth  
(in percentage points)



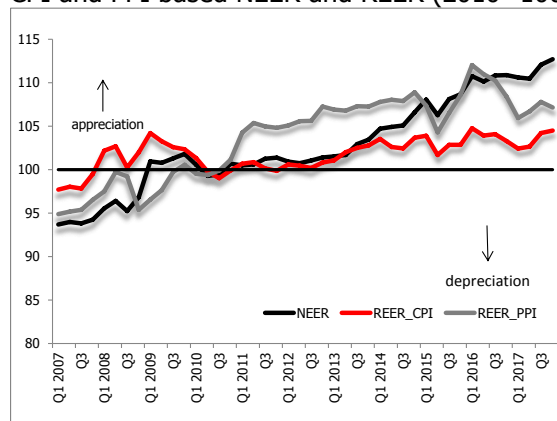
Source: NBRM.

Chart 46  
Contributions to the annual import growth  
(in percentage points)



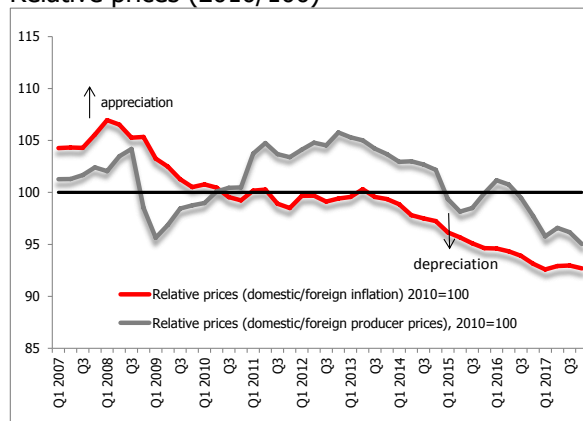
The analysis of price competitiveness indicators of the Macedonian economy<sup>31</sup> indicates moderate improvement compared to the previous year. The Real Effective Exchange Rate (REER) deflated by consumer prices depreciated by 0.5%, while REER deflated by producer prices appreciated by 3.1%. Such annual changes mostly stem from the favorable movements in relative prices, while the change of nominal effective exchange rate influenced in opposite direction, i.e. towards REER appreciation, mainly due to the depreciation of the Turkish lira and the British pound.

Chart 47  
CPI and PPI based NEER and REER (2010=100)



Source: NBRM.

Chart 48  
Relative prices (2010/100)



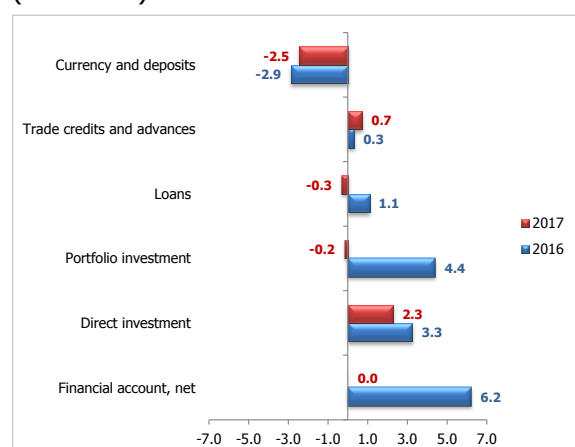
The positive balance in the trade in services contributed to narrowing of the current account deficit by 0.4 percentage points of GDP during 2017. The moderate reduction in net outflows within the construction services and fees for using intellectual property, as well as the increased surplus in tourist services, are the main drivers of favorable annual changes. Secondary income as the most important component for financing the trade deficit increased its share in GDP by 0.5 percentage points, for the first time in the last five years. The larger surplus predominantly arises from the higher net inflows of private transfers, which reflect the increase in the purchase of cash from the currency exchange market (data used to

<sup>31</sup> The analysis of indicators of price competitiveness is based on REER indices, calculated using weights based on the foreign trade without primary commodities. Primary products not included in the calculation are oil and oil derivatives, iron and steel, ores and imported raw materials for the new industrial facilities in the free economic zones.

estimate private cash transfers), in conditions of stabilizing expectations and increasing trust of economic agents after last year's political instability. On the other hand, the deficit in primary income expanded by 0.3 percentage points of GDP, which is even more moderate compared to the previous two years. Namely, the outflows from investment income, conditioned by the higher estimated profit of the companies with foreign capital, registered slower growth and were further mitigated by the inflows of employee allowances within the primary income category.

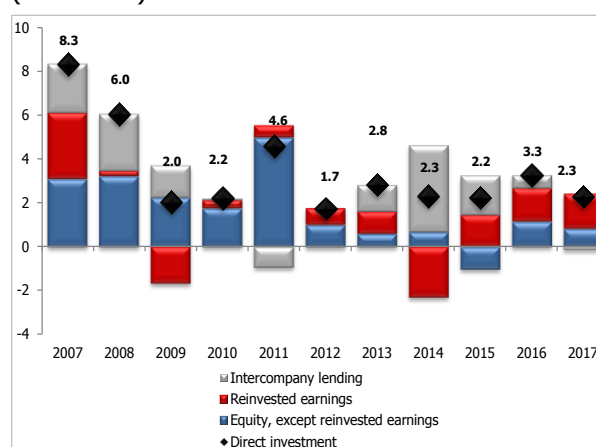
In 2017, the balance of payments' current account is marked by neutral net position. In environment of absence of external borrowing of the economy, the foreign direct investments are the main source of inflows on the financial account. Direct investments in 2017 amounted to 2.3% of GDP and were lower, compared to 2016 (3.3% of GDP). From structural aspect, in 2017, there were inflows of reinvested gain and equity, and net outflows from intercompany debt<sup>32</sup>. By activity, the investments of the direct investors were mainly directed towards services sector (activities related to real estate and trade) and mining<sup>33</sup>. The borrowing of other sectors in the economy (banks and corporate sector) in the form of long-term loans had a minor impact on the financial flows, which reflects the more moderate financing of infrastructure projects of public enterprises and the reduced net creation of liabilities with depository institutions. The effect of government external borrowing in 2017 on the financial account was negative, unlike the previous year when it was a major generator of financial inflows. Namely, long-term financial loans were repaid (0.5% of GDP), arising from weaker disbursements and repayments of due liabilities to foreign lenders<sup>34</sup>. The short-term and variable financial account components registered divergent movements, and the accumulated net liabilities based on trade loans enabled support to the financial account. On the other hand, the currencies and deposits remained the most significant outflow category, which reflects the high outflows to the segment "other sectors in the economy", partially mitigated by the net inflows in the depository corporations.

Chart 49  
Financial account  
(% of GDP)



Source: NBRM.

Chart 50  
Direct investment  
(% of GDP)



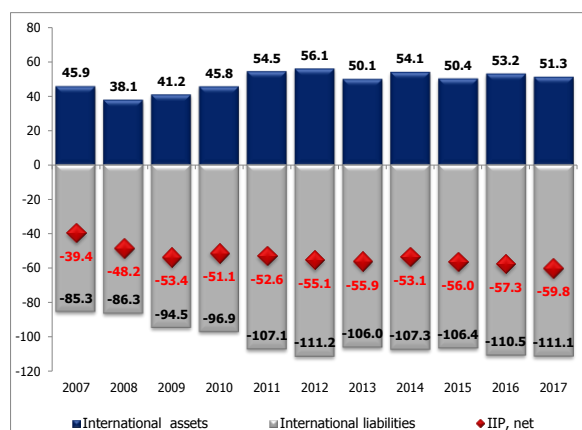
<sup>32</sup>Intercompany borrowing was negative on a net basis, as a result of the higher growth in assets - granted loans, compared to the increase in liabilities - received loans.

<sup>33</sup> The statement should be interpreted with caution, since it is based on preliminary data on the trends of direct investments for 2017. In accordance with the methodology and policy of publishing these data, in the period of preparation of the Annual Report, distribution of activities by most of the direct investments, which is in the form of reinvested profit and part of the debt instruments, is not available.

<sup>34</sup> In July 2017, part of the borrowing from the Deutsche Bank in the amount of Euro 75 million was repaid.

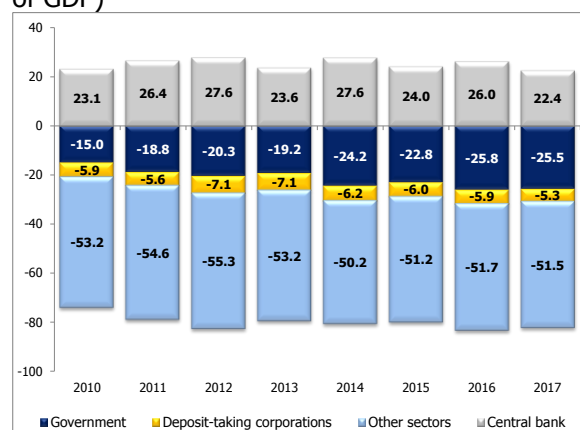
The international investment position (IIP) of the Republic of Macedonia at the end of 2017 was negative and equaled Euro 6,021.6 million or 59.8% of GDP. Compared to the previous year, IIP widened by 2.5 percentage points of the GDP. This annual change is a reflection of the reduced international assets, as well as the increase in the international liabilities (of 1.9% percentage points and 0.6 percentage points of the GDP, respectively).

Chart 51  
International investment position (% of GDP)



Source: NBRM.

Chart 52  
International investment position, by sector (% of GDP)

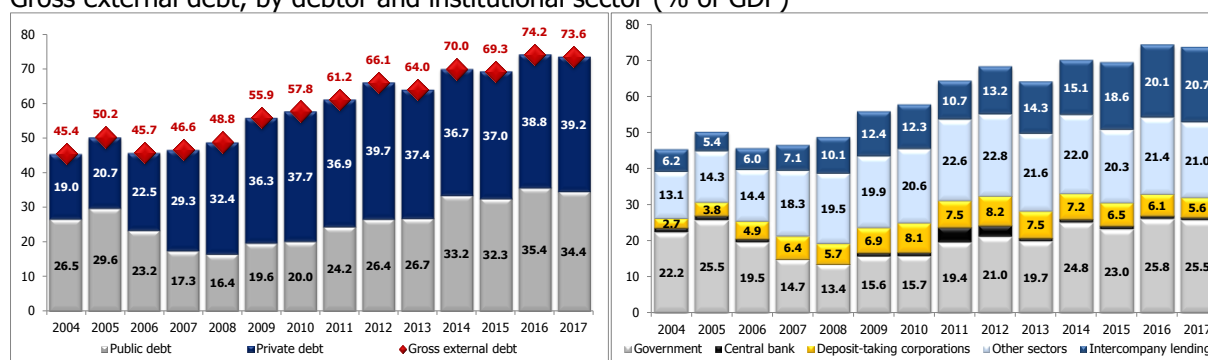


The analysis of the international investment position by sectors of the economy shows that the negative changes are entirely due to the central bank's net position as a result of the fall in the foreign reserves, while the other sectors contribute to moderate improvement in the overall net external position. Thus, the depository corporations sector experienced positive changes as a result of the repayment of long-term loans, while the improved net position of the government sector was the result of the reduced net liabilities based on other long-term loans (primarily due to repayment of loans to Deutsche Bank in the amount of Euro 77.3 million). Favorable movements in other sectors are more moderate and largely due to the slightly higher assets growth relative to the increase in liabilities.

At the end of 2017, *the gross external debt* amounted to Euro 7,403.4 million or 73.6% of GDP, which is a decrease of 0.7 percentage points of GDP, compared with the end of 2016. The lower gross external debt, according to the relative indicators, comes entirely from the annual decrease in the public debt, with moderate growth of the private sector debt. Thus, within the public debt, the decrease is due to the lower long-term loans of the central government, while the growth of the private debt is largely due to the increased intercompany debt as a result of the higher liabilities to the direct investors.

Chart 53

Gross external debt, by debtor and institutional sector (% of GDP)



\* Excluding repo-transactions.

Source: NBRM.

In general, the external debt indicators of the national economy still indicate that the gross external debt is in the safe zone. According to the indicator of the share of gross external debt in GDP, at the end of 2017, the economy was still ranked in the group of highly indebted countries, while the other indicators point to low indebtedness. However, it should be noted that the structure of total gross external debt was predominated by liabilities on intercompany debt (debt between connected entities) and trade credits, indicating more stable and less vulnerable sources of financing. The analysis of the external borrowing dynamics indicates favorable annual movements in almost all solvency indicators, except the indicator for the interest repayment in the export of goods and services and other inflows which register slight deterioration on an annual basis. Slight annual deterioration was also registered in the liquidity indicators.

At the end of 2017, net external debt, as an additional indicator of the external position of the economy, amounted to Euro 2,880.8 million or 28.6% of GDP. Compared to the end of last year, net external debt increased by 1.6 percentage points of GDP. The higher net external debt was caused by the increased net public debt, amid fall in the net private sector debt.

Table 1  
External debt indicators

	<i>Solvency</i>				<i>Liquidity</i>		
	Interest payments/ Export of goods and services and other inflows	Gross debt/ Export of goods and services and other inflows	Gross debt/ GDP	Debt servicing/ Export of goods and services and other inflows	Foreign reserves/ Short-term debt	Foreign reserves/ Short-term debt, with residual maturity*	Short-term debt/ Overall debt
	in %				ratio	ratio	in %
31.12.2004	2.41	129.3	47.3	12.4	1.14	0.89	30.27
31.12.2005	2.66	147.0	54.2	11.1	1.67	1.04	26.67
31.12.2006	3.44	131.3	49.8	21.7	1.95	1.34	28.98
31.12.2007	2.78	119.3	51.3	19.4	1.35	1.08	39.82
31.12.2008	2.66	116.9	54.1	10.2	1.29	0.95	35.19
31.12.2009	2.43	131.0	57.8	11.8	1.29	0.94	32.86
31.12.2010	3.22	140.4	59.7	13.9	1.49	0.99	27.93
31.12.2011	3.12	148.4	64.6	16.8	1.78	1.18	25.22
31.12.2012	2.92	142.1	67.6	13.1	1.64	1.03	26.66
31.12.2013	2.51	137.3	67.3	15.8	1.64	1.08	23.31
31.12.2014	3.01	149.1	74.0	17.2	1.82	1.13	22.32
31.12.2015	2.68	143.8	73.2	20.0	1.69	1.13	21.32
31.12.2016	2.38	149.9	79.1	14.9	1.65	1.16	21.93
31.12.2017	2.69	140.1	77.0	12.7	1.31	0.89	24.03
<i>Moderate indebtedness criterion</i>	12 - 20%	165 - 275%	30 - 50%	18 - 30%	1.00		

\*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.

According to the Greenspan-Guidotti rule, the country needs to keep full coverage of short-term debt (residual maturity) with foreign reserves.

Source: NBRM.

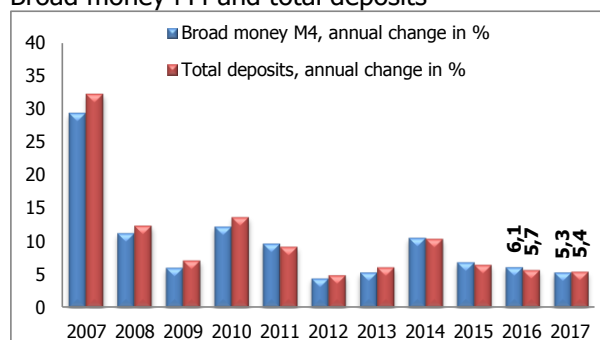
## 3.5. Monetary and credit aggregates

### 3.5.1. Monetary aggregates

Despite the uncertainty and economic stagnation, the gradual stabilization of the expectations in 2017 provided further growth of the money supply and total deposits in the banking system, but slightly more moderate than last year. The increase in monetization in the economy is in line with the continuity of favorable labor market developments, as well as the relatively favorable external position of the economy in 2017. During the year, the dynamics of the change in deposits was uneven. In the first half, the deposit base decreased, given the fall in corporate deposits and economic contraction, as well as the larger amount of outflows from dividends. At the same time, the growth pace in the households saving was moderate, against the backdrop of ongoing political uncertainty. In the second half of the year, the banks' deposit base grew noticeably, reflecting the stabilized environment, enhanced economic activity, as well as intensified lending, which additionally increased the deposits.

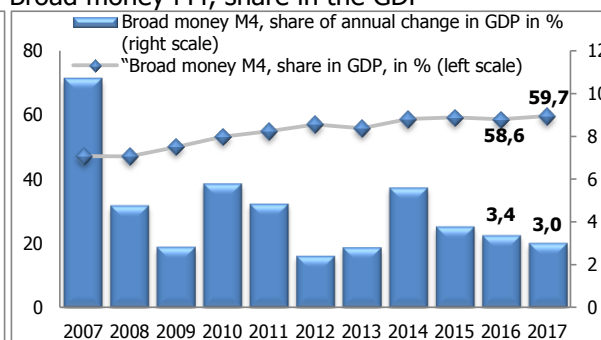


Chart 54  
Broad money M4 and total deposits



Source: NBRM.

Chart 55  
Broad money M4, share in the GDP



In 2017, broad money measured through M4, increased by 5.3%, which was slightly slower, compared to last year (6.1%). However, the share of this monetary aggregate in GDP continued to increase and at the end of the year, equaled 59.7%. From a structural point of view, the growth of M4, similar to the previous three years, was driven by demand deposits, probably in part reflecting the lower yields on savings. Positive and significantly higher annual contribution compared to the previous two years were also registered in long-term deposits. Analyzing the other components of this monetary aggregate, the contribution of the currency in circulation was moderately positive, while the short-term deposits had minor negative contribution to the change in the money supply. In accordance with the performance, the indicator for the share of the annual change in the money supply relative to GDP at the end of the year equaled 3.0% and registered a moderate slowdown on an annual basis.

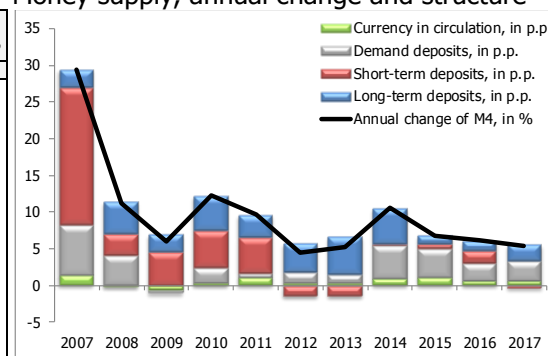
Table 2  
Money supply components - balance and changes

	Balance as of			Annual change		
	2015	2016	2017	2015	2016	2017
	in millions of denars			in %		
Currency in circulation	26,300	28,193	29,968	13.3	7.2	6.3
Demand deposits	74,978	83,156	93,240	20.3	10.9	12.1
<b>M1</b>	101,278	111,349	123,208	18.4	9.9	10.7
Short-term denar deposits	53,557	51,592	48,534	-6.3	-3.7	-5.9
Short-term foreign currency deposits	96,514	103,836	105,864	6.1	7.6	2.0
<b>M2</b>	251,349	266,776	277,607	7.6	6.1	4.1
Long-term denar deposits	53,518	55,834	61,006	3.6	4.3	9.3
Long-term foreign currency deposits	26,140	28,612	31,269	6.6	9.5	9.3
<b>Total deposits*</b>	229,728	239,873	246,674	2.4	4.4	2.8
<b>Total deposits</b>	304,706	323,029	339,914	6.3	6.0	5.2
<b>M4</b>	331,007	351,222	369,882	6.8	6.1	5.3

\* excluding demand deposits

Source: NBRM.

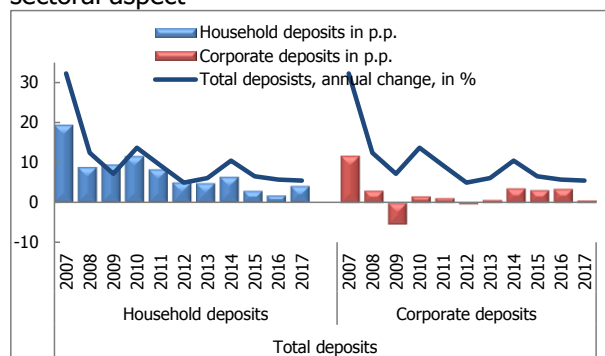
Chart 56  
Money supply, annual change and structure



The total deposits in the banking system in 2017 registered an increase of 5.4%, which was moderately lower compared to the previous year. The deposits analysis by sector shows that household deposits are growth generators, while the contribution of the corporate deposits is positive, but considerably lower. Analyzed by currency, the total deposit growth in 2017 mainly resulted from the denar deposits (including demand deposits), while growth, but to a smaller extent, was registered by foreign currency deposits. Such performance reflects gradual and further stabilization of expectations, as indicated by the changes from the aspect of the maturity structure of the deposit base, with further increase in the contribution of the long-term deposits.

Chart 57

Total deposits (with demand deposits), annual change and contribution to the change from sectoral aspect



Source: NBRM.

Chart 58

Total household deposits, annual change and contribution to the change by maturity and currency structure

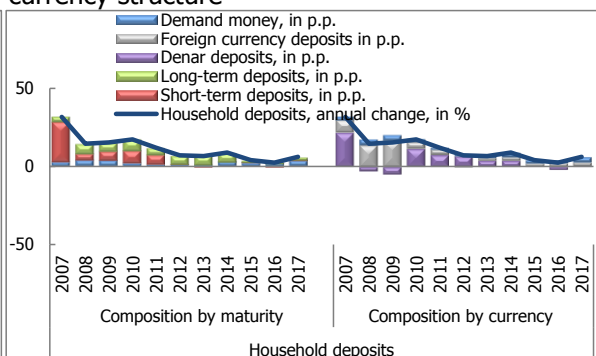
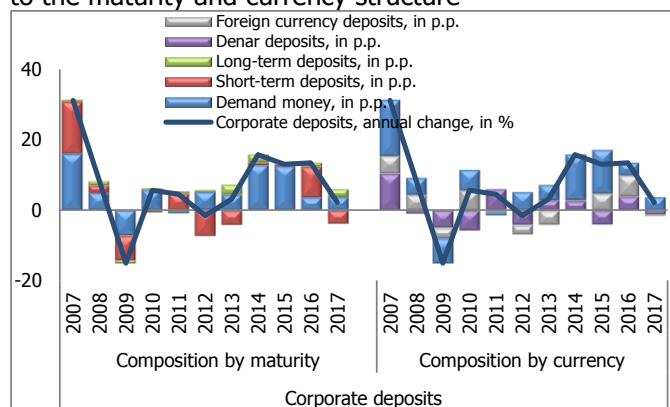


Chart 59

Total corporate deposits, annual change and contribution to the maturity and currency structure

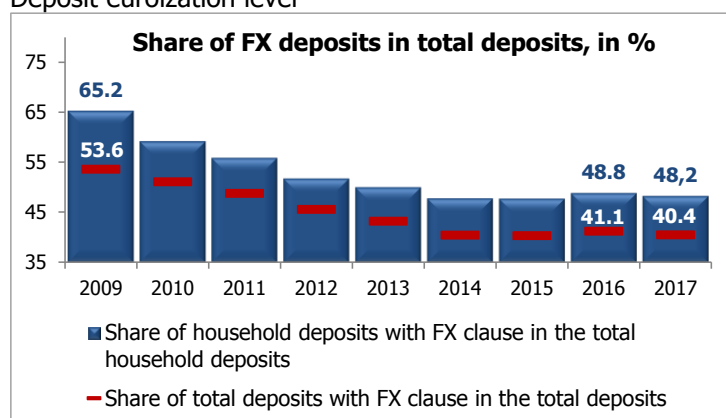


Source: NBRM.

Household deposits<sup>35</sup> in 2017 registered an annual rise of 6.2%, which is significant acceleration compared to the increase in the preceding year (2.5%), when the political crisis triggered withdrawal of part of the deposits in the first half of the year. Analyzed by structural aspect, the increase is mostly due to the rise in demand deposits and long-term savings. Also, unlike the previous year, when the short-term savings dropped, in 2017, this segment registered moderate positive movement. Despite the fluctuations during the year, throughout the 2017 there were positive movements from the currency point of view. Thus, denar deposits (with demand deposits) made the largest contribution to the annual growth of household deposits. The corporate sector deposits in 2017 registered an annual growth of 2.1%, whereby analyzed from a structural aspect, the growth was mainly due to demand deposits, as well as long-term deposits. From currency point of view, demand deposits within denar deposits were sole generators of the growth of total corporate deposits. Taking into account such performance, the degree of euroization, measured by the share of deposits with foreign currency component in total deposits, moderately decreased in 2017 from 41.1% to 40.4%. This indicator registered the same trend in the total household deposits.

<sup>35</sup> Deposit data also include demand deposits.

Chart 60  
Deposit euroization level

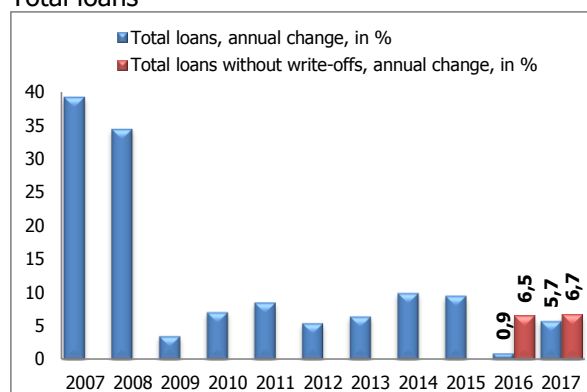


Source: NBRM.

### 3.5.2. Lending activity

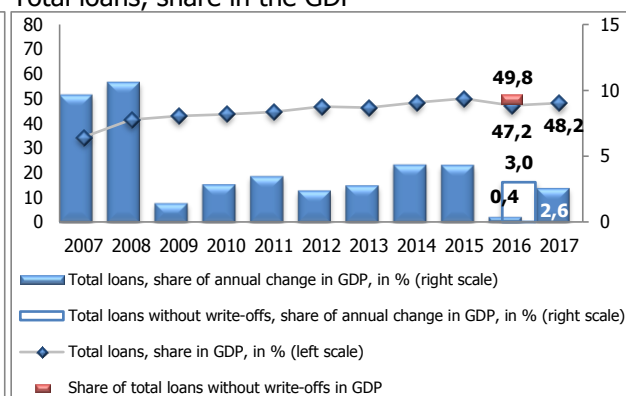
Banks' lending activity registered solid growth in 2017. The annual growth rate of total loans at the end of January equaled 5.7%<sup>36</sup>. The enhanced credit support of the economy was a reflection of the higher supply and the increase in the demand for loans. Thus, in 2017, amid stable expectations, sound liquidity and solvent position and growing competition, the banks continued to ease the credit standards for both corporate sector and households. Further increase was registered in the demand for loans, especially in the corporate sector, whose growth accelerated in the second half of the year. In this context, despite the fact that household lending prevailed in the new credit flows, corporate lending increased its contribution.

Chart 61  
Total loans



Source: NBRM.

Chart 62  
Total loans, share in the GDP

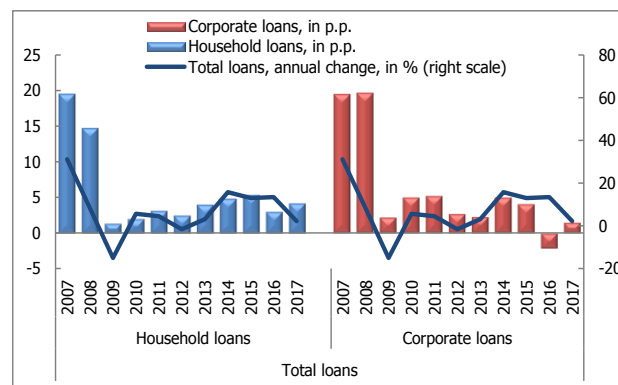


Analyzed by sectors, the largest contribution to the total credit growth was made by loans to household sector (contribution of 4.2 percentage points), while the contribution of the corporate loans was lower (1.5 percentage points), although higher compared to the two previous years. In addition, in order to further support lending to the corporate sector, at the end of 2017, the NBRM continued applying a non-standard measure of reserve

<sup>36</sup> On 17 December 2015, the NBRM Council adopted the Decision amending the Decision on credit risk management that requires from banks by 30 June 2016 to write off (and to continue writing off) all claims fully provisioned for more than two years, and where the bank identified and fully covered the credit risk of default at least two years ago. Despite the write-off of these claims, i.e. their transfer to the off-balance sheet record, banks reserve the right for their collection. The effect of the transfer of part of the suspicious and contested claims of banks to off-balance sheet records was mostly pronounced in the second quarter of 2016.

requirement<sup>37</sup>. In line with the performance, the share of the loans in the GDP at the end of the year equaled 48.2%. The indicator of the share of the annual increase in the total loans in the GDP at the end of the year equaled 2.6 percentage points

Chart 63  
Total loans, annual change and sectoral structure



Source: NBRM.

Chart 64  
Total household loans, annual change and structure by purpose

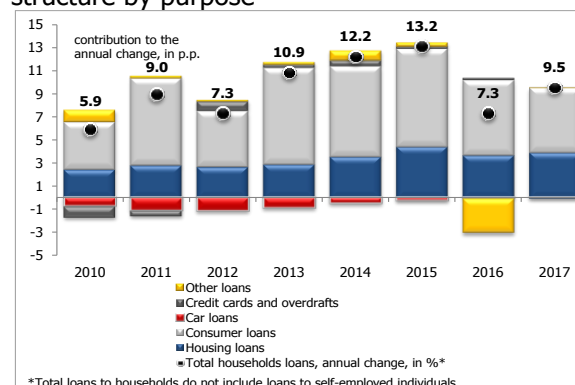
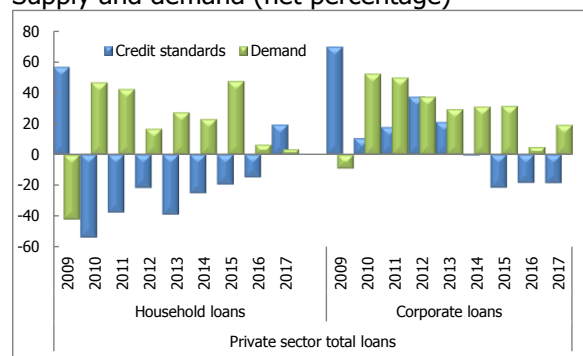
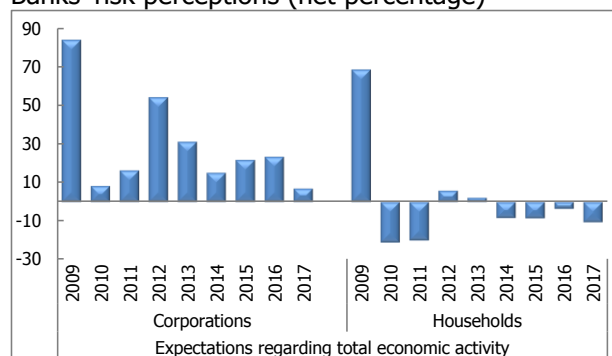


Chart 65  
Supply and demand (net percentage)\*



\* In terms of credit standards, negative net percent means easing of the credit standards. In terms of demand, negative net percent means reduction in demand. For more details on the lending surveys, please visit the NBRM website.  
Source: Lending Survey, NBRM.

Chart 66  
Banks' risk perceptions (net percentage)\*\*



\*\* As for the households, it presents the average of the net percentage of the risk factors that influence the credit standards when extending housing and consumer loans.

<sup>37</sup> This measure allows reduction of the banks' reserve requirement base for the amount of the newly approved loans to net exporters and domestic producers of electricity and banks' investments in debt securities denominated in national currency without currency clause issued by net exporters and domestic producers of electricity. The measure was introduced in late 2012, and has been applied since 2013. Since the introduction of the measure, its application has been extended twice, i.e. until the end of 2017.

## **IV. Macroeconomic environment and monetary policy in 2018 and 2019<sup>38</sup>**

Pursuant to the legal provisions, the National Bank's monetary policy will seek to maintain price stability as a primary monetary objective in the following period. For that purpose, the National Bank will pursue its efforts towards maintaining a stable and competitive banking sector and support the general economic policies without jeopardizing the achievement of the primary goal. From the aspect of the monetary strategy, the NBRM will continue to apply strategy of targeting stable nominal exchange rate of the denar against the euro as a nominal anchor, in accordance with the features of the domestic economy, as a small, open and highly import-dependent. Against this backdrop, the exchange rate stability contributes for maintaining price stability and stable inflation expectations of economic agents. The operational monetary policy framework, as before, will be founded on a flexible basis, which will enable efficient management of liquidity in the banking system and maintenance of the balance on the foreign exchange market. Thus, the monetary policy will continue to contribute to the overall macroeconomic stability, as a key factor in creating favorable environment for sustainable economic growth.

The NBRM's October 2017 forecasts expect the monetary policy in 2018 and 2019 to be conducted in a stable environment. Namely, the internal risks that marked the last two years and are attributed to the domestic political environment is expected to be exhausted, although certain external risks will endure. The latest NBRM's forecasts (October 2017) expect the economic growth to accelerate in the next two years, primarily influenced by the export and investments. It is expected that the foreign reserves will be kept in the comfort zone, and inflation will be moderate and reined up around the historical average of 2%. Expecting favorable economic environment, the NBRM will continue monitoring monetary goals and any potential risks, in order to timely adjust the monetary policy.

Despite the expected improvement in the global economic environment, the macroeconomic forecast is expected to be surrounded by risks, which in the medium term are associated with the high uncertainty arising from the implementation of new US policies, the potential introduction of global trade barriers, possible tightening of global financial conditions, the effects of establishing new relations between the EU and the United Kingdom, and turbulent geopolitical developments. Any materialization of the aforementioned risks will also imply change in the monetary policy environment, comparing with the expectations incorporated in the current forecasts.

In the following period, it is expected that the inflation rate will rise moderately, which according to the October forecasts, would be maintained at the level of 2% in 2018 and 2019. For 2018, it is expected that the price growth will be mostly stimulated by the inflation's food component. Certain moderate effects on inflation are also expected from the growth of core inflation, which is linked with the further increase of the domestic demand. Regarding energy prices, it is expected that they will fall, in conditions of stabilization of oil prices on the world stock markets, after the significant growth in 2017. Thus, the energy component of inflation would have negative contribution to the overall inflation in 2018. For 2019, it is expected that inflation will be maintained at the level of 2%, in conditions of further strengthening of the domestic economic activity and world food prices. Uncertainty about the future dynamics of market prices of primary commodities is the main risk factor in terms of the inflation forecast, whereby the uncertainty of the change in the oil price is

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<sup>38</sup> Based on NBRM's forecasts from October 2017.

especially significant, given the recent new rise of the geopolitical tensions and their potential reflection on supply and prices on a global scale.

For the next two years, it is expected that the acceleration of economic growth will arise from exports and investments. In expectation of favorable external environment, and above all, strengthening of economic activity among the most important trade partners of the country, increased activity of export companies from the free economic zones and recovery of some of the traditional export capacities is anticipated. It is also expected that the recovery of the foreign effective demand and the rise in the metals prices will have positive impact on the domestic metals export companies. Apart from export demand, growth generator would be also private and investment demand. Namely, for the aforementioned two years, recovery of the domestic investment activity is expected, in accordance with the stabilization of the political situation in the country and the expectations for greater inclination of the private sector for investment. Such movements would have a positive effect on the labor market, which would additionally contribute to the growth of private consumption. The intensified lending activity would also contribute towards additional support to the domestic demand. In such conditions, the GDP is expected to increase from 3.2% in 2018 and additional 3.5% in 2019.

In conditions of solid liquidity and solvency of banks, stabilized and less vague domestic environment, it is expected that the increase in the banks' deposit potential and the measures taken by the monetary authority will contribute towards larger financial support of the domestic economy through the banking sector. The projected growth of total loans in 2018 and 2019 of about 7% would support the growth of investments and domestic consumption, through greater credit support to both households and the corporate sector. It is assessed that the growth in disposable income and more positive perceptions of risk will further support credit demand. At the same time, it is assumed that the potential and the propensity for saving in the banks will increase, thus accelerating the growth of the deposit base and reaching about 6.0% in 2018 and 2019. Downward risks related to the credit and deposit growth forecast include weaker potential recovery of the economy than expected, as well as lingering uncertainty around the domestic risk factors, which might lead to smaller propensity for savings, limit the funding sources of banks, worsen risk perceptions and decrease the readiness for lending to the private sector.

Forecasts for 2018 and 2019 show an external position that ensures further maintenance of the foreign reserves at adequate level. It is expected that the current account deficit will be relatively lower to around 1.8% of GDP, on average. In addition, the deficit in the balance of goods and services is expected to narrow moderately in order to improve the trade in services, while the balance of the trade in goods remains unchanged. Significant changes are not expected in the surplus of secondary income, while the deficit in primary income is expected to widen in both years, as a result of the estimates for further increase in the profits of foreign-owned companies. The current account deficit, in the following period, would be financed through financial flows in the form of foreign direct investments and through indebtedness of the public sector, which will additionally ensure the growth of foreign reserves and their maintenance in the safe zone. The main risks surrounding the external position of the economy in the next period still come from the pace of the global recovery, the movements of the world prices and domestic political environment.

Implementation of prudent fiscal policy, with further consolidation of the budget deficit and relatively stable level of public debt is expected in the next two years<sup>39</sup>. Fiscal policy is an important factor that affects the monetary policy setup, with the policy nexus being a key factor for achieving sustainability of the external position of the country and maintaining macroeconomic stability. The public investments remain to be the priority goal of the fiscal policy. The budget deficit would be financed in combination, both from domestic sources, through the issuance of government securities and from external sources, whereby government deposits with the NBRM would increase. This fiscal framework envisages moderate increase in the public debt in the following period, which will not jeopardize the sustainability of the public finance. The fiscal policy setup is accompanied by risks, which as in the monetary policy arise from the domestic environment, as well as the external environment and its impact on domestic economic activity, as well as the possibility for access to foreign financial markets.

As before, the NBRM will regularly monitor the movements in the economy and the materialization of the identified risks and, accordingly, will evaluate and adjust the monetary policy setup.

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<sup>39</sup> The conclusions in the fiscal policy section are derived from the 2018 Budget and the Fiscal Strategy of the Republic of Macedonia 2018-2020.

## V. Monetary instruments

*The environment for conducting the monetary policy in 2017 was relatively favorable, although there were challenges that mainly arose from the uncertainty related to the domestic political environment. Such circumstances imposed a need for caution in the implementation of the monetary policy, as well as for the adaptability of the monetary instruments, for the purpose of efficient management of the liquidity of the banking sector, further support of the credit activity and strengthening of the banks' deposit base. At the beginning of the year, the policy rate of the NBRM was reduced to the level of 3.25%, which was applied before May 2016. This change reflected the gradual stabilization of the expectations of the households evident by the absence of negative trends in the banks' deposit base, as well as with the favorable developments on the foreign exchange market. An additional challenge for the monetary policy conduct was also the management of the structural liquidity surplus in the banking system. In such circumstances, the NBRM actively adjusted the amount of the basic instrument in accordance with the changes in the banks' liquidity potential, creating a basis for directing the excess funds to the private sector.*

In 2017, the monetary policy was implemented in an environment of sound foundations of the domestic economy, further gradual improvement of the expectations of the economic agents and mainly high liquidity position of the banks. The signals for larger public optimism came primarily from the foreign exchange market, where the constantly higher supply of foreign currency by natural persons and exchange offices indicated further lowering of the households' preference to use foreign currency and exhaustion of the shock effects in April / May 2016, conditioned by political instability. Such circumstances, which were accompanied by NBRM interventions on the foreign exchange market for the purchase of excess foreign currency from banks in the second half of 2016, enabled continuation of the monetary policy normalization in the beginning of 2017, which commenced in December 2016. Thus in the first quarter of 2017, in two occasions the NBRM reduced the interest rate on the CB bills by a total of 0.50 percentage points, from 3.75% to 3.25%<sup>40</sup>. These changes contributed towards normalization of the policy rate at the level registered before May 2016. Until the end of the year, the interest rate on the bills remained unchanged at the level which was estimated that contributes towards efficient liquidity management and attainment of the monetary policy goals, without jeopardizing the movements on the foreign exchange market and exchange rate stability. As a result of the decrease in the interest rate on the CB bills, lower interest rate on the repo auctions for liquidity creation was applied,<sup>41</sup> as well as the overnight loan facilities.<sup>42</sup> The interest rates on the deposit facilities with seven-day maturity<sup>43</sup> remained low at the level of 0.25% and 0.5%, respectively.

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<sup>40</sup> At the CB bills auctions, which were held on the first day of the reserve requirement periods, a volume tender was held (limited bid amount and fixed interest rate).

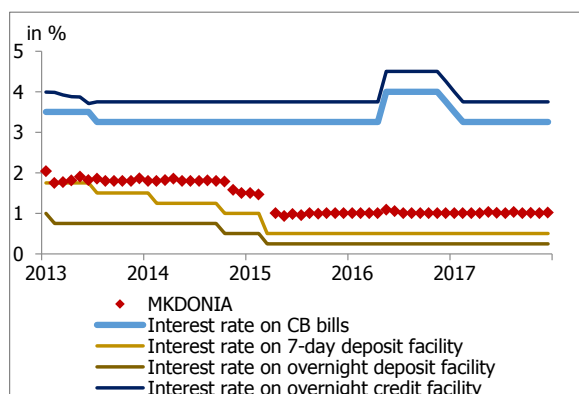
<sup>41</sup> Auctions for providing seven-day liquidity are conducted once a week, i.e. every Friday. The interest rate on this instrument is equal to the interest rate on the CB bills.

<sup>42</sup> The interest rate on the overnight loan facilities is higher by 0.5 percentage points relative to the interest rate on the CB bills.

<sup>43</sup> The overnight deposit facilities are at banks' disposal each day, while the banks have possibility to place liquid funds in deposits with seven-day maturity each Wednesday.



Chart 67  
Interest rate corridor



Source: NBRM.

Chart 68  
CB bills and liquidity potential of the banks prior to the regular monthly CB bills auctions<sup>44</sup>

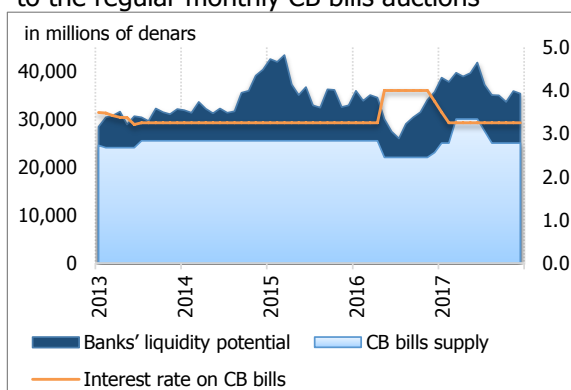
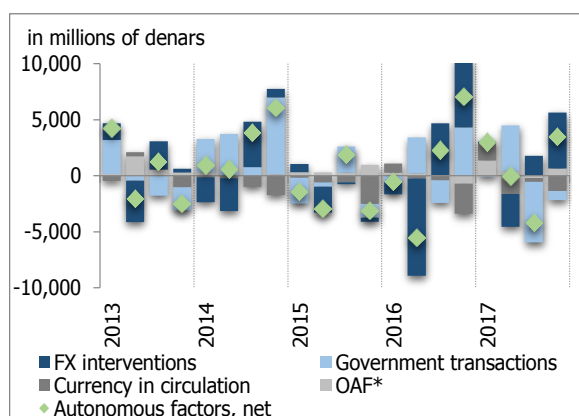


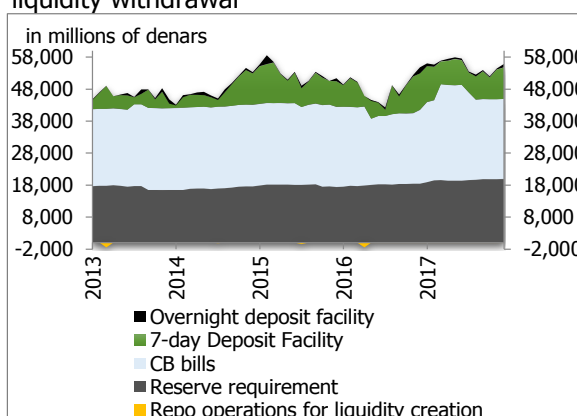
Chart 69  
Liquidity flows from autonomous factors



\* OAF – other autonomous factors

Source: NBRM.

Chart 70  
Balance of the monetary instruments for denar liquidity withdrawal



**In the implementation of the monetary policy, in 2017 the NBRM actively managed the structural excess liquidity by adjusting the offered amount of CB bills<sup>45</sup>.** Thus, immediately after the relatively high growth of the excess denar liquid funds by the banks at the end of 2016, which arose from the NBRM interventions for foreign currency purchase, in January, the CB bills increased by Denar 2,000 million, reaching Denar 25,000 million. The trend of increase in the banks' free funds continued in the first quarter of 2017, as a result of the seasonally lower households' demand for denar cash. Due to these changes, with limited supply of domestic long-term financial instruments and low credit demand of the private sector, the banks directed excess funds towards deposit facilities with the NBRM, mainly in the deposit facilities with a maturity of seven days. The seven-day deposit facilities, whose application is due to neutralizing short-term liquidity fluctuations in the banking system, reached the highest level in the last two years (about Denar 14,100 million) at the beginning of 2017. Given that such movements were present

<sup>44</sup>The banks' liquidity potential refers to the first day of the reserve requirement period when the CB bills auction is held and represents the total amount of funds on the banks' regular accounts with the National Bank, the due amount of CB bills and deposit facilities with the NBRM and the claims from the money market, reduced for the money market liabilities and the amount of the reserve requirement for the forthcoming period.

<sup>45</sup>In order to further support the long-term process of denationalization of the banks' liabilities, the offered amount of CB bills was allocated according to the individual banks' share in the total liabilities in domestic currency without currency clause. At most of the auctions, all banks had demand at the level of the offered amount, which is a confirmation for appropriate adjustment of the supply in accordance with the liquidity potential of the banks.

for several consecutive months, in March 2017, the NBRM again increased the CB bills offer by Denar 5.000 million, at the level of Denar 30,000 million. This change enabled, through the basic monetary instrument, to withdraw part of the excess funds, which was gaining features as a structural excess of liquidity, so that the share of the bills in the banks' liquidity potential was maintained around the five-year average (75%).

At the beginning of the second half of the year, the NBRM adjusted the amount of CB bills in the downward direction for a total of Denar 5,000 million, which corresponded to the reduction of banks' liquidity potential in June and July. The downward liquidity dynamics of the banks in this period was the result of the intensified government financing on the domestic market, as well as the interventions of the NBRM for providing foreign currency for the banks, in order to meet the companies' seasonally higher demand for regular operations, repayment of dividends to legal entities in a predominantly foreign ownership and repayment of the private sector's debt to abroad (Box: Foreign Exchange Market). Also, by adjusting the offer of CB bills, it was possible to stabilize the excess short-term funds placed in the seven-day deposits at the level of about Denar 8,000 million, which was assessed as a solid basis for credit support to the private sector and overcoming the short-term changes in liquidity. In the remaining period, the relatively favorable trends in the foreign exchange market, which allowed regular and relatively high purchase of the market excess foreign exchange by the NBRM (total Euro 110.4 million in the period August - December), on the one hand, and the withdrawal of funds from the government that is related to the intensified borrowing on the domestic market, on the other hand, contributed to the stabilization of the free funds on the banks' accounts with the NBRM. In such circumstances, the central bank preserved the CB bills amount at the level of Denar 25.000 million, while the short-term excess funds which the banks placed in seven-day deposits, equaled about Denar 8.500 million<sup>46</sup>.

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<sup>46</sup> At the end of the year, as a result of intensified increase in the funds on the bank accounts caused by the larger spending of the government and the NBRM interventions on the foreign exchange market, the amount of the seven-day deposits reached Denar 9,897 million).

### **Box 1. Movements on the foreign exchange market and NBRM interventions**

**In 2017, the foreign exchange market<sup>47</sup> remained dominant segment of the domestic financial markets, having in mind that the total turnover reached Euro 8,449 million, or 84% of the GDP.** The movements on the foreign exchange market in the Republic of Macedonia, not only indicated stabilized expectations of the households, but characterized also with increase in the demand for foreign exchange by the private corporate sector, due to which in all transactions with clients, the banks sold Euro 260 million on a net basis or more than Euro 84 million on an annual basis. However, the banks in the transactions with the natural persons and exchange offices in 2017 have been constantly realizing net purchase of foreign currency, which reached Euro 1,094 million, which was higher by Euro 106 million compared to 2016. This trend was especially pronounced in the second half of the year, indicating constant stabilization of the expectations of the natural persons and lower uncertainty related to the political situation in the country. The inflow of foreign exchange liquidity of the banks based on transactions with these clients was largely used for meeting the higher demand for foreign exchange by the companies and the non-residents. In the transactions with the companies, the banks in 2017 sold a relatively high amount of foreign currency on a net basis (increase of Euro 166 million annually), which was a result of stronger demand growth compared to the increase in the supply of foreign exchange. On the foreign currency supply side, the unfavorable effect of the lag of investments in the infrastructure projects was completely overcome with the growing offer by the new companies from the activity for production of motor vehicles and equipment for motor vehicles and trade in computers and computer technology, which indicates the positive effect of the structural changes in the domestic economy on the foreign exchange market. On the other hand, the increased demand for foreign currency arose not only from the companies for manufacturing and trade of goods and beverages and for procurement of oil and oil derivatives, which dominate in the import of goods structure, but from the energy and telecommunication sector, as well. The higher demand for foreign exchange from these two sectors, as well as from non-residents, is connected to the deleverage of the private sector to abroad and payment of dividends to foreign mother companies, which, as a trend, is characteristic for the mid-year. Banks compensated the higher demand for foreign currency in this period of the year, besides from own funds and through trading with foreign currencies on the interbank market, and from the NBRM, which intervened in the second quarter of the year by selling foreign currency to the banks' supporters. In the remaining period of the year, the relatively favorable movements on the foreign exchange market enabled the NBRM to constantly participate in this market segment with interventions for the purchase of excess foreign currency liquidity of banks.

Hence, despite the relatively high annual repayments of the private sector abroad, the NBRM bought the highest amount of foreign currency (Euro 65.5 million) in the net five-year foreign exchange market in 2017 in the last five years. During the year, the banks actively traded on the interbank foreign exchange market, where the intensified trading continued. From the aspect of the structure of the interbank trading, 2017 characterizes with further increase in the trade between the market makers and the other banks, which points to the deepening of the role of the market makers of this market segment.

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<sup>47</sup> The foreign exchange market within this analysis encompasses the transactions between the banks and their clients, interbank trading, as well as the transactions between the NBRM and the market makers.

Chart 71

Annual changes in the net supply of foreign exchange by client

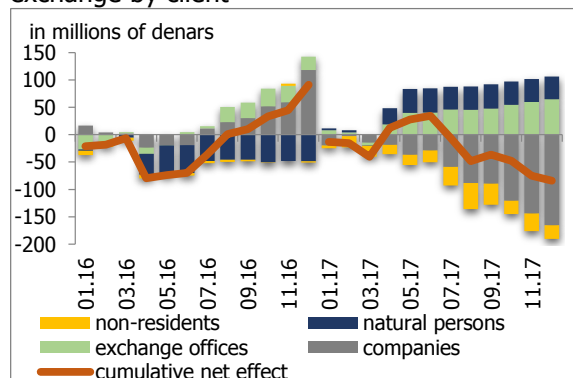


Chart 72

Supply of foreign exchange on the currency exchange market

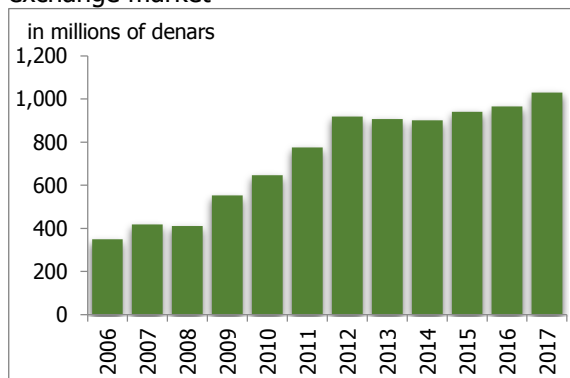
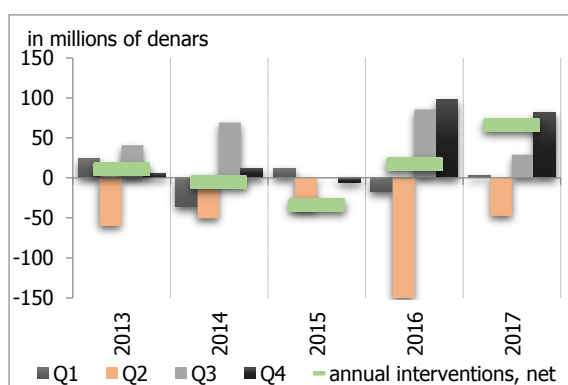


Chart 73

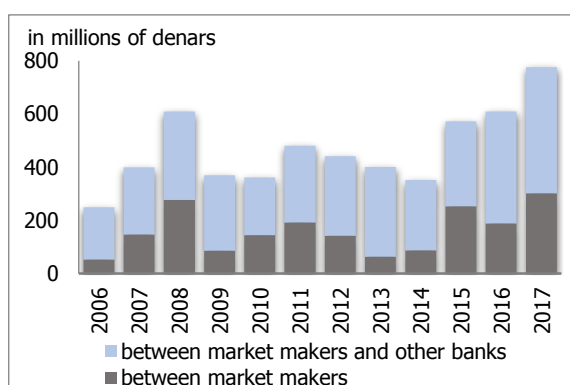
NBRM's interventions on the foreign exchange market



Source: NBRM.

Chart 74

Turnover on the interbank foreign exchange market, by segment



**Immediately after meeting the demand for liquidity on the money market, the banks placed part of the excess liquidity over the reserve requirement also in the overnight deposit facilities.** A substantial amount of this instrument, whose daily balance on average remained at a relatively stable level (about Denar 1,100 million), was still in use at the end of the reserve requirement periods, in order to reduce the average surplus of funds above the reserve requirement to a minimum.

During 2017, given the solid liquidity position, the banks did not use funds from the NBRM through the available overnight loans and repo operations for creating liquidity in the banking system.

**In order to achieve the monetary policy goal, in liquidity management, the monetary authority used the reserve requirement in 2017 as well.** The central bank did not make changes in the rates and the basis of the reserve requirement<sup>48</sup>, so this instrument, despite the main function - management of supply of money, remained prudent. Namely, the application of differentiated reserve requirements from currency and maturity was a solid basis for the continuation of the denationalization process and long-term

<sup>48</sup> In September 2017, the bank assets in the reserve guarantee fund were included in the fulfillment of the reserve requirement in denars. This change is applied immediately after the establishment of a reserve guarantee fund as the basis for fulfillment of the obligations in the payment system KIBS (by the Clearing House "Clearing Interbank Systems" AD Skopje), which aims to adequately apply the International Financial Market Infrastructure Principles, which they foresee the need for payment systems to maintain sufficient liquid resources for the settlement of payment obligations.

savings, while the non-standard measure for stimulating the credit activity of the systemically important sectors underpinned the corporate sector crediting.

The gradual stabilization of the expectations of the economic agents, coupled with lower reserve requirement rates on denar deposits in recent years, had favorable influence on the currency structure of the banks' liabilities, whereby the share of denar deposits in total liabilities at the end of the year reached a level that was characteristic before May 2016<sup>49</sup>. Such changes were largely led by households, especially in the second half of the year, which had a higher propensity to save in domestic currency compared to foreign currency savings. On the other hand, the corporate sector, which in the previous year led to the growth of both denar and foreign currency liabilities, in 2017 due to the foreign debt, had a modest contribution to the growth of the banks' liabilities (in more detail on the changes in the banks' deposit base in the part for monetary aggregates). In 2017, the NBRM prepared a draft strategy for de-euroization, which involves taking more measures and involving various institutions in order to further reduce the euroization in the economy.

**In 2017, the NBRM continued the implementation of the reserve requirement for stimulating the credit support of the banks to the systemically important sectors<sup>50</sup>.** In the analyzed period, the restraint from lending to the corporate sector, related to the further banks' risk perceptions, also resulted in a slowdown of the credit support of net exporters. Nevertheless, despite such trends, the non-standard measure, for the second year in a row, had a stimulating effect on the increased credit support to the electricity producers. Taking into account the effects of the measure on the total lending activity of the corporate sector for the entire period of application (from 2013), as well as for maintaining the positive signal to the banking system for further credit support to the systemically important sectors, in late 2017 the NBRM extended its validity for additional two years.

The combined effect of the changes in the denar and foreign currency liabilities and the implementation of non-standard measures contributed to annual change in reserve requirement in denars by Denar 1,433 million, at the level of Denar 19,840 million. The stronger growth in denar liabilities, mainly short-term liabilities towards households, had the largest contribution to the higher reserve requirement in Denars (with an effect of around Denar 1,245 million), while the increase in foreign currency liabilities in 2017 had minimal impact on the change in the reserve requirement in denars<sup>51</sup>. The relatively lower growth in the foreign currency liabilities of the banks contributed to slower growth in the reserve requirement in euros, which in 2017 was higher by Denar 769 million (in denar equivalent), thus at the end of the year it amounted to Denar 14,080 million.

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<sup>49</sup> Analysis of the trends of the bank liabilities on the basis of data on the banks' liabilities included in the basis for calculating the reserve requirement.

<sup>50</sup> It refers to net exporters and the domestic producers of electricity.

<sup>51</sup> 30% of the amount of the reserve requirement determined on the basis of banks' liabilities in foreign currency, the banks meet in denars.

Chart 75  
Contribution to the annual deposit growth by currency

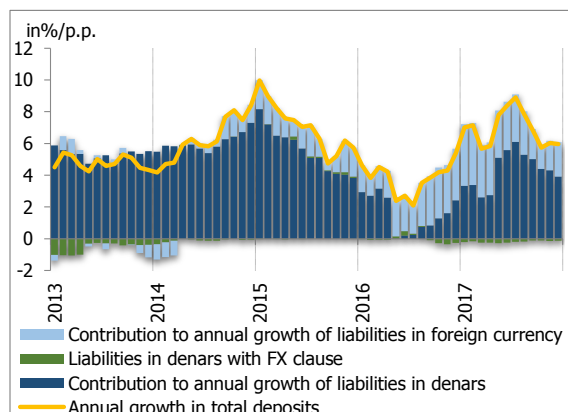


Chart 76  
Contribution to the annual increase in the denar liabilities of the banks, from the reserve requirement base

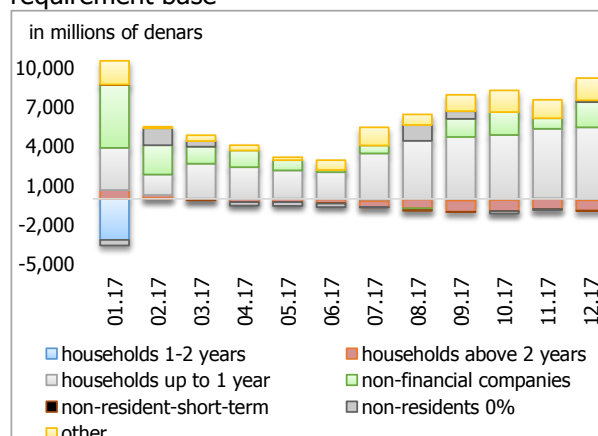


Chart 77  
Reserve requirement remuneration in denars

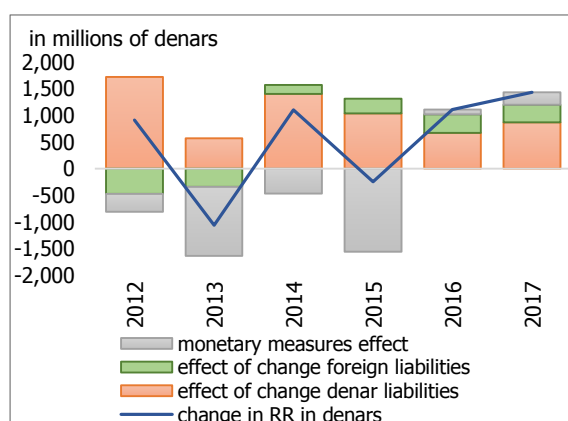
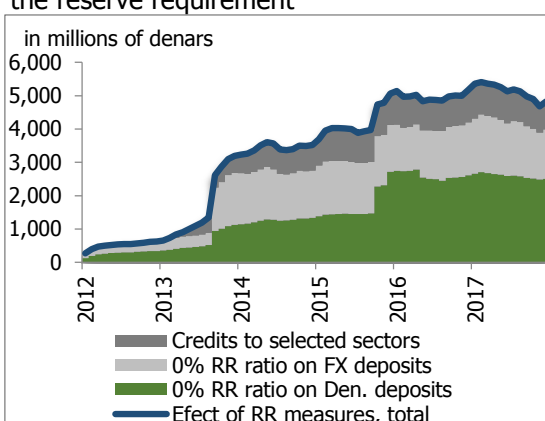


Chart 78  
Aggregate effect of the non-standard measures on the reserve requirement



\* The effect of the monetary measures refers to the effect of the change in the rates for determining the reserve requirement and implementation of the non-standard measures.

Source: NBRM.

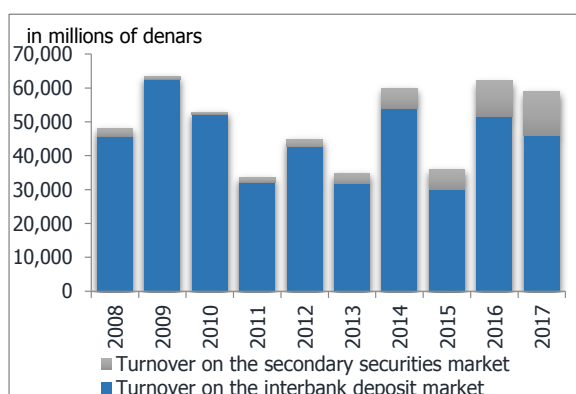
## Box 2. Developments in the money markets<sup>52</sup>

In 2017, banks' trading activity in the money market, despite its moderate decline (of around 5% on an annual basis), remained at a high annual level (Denar 58,838 million), which still has a relatively low share in the GDP of only 9.5%. Unlike in the previous year, when the growth was mostly due to the need to compensate the liquidity shortage during the period of the political shocks, in 2017, the turnover in this market is primarily connected to the need to compensate the temporary, short-term liquidity needs of banks. The increased trading activity in this segment was especially characteristic in the middle of the year, when the autonomous factors contributed to the withdrawal of liquid assets from the banking system.

The interbank uncollateralized deposit market traditionally continues to be the biggest driver of the turnover on the money market, with a share of Denar 45,872 million or 78% of the total turnover. By individual maturity, in 2017, banks secured most necessary assets through trading with one-week deposits, that had a share of 52% in the total turnover and for the first time exceeded overnight loans (whose share in the past nine years was the highest with around 75% in the total trading). The increased trading with interbank uncollateralized deposits in 2017 points to further relatively high confidence among banks and banks' efforts to reduce costs related to concluding everyday transactions had a significant contribution to the change of the maturity structure of transactions in this segment. In the trading structure of this market segment, medium-sized banks prevailed on the side of demand for liquidity that was mainly satisfied by large and small banks, positively influencing the market concentration that was reduced to historically lowest level.

Chart 79

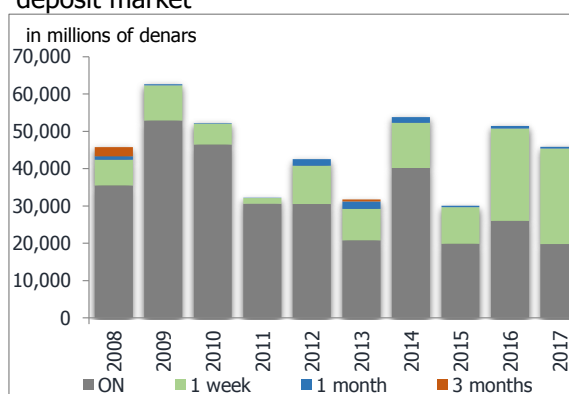
Turnover on the money market



Source: NBRM.

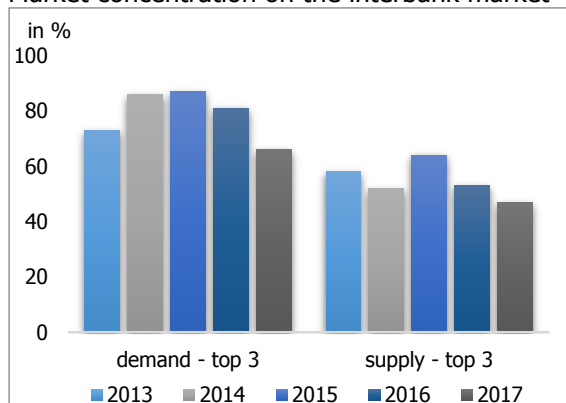
Chart 80

Turnover on the interbank uncollateralized deposit market



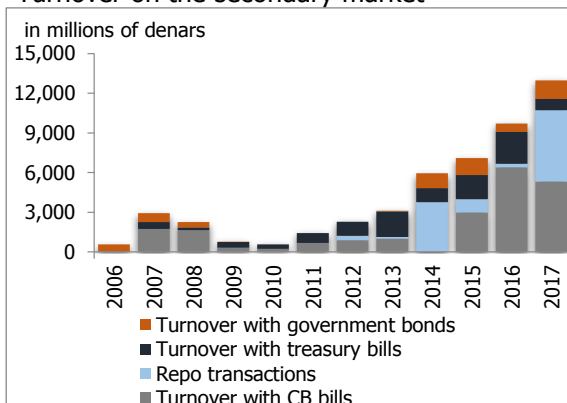
<sup>52</sup> Money market analysis in Macedonia includes the following segments: the uncollateralized deposit market, secondary market of short-term and long-term securities (excluding structural bonds), secured deposits market (repo market).

Chart 81  
Market concentration on the interbank market\*



\*Top 3 refers to the sum of the share of three dominant banks on the side of supply of/demand for deposits.  
Source: NBRM.

Chart 82  
Turnover on the secondary market



Banks provided part of the necessary liquidity through purchase and sale of securities in the secondary market. The turnover of this market segment in 2017 continued with the upward trend, registering an increase of 22.3%, mainly led by interbank repo transactions with securities, which is primarily explained with the need for compensating the temporary liquidity shortages with lower costs. Trading with CB bills was also relatively high (45.8% in the turnover of the secondary market). Although reduced in volume (decline of 12.3% on an annual basis), trading with these securities is explained with the fact that banks participated in the CB bills auctions with maximum set amounts, and later during the maintenance period of reserve requirement were financed through the outright sale of CB bills to other banks. Regarding trading with government securities, in 2017, the continuous trend of extending the average maturity of government securities and diversification of the ownership structure contributed to changes in the structure of trading with these securities. These changes were also reflected in the secondary market, perceived through the lowest volume of trading with Treasury bills in the last six years, while simultaneously intensifying the trade with government bonds, which reached its historically highest level (Denar 1,396 million).



## VI. Foreign reserves management and investment

*Confronted with unfavorable environment and high volatility on the international financial markets, NBRM, in the course of 2017 faced many challenges in managing and investing the foreign reserves of the Republic of Macedonia (hereinafter: foreign reserves). Namely, government bond yields increased, amid raising interest rates by FED and increased expectations for a possible monetary tightening from the ECB. At the same time, amid reduced political risks and growing euro area economy, the Euro appreciated against the US dollar. Thus, during the second half of the year, investors' perceptions for ECB's following step as a central bank that would end with the monetary stimulus by the end of 2018 caused a stronger volatility on the international financial markets, compared to the expectations for further interest rates increases by FED. In such circumstances, the foreign reserves' investment framework was widened with additional investment possibilities which provide positive return and acceptable level of credit and market risk. All investment decisions during the year were made in line with the primary investment objectives for maintaining the safety and liquidity of foreign reserves.*

### 6.1. Basic guidelines for foreign reserves management

The tactical asset allocation for 2017<sup>53</sup> was based on the expectations for further increase of the reference interest rate by FED, as well as announcements for gradual normalization of the monetary policy by ECB. These assumptions indicated an increase in the likelihood for further decline of the market value of the fixed income investments in both currencies, due to expectations for rising yields. Taking into account the expectations for the same direction of the monetary policy of the two most influential central banks, the outlook for EUR/USD was relatively stable. These market conditions have limited the investment opportunities in instruments denominated in euros compared to investment opportunities in US dollars. Consequently, the tactical currency structure of the foreign reserves for 2017 envisaged increase of placements in US dollars at the level of 40.4% of foreign reserves (without gold) while reducing positions in euros to 59.3%. Namely, significant growth of liquid assets within the liquidity tranche in US dollars was forecasted, as well as moderate growth of the held-to-maturity investment tranche in US dollars during the first quarter of the year, when adjustments to the new tactical asset allocation took place. At the same time, in such circumstances, a reduced exposure to interest rate risk was deemed feasible.

For the purposes of a more flexible interest rate risk management, a revision of the Foreign reserves management and investment Guidelines was carried out in May, detailing the additional conditions under which the National Bank may conclude and settle futures transaction with commercial banks/authorized brokers on the respective stock exchanges. By the end of the third quarter of 2017, this amendment enabled completion of the process of introducing futures contracts within the foreign reserves tranches. In October, the first transaction with interest rate futures was concluded, thus continuing to conclude transactions in line with the current setup and expectations for future development in the international financial markets.

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<sup>53</sup> Tactical asset allocation of the foreign reserves is performed before the beginning of each year pursuant to the foreign reserves management and investment Policy and Guidelines. During the year, a new tactical asset allocation of the foreign reserves is set in place if needed, due to new circumstances in the markets. This dynamic approach is applied by most central banks in the world, ensuring rapid adjustment to market conditions and preserving the value of the foreign reserves.

**During July, amid an ongoing depreciating trend of the US dollar against the Euro, aiming to minimize the currency risks in conditions of uncertainty regarding the future volatility of this currency pair, the tactical currency structure was changed, thus, reducing the share of US dollar in the foreign reserves.** Firstly, reduction of the US dollar to the target currency structure was planned<sup>54</sup> i.e. to the level of 22% of foreign reserves (without gold). With the further depreciation of the US dollar, additional reduction of the share of the US currency below the target currency structure (to 15% of foreign reserves, without gold) was undertaken. Consequently, the currency risk exposure significantly declined, in line with the estimated remaining revaluation reserves for exchange rate differences. The reduction of the US dollar share was made primarily through a conversion of assets from the liquidity and investment trading tranches, and afterwards a full conversion of the portfolio managed by the World Bank from US dollars to Euros. These conversions did not include the US dollar held-to-maturity tranche, where a strong commitment for holding the securities till maturity is stated, which also allowed to maintain certain diversification within the foreign reserves.

### **Box 3. Activities related to improving the institutional capacity for foreign reserves management**

NBRM's activities within the cooperation with the World Bank (RAMP - Reserves Advisory and Management Program) continued during 2017.

During the first quarter, a work meeting was held with experts of the World bank, aimed at revising and improving the credit risk management. Thus, credit risk modeling based on Basel requirements was developed which laid the foundation for quantifying the credit risk of foreign reserves investment, through determining the source of credit risk within the foreign reserves and the contribution of individual instruments to the overall credit risk, in relation to the risk tolerance. It is envisaged that the credit risk measurement tool, after its adjustment to the respective tranches, will become integral part of the regular credit risk management of the foreign reserves.

In September, a World Bank Treasury team visited the NBRM to provide technical assistance on applying the new IFRS9 standard. The purpose of the mission was to establish decision making processes regarding the classification of financial assets through an appropriate assessment of the business models, as well as to provide expert support for measuring the impairment of financial assets based on the model for expected credit loss. Based on the guidelines in the international accounting standard, the discussion during the World Bank mission, as well as additional consultations with other central banks and experts from the World Bank whose specialty is credit risk, the National Bank developed its own model for calculating the expected credit loss of the financial assets. At the beginning of 2018, the model was applied to the current foreign reserves portfolios.

At the same time, the knowledge and institutional capacity building in the NBRM continued through visits of employees that are included in the process of investing the foreign reserves to specialized workshops organized by the World Bank. Also, there was a two-week internship in the World Bank premises for acquiring practical knowledge and skills in the area of foreign reserves management. All visits to professional workshops are used for exchanging experiences, both with experts from the World Bank and representatives of central banks on a global level, who are members of the World Bank reserve advisory program, which is extremely important for maintaining high level of efficiency, professionalism and quality of the human resources engaged in the process of foreign reserves management.

<sup>54</sup> The target currency composition of the foreign reserves is in line with the currency structure of the interventions in the domestic foreign exchange market, government's liabilities abroad, foreign trade of the Republic of Macedonia and other liquidity needs, and provides 80% Euros, 19.7% US dollars and 0.3% other currencies.

## 6.2. Investment conditions in the international financial markets in 2017

In 2017, the international financial markets can be characterized as **volatile, but were mainly influenced by the positive signals of the acceleration in global economic activity**. Stocks reached record high levels, amid more favorable economic fundamentals and relatively high risk preference, which on the other hand, led to lower demand for fixed income instruments and growth of yields that was more pronounced in the US markets. This was due to the further normalization of the monetary policy by the FED. Namely, amid more favorable performance of the US economy, FED continued to tighten the monetary policy by increasing the target range for the federal funds rate on three occasions (from 1.25% to 1.5%)<sup>55</sup>. In October, FED stopped reinvesting the proceeds from maturing bonds from the securities tranches, purchased within the programs for quantitative easing, thus starting the last phase of monetary policy normalization by shrinking its balance sheet<sup>56</sup>.

Chart 83  
Share movements  
(in points)

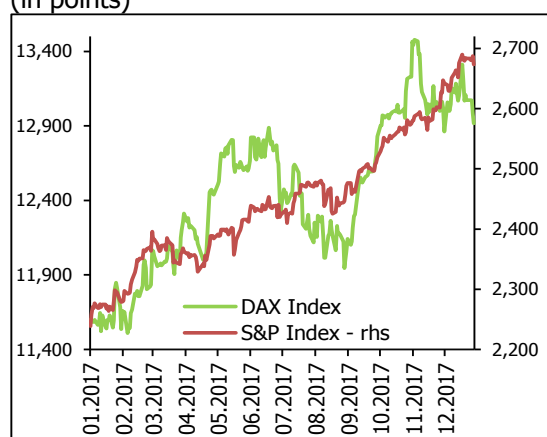
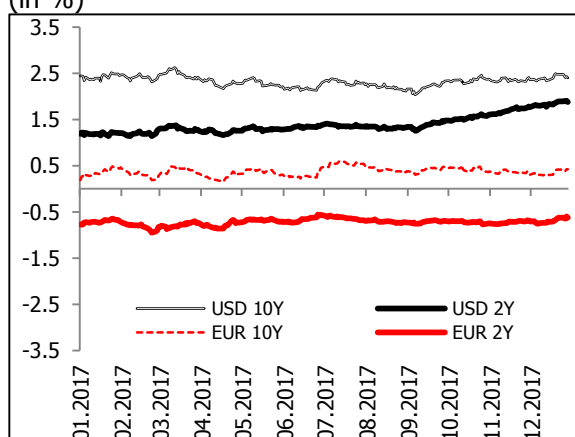


Chart 84  
Movements of yields on government bonds  
(in %)



**The short and medium term US government yields had an upward correction.** On the other hand, due to the unsuccessful attempt by the US president to receive support for the implementation of the planned reform of the healthcare system and increased political turmoil in USA<sup>57</sup>, the yields in the long segment of the government yield curve moved in the opposite direction.

**The yields in the euro area were also influenced by the favorable economic developments, which contributed to increasing the expectations for monetary policy normalization by the ECB.** In addition, after a longer period of decline, in 2017, the government yields in the euro area registered an increase. The yields significantly increased in the first half of the year, with particular growth at the 5-year segment, due to investors' increased inflation expectations. In addition to this, the reduced political risks enabled decline of the government yields in the peripheral economies amid increased demand for higher-yielding government bonds. Thus, the spread between the 10-year French and German government bonds narrowed and the same i.e. significant narrowing of spreads was registered among yields in all other credit instruments relative to the safest government bonds in the euro area.

<sup>55</sup> These decisions were made at the FED's meetings in March, June and December 2017.

<sup>56</sup> Regarding the FED leadership, given that the current president's mandate expires in 2018, the American President assigned the future FED president, pointing to continuing precautionary policy by FED.

<sup>57</sup> In the middle of the second quarter of 2017, the political uncertainty in USA increased, following the released information on the alleged interference of the US president in the FBI investigation and sharing confidential information with Russia.

Chart 85  
Annual change of yields on government bonds  
(in percentage points)

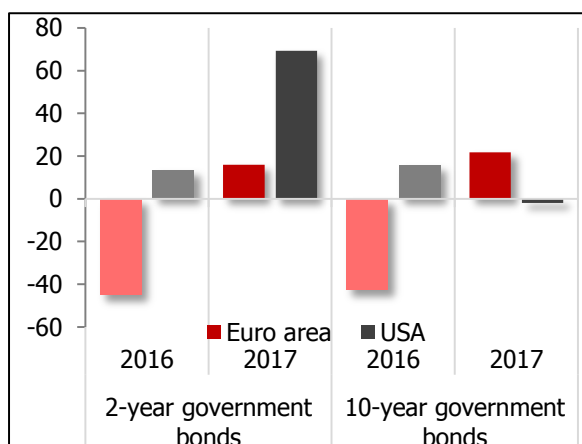
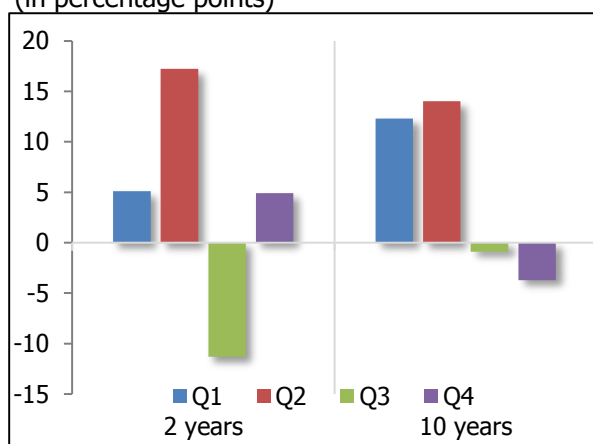


Chart 86  
Quarterly change of yields on government bonds  
in the euro area  
(in percentage points)



**In the third quarter, due to the increased political uncertainty in the euro area<sup>58</sup> and increased geopolitical tensions between USA and North Korea, the demand for safe haven instruments increased, which led to decline of the government yields.** In the last quarter of the year, the short term yields increased again, given that at the meeting on 26 October, the ECB announced reduction of the monthly purchases within the securities purchase program, starting in January 2018. However, lower price pressures contributed for a reverse reaction of the yields on the long segment of the curve.

**The foreign exchange markets were influenced by the perceptions for convergence of the global central banks' monetary policies<sup>59</sup> and also by the geopolitical news and perceptions for risk.** In the first half of the year, the political risks in the euro area declined, while ECB<sup>60</sup> and other influential central banks pointed to tightening the monetary policy. The results from the presidential elections in France, which the markets monitored with particular attention after the referendum in the United Kingdom for exiting the EU in 2016, signaled reduced Euro-skeptical movements in Europe. These factors contributed towards strengthening the value of the euro area common currency, while the slow development of the events regarding the envisaged tax reform in USA<sup>61</sup> contributed to a weaker value of the US currency.

<sup>58</sup> In September, after the decision of the regional Parliament of Catalonia to hold a referendum of independence from Spain, a unilateral proclamation of independence followed, which was declared unconstitutional by the Spanish authorities. Despite the political developments in Spain, the risk premium of Spanish government bonds continues to be stable and the spreads between Spanish and German government bonds narrowed. In addition, the political developments in Germany, the biggest economy in the euro area, where federal elections were held and resulted in negotiations for forming a coalition, contributed to the increase of the political uncertainty in the euro area.

<sup>59</sup> During 2017, FED, Bank of England and Bank of Canada increased their reference interest rates.

<sup>60</sup> ECB's president, at ECB's Forum for Central Banking in Sintra, Portugal, expressed his optimism regarding the recovery of the euro area economy, pointing that the ECB will carefully and gradually adjust its monetary policy.

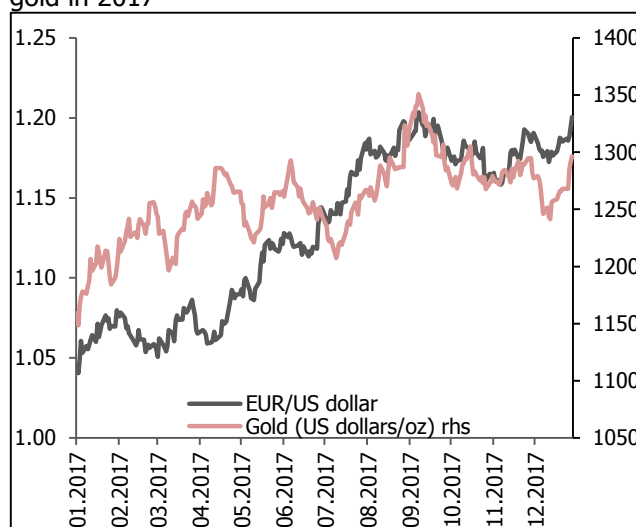
<sup>61</sup> The US Senate and House of Representatives eventually voted in favor of the tax reform at the end of 2017. With the tax reform, the corporate tax rate will be 21% (instead of 35%) and the income tax rate for individuals with higher income will be reduced from 39.6% to 37%.

**In such conditions, the Euro at the end of the year reached 1.2005 relative to the USD i.e. increased its value by 14% against the US dollar on an annual basis, which is the highest annual depreciation of the US dollar since 2003 onwards.**

Amid the decline of the US dollar during the whole year, increased political tensions in the Korean Peninsula<sup>62</sup> and political uncertainty in the euro area from the beginning of the last quarter of the year, the gold price increased from USD 1,158 per ounce at the end of 2016 to USD 1,296 per ounce at the end of 2017. During the year, the demand for gold from the central banks was 5% lower compared to the previous year, therefore central banks purchased 371.5 tons on net basis. Among banks that purchased largest amounts of gold were the central banks of Turkey and Russia<sup>63</sup>.

Chart 87

Movement of Euro/USD currency pair and price of gold in 2017



### 6.3. Foreign reserves investment

#### 6.3.1. Asset allocation by tranche

**The asset allocation of the foreign reserves takes into account the liabilities and purposes of foreign reserves in different time periods.** In that regard, foreign reserves are segregated into operational (working capital), liquidity and investment tranche. This manner of liquidity management enabled the NBRM to efficiently respond to the liquidity needs of the foreign reserves during the year.

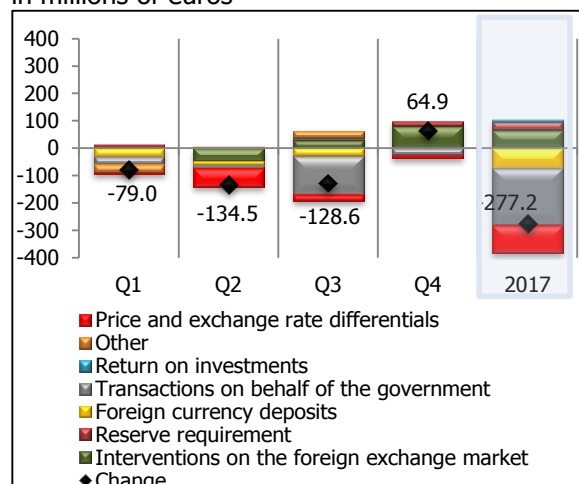
The foreign reserves declined by Euro 277 million (from Euro 2,613 million at the end of 2016 to Euro 2,336 million at the end of 2017), mostly due to transactions on behalf of the government in net amount of Euro 206 million, then due to the decline of the market value (unrealized negative foreign exchange differences), and, to a lesser extent, due to the decline of the banks' foreign currency deposits with NBRM. On the other hand, the outflow of foreign reserves was partly compensated with the NBRM's interventions on the domestic foreign exchange market by purchasing foreign currency from market makers (Euro 66 million), the inflows from reserve requirement of domestic banks and funds with MIPS for payments in Euros in TARGET2, as well as return from investing the foreign reserves.

<sup>62</sup>In September, North Korea tested an intercontinental ballistic missile that passed over the Japanese island Hokkaido before falling into an open ocean.

<sup>63</sup> World Gold Council, Gold Demand Trends Full Year 2017, 6 Feb. 2018.

Chart 88

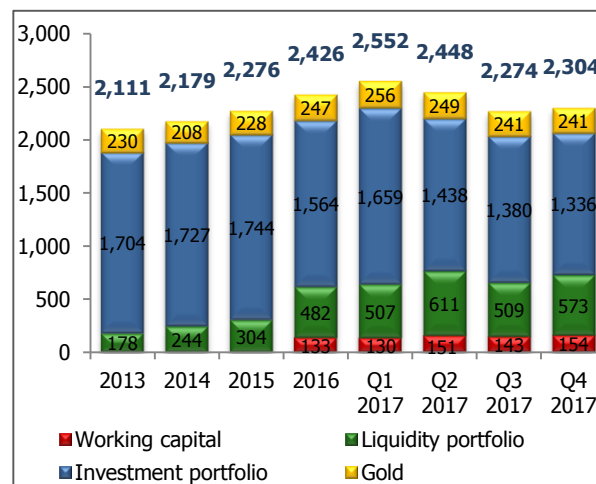
Foreign reserves factors of change in 2017  
(quarterly and cumulatively)  
in millions of euros



Source: NBRM.

Chart 89

Foreign reserves tranching  
average level, in millions of euros



**During the first three quarters of 2017, the foreign reserves had a declining trend, amid negative contribution of all factors influencing the foreign reserves.** There was a significant decline due to transactions on behalf of the government, primarily due to the repayment of matured loans and coupons on the Eurobonds in the third quarter. A higher decrease of the foreign reserves market value was registered in the second and third quarter due to unrealized negative exchange rate differentials amid US dollar depreciation given the political instability in the USA. The outflows from the foreign reserves were also due to the repayment of matured foreign currency deposits of the banks with the NBRM in the first quarter, as well as the intervention by sale of foreign currency with the market makers on the domestic foreign exchange market, in the second quarter of the year. The inflows from reserve requirement of domestic banks and funds in MIPS for payment in Euros in TARGET2 contributed to the increase in foreign reserves.

**Contrary to the movements in the first three quarters of the year, during the fourth quarter of the year, the foreign reserves increased due to interventions of the NBRM with the market makers by purchasing foreign currency, with individual tranches being maintained at levels appropriate to their purpose.** Namely, the interventions on the foreign currency market for purchase contributed towards maintaining the level of the working capital in line with the forecasted outflows from the foreign reserves, and the funds from the matured securities in the held-to-maturity tranche in US dollars were redirected to the liquidity tranche and placed in short-term deposits, in order to provide greater flexibility.

### 6.3.2. Credit exposure and instruments

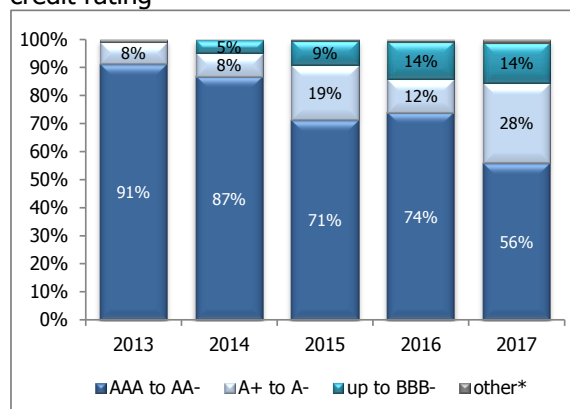
**The safety of foreign reserves investments is of primary importance in determining the NBRM's investment strategy.** In accordance with the investment framework, most of the foreign reserves or an average of around 56% were invested in financial instruments with the highest credit rating ("AAA" to "AA-") i.e. with the lowest credit risk exposure. Compared to the last year, this category registers a moderate decline, primarily due to the reduction of investments in US government securities, which have a "AAA" rating, during the first quarter of 2017, as a result of the decision on reducing the interest rate risk in the US dollar trading tranche. In order to balance the principle of value preservation amid low and negative yields, most foreign reserves investments were directed



in instruments with credit rating ranging from "A+" to "A-", which were also characterized with high safety and enabled moderate positive return of assets. A limited part of investments within the liquidity tranche in euros is directed towards countries and instruments that possess a moderately lower credit rating, but higher than the minimum investment rating. This way, pursuant to the safety principle, NBRM seeks to achieve optimum return on investment through careful and simultaneous active foreign reserves management, in conditions of strictly controlled credit risk.

Chart 90

Average annual structure of investments by credit rating

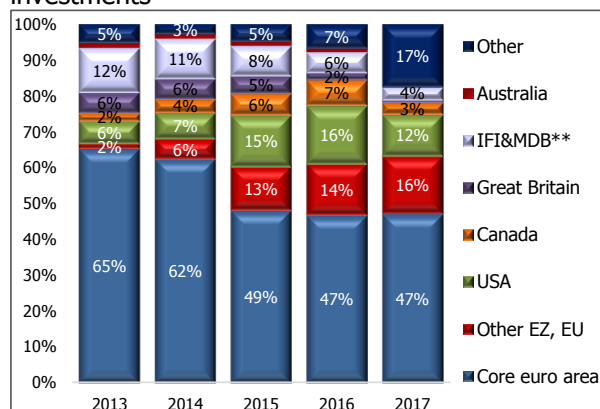


\* IMF, BIS are classified in the category others

Source: NBRM.

Chart 91

Average annual geographical structure of investments



\*\* IFI and MDB - international financial institutions and multilateral development banks

**Geographically, significant part of foreign reserves investments are directed towards the euro area core countries, but the negative yields of the European fixed income instruments and the search for yield, conditioned moderately higher exposure to other economies from the euro area and the European Union.** In this regard, investments from the "others" category also registered a significant increase, compared to the last year, primarily due to the increased investments in short-term money market instruments (securities and deposits) in high-quality commercial banks from the Asian region (China, Japan and Singapore).

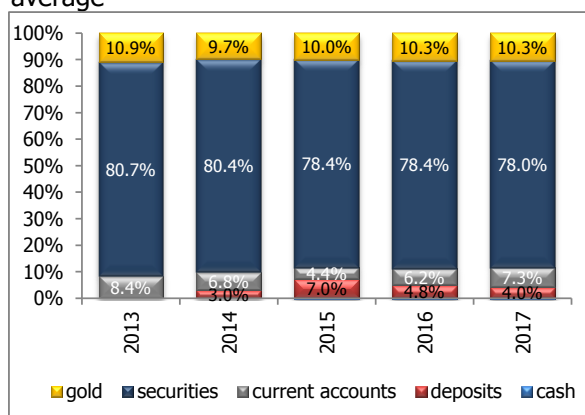
**The focus on the safety principle of foreign reserves investment, combined with the need of maintaining an adequate liquidity level is also evident in the structure of financial instruments.** Namely, given that securities are included in both the investment and liquidity tranche, these financial instruments, with an average share of 78% prevail within the structure of foreign reserves by instruments. However, within the securities, a moderate decline is registered in government securities investments and securities with government guarantee, which had a share of 62.7% on an average in the total foreign reserves securities investments (less by 7.8 percentage points compared to 2016). This decrease is primarily due to the decrease of US dollar investments, with the most sold securities being government securities. In order to maintain the interest rate risk within the desirable limits, in the euro tranches, long-term investments in government securities are combined with investments in short-term commercial papers and certificates of deposits issued by highly credible foreign commercial banks which enable flexibility in terms of need for liquidity, whereby this category had a share of 13.7% in the structure by securities. Investments in securities with implicit government guarantee also had a significant share (10.1%), which despite the high safety level, also have higher yields compared to government securities. A moderate share of investments was directed in

securities issued by multilateral organizations<sup>64</sup> with an average share of 3.7% in the securities and securities issued by the regional governments of Germany, Australia and Canada (with an average share of 8.4%).

**Part of the foreign reserves were also kept in the current accounts (around 7.3% on an average) mostly comprising the operational tranche.** In order to optimize costs, besides in the accounts with the central banks, part of the funds was kept in current accounts with foreign commercial banks. Deposits<sup>65</sup> were also placed in foreign commercial banks, within the liquidity and investment tranche, whereby their share moderately decreased (from an average of 4.8% in 2016 to 4% in 2017) mostly due to placements of some matured deposits in other money market instruments (certificates of deposits, commercial papers and government bills).

Chart 92

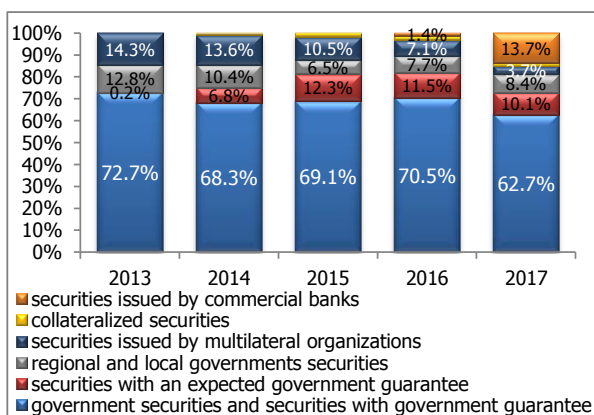
Structure of investments by instruments, annual average



Source: NBRM.

Chart 93

Structure by securities type, annual average



**Gold, which is usually a financial instrument with a lower return, during the year was placed in short-term deposits with foreign commercial banks.** Short term gold swaps were also concluded during the year, which enabled additional income from foreign reserves management<sup>66</sup>. Within the structure of foreign currency, the average share of gold hasn't changed and amounted to 10.3% of the foreign reserves.

**Regarding the other operations with foreign reserves, NBRM continued with securities lending by simultaneously concluding repo and reverse repo transactions.** In order to compensate part of the accounts maintaining and custody fees, NBRM continued the use of the depositories' services for automatic securities lending.

### 6.3.3. Currency structure<sup>67</sup>

**The breakdown of the foreign reserves by currency was done according to the guidelines given with the tactical asset allocation of the foreign reserves, and with the primary purpose of supporting the exchange rate targeting, as a monetary strategy of NBRM.** Subsequently, assets invested in financial instruments

<sup>64</sup>The European Investment Bank (EIB), Council of Europe Development Bank (COE), European Company for the Financing of Railroad Rolling Stock (EUROFIMA), International Bank for Reconstruction and Development (IBRD), International Finance Corporation (IFC), Nordic Investment Bank (NIB), Asian Development Bank (ADB), Inter-American Development Bank (IADB).

<sup>65</sup>Investments in deposits within the investment tranches are limited to one year maturity.

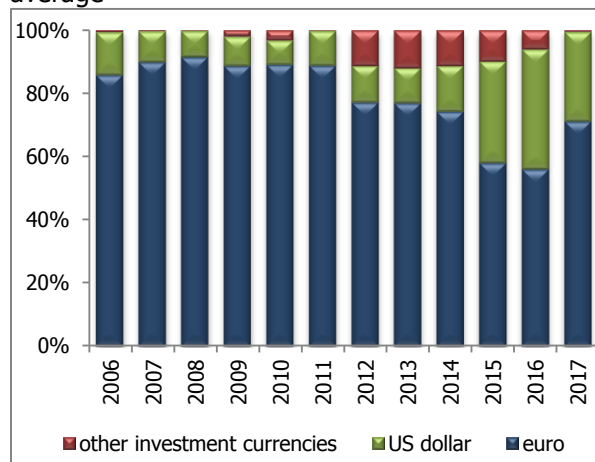
<sup>66</sup>In swap transactions, US dollars are placed and at the same time gold is received as a collateral (with a spot currency date), with the obligation to conduct reverse transaction at the date of concluding the derivative contract.<sup>66</sup> Gold obtained as a collateral is placed in deposits in one of the high quality counterparties, for the same period in which the US dollars are placed. Thus enabling revenue from placements in US dollars and gold.

<sup>67</sup>The currency structure is analyzed taking into account the stock of foreign reserves reduced by the amount of gold.



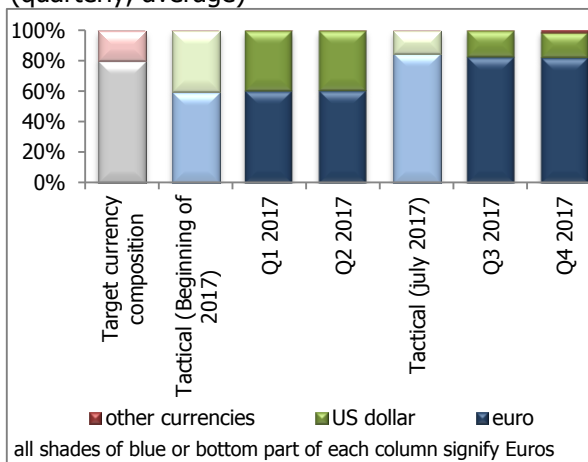
denominated in euros prevail within the foreign reserves, with an average share of 71.1%. However, given the unfavorable market conditions in the European markets and in accordance with the tactical asset allocation, a significant portion of the foreign reserves were invested in financial instruments denominated in US dollars. The share of these investments in the currency structure amounted to 28.4% on average, during 2017 and decreased by around 9.7 percentage points compared to 2016. This decline is justified, given the depreciation trend of the US currency and the increased currency risk.

Chart 94  
Currency structure of foreign reserves, annual average



Source: NBRM.

Chart 95  
Changes in currency structure (quarterly, average)



Observing the dynamics, during the first half of the year, the currency structure of the foreign reserves (without gold) fully corresponded to the tactical currency structure of the foreign reserves for 2017, with the Euro reaching an average share of 60%, and the US dollar 40% of the foreign reserves. However, the second quarter was characterized by unfavorable movements of the US dollar and based on the analysis of the outlook of the US currency, possibilities for reducing the exposure to currency risk were considered. Consequently, at the beginning of the third quarter, a change in the tactical currency structure of foreign reserves was made. Namely, taking the market developments into account, the new tactical currency structure gave guidance to increase the share of the Euro in the foreign reserves from 59% to 85% and simultaneously decrease the US dollar share in the foreign reserves from 41% to 15%. The adjustment towards the tactical currency structure was conducted in the second half of July and the beginning of August 2017, reducing the US dollar share to 15% of the foreign reserves.

During the fourth quarter, the currency structure of the foreign reserves changed due to the diversification of small part of the foreign reserves in Australian and New Zealand dollars in order to utilize higher interest rates. However, as a result of the increased volatility of these currencies, the positions were closed and the funds were converted into US dollars in order to gradually bring the foreign reserves exposure towards the strategic currency structure. In such circumstances, the amount of US dollars in the foreign reserves increased only insignificantly, but taking into account the inflows in Euros during the last quarter, the US dollar share in the currency structure was relatively unchanged by the end of the year.

#### 6.3.4. Exposure to interest rate risk and performance

**Amid expectations for volatility in the markets during the year and increased likelihood of yields' growth, especially in the euro area, in 2017, a**

**reduction in the exposures to interest rate risk for all foreign reserves tranches was envisaged.** Namely, foreign reserves placements and investments are mainly in coupon bearing securities that are exposed to changes in their market value i.e. current yields. This interest rate risk exposure is controlled by determining a target modified duration and classifying part of the securities as held-to-maturity. The interest rate risk management, in addition to the modified duration, is also monitored in terms of limits on the interest rate risk tolerance<sup>68</sup>, which during the year was kept within the limits, which suggests that the investment strategy is appropriate.

**The reduction of the interest rate risk started in the first quarter of the year, through the sale of long-term securities and redirection of funds towards short-term instruments.** This trend also continued in the next period, amid perceptions for the withdrawal of monetary stimulus by the ECB in 2018 i.e. expected rise in government yields in the euro area, especially on the medium and long term. The guidelines for reducing the interest rate exposure implied lower tactical modified duration that contributed towards reducing the interest rate risk exposure of the benchmarks. The modified durations of the portfolios gradually approached the benchmarks, which, together with the instrument selection also caused a trend of reduction of the active interest rate risk.

**Considering that the implementation of futures in formulating the investments strategies started at the beginning of the fourth quarter, the interest rate risk management was more flexible, and the modified durations of the portfolios were aligned with the changed market expectations quicker and more efficiently.** Moreover, most investments were already directed towards European markets, where short-term investments almost without exceptions were negative. In order to preserve the investment value and simultaneously reduce the interest rate exposure, in the last quarter of the year, the relatively longer investments with positive yield were combined with short-term positions in bond futures, which enabled the protection from yields' growth and simultaneous average positive yield on invested assets.

**The performance of the foreign reserves investments are mostly due to the market conditions at the moment of the investments, as well as the return of the benchmarks<sup>69</sup> that serve as investment guidance.** The operational tranche, given the need for maintaining funds in Euros, has a negative impact<sup>70</sup> on revenues from foreign reserves investment, but is less negative than the benchmark. The increase of government yields, which was most significant in December, led to a decline in the market value of the euro portfolios. However, the positive return from the futures within the euro liquidity and investment trading tranche managed to partially compensate the unfavorable performances of these tranches, thus outperforming the respective benchmarks. On the other hand, the investment tranche in US dollars registered a relatively solid rate of return which is higher compared to the benchmark.

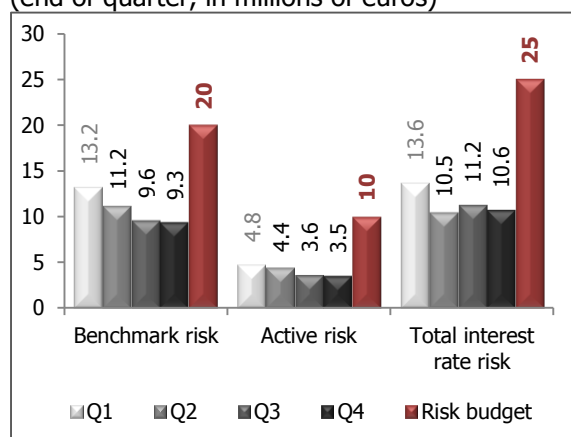
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<sup>68</sup>The acceptable level of interest rate risk, according to the foreign reserves management and investment Policy, is limited to the probability for reducing the market value of the foreign reserves by 1% at most, with a probability of 95%, during the investment period of one year.

<sup>69</sup>Benchmark index of securities' prices and money market index, comprised of real financial instruments, with modified duration, which corresponds to the target modified duration of the investment portfolio.

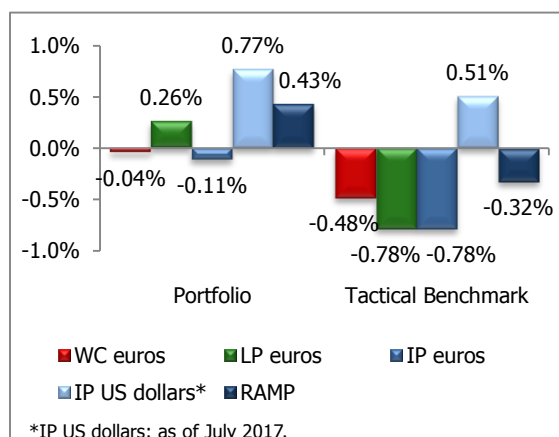
<sup>70</sup>Assets within the operational tranche, due to their function, are primarily placed in current accounts with the central banks, where negative interest rate of 0.40% is applied. However, in order to limit the negative effect on revenues, part of the assets are kept in current account with commercial banks, in the amount for which these banks do not charge negative interest.

Chart 96  
Value exposed to interest rate risk  
(end of quarter, in millions of euros)



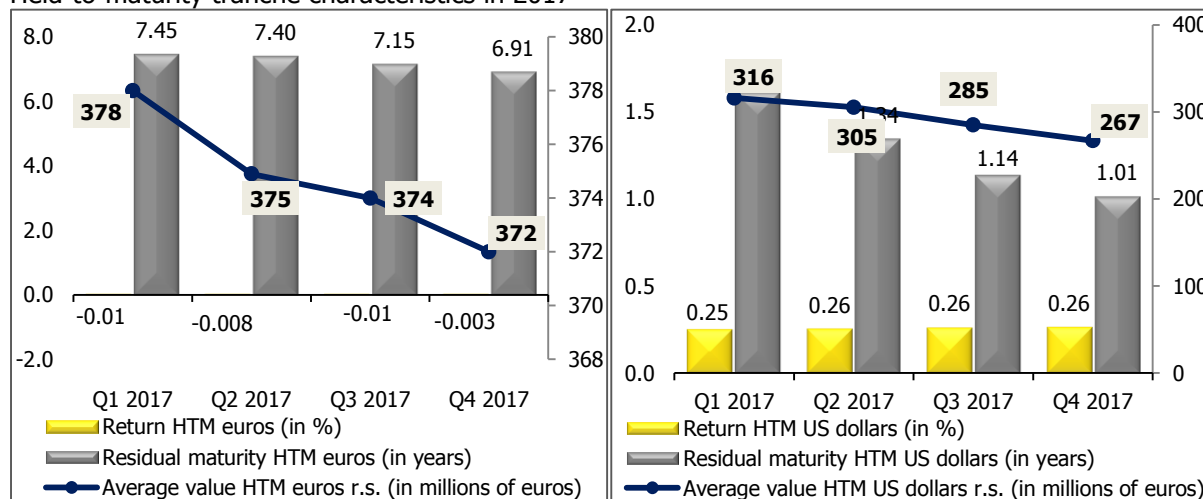
Source: NBRM.

Chart 97  
Return rates by tranche in 2017



**In order to reduce interest rate risk exposure, part of the securities within the foreign reserves is classified as held-to-maturity and according to their treatment have a predictable and stable return.** The level of the held-to-maturity sub portfolio in euros was relatively stable and the residual maturity of this tranche moderately declined. Given perceptions for increased currency risk, assets that matured within the held-to-maturity investment tranche in US dollars, during the second half of the year were redirected to short-term placements within the liquidity tranche in US dollars, which conditioned reduction of the level of this portfolio.

Chart 98  
Held-to-maturity tranche characteristics in 2017



HTM (Held-to-maturity)

Source: NBRM.

The total rate of return on foreign reserves in 2017, which in addition to the realized income also includes the unrealized price changes of gold and exchange rate differentials, was 0.55% which is moderately lower compared to 2016 (0.72%).

## VII. Activities and developments in the payment systems and services

*In 2017, NBRM undertook numerous activities which emphasized its commitment for further improvement of payment services market and development of payment infrastructure in the country, as well as their European standards integration. In this regard, through the undertaken diverse range of activities and projects, NBRM successfully realized its operational, oversight, development and catalyst role in the payment sphere.*

### 7.1. Activities by the NBRM

**Since the beginning of 2017, NBRM through the MIPS<sup>71</sup> payment system enabled banks to conduct payments in euros (inflows and outflows) in the country and abroad through TARGET2<sup>72</sup> payment system of the Eurosystem.** By upgrading MIPS to a single payment platform for payments in denars and euros, NBRM realized the recommendations from the European Commission Progress Reports for the Republic of Macedonia and the Eurosystem Needs Analysis Report for the National Bank of the Republic of Macedonia, which refer to establishing an alternative channel of corresponding banking arrangements through connecting it to TARGET2 and respectively, reducing costs for cross-border payments. NBRM actively promotes the benefits of the new manner of payments (fast, safe and efficient payments with lower costs) in front to the banking sector and Macedonian companies.

**Strategic commitment for harmonizing the national legislation with the European is also enforced in 2017.** The new draft framework for payment services and payment systems transposes the provisions of the Directive on payment services in the internal market 2 (2015/2366/EU), the E-Money 2 Directive (2009/110/EU), the Directive on settlement finality in payment and securities settlement systems (98/26/EU), the Directive on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features (2014/92/EU), as well as the relevant provisions of the Regulation on interchange fees for card-based payment transactions (2015/751/EU) and the Regulation establishing technical and business requirements for credit transfers and direct debits in euro (260/2012/EU). It is expected that the new framework will provide increased competition among payment services with the entry of the non-banking institutions in the market (through introducing innovative payment solutions), clearer and timely information for payment service users, higher level of protection for payment service users, greater payment systems stability, solid legal basis for faster integration of the Republic of Macedonia into the EU and inclusion in the Single Euro Payment Area, all of which will give a higher degree of payment inclusion of the Republic of Macedonia and higher level of harmonization with the EU in the payments domain.

**By applying the new oversight framework, which is based on internationally accepted standards also known as "Principles for Financial Market Infrastructures (PFMI)",** in 2017, the NBRM started partial, on-site oversight on the KIBS<sup>73</sup> payment system, while, the off-site oversight of the payment system operators will be conducted regularly.

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<sup>71</sup> MIPS is a system for settlement of large-value and urgent payments in denars and in euros in real time on a gross basis (RTGS - Real Time Gross Settlement System).

<sup>72</sup> TARGET2 - system for settlement payments in euros in real time on gross basis owned and operated by the Eurosystem.

<sup>73</sup> The Clearing House - Clearing InterBank Systems AD Skopje (KIBS) operates the system for multilateral deferred net settlement for processing of small - value payments that does not exceed Denar 1,000,000.00.

**In order to promote its operation function in the payment area, the NBRM carried out the banking project for electronic conducting of the cross-border payments for the purposes of the government and government authorities.** This way, the NBRM improves the quality of the services provided to the government and government authorities in the area of conducting cross-border payment operations. The need for improving services is especially expressed amid continuous digital technology development which enables fast and efficient execution and supervision of payments.

**To achieve a higher level of digitization of the Macedonian society and reduce the use of cash, the NBRM, the Ministry of Finance and the banking sector representatives prepared a Draft Cash Reduction Strategy for the Republic of Macedonia. The draft strategy** includes a wide range of draft administrative, market, educational and promotional measures, with a defined timeframe and institutions responsible for their implementation. The implementation of the Strategy should contribute to greater use of efficient and reliable cashless payment instruments, in order to maintain financial stability and sound banking system. In addition, reducing the use of cash would contribute to reducing the informal economy and tax evasion.

**The Tenth Jubilee Conference on Payments and Market Infrastructures entitled “Drivers of European Payment Integration - Innovations and Cooperation” was organized in 2017.** At the Conference, in the presence of a professional core of eminent speakers and senior representatives from the country and abroad, significant topics in the sphere of payments on global, European and national levels were elaborated.

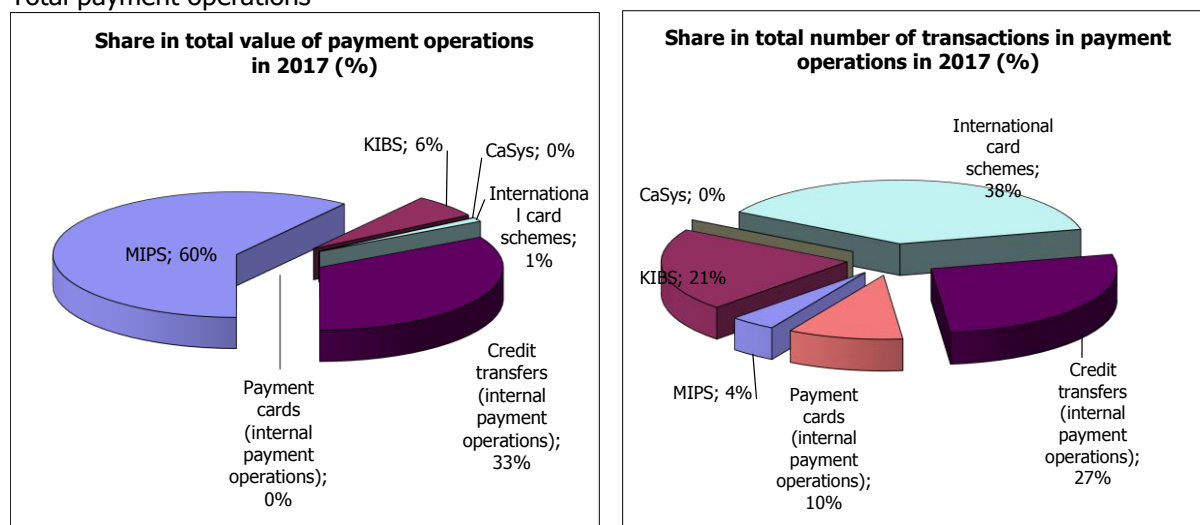
## **7.2. Total payment operations**

**The total payment operations in the country in 2017 registered an annual growth of 9% and reached Denar 5,929.4 billion, which is 9.6 times more than the nominal GDP.** From a structural point of view, most of the value of the total payment operations were carried out through MIPS (60%), followed by payments settled within the internal systems of banks (33%), KIBS (with around 6%), international card schemes (about 1%) and CaSys<sup>74</sup> with a small share in total payments. Regarding the number of transactions, most of the cashless payments were made using payment cards through international card schemes (38%), credit transfers from the internal payment operations of banks (27%) and KIBS (21%), while the rest was made with payment cards from the internal payment operations of banks (10%) and credit transfers through MIPS (4%). Compared to 2016, significant changes were registered in the total number of transactions executed through the international card schemes, which increased the structure share by 5.6 percentage points in 2017 (an increase from 32.4% to 38%) and indicates an increased use of payment cards for cashless payments.

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<sup>74</sup> International Card System AD Skopje (CaSys) is a system of multilateral deferred net settlement of payments with domestic brands of payment cards.

Chart 99  
Total payment operations



Source: NBRM

**Regarding the newly established channel for domestic and cross-border payments in euros through MIPS and TARGET2**, in 2017, the total value of executed outflow payments in Euros through MIPS reached euro 343 million, while the total number of outflow payments was around 4.6 thousand transactions. Analyzing the euro inflows, about 0.5 thousand transactions were executed through TARGET2 and MIPS, with a total value of Euro 303 million.

### 7.3. Background of the cashless payments in the republic of macedonia

**The total value of cashless payments<sup>75</sup> in the country in 2017 registered an annual growth of 9.6% and reached Denar 3,483 billion, which is 5.6 times more than the nominal GDP.** This year, the largest portion of the value of cashless transactions (99%) was made through credit transfers (with almost equal structural contribution of paper-based and electronic credit transfers), and only 1% of the value was realized with the use of payment cards. Although the share of transactions with payment cards in the total value of cashless transactions is low, the realized value with this payment instrument represents 9% of the personal consumption in the Republic of Macedonia in 2017. The analysis of the structure of payments in trade in the Republic of Macedonia shows a high preference for cash payments, despite the downward trend in the cash payments in the total turnover in the trade. According to estimates<sup>76</sup>, in 2017, the share of cash payments in the total value of transactions in retail trade was 72%, compared to 2016 (78%) or 90% in 2008. What is notable is the presence of a clear and constant trend of reducing the use of cash in trade at the expense of an increase in cashless payments. In addition, there is a change in the structure where the number of transactions with cashless payment

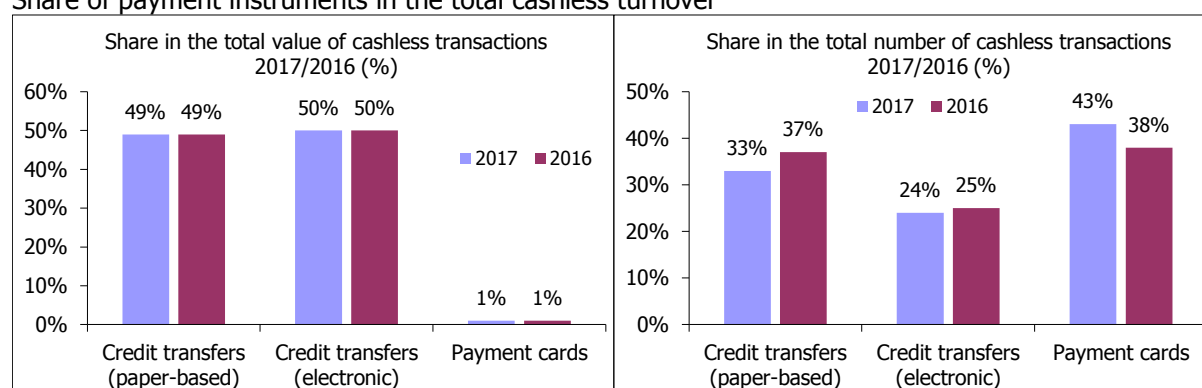
<sup>75</sup> Cashless transactions refer to transactions initiated with a payment order – payment instrument: credit transfers, direct debits, payment cards, transactions by using e-money, cheques and other payment instruments. In the Republic of Macedonia, direct debits have not yet been introduced as a payment instrument, while checks were abolished in 2007. At the same time, despite the legal possibility, there are no e-money transactions. In addition, the total cashless transactions cover only credit transfers in the domestic payment operations and payments with payment cards issued in Republic of Macedonia in the domestic payment operations (excluding transactions within the sector of monetary financial institutions).

<sup>76</sup> When interpreting the results of the share of cash payments in the total trade transactions, it should be taken into account that the assessment of the volume of cash payments was made so that the total turnover in the retail trade, except for the trade in motor vehicles and motorcycles, is reduced by the total value of transactions with payment cards on POS terminals (physical and virtual). Since this is an estimated data, there is uncertainty about the accuracy of the results obtained.

instruments, namely increase of the payment card share by 4 percentage points i.e. decrease of the share of paper-based credit transfers by 4 percentage points on an annual basis. Thus, **the total number of transactions with cashless payment instruments** for 2017 was 102 million, most of which were made using payment cards (43%), while the rest were made using paper-based and electronic credit transfers 33% and 24%, respectively. This change indicates an intensification of the trend of greater use of payment cards by the households and companies for the execution of cashless payments in trade.

Chart 100

Share of payment instruments in the total cashless turnover

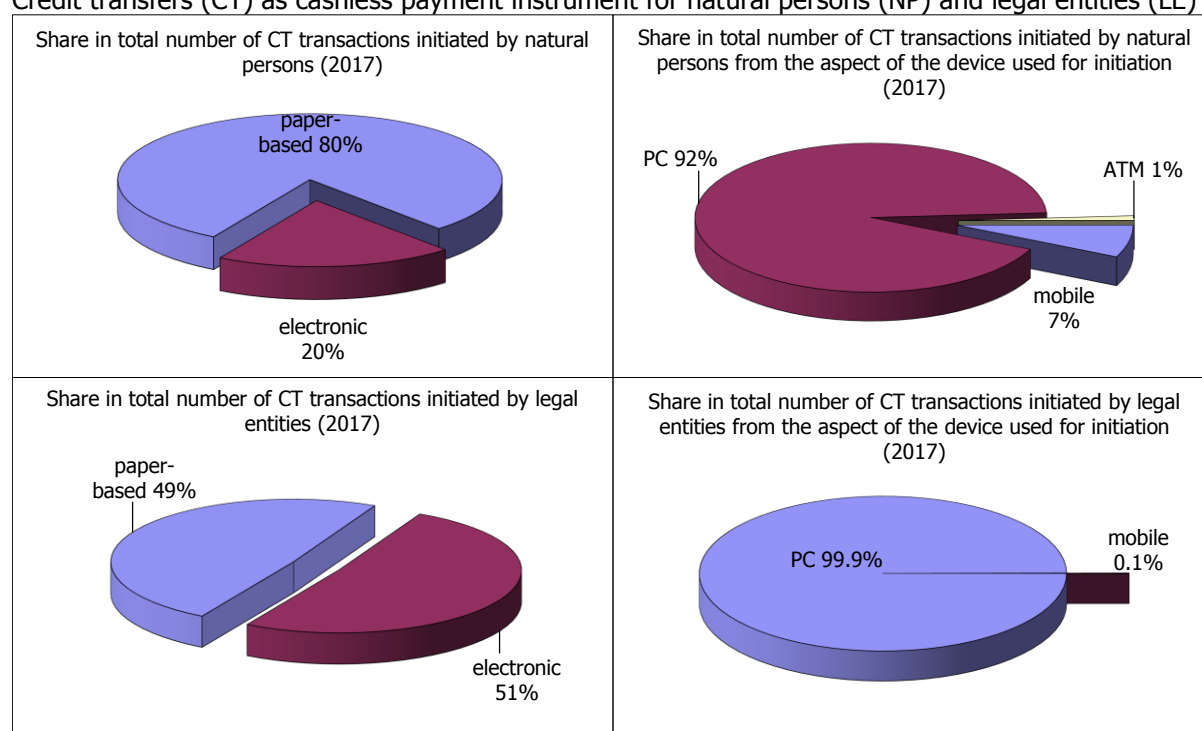


Source: NBRM.

**In 2017, the total number of credit transfer transactions was 58.7 million.** Thus, the structural share of electronic transfers in the total number of credit transfers was 42%. Most credit transfer transactions were made by legal entities (71%), while the rest by natural persons.

Chart 101

Credit transfers (CT) as cashless payment instrument for natural persons (NP) and legal entities (LE)



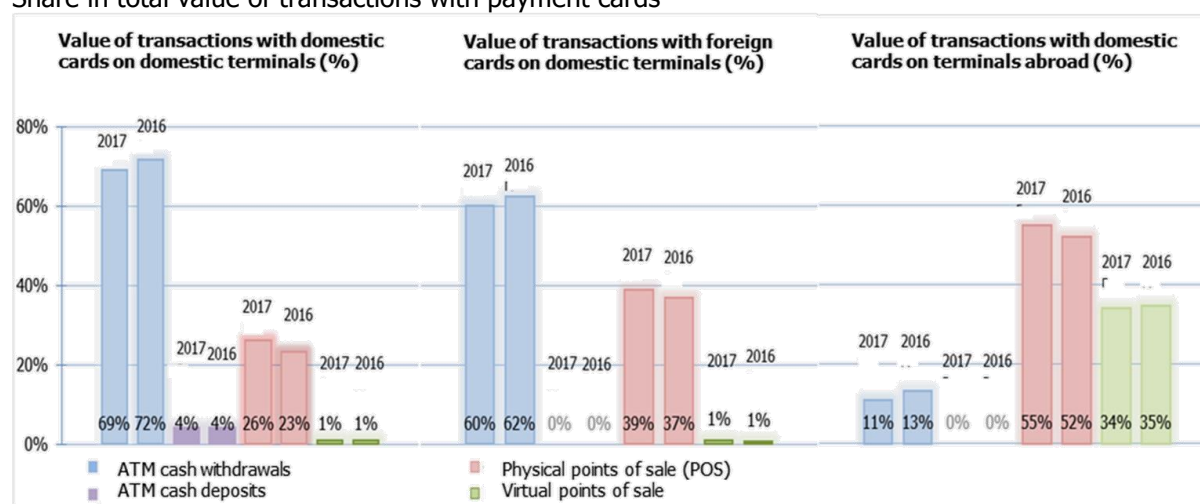
Source: NBRM.



Thus, legal entities mostly use e-banking services compared to natural persons (51% of the total number of credit transfers are initiated electronically, while among natural persons, 20% of credit transfers are initiated electronically and the rest are paper-based). In terms of the device in which electronic credit transfers are initiated, the personal computer has the largest application (100%) among legal entities while a moderate use of cell phones and ATMs is registered among natural persons with 7% and 1%, respectively. This situation can be an indication of a gradual, yet sure change in the payment culture of the domestic economy, by using the benefits of electronic payments. However, the comparative data show that the Republic of Macedonia has a low structural share in the electronically initiated credit transfer transactions (42.2%), compared to the old EU<sup>77</sup> member states from CESEE<sup>78</sup>, where the share of electronically initiated credit transfers within the total number of credit transfer transactions is 90.8% and 86.4%,<sup>79</sup> respectively.

**The total value of payment card transactions in terms of location of terminals (in the country and abroad) in 2017 was Denar 213 billion.** Regarding the purpose of using domestic and foreign payment cards at terminals located in the country, payment cards were mostly used for cash withdrawal (with a share of 69% and 60%, respectively). Furthermore, residents realized 26% of the transaction value at the POS terminals in the country, 4% for ATM cash deposits, and only 1% for online payments (virtual points of sale). However, in comparison with the performances in the same categories for 2016, there was a reduction of the structural share in the use of payment cards for cash withdrawal at ATMs and increased use of payment cards on POS terminals (by 3 percentage points). Similar changes were also registered among non-residents who used foreign payment cards on domestic terminals, namely, 39% of the transaction value was executed on POS terminals, 60% for cash withdrawal from ATMs and 1% for online payments, compared with 2016, when this share was 37%, 62% and 1%, respectively. At the same time, residents used relatively more domestic payment cards abroad for transactions on POS terminals (55% in 2017 versus 52% in 2016), at the expense of the relative decrease in cash withdrawal.

Chart 102  
Share in total value of transactions with payment cards



Source: NBRM.

<sup>77</sup> Austria, Belgium, Germany, Greece, Denmark, Ireland, Italy, the United Kingdom, Portugal, Finland, France, the Netherlands, Sweden and Spain.

<sup>78</sup> Bulgaria, Estonia, Cyprus, Latvia, Lithuania, Poland, the Czech Republic, Romania, Slovakia, Slovenia, Hungary and Croatia.

<sup>79</sup> The latest available data for the EU member states are as of 2016.



## 7.4. Payment infrastructure that supports digital payments

The total number of transaction accounts in the RM at the end of 2017 was 3.86 million, which is a moderate annual decline of 0.18%. The share of the accounts available for initiating payments in 2017 registered a slight increase compared to 2016 and amounted to around 8% from the total number of transaction accounts, which points to a limited use of digital banking channels for conducting payments. On the other hand, the

Table 3  
Payment infrastructure

	2016	2017
<b>Payment accounts</b>	<b>3,865,479</b>	<b>3,858,644</b>
Payment accounts offering electronic payments	261,266	324,319
<b>Total cards with payment function</b>	<b>1,818,676</b>	<b>1,821,997</b>
<i>of which according to the technology of payment</i>		
Contact/contactless	252,851	498,199
Internet	18,764	19,337
<b>ATM</b>	<b>1,039</b>	<b>1,031</b>
with a cash deposit function	86	256
with a credit transfer function	256	280
<b>Electronic funds transfer at point of sale terminals</b>	<b>34,826</b>	<b>31,995</b>
contact/contactless	12,056	15,807
<b>Terminals at virtual points of sale (internet point of sale)</b>	<b>711</b>	<b>832</b>

Source: NBRM.

number of contact-contactless cards in 2017 almost doubled on an annual basis and made up 27.3% of the total number of cards with a payment function (around 1.8 million cards in circulation). The number of installed devices at the POS terminals that support cards with contact-contactless technology also registered an increase of its share in the total number of POS terminals by 15 percentage points and reached 49.4% at the end of 2017. The trend of increased installation and use of modern digital payment devices is also confirmed by the growth of the number of ATMs with additional function for initiating credit transfer in 2017 (annual growth of 9.4%). In addition, it is noteworthy that the banks tend to reduce the waiting queues at the cash payment counters, as well as the manual operations of the bank tellers, by constantly increasing the number of ATMs with a cash deposit function (118 ATMs with a cash deposit function in 2017 compared to 86 in 2016). On the other hand, in 2017, EFPOS terminals registered an annual decline of 8.1%, due to the process of cost optimization and the replacement of the old EFPOS terminals with new modern ones, thus reducing the number of POS terminals with retailers. At the end of 2017, the total number of merchants in the country who accept cards was 12,817. Most of them (11,899) are retailers who accept payments on EFPOS terminals with 92.8%, followed by retailers who accept payments on virtual points of sale (719) or 5.6%, while the rest (199) are retailers who accept payments on other devices (fast collection systems<sup>80</sup> and micropayment service providers<sup>81</sup>) with a share of 1.6% of the total number of merchants.

<sup>80</sup> The fast collection system is an innovative technology which enables faster cash and cashless payments for various types of services through relevant devices (payment of water bills, broadcast fee, cable television, mobile telephony, insurance, tuition, etc.).

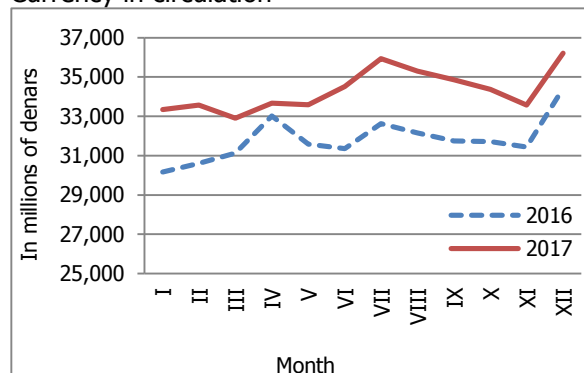
<sup>81</sup> "Micropayment" shall denote payment of products and services in a single amount not exceeding Denar 1,000, with the approval for making the payment being issued through telecommunication, digital or IT devices.

## VIII. Issuance and management of the banknotes and coins of the Republic of Macedonia - vault operations

### 8.1. Currency in circulation

As of 31 December 2017, the total amount of the currency in circulation amounted to Denar 36,208 million, which is by Denar 1,783 million or 5.18%<sup>82</sup> more compared to the end of 2016. The structure of the currency in circulation suggests that at the end of the year, banknotes and coins make up 96.4% and 3.6%, respectively of the total value. In terms of the number of pieces of currency in circulation, the share of banknotes equals 22.6% (73.6 million pieces), and the share of coins equals 77.4% (251.6 million pieces).

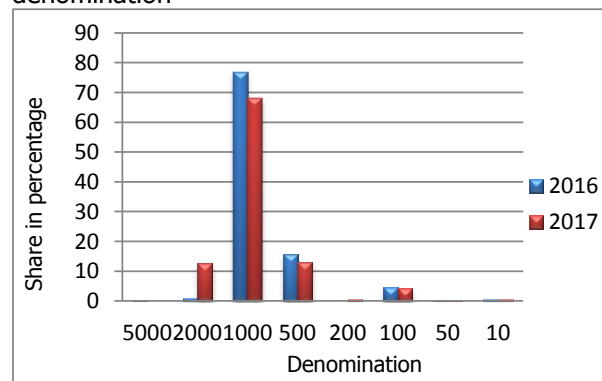
Chart 103  
Currency in circulation



Source: NBRM.

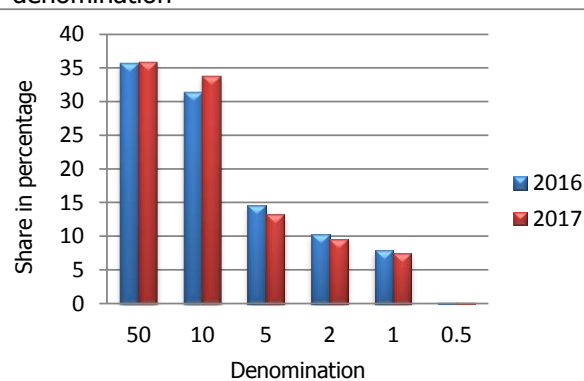
Banknotes in denomination of Denar 1000 (68.1%), Denar 500 (13.1%) and Denar 2000 (12.8%) account for the most of the total value of banknotes in circulation. Other banknotes account for 6.0% of the total value. In 2017, coins in denominations of Denar 50 (35.9%), Denar 10 (33.8%) and Denar 5 (13.2%) had the largest share in the value of coins.

Chart 104  
Value share of banknotes in circulation, by denomination



Source: NBRM.

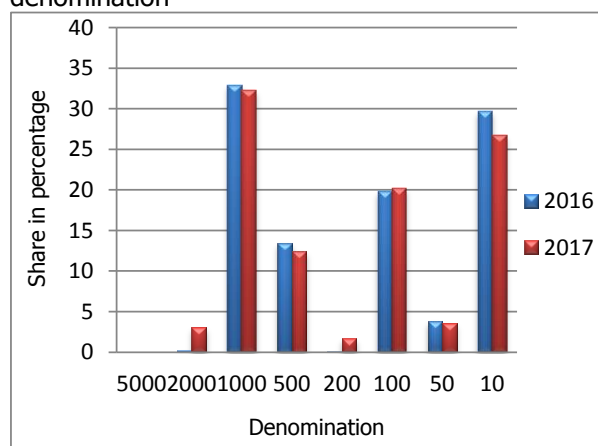
Value share of coins in circulation, by denomination



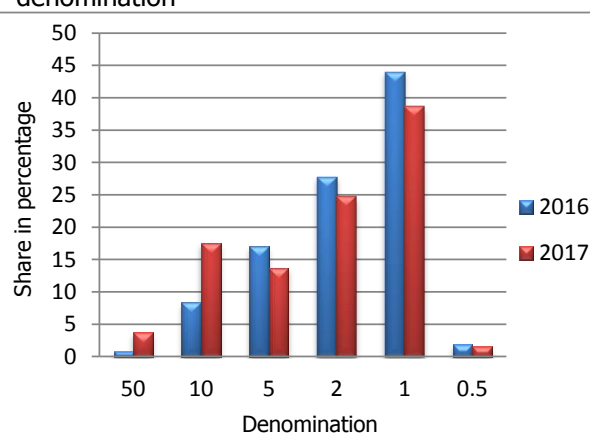
<sup>82</sup> The presented data on the currency in circulation do not include the quantities and value of the collector coins, which were made and put into circulation by the NBRM for artistic, cultural and promotional reasons. Collector coins are available primarily abroad, but also in the Republic of Macedonia. The value of the collector coins in circulation, as of 31 December 2017, was Denar 7.5 million.

Chart 105

Quantity share of banknotes in circulation, by denomination



Quantity share of coins in circulation, by denomination



Source: NBRM.

In the structure of the currency in circulation, according to the number of pieces, the share of banknotes in denomination of Denar 1000 (32.3%), Denar 10 (26.8%) and Denar 100 (20.2%) is the largest. Other banknotes constitute 20.7% of the total quantity of banknotes in circulation. The coin in denomination of Denar 1 (38.7%) constitutes the most of the total coins in circulation.

In the course of 2017, efforts were made to improve the quality of the currency in circulation, with special emphasis on the tendencies in the cash flows of the denominations of 10 and 50 denars. The comprehensive analyses and the identified weaknesses imposed the need for finding an appropriate alternative solution which will remove the specific movements that were predominantly unidirectional for the coins, and will rationalize and optimize the process of supplying with these denominations. For that purpose, the NBRM decided to apply a new concept which will replace the existing coins with polymer banknotes, as a viable alternative to paper money and especially current trend, which has already been introduced by a large number of the central banks, for the money with lower denomination value and greater frequency in circulation.

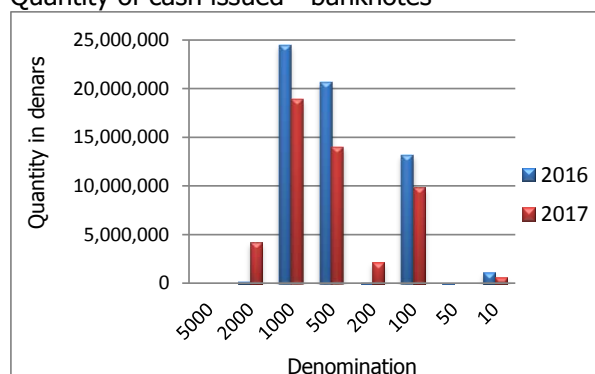
## 8.2. Supplying banks and cash centers with banknotes and coins

During 2017, the NBRM issued cash to banks and cash centers<sup>83</sup> in the amount of Denar 36,108 million (decrease of 2.1% compared to 2016). At the same time, cash has been received from banks and cash centers in the amount of Denar 34,312 million (decrease of 0.2% compared to 2016). The analysis of the denomination structure of banknotes and coins suggests that, when issuing and receiving banknotes and coins, the largest banknote is the denomination of Denar 1000 with a share of 38.2% in 2017 (i.e. 38.7% in 2016) and the most common coin is the denomination of Denar 10 with a share of 39.0% in 2017 (versus 37.8% in 2016).

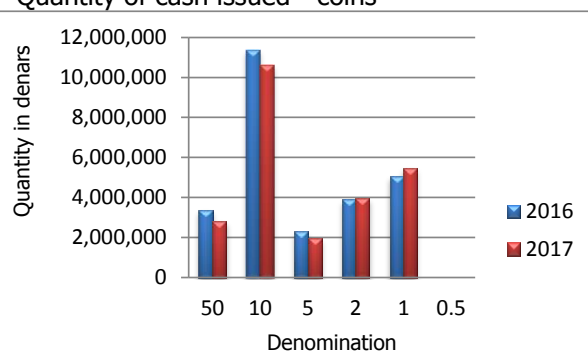
<sup>83</sup> During 2017, the second cash center (a company that fulfills the conditions for supplying with cash), which was registered in 2016, actively took part in the cash supply process, which undoubtedly increased the market influences in this segment of the operation and created sound competitive conditions, ensured higher quality of the cash services and maintenance of a standard quality level of the currency in circulation. The next period is expected to witness strengthening of the activities of the cash centers in the operational and distributional cash system through regional dispersion of the cash and operational infrastructure support.

Chart 106

Quantity of cash issued - banknotes



Quantity of cash issued - coins



Source: NBRM.

### 8.3. Processing and destroying banknotes and coins

During 2017, the quality control process of banknotes in circulation covered all received banknotes. Of the total 54.2 million banknotes processed, 16.7 million banknotes (12.1 million in 2016) were destroyed due to unfitness for circulation. Most destroyed banknotes were denominated in Denar 100 and Denar 10 (58.2%). In 2017, 9.7 million pieces of coins in denominations of 1, 2, 5, 10 and 50 denars were processed, 295.5 thousand pieces of which being withdrawn as unfit for circulation.

### 8.4. Expertise of suspicious / counterfeit money

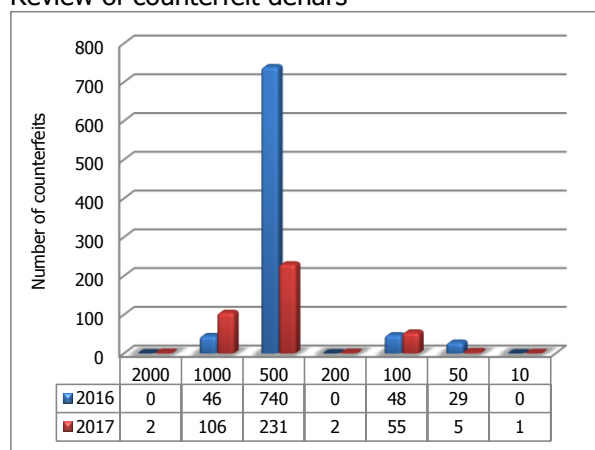
In 2017, the NBRM, as a single institution authorized to determine the authenticity of banknotes and coins denominated in denars and in foreign currencies, successfully performed the expert analysis of counterfeit money. In order to strengthen the capacities for accurate detection of suspicious and counterfeit money with officers engaged in daily cash handling, in 2017, the NBRM continued with the specialized training of staff in banks and cash centers. Through presentations and direct handling of authentic and counterfeit money, expertise was conveyed to participants that would be applied in their future activities.

As for the number of expert analyses committed during 2017, of the total 485 suspicious Denar banknotes received, the expert analysis carried out found that 83 banknotes were genuine, while the remaining 402 were counterfeit banknotes. The number of identified counterfeit banknotes detected during 2017 decreased by 53% compared to 2016. Of the total number of detected counterfeit Denar banknotes in 2017, the most common is the denomination of Denar 500 (231 piece), or 57.5% of the total number of counterfeits<sup>84</sup>, followed by the denomination of Denar 1000 (106 pieces), or 26.4% of the total number of counterfeits and the denomination of Denar 100 (55 pieces), or 13.7% of the total number of counterfeits. The total value of Denar counterfeits in 2017 amounted to Denar 231,660.00, which is a negligible share, compared with the total value of the currency in circulation.

<sup>84</sup> The banknote in denomination of Denar 500 has the largest share in the number of counterfeit banknotes, which is exclusively due to the fact that banknotes that were put into circulation in an organized manner in recent years, are still delivered.

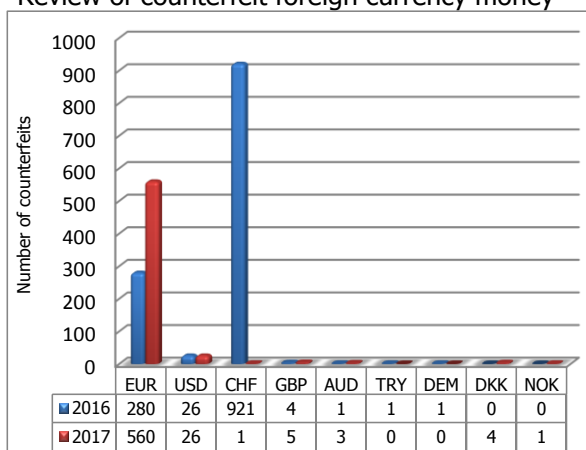
Chart 107

## Review of counterfeit denars



Source: NBRM.

## Review of counterfeit foreign currency money



In terms of committed expert analyses of received suspicious banknotes and coins denominated in foreign currency in 2017, of total 605 analyses, 600 counterfeit and 5 original money were identified. Of the total number of counterfeit banknotes, the Euro banknotes (553 pieces) and US dollars (26 pieces) prevailed.

Unlike the previous year, when larger quantities of counterfeit coins in foreign currency (1001 piece) were detected, this year their number was drastically reduced, to a total quantity of 7 pieces of counterfeit coins in euros.

The general conclusion is that counterfeit banknotes and coins are of relatively poor quality, allowing simple and easy identification and determination of their properties<sup>85</sup>.

### 8.5. Control of the implementation of standards and criteria for cash operations in banks and cash centers

In order to fully implement the envisaged standards and criteria for higher quality and protection of the integrity of the domestic monetary unit, in this period, the NBRM significantly strengthened its control activities in banks and cash centers by conducting off-site and on-site controls of their operation. Also, the NBRM conducts regular tests, i.e. verification of the functional features of the banknote and coin processing machines, as well as training of staff from banks and cash centers for manual processing of the money for the purpose of its return in circulation.

Sublimating the effects of these activities, the NBRM undoubtedly confirmed its expectations for establishing a stable system of supplying with cash and maintaining a certain standard quality of banknotes and coins in circulation.

### 8.6. Issuance of collector coins

The collector coins are unique, representative samples, of great artistic value and consequently contribute to the promotion of the Republic of Macedonia abroad. Although

<sup>85</sup> The expert analysis of the technique of making counterfeit banknotes found that they are mostly made on a plain paper without enough security features, by using computer technique (scan and print) or color copy machine.

the sale of collector coins is primarily intended and takes place abroad, there is a considerable interest in them in the country as well.

During 2017, the NBRM enriched the already rich collection of collector coins with new issues, and the issuance of the coin on the occasion of the celebration of the 50th anniversary of MANU, can be highlighted as the most important.

In 2017, a total of 603 pieces of collector coins were sold, out of which 494 pieces were sold through the NBRM, while 109 pieces were sold through the commission agent<sup>86</sup>.

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<sup>86</sup> Due to the increased interest in these coins and enabling their greater availability for purchase, the NBRM concluded a contract with the National Institution "Memorial House of Mother Teresa", Skopje for commission sale of these coins.

## **IX. Conducting supervision and inspection**

During 2017, pursuant to the Annual Control Plan, the NBRM performed regular supervisory controls (on-site risk assessment controls) in 14 banks and one outsourcing company, as well as inspection controls (on-site controls of compliance with the regulations) in 15 banks, 2 savings houses, 3 fast money transfer service providers, 22 subagents and 156 controls of authorized exchange offices.

### **9.1. On-site risk controls**

Banks in the Republic of Macedonia usually perform traditional banking activities and the credit risk mostly defines their risk profile<sup>87</sup>. Hence, this risk, especially the quality of its management, with special emphasis on the adequacy of determination of the losses due to impairment, as well as the exposure level, are most often subject to on-site control assessments. Also, in the reporting period, in individual banks, there was an assessment of the adequacy of their anti-money laundering systems, the operational risk management and the accuracy of the reports on transactions carried out with persons/entities connected to the bank. In the reporting period, the information security adequacy was also assessed in 6 commercial banks. Also, the on-site risk controls in 3 commercial banks verified the accuracy of the capital adequacy reports.

The controls have shown that banks adequately manage the risks they are exposed to and they are largely responsive to the corrective measures imposed by the NBRM.

In order to improve the existing rules and practices for credit risk management in banks, several recommendations are given by the NBRM, which mainly relate to: improvement of the process of classification of the exposure to credit risk in terms of greater influence of the creditworthiness and inclusion of the early-warning indicators, reduction of the exposure in individual costumers within the legally determined exposure limits and appropriate management and mitigation of the concentration risk, more frequent monitoring of the costumers with higher credit risk, improvement of the process of identification of connected persons/entities and management of exposures approved with an exception. Furthermore, the analysis of a selected sample of exposures to credit risk identified an inadequate risk category in terms of the application of the criteria defined according to the regulation, due to which in 9 banks, an additional impairment and special reserve has been determined. In addition, the NBRM gave a recommendation for improving the process of managing non-performing loans by establishing a medium-term strategy which will include a plan for "dealing" with non-performing exposures, timely identification of the need for restructuring in approved credit exposures, as well as strengthening the process of monitoring of this part of the credit portfolio. Regarding the households segment, the NBRM gave recommendations for strengthening the criteria for approving credit risk exposures, internal controls and setting limits on approving exposures by exception. In some of the banks, the NBRM identified the need for improving the stress testing and increasing the activities of the Internal Audit Department.

In terms of measures and actions undertaken by banks for anti-money laundering and combating the financing of terrorism, the recommendations refer to the following: strengthening of the measures for identifying and verifying the identity of the customers'

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<sup>87</sup> The analysis of risks in the banking sector is covered in the Report on the risks in the banking sector in 2017.

beneficial owner, improvement of the contents of the customer due diligence by determining the consistency of transactions with their activity and financial condition and seeing the need for their reporting to the Financial Intelligence Unit, expansion of the set of indicators established to identify unusual transactions, strengthening of internal controls and extending of the scope of controls conducted by the Internal Audit Department.

In assessing the operational risk management, the NBRM gave recommendations for improving the process of identification, measurement and monitoring of this risk. The recommendations refer to defining limits on the key risk indicators, defining minimum loss amount, improvement of the record of harmful events in banks and improvement of the self-assessment method in banks. Also, the NBRM gave recommendations which relate to physical security, as well as the need for increasing the resources for managing this risk.

To increase information security, the NBRM gave recommendations for limiting the access to databases and strengthening the established audit trail system, improving system configurations, improving the protection of the IT system confidentiality, improving the business continuity plan, improving the process of testing of the existing functionalities in case of changes in applications and developing a strategy for information system development.

## **9.2. On-site controls of compliance with regulations**

The on-site controls for assessment of the compliance with the regulations focused on the assessment of the operations of banks and savings houses pursuant to the Law on the National Bank of the Republic of Macedonia, the Law on Foreign Exchange Operations, the Law on Consumer Protection in Case of Consumer Loan Agreements, the Law on Providing Fast Money Transfer Services and the Law on Payment Operations. All controlled entities mainly operated in accordance with the regulations. In some banks, the NBRM identified irregularities in the area of international payment operations, the operations with non-resident accounts, as well as the manner of enforcement of the Law on Consumer Protection in Consumer Loan Agreements.

On-site controls of non-banking financial institutions i.e. authorized exchange offices, providers of fast money transfer services and their subagents aimed to assess the compliance of their operations with the Law on Foreign Exchange Operations, the Law on Providing Fast Money Transfer Services and the Law on Prevention of Money Laundering and Terrorist Financing. Overall, the NBRM established that these institutions also operate in compliance with the regulations.

## **9.3. Other**

In this period, the internal risk assessment methodologies have been improved, thereby harmonizing them with the Basel standards for banking supervision and the methodology applied by the European Central Bank in the performance of its supervisory function. At the same time, the Methodology for Developing On-Site Supervision Report has also been revised.

The NBRM actively participates in several activities related to the combat against money laundering and the financing of terrorism, establishing cooperation with the other relevant institutions in the Republic of Macedonia. Based on the established cooperation, the NBRM developed the National Strategy for Combat against the Money Laundering and the



Financing of Terrorism, as well as the Draft-Instructions for determining the beneficial owner of the client.

#### 9.4. Licensing of banks and savings houses in 2017

Within the regular activities in the area of licensing of banks and savings houses in accordance with the Banking Law, during 2017 the NBRM processed 58 applications for issuing approvals. Applications processed during the year are shown in the table below.

Table 4  
Processed applications for issuance of prior approval in 2017

<b>Type of license/approval (banks)</b>	<b>issued</b>	<b>rejected</b>	<b>halted</b>
Approval for acquiring shares in a bank	/	/	1
Approval for start of conduct of financial activity	1	/	/
Approval for statute amendment	12	/	1
Approval for appointment of a Supervisory Board member	23	/	3
Approval for appointment of a Management Board member	12	/	1
Approval for including a capital instrument in Common Equity Tier 1 capital	1	/	/
<b>Type of license/approval (savings hoses)</b>	<b>issued</b>	<b>rejected</b>	<b>halted</b>
Approval for appointment of a manager	2	/	/
Approval for transformation of a savings house into a financial company	1	/	/
<b>Total</b>	<b>52</b>	<b>/</b>	<b>6</b>

Source: NBRM.

## X. Statistics

The official statistical data which are prepared by the NBRM are intended to inform the public of the financial and macroeconomic environment and trends in the economy, as well as its relations with the rest of the world.

During 2017, the NBRM continuously implemented the activities for achieving the strategic determination in the field of statistics, which is providing quality statistical data, fully harmonized with the international and European statistical standards. Thus, as before, when collecting data, reporting burden, as well as efficient, timely and simple publication of the data were taken into account.

What marks the 2017 year in the field of statistics is the significant contribution made in the statistics of financial accounts. Namely, for the first time, an official transmission of data on the financial account to Eurostat has been carried out, thus completing all complex activities undertaken over a longer period of time. Transmission is a significant step forward towards further alignment with European requirements, as one of the strategic commitments of the NBRM. Also, during 2017, regular activities that improve the quality and the details of the external and monetary statistics and communication with the public through the dissemination of statistical data and issuing press releases were continuously carried out.

From the aspect of more specific activities, in 2017, progress in the field of statistics was achieved in the following areas:

- in the area of financial accounts statistics, a methodological document and data time series for the period 2013-2015 were prepared for all institutional sectors and subsectors, in accordance with the requirements of the latest statistical standard ESA 2010<sup>88</sup>. In December 2017, in accordance with the time frame envisaged in the Transmission Program ESA 2010, the NBRM for the first time carried out the transmission of data on financial accounts - stocks<sup>89</sup>, on an unconsolidated basis, to Eurostat. Also, for the first time, detailed data on the flows of financial assets and liabilities for the "government" sector for 2014 and 2015 were prepared as one of the key input components for compiling the tables for excessive debt and deficit;

- in the area of external statistics, efforts were made to improve the coverage and quality of data, but also to enrich the available data. In order to improve the methodology for assessing private transfers in the balance of payments, efforts were made to identify and consider acceptable alternative solutions for estimating the real amount of inflows from remittances from abroad, taking into account the available results from the surveys conducted and the registered inflows through the official channels. Based on additional data, primarily from the SSO, activities were undertaken to assess the unregistered export of goods and services, the gray economy, the inflows and outflows related to travels etc.;

- within the activities for compliance with the requirements of the European Union for submitting more detailed data to Eurostat and other international organizations and external users, a long-term project for establishing a single statistical data warehouse for the needs of external statistics was continued, which will also enable optimal management of statistical databases in the NBRM;

- in the field of securities statistics, and for the needs of external statistics from the aspect of examining the way of covering these transactions in the existing data sources in

<sup>88</sup> European System of Accounts ESA 2010.

<sup>89</sup> The data is treated experimentally, until the scope and details appropriate for their dissemination is reached.

the NBRM, two analyses were made: for trading in securities within the project for regional connection of stock exchanges (through the so-called platform SEE link) and for trading with financial derivatives. At the same time, the promotion of this statistics creates preconditions for enriching the data sources and improving the quality of the statistics on financial accounts, because of which in 2017 methodological setup and automation of the reports by type of securities held by residents were addressed;

- further harmonization with the latest international standards in the area of monetary statistics has been made. According to the latest IMF Manual for Monetary Statistics from 2016, a new time series of the monetary data set by using advanced sectoral and currency breakdown of financial instruments and a new methodology for broad money, to be published in 2018, has been prepared. At the same time, within the framework of the long-term project for establishing an integrated reporting system for the needs of statistics and supervision, several activities have been undertaken to harmonize the scope of monetary data, in accordance with the recommendations of the ECB and the new regulations of the European Union on the statistics of balance sheet and flow statistics, as well as new requirements from ESA 2010;

- within the strategic commitment for improving the quality of communication with reporters, a number of activities were undertaken. On a regular basis, communication with the reporters has been made, organizing also regular trainings on the manner of reporting. In order to reduce the reporting burden and rationalize the data collection process in the NBRM, in December 2017, amendments were made to the by-laws on reporting on capital investments in and from abroad. The most significant novelty is the introduction of the sample method instead of the current census method, when reporting on capital investments in the country, as well as reducing the reporting burden for portfolio investments in and from abroad. The increase in the efficiency of the existing reporting system in the next period will continue through the introduction of electronic reporting;

- in terms of communication with users, regular press releases for the basic statistical data sets were issued, which is within the NBRM responsibility, simultaneously with the data dissemination. In 2017, a special press release about the conducted regular annual revision of the external statistics data was issued for the first time. During the year, a software tool was designed for internal analysis of statistical data, as well as a statistical internet portal that would increase the level of availability and facilitate the access of external users to statistical data that would become functional in the year 2018.

- for improving the communication with the users are the activities for the accession to the latest Data Dissemination Standard of the IMF - SDDS plus<sup>90</sup>. As a result of the regular previous activities related to the fulfillment of the conditions for membership under this standard (a thorough process of internal reviews of the adequacy of the coverage and the quality of the available 5 out of 9 indicators), in April 2017, the NBRM, as the national coordinator, officially launched the initiative to join this highest data dissemination standard. In September 2017, final metadata reviews were submitted to the IMF for all available indicators SDDS plus;

- within the fulfillment of the statistical function, the NBRM participated in the work of the inter-institutional working group for the compilation of the Programme of Statistical Survey for 2018-2022, which is an official document that contains all official statistical surveys at national level, including 27 statistical surveys conducted by the NBRM. In the period from 13 to 17 February 2017, a mission for the partnership assessment of the national statistical system in terms of the compliance of statistics in the NBRM with the European Statistics Code of Practice in all 15 principles was carried out. Moreover, within the Report prepared by the Eurostat assessment team, the compliance of the statistics within the NBRM with the Eurostat Code has been highlighted on several occasions.

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<sup>90</sup> Special Data Dissemination Standard Plus.

To perform its statistical function, the NBRM cooperates with other authorized bodies for statistical surveys. The cooperation with the SSO and the MoF was further strengthened through the activities of the inter-institutional working groups for statistics on financial accounts, fiscal statistics and excessive debt and deficit<sup>91</sup>, harmonized sectoral classification of institutional units, as well as through joint projects for technical assistance for further development of more statistical domains, primarily for notification of excessive debt and deficit.

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<sup>91</sup> The Excessive Deficit Procedure (EDP) is a separate data set that the EU Member States and candidate countries for membership should submit to Eurostat, referring to the debt and deficit of the government sector, according to pre-defined standards for its calculation.

## **XI. Internal audit**

In 2017, the Internal Audit Department (DVR) fully implemented its work program. Through a systematic assessment and giving recommendations for improvement of the risk management process, adequacy and effectiveness of internal controls and governance processes, the internal audit exercised its primary objectives by giving assurance on:

1. Efficient and economical use of resources;
2. Safeguarding of assets;
3. Reliability and integrity of financial and other information, and
4. Compliance of operations with laws and regulations, internal policies and working procedures.

In 2017, 20 regular audits were carried out for 25 business processes, giving 19 recommendations to improve the internal control system. The recommendations were followed up on a regular quarterly basis and the findings of the monitoring suggest that the recommendations are mainly observed and implemented within the given deadlines. In 2017, 100% of the recommendations were implemented.

In addition to the regular, the internal audit had additional activities through application of the Quality Assurance and Improvement Program. From this perspective, during 2017, the Regulation on the Activities of the Internal Audit Department was amended, the organizational and methodological aspect of IT audits was self-assessed, independent experts from the Central Bank of the Netherlands carried out an external assessment of the Internal Audit Department activities, as well as other education activities.

The operation of the Internal Audit Department was closely supervised by the Audit Committee, which held regular meetings during 2017.

## **XII. Improving the institutional capacity of the NBRM**

### **12.1.Strategic planning**

In May 2017, the new Strategic Plan of the National Bank of the Republic of Macedonia for the period 2018 - 2020 was adopted. The Strategic Plan is laid down on the basis of the mission, the vision and the organizational values of the NBRM, taking into account the macroeconomic environment and key challenges, and contains the main strategic goals for the next three years. The strategic objectives establish the critical points of the NBRM's operations, on the basis of which the plans of the organizational units and the Plan of Activities of the National Bank of the Republic of Macedonia for the next year were prepared.

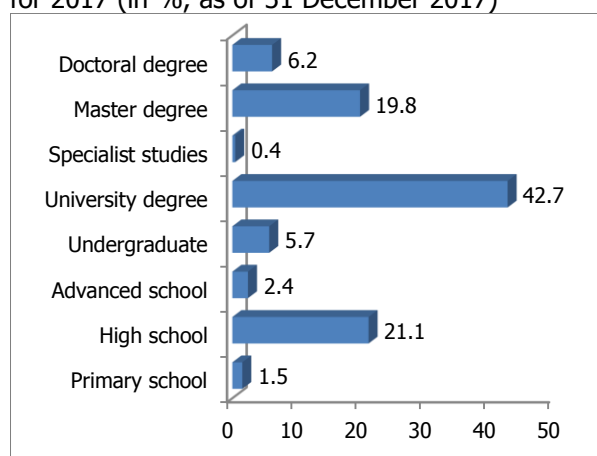
The Plan of Activities unites the planned program activities of the organizational units in the NBRM and simultaneously enables coordination of the activities, better assessment of the planned and expected results, as well as adequate allocation of available resources for more effective implementation of the strategic objectives.

### **12.2.Human resources management**

The NBRM is an institution that has been taking care and investing in its employees, in order to strengthen their skills and competencies and increase their expert knowledge for the purposes of creating highly educated staff that will fight off any challenge encountered while achieving its goals.

In 2017, the total number of employees in the NBRM was 446. In 2017, the NBRM gender structure has not undergone any change compared to previous years, i.e. 59.6% females, and 40.4% males.

Chart 108  
Qualification structure of employees in the NBRM  
for 2017 (in %, as of 31 December 2017)



Source: NBRM.

In terms of age structure, the median age of employees was 44.8 years in 2017, despite the median age of 44.1 years in 2016. The chart shows the qualification structure in the NBRM for 2017, according to the National Qualifications Framework of the RM (NQF). According to the chart, the highest percentage (74.9%) was registered in university education (of which the highest percentage was registered in the four years' studies and Master's studies with 42.7%, i.e. 19.8%, respectively).

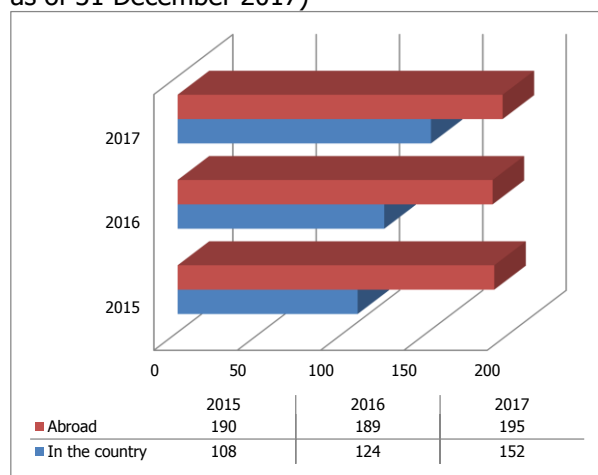
Professional development, employee evaluation and remuneration are processes that affect career development of the NBRM employees. Last year, departments were given a professional advice, by using coaching approach, to improve the annual employee evaluation process. The role of the human resources management, by giving a professional advice, is to ensure impartial application of the employee evaluation and provide feedback to employees about their performance. This system established in the National Bank is used as a tool for greater engagement, productivity and utilization of knowledge and creative

potential in the institution. As every year, these processes require development of the professional and soft skills of the employees and managers in the institution.

The NBRM has been constantly investing in the professional training and development of all employees in order to fulfill its strategic objectives, mission and vision. During 2017, 347 professional training courses were organized in the country and abroad.

Chart 109

Professional training held in the country and abroad (number of professional training courses, as of 31 December 2017)



Source: NBRM.

Compared to the previous year, the total professional training courses increased by 10.9%, while the professional training courses in the country increased by 22.6%. In 2017, the number of employees who attended professional training course increased by 20.6%, compared to the previous year. Main international institutions that organize professional training courses include the European central banks and the International Monetary Fund in cooperation with the Joint Vienna Institute who are the NBRM's major partners in the mutual cooperation programs.

The professional training courses in the country are primarily hosted by the domestic education centers that provide training on data protection and amendments to legislation in the area of NBRM operations.

The NBRM has been following the trends in the human resources management, encouraging continuous education and development of employees, especially young professionals. For this purpose, the NBRM has been hosting ongoing internal training courses for strengthening the soft skills of its employees and management, as well as specialized (targeted) training courses.

### 12.3. Research activity

In 2017, the NBRM's research activities were directed towards areas important for achieving the main goals of the operation, support of the decision-making process, timely consideration of future challenges, as well as further strengthening institutional capacity. During 2017, the NBRM worked on several research projects, that were related to: assessment of the productivity of the economy by using microdata, decomposition of the inflation forecast obtained with the MAKPAM of the NBRM, assessment of the credit channel of the monetary transmission in Macedonia, as well as assessment of the "risk-taking" channel, effects of the quantitative easing of the ECB on the capital flows in the region, analysis of the results of the survey for financing of small and medium-sized enterprises, the effects of lending to households and the corporate sector on the current account, the connection of capital flows and the investment activity, the transmission effects of the inflation in the euro area on the inflation in the region, determinants of the non-performing corporate and household loans, macroeconomic implications of the increase in household debt. In addition, during the year, the NBRM also worked on other research projects the delivery of which is in progress, mainly in the field of: the interactions between the main macroeconomic sectors, financial stability and the banking system. The research program for the period 2018 - 2020, adopted in mid-2017, pointed

to further activities within the main research areas, and was supplemented with several new projects.

On 5-7 April 2017, the Sixth Research Conference was organized: "Central Banking under Prolonged Global Uncertainty: The Latest Lessons while Searching for the "New Normal"." The Conference is held traditionally on the occasion of the monetary independence, and this time as a sign of the celebration of the 25-year jubilee of the monetary independence of the Republic of Macedonia. For the first time, the Conference was organized as a joint event with the London School of Economics - research of Southeast Europe and their Conference on Social Cohesion in Southeast Europe. The Conference began with a panel on the policies of senior representatives of central banks, academic and research institutions, and the two conference days covered multiple sessions at which research papers of representatives of central banks and academic institutions in the region and the EU were presented. At this event, the NBRM awarded an annual award for best paper written by a young researcher in the field of macroeconomics and banks and banking systems.

The Researchers' Club, which is open to researchers outside the NBRM, continued operating as a part of the activities to support the development of research and analytical activity. In 2017, the Club held its regular four quarterly sessions where participants presented and discussed several research papers that addressed research topics in the field of monetary policy, banking, relationships among certain macroeconomic variables and assessment of a potential vulnerability to crises. During 2017, in the area of research activity, the NBRM had technical cooperation with the Central Bank of Belgium, through exchange of experiences in the field of the setup of the research activity in the two central banks, as well as through cooperation on a specific research project. Employees of the NBRM participated in many conferences and international events with their papers and presentations.

#### **12.4.Managing operational risks**

Taking into account the set framework for managing operational risks, during 2017, the National Bank revised the business process register and updated the degree of their criticality. Also, based on the systemic monitoring of the business processes and the potential sources of operational risk, the main risk events were identified. Starting from the assessment of the probability and the possible consequences of the probable materialization of the risk events, the level of operational risk was assessed. The strategies and measures for dealing with operational risks were included in the program activities of the organizational units of the NBRM for 2017.

#### **12.5.Ensuring business continuity**

Starting from the Business Continuity Policy of the National Bank, the NBRM provides a system for coordinate planning, updating and testing of measures necessary to ensure continuity in the operations of the business processes in a crisis situation.

In the course of 2017, the Business Continuity Plans (BCP) were revised for a total of 97 business processes. Furthermore, in order to confirm the completeness and enforceability of the business continuity plans of the critical business processes, during 2017, activities were conducted for the preparation of the necessary documentation, training of the employees and testing the business continuity plans for ensuring the continuity of eighteen critical work processes, in conditions of pre-defined crises scenarios and scope of testing.



For the results of the conducted tests, detailed reports were prepared with appropriate action plans for implementation of the determined measures for improvement of the business continuity plans.

## **12.6.Information security and personal data protection**

In terms of the activities for ensuring the compliance of the relevant internal regulations and the NBRM's operations with the personal data protection regulations, as well as with the changes in the environment that pose a potential risk to jeopardizing the information security, periodical controls were conducted on the basis of which recommendations were given to overcome the identified inconsistencies. At the same time, within the regular activities, the incidents in the operation were analyzed, whereby the annual report on the incidents recorded during the previous year was reviewed by the Information Security Steering Committee.

In the period May - December 2017, the NBRM implemented an extraordinary project the aim of which was to check and confirm the NBRM's compliance with the mandatory security controls specified in the document titled "Customer Security Controls Framework"<sup>92</sup>, published by SWIFT on 31 March 2017. The project team for confirming the NBRM's compliance with the mandatory security controls prescribed by SWIFT, conducted a check on the compliance of the NBRM with a total of 225 security requirements, grouped in 16 mandatory controls, and in December 2017 published the document of the NBRM's compliance with the mandatory controls envisaged by the "Customer Security Controls Framework" in the KYC Registry<sup>93</sup> of SWIFT.

## **12.7.IT development**

In the course of 2017, in the area of information technology more than 6,500 working cases were processed. Of these, the majority, or 54%, were requests for IT services, 32% relate to resolving incidents, while 14% account for the regular maintenance of information infrastructure and its improvement. The IT Department maintains around 130 servers, 460 workstations, 190 applications (largely software solutions developed within the NBRM, and a small part purchased from external suppliers), as well as a large range of other IT assets used by the employees of the Bank every day.

In order to constantly improve the total security functions and controls in the NBRM that should be in accordance with the business and regulatory requirements, in the first quarter of 2017, the NBRM replaced the existing system and put in service a new SIEM system for managing events and incidents in the field of information security. In this way the operational efficiency in the analysis of the security events for the overall IT equipment increased, such as: gateways, servers, workstations, and of course, the performances of devices and applications from which security events are being collected, improved.

For 2017, 34 IT software projects were planned, out of which 22 IT projects are delivered, 10 IT projects continue also in 2018, while 2 are canceled.

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<sup>92</sup> Customer Security Controls Framework.

<sup>93</sup> The "Know Your Customer" application is used to exchange information between SWIFT members.

In 2017, the IT Department implemented a series of activities to comply the NBRM with the mandatory security requirements prescribed by SWIFT in the document titled "Customer Security Controls Framework"<sup>94</sup>, introducing new systems, reconfiguring the existing systems, changing files, amending procedures and guidelines, staff training and reorganizing staff for the purpose of greater separation of duties.

In November 2017, from the NBRM's disaster recovery location, we successfully tested and checked the functionality of IT equipment in relation to the Business Continuity Plan of the business processes related to MIPS in conditions of a crisis situation.

In the period October - December 2017, a specialized outsourcing company performed penetration testing of the NBRM's information system. The penetration testing covered the operating systems, databases and another system software, as well as the security of the applications for 18 critical systems. The testing was performed in 2 (two) phases, in a period of 75 days, submitting seven recommendations, one informative and six with low risk.

In the last quarter of 2017, the migration of the System Center Operations Manager ended, from the version 2012 to the version 2016, whereby the IT Department received better visibility of the situation and performances of servers, gateways and IT services, as well as faster notification on the acute problems in IT infrastructure.

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<sup>94</sup> Customer Security Controls Framework.

## **XIII. Other activities**

### **13.1. International cooperation**

During 2017, the NBRM continued to maintain and promote international cooperation, on both multilateral and bilateral basis.

Within the multilateral cooperation, representatives of the International Monetary Fund (IMF) paid a regular visit to the NBRM, in connection with consultations under Article IV of the IMF's Articles of Agreement. During 2017, the cooperation with the IMF in the area of statistics continued for the purpose of improvement of the statistics within the competence of the NBRM. Regarding the cooperation with the World Bank, two technical assistance missions were carried out in the area of the banking supervision, which were conducted by FinSAC. The Governor and Vice-Governors of the NBRM participated in the Spring Meetings and the Annual Meeting of the IMF and World Bank Group, as well as the meeting of the Dutch Constituency. During 2017, the NBRM took part in the regular meetings of the Bank for International Settlements in Basel and in the meetings of the Central Bank Governors' Club of the Black Sea Region, the Balkan Countries and Central Asia.

Within the bilateral cooperation, during 2017, the NBRM had the most fruitful cooperation with the National Bank of Belgium, continuing simultaneously the long-term technical cooperation established with De Nederlandsche Bank, Deutsche Bundesbank, as well as other central banks of the EU and the countries in the region. The cooperation with the European Central Bank (ECB) was carried out within the established regional approach for cooperation between the ECB and the central banks of the Western Balkans countries. In addition, this year, on the initiative of the Central Bank of Turkey, a Memorandum of Understanding was signed in order to promote mutual cooperation.

Also in 2017, the NBRM participated in the national strategic activities related to the process of accession of the Republic of Macedonia to the European Union, through its participation in the regular dialog with the European Commission within the subcommittees resulting from the Stabilization and Association Committee, participation in the development and implementation of the Annual National Programme for the Adoption of the Acquis (NPAA), participation in the preparation of the contribution of the Republic of Macedonia to the Annual Report of the European Commission, and in the development of the Economic Reforms Programme (ERP).

Regarding the available pre-accession funds from the EU, in 2017, the NBRM implemented projects financed through the Instrument for Pre-Accession Assistance (IPA) and the Technical Assistance and Information Exchange Instrument (TAIEX).

Within IPA, the National Bank was involved as a beneficiary in the national programs for 2012 and in the IPA Multi-beneficiary Statistical Co-operation Programme for 2015. Moreover, during 2017, we continued with the implementation of the project "Building an Internal Analytical Tool and a Statistical Web Portal for External Users", the implementation of which is expected to improve the availability of statistical data whose preparation is within the competence of the NBRM, by providing more efficient and easier access to available data for internal and external users. Financial support was provided within the IPA Multi-beneficiary Statistical Co-operation Programme for participation of representatives from the

NBRM in the regular meetings and committees of Eurostat in the field of balance of payments statistics.

Within the TAIEX instrument, during the year, three projects were completed in various areas of central-banking operations.

### **13.2. Public relations**

In 2017, the NBRM made efforts for transparent and timely informing of the public on various aspects of its operations. The NBRM regularly communicated with the media, by issuing press releases and other materials intended for informing of the public, by answering journalists' questions in a regular and timely manner, giving interviews, organizing press conferences, and publishing content on the website ([www.nbrm.mk](http://www.nbrm.mk)).

Monitoring the development of technology, within the activities for approximation of the work of the NBRM to the general public and for improvement of the citizens' informedness about the institution activity domain, in 2017, the NBRM developed and launched a new, institutional website. One of the goals that were supposed to be achieved with this change was greater functionality and visibility on the website, through all the devices from which one can access websites, which would allow users easier and rapid access to the information and data subject to their interest.

The website continues to be updated with: the regular communications of the NBRM, the information on the application of monetary policy instruments, the information on new data and publications, in Macedonian and in English, and for most of them also in Albanian. The contents of the NBRM's operations were regularly updated.

With increased efficiency and reaching faster deadlines for providing answers, the NBRM continued to communicate directly with the public through electronic mail [info@nbrm.mk](mailto:info@nbrm.mk), as well as through contact-forms on the official websites of the NBRM on the social networks. The institution also has a separate link leading to free access to public information, as well as electronic addresses for questions and answers in the field of statistics and supervision. A separate address for journalists' questions started to function in order to be considered in a timely manner and the answers to be given for a shorter period of time.

The annual, quarterly, monthly and other reports on the operations are published in an electronic form on the website of the NBRM, in Macedonian and in English. The Annual Operations Report is published also in printed form, in Macedonian and in English. Starting from 2015, annual and quarterly reports on the operations are being translated into Albanian, and translated reports are published on the website of the NBRM.

Following the new trends in the manner of communication of the central banks with the public, in 2017, the NBRM developed an operational plan for developing the pages of the institution on the social networks, the implementation of which has already been started and these pages are expected to be even more accessible and more acceptable to the general public in the forthcoming period.

In 2017, the National Bank also developed a plan for introducing a centralized electronic system of coordinating public relations - NBRM Media, which will start to function in 2018. Following the example of many central banks, the ECB, the IMF and other

international institutions and organizations, the NBRM developed a concept for incorporating electronic press clipping into the work of the institution and started with its implementation, for the purpose of greater informedness and improving public relations.

### **13.3. Financial education**

Throughout 2017, the NBRM carried out several activities in the field of financial education and literacy.

All the year round, interactive lectures were given to the students from primary and secondary schools on the premises of the NBRM. More than 1200 students were included, accompanied by teachers and professors. Besides lectures on topics about monetary policy and the NBRM's main functions, the visits also included a visit to the Museum, as well as the mint at the NBRM. Also, the NBRM organized a caravan of visits in more than 15 primary and secondary schools from 9 cities and municipalities in the country.

In January 2017, the NBRM and the Bureau for Development of Education signed a Memorandum of Cooperation in the area of financial literacy and other areas in education. The two institutions carry out their cooperation in the field of financial education through policy making, conducting research and analyses, undertaking joint activities for raising public awareness and promoting financial education and literacy, and by exchanging relevant expertise. This cooperation contributes to increasing the awareness among students and strengthening their knowledge in the area of finance.

The Global Money Week (GMW) was held in the week from 27 March to 2 April and on the first day of this week, the Coordinating Body of Regulatory Institutions for Financial Education in Macedonia, in cooperation with the Bureau for Development of Education and the Alliance of Microfinance Organizations, marked the beginning of the GMW through many educational activities - educational caravan. This caravan included organized visits by students from four secondary schools from Skopje on the premises of all five regulators (the NBRM, the Ministry of Finance, the Insurance Supervision Agency, MAPAS and the Securities and Exchange Commission), as well as the Macedonian Stock Exchange, one pension fund, investment fund, commercial bank, savings house and insurance company. Then, during the whole week, visits were organized in various cities. This year was the fifth year in a row when the GMW in the Republic of Macedonia was celebrated.

On 11 May 2017, for the first time, the "Financial Education Day" was marked, an event organized by the Coordinating Body of Regulatory Institutions for Financial Education in Macedonia. The objective of the event was to raise the awareness among population, primarily the young people, for making sound financial decisions in the future in an easier and safer manner. Financial education is an important factor for building a sound and safe financial sector and this event has proved successful in terms of raising public awareness with respect to the functioning of financial institutions and their regulators.

In November 2017, the NBRM, the Ministry of Finance and the Insurance Supervision Agency handed out the awards for the most successful art and literary works that entered into competition on the occasion of the "World Savings Day - 31 October" on two topics in the field of savings "I can save, too" and insurance "What does insurance of home and family mean to me". The competition included more than 780 participants from more than 100 schools that sent art and literary works on the topics - savings and insurance. All the primary and secondary schools that participated in the competition were given a certificate

of participation, which is a stimulus for both the students and the teachers to support future generations to send creative works to the competitions in the next years.

In December 2017, the NBRM and other regulators of the financial system, in cooperation with the European Fund for Southeast Europe (EFSE DF), organized the third workshop for journalists from economic editor's offices from print and electronic media. The topic of this year's workshop was "Clear Reading and Interpretation of the Reports of the NBRM and Other Regulatory Institutions". The aim of the workshop was to raise the level of financial literacy among the population, through the cooperation with journalists from the economic editor's offices that inform the public of the latest developments in the economy.

#### **13.4. Activities of the Museum and the Library and the Archive of the NBRM**

The museum activity of the NBRM the past year, in addition to the current working tasks and other significant activities related to the aspects of revision and control of the Numismatic Collection of the NBRM and the museum operations, also included several research and preparatory activities for immediate museum education of children and youth and other visitors to the permanent museum exhibition. At the same time, the Museum also contributed to the participation in international and regional conferences related to museum work and its proper presentation. Also, the Museum was actively involved in the arranging of the visiting exhibition "Golden Dust" of the National Museum of Slovenia, which marked 25 years of the monetary independence of the Republic of Macedonia. In addition, within the museological research work, the project task for the new permanent museum exhibition of the NBRM was also prepared. Within the specific numismatic research work, which includes studying and interpreting different aspects of both numismatics and monetary history of Macedonia, we completed the research on the use of money in Upper Macedonia in the ancient period, which was supported by the NBRM, and we also continued with the studying of the separate coin circulation patterns in the region of pre-Roman, Roman and Byzantine money from the southwestern part of Macedonia.

The research activities of the Library and Archive during the past year were related to the enrichment of the library and archival fund: monitoring of the novelties on the book market, selection for binding serial publications, digitalization of archival material arising from the NBRM operations and research activities in the Region for undertaking material significant for central-banking operations in the Republic of Macedonia.