National Bank of the Republic of Macedonia

Quarterly Report
February 2017

Introduction

In the last quarter of 2016, the NBRM cut its policy rate by 0.25 percentage points and by additional 0.25 percentage points at the beginning of January, thus reducing it to 3.5%. The monetary policy response came after few months of evident stabilization of economic agents' expectations after the measures to deal with the pronounced speculative pressures from the uncertain political environment in the second quarter, amid ongoing assessments for stability of economic fundamentals. There were signs of stabilization in the two points where the political crisis hit the most - foreign exchange market and deposits in the banking system. During the fourth quarter, the NBRM intervened in the foreign exchange market by purchasing excess foreign assets, making a net purchase of foreign currency cumulatively for the whole year. Thus, sales of foreign currency in the second quarter triggered by pressures from the political crisis were fully compensated in the second half of the year. The growth of household savings continued in the fourth quarter, and from June to the end of the year, household deposits in the banking system were steadily increasing. Also, changes in their currency structure tend to gradually increase preferences for domestic currency. Notwithstanding the stabilized expectations of economic agents and the full exhaustion of the direct effects of political instability on the economy, the uncertainty arising from the domestic political situation is still present. At the same time, risks of the adverse external environment are still present reflecting the economic and political instability in the euro area prompted by the anticipated Brexit, the uncertainty in the US, the potential growth of protectionism and the prolonged geopolitical risks.

The available macroeconomic indicators for the fourth quarter of 2016 indicate retention of safe and sound economic fundamentals. The cut in **domestic consumer prices** continued, driven primarily by lower food prices, while core inflation remained in a positive zone in the fourth quarter of the year. Economic activity, as measured by the **gross domestic product** recorded a solid growth rate in the third quarter of 2016. Indications of high-frequency data for the last quarter are divergent, making it difficult to provide a precise assessment of the movement of the economy in this period. Data on **lending activity** for the end of the year show maintenance of steady pace of growth of the credit support to the private sector, with an increase in both the supply of and the demand for credit. **Foreign reserves** decreased in this quarter, which was expected due to the regular servicing of government liabilities to external creditors, while compared to the end of last year, they saw a significant growth. Foreign reserves remained at an adequate level throughout the year.

The key macroeconomic parameters in the domestic economy were mainly ranging within the October forecasts. In the third quarter, GDP increased as forecast in October, at a slightly higher than expected growth rate. Analyzing demand components, GDP growth in the third quarter fully stems from the domestic demand, while net exports made a small negative contribution. Observing by component, export is the key generator of growth in the third quarter, mainly associated with the operation of the new production facilities. Analyzing domestic demand, only private consumption increased annually, reflecting favorable labor market developments, low consumer prices and further credit support to the households. On the other hand, in the third quarter, there was a decrease in gross capital formation and small downward adjustment in public consumption. Enhanced export activity and public consumption resulted in increased imports in the third quarter, making the contribution of net exports to GDP growth in the third quarter insignificantly negative. The available high-frequency data for the fourth quarter indicate divergent movements, but seen as a whole, the situation in the economy in the last quarter of the year would be slightly less favorable compared to the third quarter. **General assessment is that the economy continued to grow throughout 2016, and the growth rate is close to the expected growth of 2.3% as forecast in October.** Cumulatively, the economic growth for the first three quarters of the year was 2.7%, compared to the expected 2.1% as forecast in October. **GDP growth for 2017 and 2018 is forecast at 3.5% and 3.7%, respectively,** with exports and investments being main generators of growth, and positive spillover effects on the labor market and household consumption. **Risks surrounding this macroeconomic scenario have not significantly changed compared to the October forecasts, and mainly relate to the uncertain domestic environment against the backdrop of still unresolved political crisis and unfavorable risks arising from the external surrounding.**

In the fourth quarter of 2016, domestic prices decreased by 0.1% on an annual basis. For the whole of 2016, the decline in consumer prices was 0.2%, bringing it close to the inflation rate of around 0% as forecast in October. The slight downward deviation reflects somewhat higher annual decline in food prices than expected. Observing by component, trends that marked the year continued in the fourth quarter. Thus, the decline in domestic prices of food and energy influenced by factors on the supply side (low import prices of food and energy) continued, while core inflation remained in the positive zone. However, developments in the fourth quarter suggest changing movement dynamics, i.e. a slower decline in energy prices and a slowdown in core inflation. **In 2017 and 2018, the price growth is expected to accelerate moderately by 1.3% to around 2%, respectively, and inflation forecast is still accompanied by risks, mainly related to the movements in world prices of oil and food, as well as to the growth of the domestic economy.**

Within the external sector, in the third quarter of 2016, there was **current account surplus** of 1.4% of GDP, as forecast in October. The balance of goods and services registered improved performances, while a slight negative deviation was registered in the balance of primary income. At the same time, financial account registered high net inflows of Euro 428 million, or 4.5% of GDP as expected in October, mainly due to the external government borrowing. **Gross foreign reserves** in the fourth quarter registered a quarterly decline, which is significantly lower than expected in October, pointing to a better position of the balance of payments than forecast for the fourth quarter. Available external sector data for the last quarter of 2016 indicate improved performance in the current and financial transactions, not sufficient though for robust conclusions. Foreign trade statistics available in this period indicate lower trade deficit than expected, and the latest data on the net purchase on the currency exchange market suggest performance equal to the forecast net cash in private transfers for the fourth quarter. Exhaustion of the adverse effects of political instability brought about gradual stabilization of the household preferences for a foreign currency cash, and therewith, positive trends in the currency exchange market. Accordingly, there was a notable stabilization of the two key balance sheet categories affected by the political crisis - net cash from currency exchange operations and outflows from the category of currency and deposits of other sectors in the financial account. These developments also increased the supply on the foreign exchange market, whereby the NBRM intervened by purchasing excess foreign assets, thus significantly mitigating the fall in foreign reserves due to the regular servicing of government external liabilities during the fourth quarter of the year. The foreign reserves adequacy ratios remained at an adequate level throughout the period. According to the October forecast, a cumulative growth of foreign reserves is expected for the period 2016-2018, and their maintenance in the safe zone, i.e. at a level appropriate for dealing with unforeseen shocks.

In the fourth quarter, **the lending activity of the banking sector accelerated,** which is typical for the credit market at the end of the year. Sector-by-sector analysis shows that the credit growth accelerated due to the increased credit support to the corporate sector, accounting for more than two thirds of the new lending in the last quarter. This is a significant shift compared to the movements in the previous three quarters, when household loans played the leading role in the credit growth. In the fourth quarter, the growth of household loans accelerated, whereby besides consumer loans, positive contribution to the growth was also made by housing loans. There was an increased credit activity in the last quarter of the year following the exhaustion of the effect of the transfer of part of doubtful and contested claims on the banks' off-balance sheet, which was mostly felt in the second quarter of the year. On an annual basis, the credit growth exceeded the expectations, when total loans increased by 1.0%, or 6.5% when controlled for the effect of regulatory changes, compared with the October forecast for the end of the year (0.5 % and 5.6%, respectively). Analyzing the drivers of credit market, surveys show positive movements on both the demand side and the supply side of credits. Thus, against the background of restrained growth of economic activity, positive labor market developments and favorable terms of lending by the banking sector, the private sector continued to increase the demand for loans. Sound solvency and liquidity position of banks and increased competition in the banking sector are factors that continue to have a stimulating effect on the conditions that increase supply of loans. Analyzing the sources of funding, **the last quarter saw an intense growth in total deposits** and in December, the annual growth rate of total deposits reached 5.7% which is above the forecast for the end of the year (2.6%). Corporate deposits and the high growth of household deposits, primarily in local

currency, made greater contribution to the growth of total deposits in the last quarter. These deposit market trends bring about noticeable stabilization of expectations and further depletion of the effects of non-economic factors that resulted in weaker performance in household deposits in the previous two quarters. Bank deposit base is expected to continue increasing in the period ahead, ensuring stable sources of financing of credit growth, which according to the October forecast are expected to range between 6-7% in the next two years.

In summary, performances show that despite the increasing endogenous and exogenous risks in this period, the assessments for the domestic economy fundamentals remain solid. The economy has still been recovering at a solid pace, in part supported by the lending of the domestic banks. Economy has recovered without price pressures and with adequate level of foreign reserves. The risks to the economy are still assessed as unfavorable and are associated with the domestic political environment, and there are also external risks. The impact of endogenous risks in the past was somewhat alleviated by the positive steps taken to address domestic political challenges, but there is still some uncertainty that makes these risks to remain relevant. The exogenous risks are generally attributed to the fragile global recovery, protectionist trends, volatility in financial markets and the Brexit. Hence, the NBRM will closely monitor the developments in the coming period, while the future changes to the monetary policy will largely depend on the further stabilization of the domestic political environment, as well as on the potential materialization of external risks.

1. Macroeconomic developments
1.1. International economic surrounding[1]

Global economic growth continued in the third quarter of 2016, driven by the relatively solid performance in the major developed countries, amid moderate recovery of some emerging and developing countries. For the upcoming period, there are expectations for further strengthening of the world economic growth, however at a pace slower than before crisis. Risks surrounding global growth tend to be mainly unfavorable. The most pronounced risks are the political risks accompanied by the still moderate growth in the developed economies, the slowing growth rates in China and the recession in some emerging countries. Available data show acceleration in the global inflation in the fourth quarter of 2016. In the developed countries, inflation is moving upwards, while in the emerging economies and developing countries it continued its moderate deceleration that began in the second quarter. The gradual depletion of the base effect of low energy prices and the increased oil prices on world markets leave room for moderate inflationary pressures in the period ahead.

Global economic activity indicators
(monthly indices*)

JPMorgan Global Manufacturing & Services PMI
EC Composite PMI Output
US Chicago Purchasing Managers Index
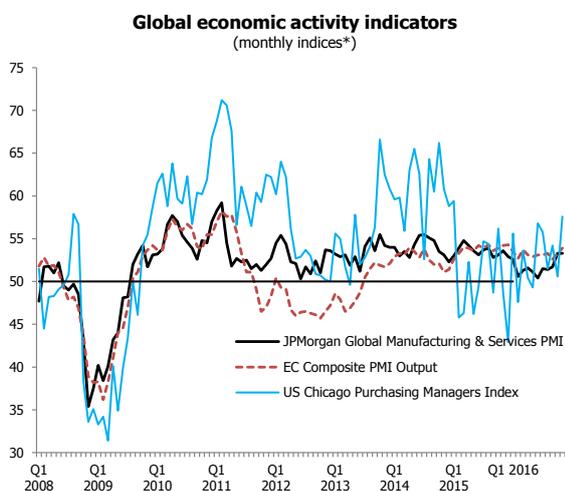
*The PMI index reflects the percentage of respondents that reported better bussiness conditions compared to the previous month and it can take values between 0 and 100. PMI=50 is considered as a reference value, indicating unchanged economic conditions. A PMI value over 50 is taken to indicate that the economy is expanding, while a PMI value below 50 suggests that the economy is contracting.
Source: Markit, ISM-Chicago.

The indicators of global economic activity point to strong performance in the third quarter of 2016, largely stemming from the improved performance in some developed economies. So, the UK, the US and Japan reported faster annual growth, while the growth in the euro area remained at the level of the second quarter. Against the backdrop of stable financial markets after the gradual restoration of the confidence of market operators shattered by the Brexit, in the third quarter, the UK reported positive economic results (an annual growth of 2.3%). The US economy showed signs of further recovery and annual GDP growth of 1.7%, driven by private consumption, exports and investment. The Japanese economy grew by 1% annually, with net exports being the prime generator. The growth of economic activity in the euro area of 1.7% on an annual basis was mainly driven by private consumption and investment, making a smaller contribution than the exports. Viewed from the perspective of emerging economies and developing countries, they still report slower economic growth rates that differ from one country to another. The economies of China and India continued to grow at the same rate as in the previous quarter and the recession in Brazil and Russia gradually slowed down. The high-frequency survey indicators on economic activity - PMI indicate improved expectations of market entities for the future economic development. In the period from October

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[1] The analysis is based on the IMF's *World Economic Outlook* of October 2016 and update: January 2017; the ECB's *Economic Bulletin*, the announcements of *Markit Economics*, the World Bank's *Global Economic Prospects*, Bloomberg, *Roubini Global Economics* and *Capital Economics* reports, the monthly reports of the International Energy Agency and the weekly reports of the Bank of Greece.
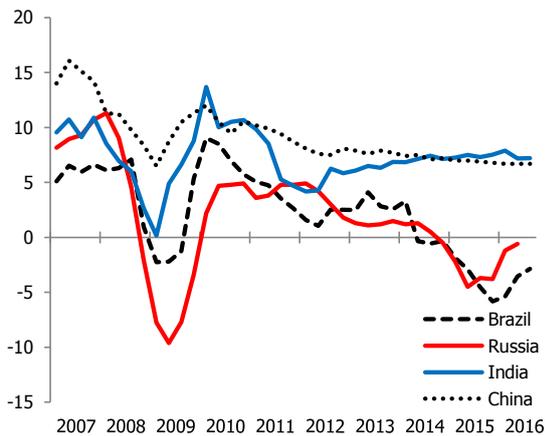
Real GDP growth in advanced economies
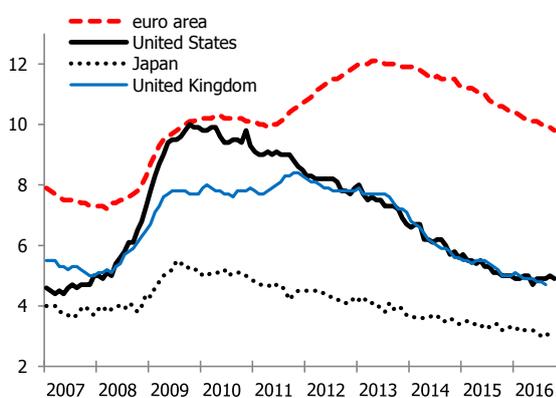(year-on-year percentage changes; quarterly data)
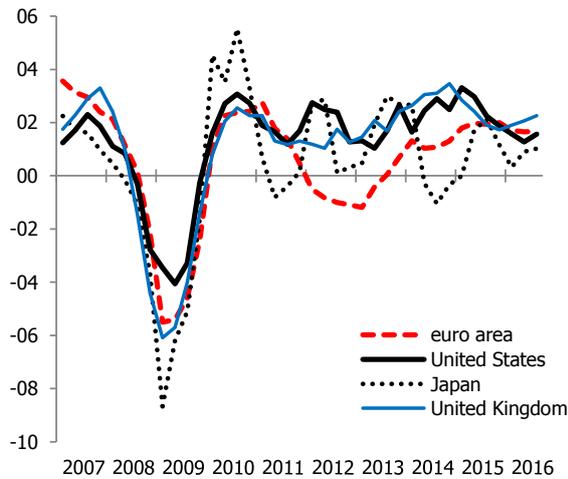
Source: OECD.

Real GDP growth in emerging economies
(year-on-year percentage changes; quarterly data)

Source: OECD and IMF.

Unemployment in advanced economies
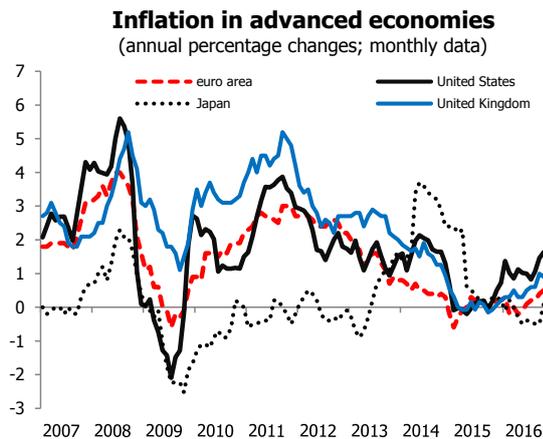(in percent; seasonally adjusted monthly data)
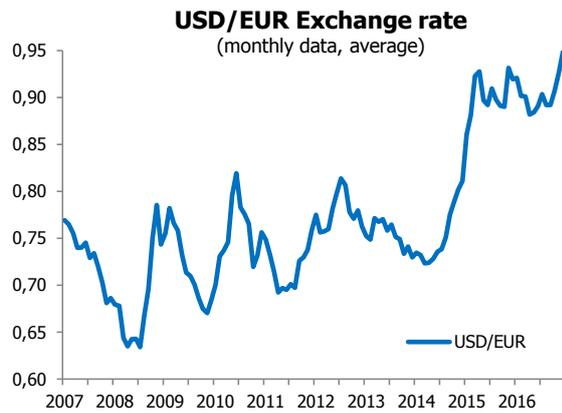

Source: Eurostat.

to November, the global composite PMI reached an average value of 53.3 index points, which means an increase of 3.4 percentage points compared to the previous quarter. The latest global economic forecast for the next period indicates gradual strengthening, although still below the pre-crisis levels. The US economy is forecast to continue to grow moderately, with improved economic fundamentals. There are expectations for moderate but steady economic growth in the next period in the euro area, driven by the positive effects of the expansionary monetary policy on the real sector, the recovery of investment and improvement in the labor market. However, uncertainty over the global growth remains, with mainly unfavorable risks, particularly the political ones, especially in the developed countries. There is still present uncertainty about the effects of Brexit on the global economy, with the possible rise in protectionism being an additional risk. The moderate growth in the developed economies as well as the slower growth in China and the recession in some emerging economies could also have an adverse effect. Also, the Middle East developments as well as the refugee crisis pose risks that could hit global growth in the coming period. On the other hand, the stimulating policies in the US and China tend to be positive risks to the global growth.

The available data show that global inflation continued to accelerate at the beginning of the fourth quarter of 2016. In the period from October to November, inflation accelerated in developed countries, while in emerging and developing countries it varied (a slowdown in India, Brazil and Russia and an increase in China). The lower base effect and the higher world oil prices leave room for moderate inflationary pressures in the period ahead.

In the third quarter, economic activity in the euro area was still recovering. GDP data in the third quarter suggest growth in the euro area of 0.3% quarterly and 1.7% annually, which is basically the same pace of growth as in the previous quarter. Looking at individual economies within the euro area, the performances are divergent. Thus, the annual GDP growth accelerated in Italy, in Germany it remained unchanged, while in Spain and France it slowed down. Regarding the labor market, the unemployment rate in the euro area continued to decline, and in November, it reduced to 9.8%, hitting a record low since mid-2011.

Inflation in advanced economies
(annual percentage changes; monthly data)

Source: Eurostat and national statistical offices.

USD/EUR Exchange rate
(monthly data, average)

Source: Eurostat.

Prices of crude oil and non-energy commodities
(monthly data)
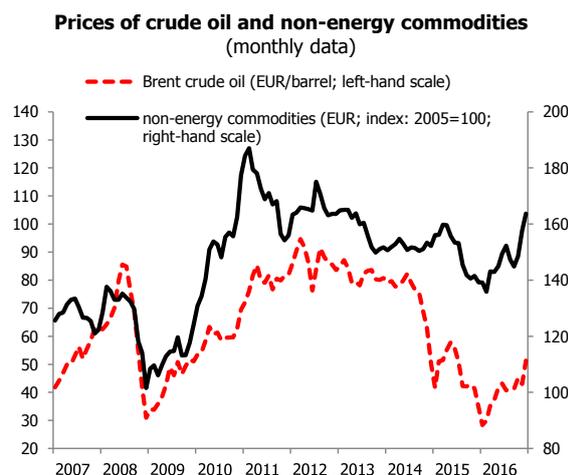
Source: IMF monthly database.

In the fourth quarter of 2016, inflation across the euro area remained low and well below the targeted rate of 2%. However, there is a trend of slight acceleration, and in the fourth quarter, the average inflation rate reached 0.7% on an annual basis. This is due to the rise in prices of food, alcohol and tobacco, with additional contribution of the core inflation, which averaged 0.8%. In the coming period, inflation is expected to accelerate and continue going upward in 2017, which largely reflects the base effects of the fall in energy component.

In the fourth quarter of 2016, central banks of developed countries continued to run generally accommodative monetary policy, whereby the Fed and the ECB made changes to the monetary policy. In its regular meeting in December, the Fed raised the policy rate by 25 basis points to 0.5%-0.75%. This increase reflects the assessments of accelerated economic growth and possible inflationary pressures in the future. On the other hand, the ECB decided to reduce the amount of redemption of backed securities under the quantitative easing program from Euro 80 billion to Euro 60 billion per month (as of April 2017), but extended its duration period from six to nine months. This measure was taken to provide further support to growth and to achieve inflation target. Bank of Japan and Bank of England made no changes to the monetary policy setup.

The movements of the nominal exchange rate of the US dollar against the euro in the fourth quarter of 2016 show appreciation of the US currency. In the fourth quarter of 2016, the exchange rate appreciated by 3.5% compared to the third quarter of 2016. Annually, the US dollar against the euro was slightly higher, and in December 2016, one US dollar was exchanged for 0.948 euros.

In the fourth quarter of 2016, oil price on world markets registered relatively high growth. Namely, in the fourth quarter, oil price averaged Euro 46.5 per barrel, which compared with the third quarter of 2016 is an increase of 13.3%, mostly due to the price movements, and to a lesser extent, to the appreciation of the US dollar against the euro. Annually, the oil price increased by 17.2%. The upward movement in oil prices partly reflected the agreement among OPEC countries to cut oil production by 1.2 million barrels a day, and the indications of Russia readiness (which is not a member of OPEC) to support the
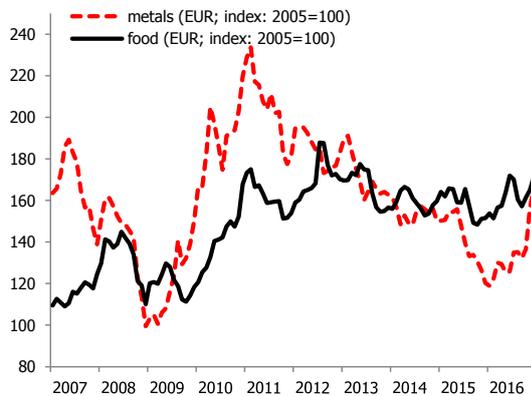
measures by cutting its own oil production. **Prices of non-energy commodities in euros continued to grow in the fourth quarter of 2016.** Thus, the prices of non-energy commodities increased by 11.5% annually and by 5.7% compared to the third quarter of 2016. Analyzed by group of products, metals prices registered an annual increase of 21.7% in this period, while food prices grew by 10.4%. The rise in metal prices was largely due to the rise in the price of lead and iron. Thus, in the fourth quarter, the average lead price rose by 24.3% on a quarterly basis, while the average price of iron rose 17.3%. The main rea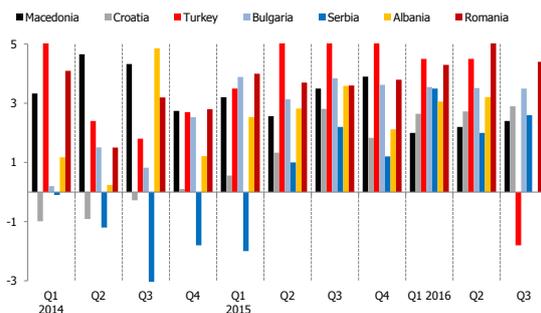son behind the rise in prices of these two metals were the higher expectations for demand from China and speculation of a rise in prices after the US presidential elections related to pre-election promises to increase government spending in the area of infrastructure.

The trend of positive economic growth in the region continued in the third quarter, with the exception of Turkey. Thus, in the third quarter, Turkey reported a GDP decline of 1.8%, mostly due to political instability and growing uncertainty after the attempted coup of 15 July. In the third quarter, the fastest economic growth in the region of 4.4% was reported by Romania, which is a slight slowdown compared to the second quarter (6%), primarily as a result of the slower private consumption and investment. In contrast, after the slower growth of 2% in the second quarter, the Serbian economy increased by 2.6% in the third quarter. Investment and exports as well as private consumption recovery made the largest contribution to this growth. The growth in Croatia and Bulgaria was 2.9% and 3.5% respectively, similar to the second quarter of 2016.

In the fourth quarter of 2016, the inflation in the region was relatively low. Compared to the third quarter of 2016, it recorded divergent movements. Thus, the inflation recorded a slight rise in Croatia, Bulgaria, Serbia and Kosovo. This growth was mainly due to increase in prices of clothing and footwear. On the other hand, in the period from October to November, Albania and Turkey reported a small decline in the inflation rate compared to the third quarter. The fall in inflation in Turkey was due to measures undertaken by the central bank to curb inflation in line with the target level of 5%. Expectations say that inflation in the countries of the region will increase in the future, primarily due to the increase in oil prices.

Prices of food and metals
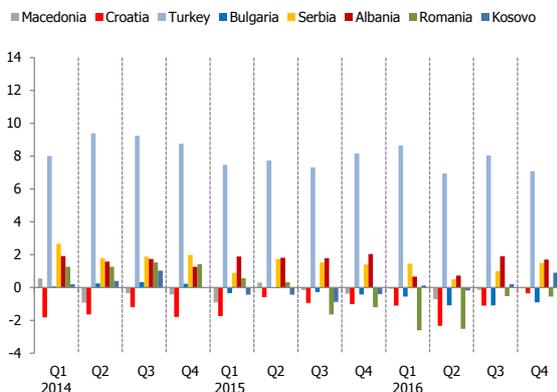(monthly data)

Source: IMF monthly database.

Real GDP growth in countries from the region
(annual percentage changes, quarterly data)

Source: Eurostat and national statistical offices.
* According to ESA 2010 methodology, except for Turkey and Albania.

Inflation in countries from the region
(annual percentage changes)

Source: Eurostat and national statistical offices.

1.2. Domestic supply

Domestic economy continued growing in the third quarter of 2016, but at a slightly slower pace. Thus, in the third quarter, GDP increased by 2.4% annually, compared to 3.1% in the second quarter. Analyzing growth structure, construction is again the key player in the third quarter, but the growth in value added was significantly lower compared to the previous quarter. Industry recorded favorable movements in the third quarter, where after two quarters of decline, in the third quarter, the value added slightly increased. Regarding the developments in the fourth quarter, most of the available economic sector data for October point to unfavorable movements compared with the third quarter. Notwithstanding these developments in the economy, according to the surveys conducted in the third quarter, the expectations of managers about the situation in the three key economic sectors - manufacturing, construction and retail trade - in the fourth quarter remain favorable.

In the third quarter of 2016, GDP increased by 1.3% quarterly (seasonally adjusted) and by 2.4% annually, which is a small slowdown of growth, compared to the second quarter of the year. Most of the economic sectors registered growth of value added, with the construction making the greatest positive contribution. There were also favorable developments in industry that reported growth of value added annually in the third quarter, despite the decline in the previous two quarters of this year.

	2013	2014	2015	Q1 2016	Q2 2016	Q3 2016		2013	2014	2015	Q1 2016	Q2 2016	Q3 2016
Agriculture	8,6	3,1	2,3	7,8	6,2	4,9		0,8	0,3	0,2	0,6	0,6	0,5
Industry	3,7	11,5	6,9	-6,3	-2,1	2,1		0,6	1,7	1,1	-1,0	-0,3	0,3
Manufacturing	9,6	21,5	0,9	-9,4	-0,8	1,1		1,0	2,1	0,1	-1,0	-0,1	0,1
Construction	12,8	5,1	11,0	6,9	31,4	10,3		0,7	0,4	0,8	0,5	1,9	0,7
Trade and transport	11,1	3,1	2,9	3,7	1,2	0,4		1,9	0,6	0,5	0,7	0,3	0,1
Information and communication	4,8	3,4	18,0	10,5	6,7	5,6		0,2	0,1	0,5	0,3	0,2	0,2
Financial and insurance activities	-1,4	13,5	10,1	9,4	3,0	3,5		0,0	0,4	0,3	0,3	0,1	0,1
Real estate activities	-1,3	0,0	1,0	0,8	-2,2	-1,9		-0,2	0,0	0,1	0,1	-0,2	-0,2
Professional, scientific and technical activitiess	9,6	6,3	5,5	7,5	8,9	10,9		0,3	0,2	0,2	0,2	0,3	0,3
Public administration	-7,5	3,2	4,0	4,5	1,0	-0,1		-1,1	0,4	0,5	0,6	0,1	0,0
Other service activities	12,7	11,5	4,6	6,0	2,9	1,0		0,3	0,3	0,1	0,2	0,1	0,0
Gross Domestic Product	**2,9**	**3,6**	**3,8**	**2,6**	**3,1**	**2,4**		**2,9**	**3,6**	**3,8**	**2,6**	**3,1**	**2,4**

Source: State Statistical Office and NBRM calculations.

Growth in construction activity continued in the third quarter, when construction remained a driver of the GDP growth. However, growth slowed down both on annual and quarterly basis[2]. In terms of structure, according to data on the value of completed construction works, most of the growth is likely a reflection of increased activity in the construction of residential buildings. Government capital investments recorded solid growth as well. The

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[2] Seasonally-adjusted.

Contruction in 2016-Q3
(real annual growth rates, in %)
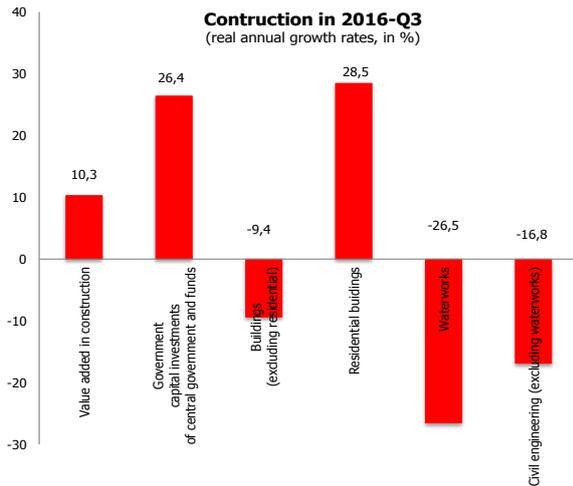
Source: State Statistical Office and Ministry of finance.

Construction and expectations of the construction sector

Expectations for the total orders (agreements) during the next 3 months
Assessment of the present business situation in the business entities
Construction, real growth rates, in % (right scale)

Source: State Statistical Office.

Trade 2016 - Q3
(real annual growth rates, in %)
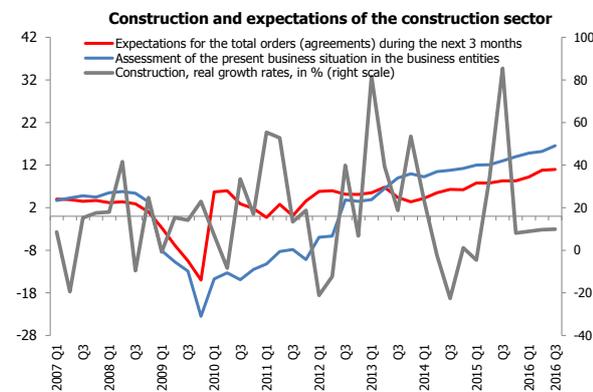
Source: State Statistical Office and NBRM.

results of business tendency surveys in construction[3] are in line with the performance of this sector. Namely, compared to the same period last year, respondents' assessments of the current business and financial situation in companies are more favorable, and emphasize significant alleviation of the limiting effects of the labor costs[4] and the lack of qualified staff. On the other hand, factors whose limiting effects increased in the third quarter include insufficient demand and competition in the sector. **Construction growth is expected to slow down in the fourth quarter,** taking into account the decrease in the value of completed construction works in October. Despite these developments, the expectations of company managers in the construction sector in terms of employment and total number of orders for the fourth quarter remained favorable.

Trade sector continued registering favorable trends in the third quarter[5], at slightly faster pace that primarily reflects the higher turnover in retail trade, as well as the growth in the trade in motor vehicles. In wholesale trade, after a slight decrease in the previous quarter, in the third quarter, the turnover remained unchanged. Business Tendency Survey in retail trade[6] conducted in the third quarter also confirms the improved performances in the retail trade. The survey results show assessments of favorable trends in the current business and the financial standing of companies. Moreover, managers pointed to the smaller limiting effect of the production costs as factors that influenced the activity in this sector. On the other hand, managers single out increased offer factor as well as increased competition as factors whose limiting influence grew. **In the fourth quarter, there are no expectations for major changes in the trends in trade.** Namely, in the period from October to November, there was increased value of total trade turnover driven primarily by retail trade, with a small growth in the turnover in wholesale trade. The accelerated growth of retail trade corresponds to the favorable expectations of managers regarding

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[3] Refers to the surveys conducted in the third quarter of 2016.

[4] The balance of responses on the question related to increased labor costs as a limiting factor for the construction activity has decreased from 14.3 in the third quarter 2015 to 8.3 in the third quarter of 2016, i.e. significantly lower number of firms identified the increased labor costs as a limiting factor.

[5] The analysis of trends in trade uses trade turnover data.

[6] SSO's Business Tendency Survey in retail trade for the third quarter of 2016. The balance of responses is the difference between weighted positive and negative responses of corporate managers. The balance is designed such as to show the movement of the observed economic indicator rather than its true size, i.e. it provides qualitative rather than quantitative (numerical) data from corporate managers.
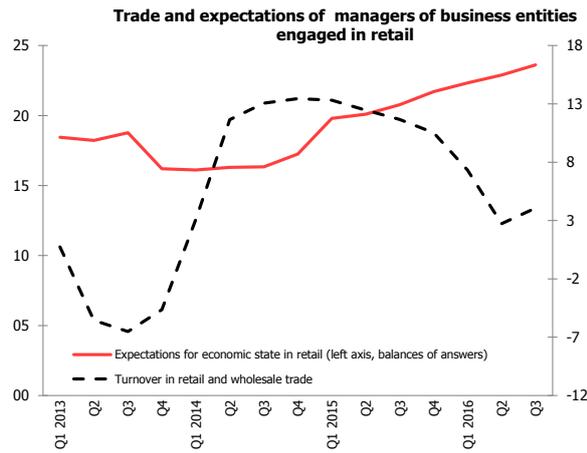
Trade and expectations of managers of business entities engaged in retail

Expectations for economic state in retail (left axis, balances of answers)
Turnover in retail and wholesale trade

Source: State Statistical Office and NBRM.

Transports and communications in 2016 - Q3
(real annual growth rates, in %)

Source: State Statistical Office.

Contributions of individual industries to the total industrial production, annual rate of change (in percentage points)

2Q 2016
3Q 2016
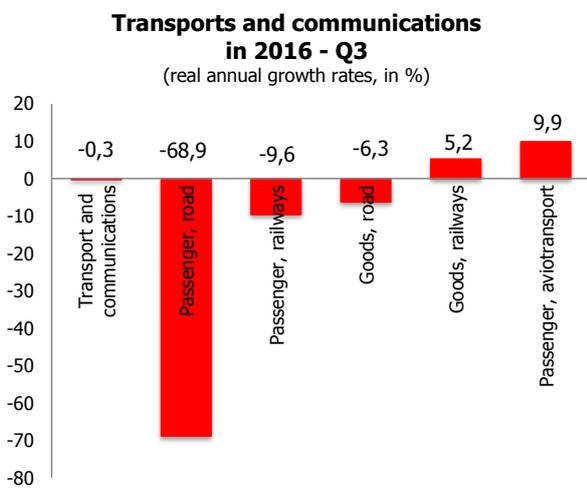
Source: State Statistical Office and NBRM.

the business situation in the sector, orders and employment growth in the next three to six months[7].

Analyzing the developments in transport and communication sector, the indicators for the third quarter of the year point to a deterioration amid adverse movements in the road and rail transport[8] (drop in the number of kilometers passed). Somewhat better shifts were registered in air traffic, due to the growing number of passengers and goods in the third quarter. **The small number of high frequency indicators makes it difficult to have precise assessment of the developments in the transport and communications sector in the fourth quarter,** although the currently available data point to a decline in this activity, given the high annual decline in all types of rail traffic.

The third quarter registered annual and quarterly increase of value added in the industrial sector. Manufacturing is the main generator of growth of industrial output. Analyzing individual manufacturing sectors, the production of motor vehicles made the highest contribution to the growth, followed by other sectors mainly those that include foreign capital facilities (manufacturing of electrical equipment and production of machinery and equipment). Besides the manufacturing industry, the third quarter also registered a growth in the sector of supply of electricity, gas, steam and air conditioning despite the negative developments in this sector over the last two quarters of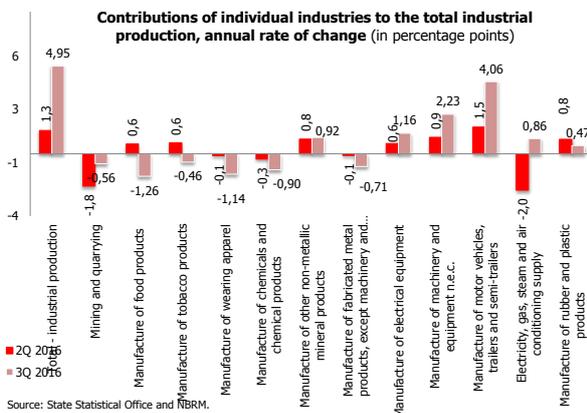 the year. The improved performance of manufacturing industry has also been confirmed by the results of the **Business Tendency Survey in the manufacturing industry[9]**, where managers assess the economic standing of their businesses as more favorable, amid higher assessment of the output volume in the last three months and the higher average capacity utilization in the third quarter of the year. The good performances of companies in this sector are related to the reduced influence of some limiting factors, such as the lack of skilled labor and insufficient demand. On the other hand, respondents' expectations show larger limiting effect of the uncertain economic environment and the

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[7] SSO's Business Tendency Survey in retail trade for the third quarter of 2016.
[8] The relatively high decline in rail traffic is associated with the high base effect of last year, when in the second half of the year, the demand for this type of service increased as a result of the refugee crisis.
[9] Refers to the surveys conducted in the third quarter of 2016.

Industry, capacity utilization and managers' expectations for production volume
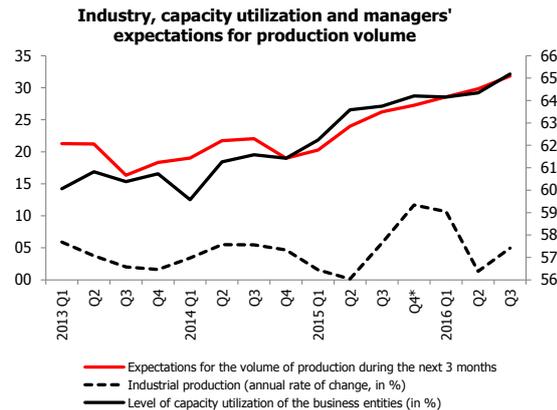
Source: State Statistical Office.
* average of expectations for October and November of 2015.

— Expectations for the volume of production during the next 3 months
---- Industrial production (annual rate of change, in %)
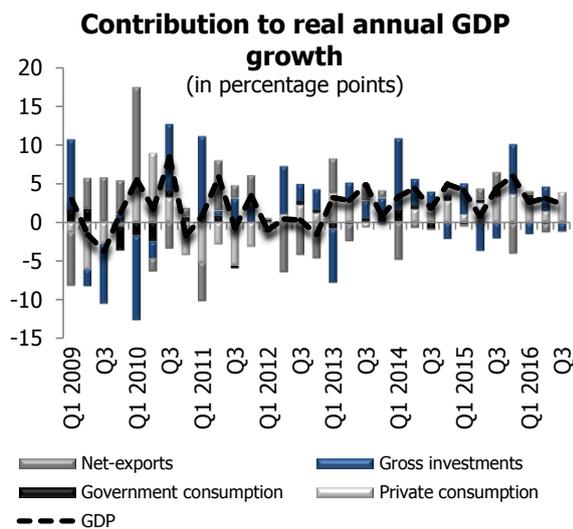— Level of capacity utilization of the business entities (in %)

competitive imports.

Contrary to the favorable developments in the industrial sector in the third quarter, the data for the period from October to November indicate an annual decline in industrial output of 4.3%. Analyzing by sector, a significant part of the decline reflects reduced production in some of the traditional activities due to the high base effect of the previous year. On the other hand, the sector of export-oriented facilities still registers increased production. Also, surveys show retention of favorable expectations regarding the developments in this sector which in turn leads to possible improvement of the situation in the sector in the last month of the quarter.

1.3. Aggregate demand

Observing demand components, annual GDP growth was 2.4% in the third quarter, which is completely due to the domestic demand, with small negative contribution of net exports. Observing individual components, export demand registered the highest annual growth and made the largest positive individual contribution to the growth of economic activity for the third quarter in a row. Export growth was largely attributed to the activity of new industrial facilities and the gradual growth of foreign effective demand. Only the household consumption as a component of domestic demand increased annually, while gross capital formation and public consumption registered unfavorable developments. Strong growth in private consumption in the third quarter was supported by the favorable labor market developments, the environment of low consumer prices and further lending to households.

Contribution to real annual GDP growth
(in percentage points)

Net-exports
Gross investments
Government consumption
Private consumption
GDP

Source: State Statistical Office and NBRM calculations.

In the third quarter of 2016, GDP increased by 1.3% compared to the previous quarter (seasonally adjusted), and by 2.4% compared to the same period last year, at a slightly slower pace compared to that in the previous quarter. The structural analysis shows that the growth in the third quarter reflects higher domestic demand, with a small negative contribution of net exports. Exports made the greatest individual positive contribution to growth. As before, these favorable developments in the export sector are mainly due to the activity of the new production facilities and the gradual increase in foreign effective demand. Analyzing domestic demand components, only the private consumption increased, at a strong pace, while public consumption and gross capital formation registered an annual decline in the third quarter. Growth in consumer spending and export demand affected imports that grew rapidly during the third quarter.

13

Domestic Demand and Net-Exports
(contributions in nominal annual growth,
in persentage points)
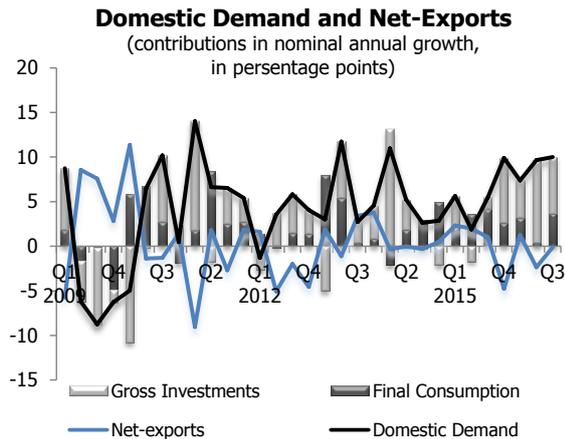
Source: State Statistical Office and NBRM calculations.

	Real annual growth rates (%)						Contributions to real annual growth (in p.p.)					
	2013	2014	2015	2016-Q1	2016-Q2	2016-Q3	2013	2014	2015	2016-Q1	2016-Q2	2016-Q3
Private consumption	1,9	2,2	3,7	4,1	2,0	5,6	1,4	1,6	2,6	2,7	1,3	3,8
Government consumption	0,5	3,0	2,1	4,7	-1,4	-0,4	0,1	0,5	0,4	0,8	-0,2	-0,1
Exports of goods and services	6,1	16,5	6,7	9,1	7,4	15,6	2,8	7,2	3,2	4,0	3,6	8,0
Imports of goods and services	2,2	14,1	5,2	5,8	7,1	13,3	-1,4	-8,7	-3,4	-3,6	-4,7	-8,2
Gross capital formation	0,5	10,7	3,6	-4,4	11,5	-4,0	0,1	3,1	1,1	-1,4	3,1	-1,2
Domestic demand	*1,3*	*4,4*	*3,5*	*1,7*	*3,8*	*2,5*	*1,6*	*5,2*	*4,0*	*2,1*	*4,2*	*2,6*
*Net exports**	*-6,9*	*8,0*	*1,0*	*-2,9*	*6,1*	*1,3*	*1,3*	*-1,5*	*-0,2*	*0,5*	*-1,0*	*-0,2*
Statistical discrepancy							*0,0*	*0,0*	*0,0*	*0,0*	*0,0*	*0,0*
GDP	**2,9**	**3,6**	**3,8**	**2,6**	**3,1**	**2,4**	**2,9**	**3,6**	**3,8**	**2,6**	**3,1**	**2,4**

*decrease represents lower deficit
Source: SSO and NBRM calculations.

1.3.1. Private consumption
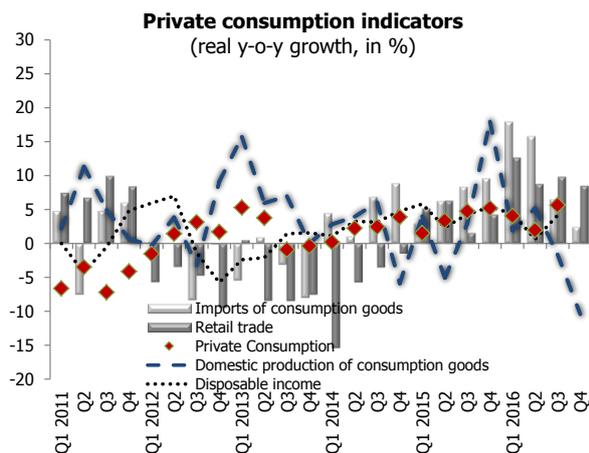
Private consumption indicators
(real y-o-y growth, in %)

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

In the third quarter of 2016, household consumption registered a quarterly increase of 4.3% (seasonally adjusted) and stronger real annually growth of 5.6%. The strong annual consumption growth reflects favorable trends in the fundamentals of consumption. Namely, the third quarter of the year recorded a further increase in the bill of wages and pensions but with slightly weaker intensity compared to the second quarter, and a solid growth in consumer loans. Inflows of private transfers from abroad also increased after the fall in the previous quarter, with additional incentive of the lower consumer prices that have positive effect on consumer optimism of households. Considering the dynamics, the annual growth rate is significantly higher compared to the previous quarter. This enhancement of private

Consumer confidence indicator
(in standard deviations from the mean)

- Financial situation
- General economic situation
- Unemployment expectations
- Savings
- Confidence Indicator
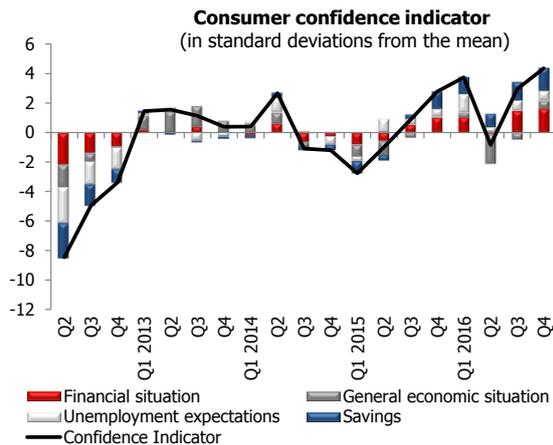
Source: European Commission and NBRM's calculations.

Expenditures for Wages and salaries and Goods and services
(y-o-y change, in %)

- Wages (nominal)
- Wages (real)
- Goods and services (nominal)
- Goods and services (real)

Source: Ministy of Finance and NBRM calculations.
The calculations include expenditures of Consolidated Budget of Central Government and Funds, deflated by CPI.

consumption is also confirmed by the results of consumer confidence surveys[10], which point to increased consumer optimism primarily due to the favorable expectations about the unemployment and the financial landscape. In the third quarter, the growth of retail accelerated which also confirms the enhancement of consumption.

The growth in private consumption is expected to continue in the last quarter of 2016[11]. This is suggested by the growth of real wages and pensions, as components of disposable income and the stable growth of household lending, which according to the Bank Lending Survey[12], corresponds to the banks' assessments to further ease the overall credit conditions to households and a small increase in demand for loans in this period. As for the remaining high-frequency data on private consumption, additional positive signals also come from the retail trade, the imports of consumer goods (although slower compared to the previous quarter), as well as from the net private transfers. Same as the short-term indicators, the signals from the surveys of consumer confidence[13], conducted in the fourth quarter, indicate favorable expectations in terms of unemployment and the financial standing of consumers.

1.3.2. Public consumption

In the third quarter of 2016, public consumption recorded a quarterly increase of 1.1% (seasonally adjusted) and a small real annual fall of 0.4%. The fall in public consumption is due to the decreased expenditures for goods and services, while wage expenses for the employees in the public sector and health care transfers[14] increased.

The data for the period October-November 2016 indicate an annual increase in public spending in the last quarter, given the increased expenditures for goods and services, cost of public sector wages and health care transfers.
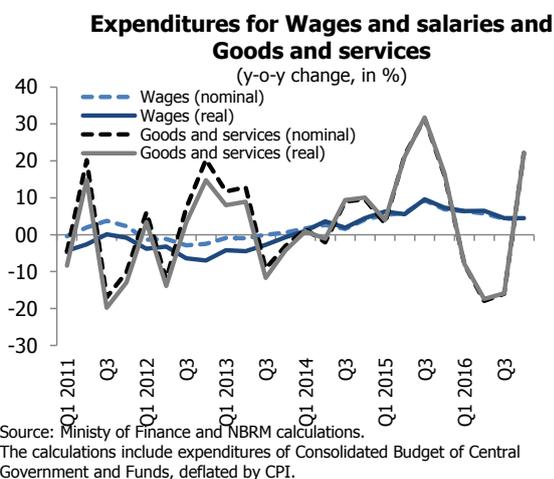
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[10] European Commission's Consumer Survey as of September 2016.
[11] The analysis of net private transfers was made using October data. Other factors have been analyzed as of November.
[12] NBRM's Lending Survey, January 2017.
[13] European Commission's Consumer Survey as of November 2016.
[14] Most of these assets relate to expenditures on goods and services.

Gross investment and indicative series
(real annual growth rates, %)
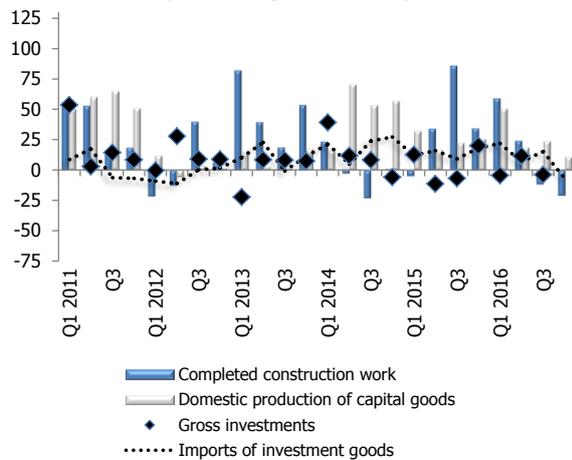
Source: State Statistical Office, Ministry of Finance and NBRM calculations.

Gross investments and determinants
(nominal annual growth rates, %, only for FDI in milion denars)
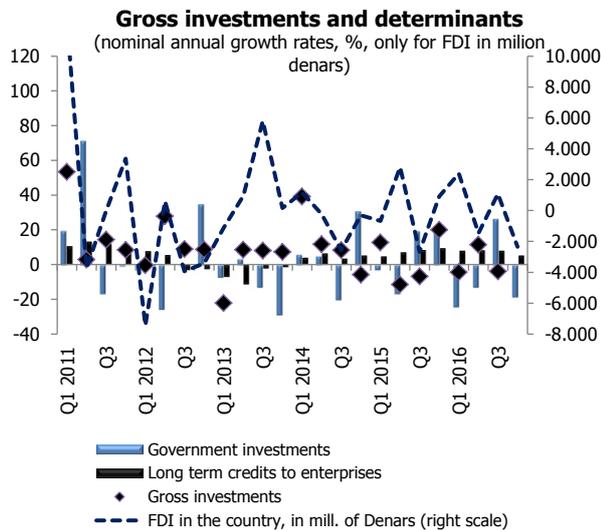
Source: State Statistical Office, Ministry of Finance and NBRM calculations.

1.3.3. Investment consumption

In the third quarter of 2016, gross capital formation registered a quarterly decline of 5.4% (seasonally adjusted) and an annual decline of 4%, following the solid growth in the previous quarter. On the other hand, in the third quarter, there was a growth of value added in the construction sector, and higher import of capital goods. Also, shifts in most short-term investment indicators are generally favorable. Thus, domestic production of capital goods, bank's corporate loans and inflows of foreign direct investment, as well as government expenses for capital investments increased in the third quarter.

Signals from the available high frequency indicators give divergent directions regarding the movement[15] of gross capital formation in the last quarter of 2016. Thus, completed construction works in October 2016 registered an annual decline due to the high base effect. However, viewed quarterly, construction activity is expected to have a positive impact on total investment, taking into account the more optimistic expectations of managers in the construction sector in terms of total orders and number of employees[16]. There is also an annual decline in the short-term indicators of investment in import of investment goods, inflows of foreign direct investment, and in government expenses for capital investments. On the other hand, the funding environment is also favorable given the solid growth in long-term corporate lending by banks. As shown in the survey, this is in line with the banks' assessments for increased demand for corporate loans amid eased credit standards in this period[17]. The growth of domestic production of capital goods and the increase in capacity utilization in the manufacturing industry[18] in the period from October to November indicate potentially positive developments in investments in the fourth quarter.

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[15] Data on completed construction works and foreign direct investments have been analyzed as of October, while for the other indicative categories, the cut off date is November.
[16] Refers to the surveys conducted in the third quarter of 2016.
[17] NBRM's Lending Survey, January 2017.
[18] Survey conducted in November 2016.

Export and Import nominal changes
(y-o-y, in milion denars)

Source: State Statistical Office .

Iron and steel export, base metals production and price of nickel
(index, 2010=100)
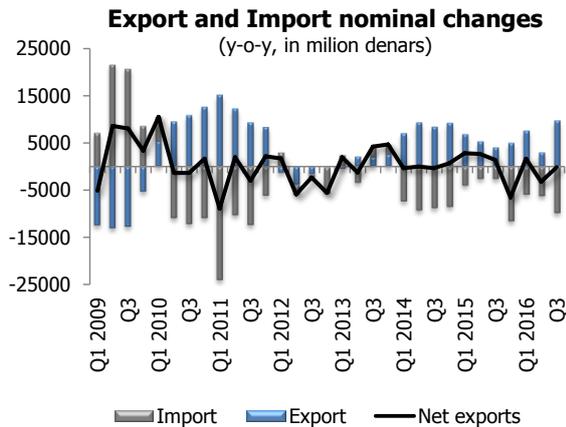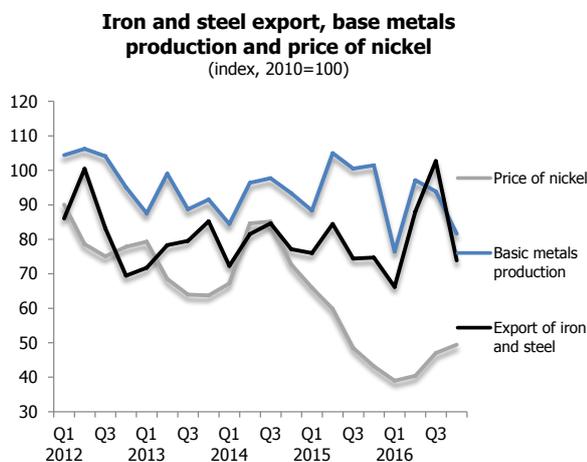
Source: State Statistical Office, IMF monthly database and NBRM calculations.

1.3.4.   Net external demand

Net exports made negative contribution to the growth of economic activity in the third quarter of 2016, which is still lower compared to the previous quarter. Real exports of goods and services recorded an annual growth of 15.6% (acceleration of the annual growth pace) amid a quarterly increase of 6.8%, seasonally adjusted. The annual growth is mainly a result of the increased exports of new production facilities. On the other hand, the unfavorable metal market conjuncture associated with the still weak global demand for metals and the low metal price continued having an adverse effect on the export activity of the metal industry. In the third quarter, **import of goods and services** in real indicators increased by 13.3% on an annual basis, which is a significant acceleration compared to the pace recorded in the previous quarter, amid a quarterly increase of 5.4%, seasonally adjusted.

Trade deficit is expected to further narrow in the last quarter of 2016. Namely, nominal foreign trade data for the period from October to November 2016 indicate a narrower deficit in the fourth quarter of 2016 due to the increased exports of goods, amid almost unchanged imports.

1.4. Employment and wages

The favorable labor market developments continued in the third quarter of the year. Thus, the number of employees increased by 2.3%, while the unemployment rate was 23.4%, which a new record low. Also, the aggregated signals from business tendency surveys show stronger optimism about employment for the next three months. Additionally, in the third quarter the number of the vacancies continued to gradually decrease, which observed through the aforementioned positive signals of the labor market may point to potential improvement of its efficiency. On the labor supply side, developments are unfavorable, amid further narrowing of the total economically active population, but however a gradual deceleration of the decline pace is noticeable. Competitiveness indicators point to maintaining a similar state as in the previous quarter, i.e. labor productivity growth (even though somewhat slower compared to the previous quarter), followed by the unit labor cost growth.

The employment growth continued in the third quarter of 2016 at a slower annual growth pace. Thus, the number of employees

Employment and unemployment rate
(in %)

employment rate (not seasonaly adjusted)

Employed by economic status
(y-o-y changes, persons)

unpaid family worker
self-employed
employer
employed
total
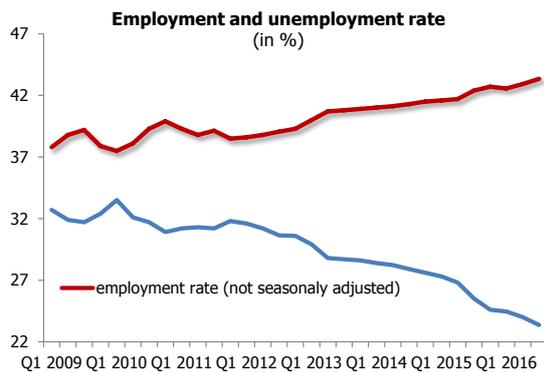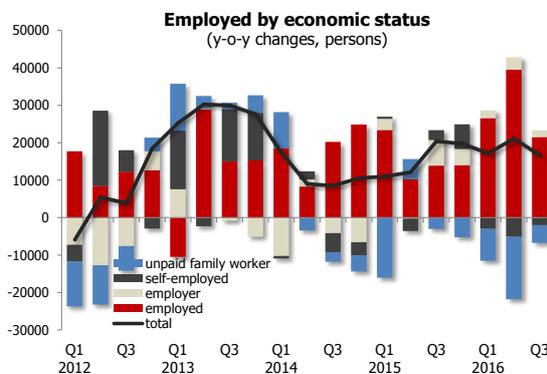
increased by 2.3% annually and 0.6%[19] quarterly (compared to an annual growth of 3% and a quarterly growth of 0.9% in the second quarter of 2016). Increase of the number of employees, on annual basis, is registered in most sectors, whereby trade, "water supply, waste water removal, waste management and environmental sanitation", administrative and support services, as well as health had the highest contribution to the growth. These activities cumulatively explain around 70% of the total growth of employment in the third quarter. Decrease in employment is registered in agriculture, mining, manufacturing industry, transport and storage and "information and communications". In terms of the economic status[20], same as in the previous quarter, most employments are in the "employed population" category.

In the third quarter of 2016, the employment rate amounted to 43.4%, which is an annual growth of 1 p.p. Considering the dynamics, the shift in the third quarter is a slight deceleration of the annual growth. In terms of shifts in labor demand in the last quarter of the year the **aggregates signals from the business tendency surveys[21] indicate a continuation of the favorable trends of stronger optimism among company managers for the period ahead.** In the third quarter the rate of vacancies[22] was reduced to 1.3% (compared to 1.4% in the second quarter of 2016 and 1.6% in the third quarter of 2015). Bearing in mind that the rate of vacancies is an indicator of uncovered labor demand, as well as of the potential mismatches between the demanded profiles and those available in the labor market in the given moment (skill mismatches)[23], the decrease of this indicator could mean improvement of the labor market efficiency. However, bearing in mind the magnitude of the change, as well as the short period, it is still early to form more accurate

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[19] The analysis of quarterly dynamics of employment, unemployment and total economically active population was made using seasonally adjusted data.

[20] The classification by economic status applies to the following groups: **employers** - persons who operate their own business entity or engages independently in their own shop, or farm owners who hire other employees; **employees** - persons who work in government institutions, business entities in public, mixed, cooperative and undefined ownership or for private employer; **own-account workers -** persons who operate their own business entity, company, engage independently in their own business and work on a farm in order to generate income, while not hiring other employees; **unpaid family workers** - persons who work without pay in a business entity, shop or farm (owned by a family member).

[21] Source: State Statistical Office, business tendency surveys in manufacturing industry (October 2016), construction (third quarter of 2016) and trade (third quarter of 2016).

[22] The rate of vacancies is defined as the ratio between the number of job vacancies and the total number of jobs, i.e. both vacant and occupied jobs.

[23] Source: Statistics Explained (http://epp.eurostat.ec.europa.eu/statisticsexplained/) - 15/12/2016.

Labour force, inactive population and participation rate
(in %)

activity rate
labour force (y-o-y changes, right scale)
Inactive population (y-o-y changes, right scale)
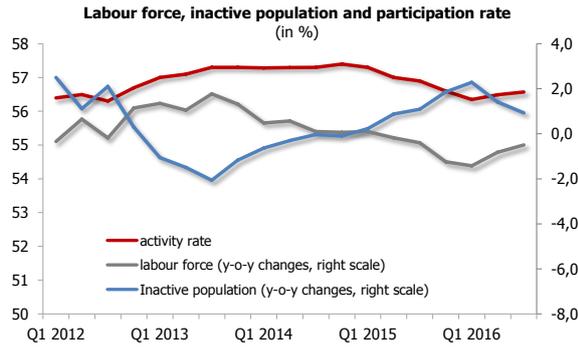
Source: State Statistical Office, Labor Force Survey.
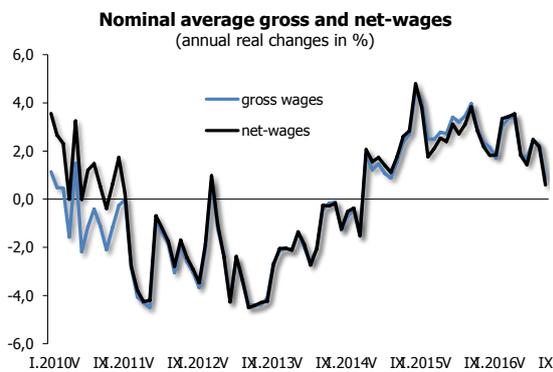
Nominal average gross and net-wages
(annual real changes in %)

gross wages
net-wages

Source: State Statistical Office.

Labour productivity
(contributions to the annual growth rate, in p.p.)

Services
Industry
Agriculture
Total
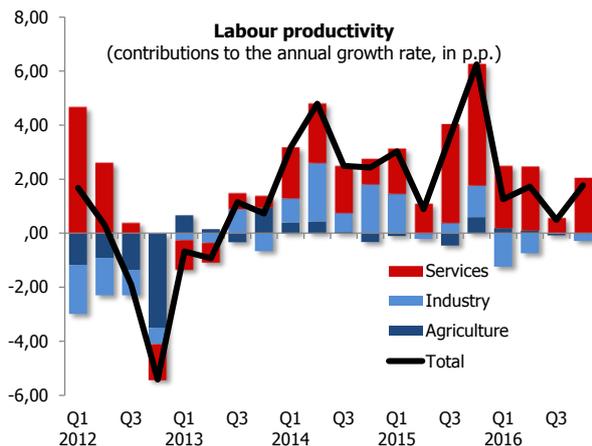
Source: State Statistical Office and NBRM calculations

assessments in this regard.

As regards to the shifts on the labor force side, the negative trend continued in the third quarter, but however a deceleration of the decrease pace is registered. Thus, the total active population in the third quarter decreased by 0.5%, on an annual basis, which is a decrease twice as low compared to the registered in the first half of the year (annual decrease rate of 1.1%). Similar developments are also registered in the activity rate which in the third quarter was 56.6%.

The higher demand in the third quarter of the year, amid reduced labor supply led to a further decline in unemployment. Thus, the number of unemployed persons in the third quarter decreased by 8.7% on an annual basis, which is somewhat slower pace compared to the previous quarter, while the unemployment rate positioned itself at a level of 23.4% (annual and quarterly decline of 2.1 p.p. and 0.6 p.p., respectively).

The average wages paid in the third quarter registered an annual growth of 1.6% and 1.7% (net and gross wages), which is a retention of the annual growth pace compared to the previous three-month period. The growth is distributed in most economic activities, with agriculture, construction, trade, administrative and support services and public administration and defense standing out as activities with the highest wage growth. Compared to the previous quarter, the nominal net and gross wages remained almost unchanged. **In the third quarter, amid small decrease of consumer prices, the real annual wage growth is slightly higher than the nominal** (1.7% in net and 1.9% in gross wages).

Labor productivity[24] in the third quarter increased by 0.8% which compared to the previous quarter of the year represents a deceleration of the growth pace. Such shift is mostly due to the significant decrease of the labor productivity in construction, amid slower growth added value compared to the growth of unemployment. **On the other hand, the annual growth in unit labor costs in the**

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[24] Total productivity is calculated as weighted sum of the calculated productivity on an individual sector level. Within each sector productivity is calculated as a ratio between the added value in that sector and the number of persons employed.

Unit labour cost
(contributions to the annual growth rate, in p.p.)
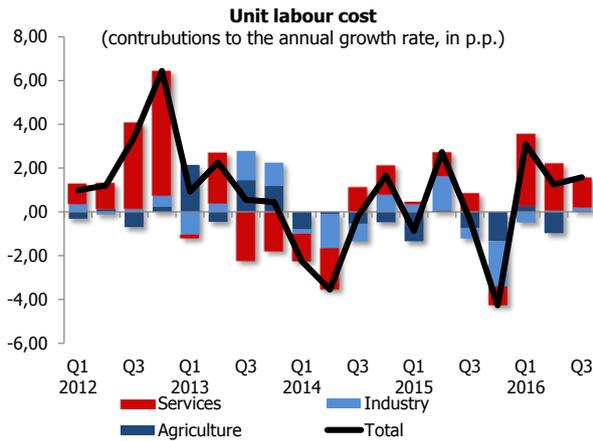
Source: State Statistical Office and NBRM Calculations

third quarter was similar to the previous quarter and amounted to 1.2%. Thus, unit labor costs increased in the services sector, a small increase was also registered in industry, while labor costs in agriculture remained unchanged.

1.5. Inflation

Domestic prices reduction trend was also maintained in the fourth quarter of 2016, when prices were lower by 0.1% on average, on an annual basis. Domestic prices developments reflect lower prices of the food and energy component of inflation, whose decrease continued to decelerate during the last quarter. Such shift in domestic prices of energy is expected bearing in mind the gradual changes in the global environment of primary commodity prices, where gradual annual growth of the world energy prices is registered, after almost two years strong reduction. Core inflation (price component without food and energy) was positive in the fourth quarter of the year and slightly lower compared to the previous quarter. In the first two months of the quarter, producer prices in the domestic market registered a small decline. The Inflation Expectations Survey conducted in September mainly pointed to unchanged inflation expectations relative to the previous quarter. Dynamically speaking, same as in the previous quarter, the respondents expect moderate acceleration of inflation until the end of the year and in 2017.

Inflation and volatility of food and energy
(annual growth rates, in %)
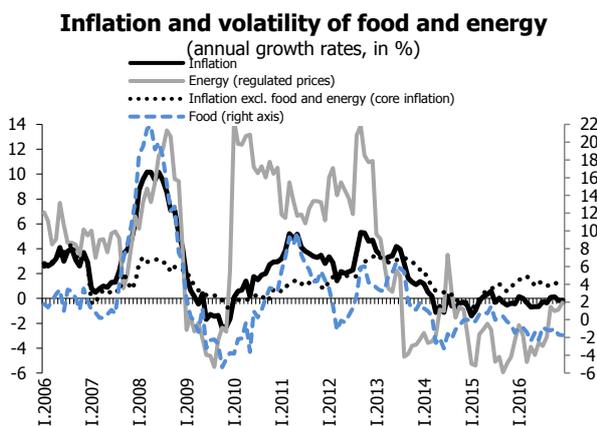
Source: State statistical office and NBRM calculations.

The downward shift of domestic consumer prices continued in the fourth quarter of 2016, when prices declined by 0.1%, annually. Thus, the average price level registers a decline for the sixth consecutive quarter, even though compared to the first half of the year a deceleration of the decrease pace is evident. Analyzed by components, the minor price decline in the fourth quarter is explained primarily by the decline in the food component, and the energy component of the inflation index also contributed to the decline. Lower food prices mainly reflected lower vegetable prices, fruits, grain products and oils, whereas the decline in energy prices is mainly reflected by the lower prices of liquid fuels and lubricants. On the other

Domestic inflation and foreign effective inflation
(annual growth rates, in %)
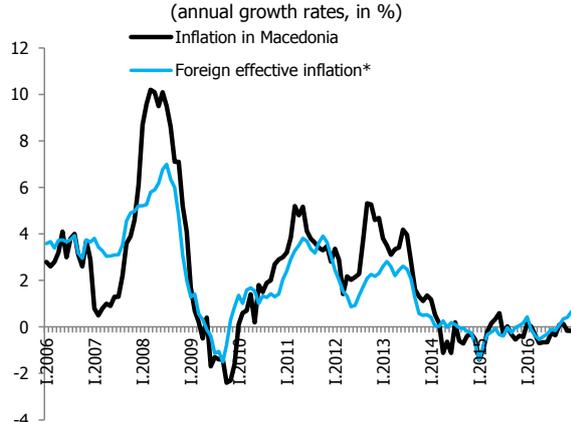
* Foreign effective inflation is calculated as weighted sum of inflations in countries that are major trade partners with Macedonia.
Source: State statistical office, Eurostat and NBRM calculations.

hand, in the fourth quarter, analyzing the major components, the core inflation[25] continues to register an increase with larges contribution made by higher tobacco prices[26]. The sub-indices of inflation which exclude the most volatile prices were maintained in the positive zone. Thereby, total index with excluded energy, liquid fuels and lubricants and unprocessed food points to an annual change of 2.2%, whereas the total index with excluded, energy, fluid oils and lubricants, unprocessed food, tobacco and alcoholic beverages points to an annual increase of 0,1%[27].

Unlike domestic effective inflation, **foreign effective inflation[28] followed an upward trajectory** i.e. is positive in the fourth quarter and amounted to 0.5% compared to the decrease of 0.1% in the previous quarter.

	2015	2016				2016	2015	2016				2016
		Q1	Q2	Q3	Q4			Q1	Q2	Q3	Q4	
Consumer price index - all items	**-0,3**	**-0,1**	**-0,7**	**-0,1**	**-0,1**	**-0,2**	**-0,3**	**-0,1**	**-0,7**	**-0,1**	**-0,1**	**-0,2**
Food	0,1	-1,0	-2,2	-1,1	-1,4	-1,4	0,1	-0,4	-0,8	-0,4	-0,5	-0,5
Energy	-4,1	-3,5	-3,9	-2,5	-0,7	-2,7	-0,6	-0,5	-0,6	-0,4	-0,1	-0,4
Electricity	1,5	-0,4	-0,4	-0,2	-0,2	-0,3	0,1	0,0	0,0	0,0	0,0	0,0
Heat energy	-6,8	-18,3	-18,3	-13,6	-10,8	-15,5	-0,1	-0,1	-0,1	-0,1	-0,1	-0,1
Fuels and lubricants	-16,5	-10,2	-11,8	-8,1	-0,4	-7,7	-0,7	-0,4	-0,4	-0,3	0,0	-0,3
Food and energy (volatile prices)	-1,1	-1,7	-2,6	-1,5	-1,3	-1,8	-0,6	-0,9	-1,4	-0,8	-0,6	-0,9
Core inflation (inflation excl. food and energy)	0,6	1,7	1,5	1,3	1,2	1,4	0,3	0,8	0,7	0,6	0,6	0,7
Overall index excluding energy, liquid fuels and lubricants and unprocessed food (SSO)	-0,1	0,9	0,4	0,1	2,2	0,9						
Overall index excluding energy, liquid fuels and lubricants, unprocessed food, tobacco and alcoholic beverages (SSO)	0,1	1,3	0,8	0,4	0,1	0,7						

Source: State Statistical Office and NBRM calculations.

Volatile (food and energy) and core inflation
(contribution to inflation, in percentage points)
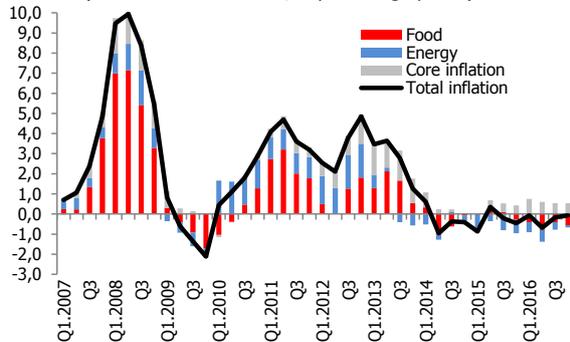

Source: State statistical office and NBRM calculations.

Analyzed the dynamics, in the fourth quarter of the year, the price decline was similar to the previous quarter. Observed by components, a deceleration of the annual decline was registered in the energetic component, due to the gradual increase of the oil prices in the global market. On the other hand, the food price decline deepened in the fourth quarter, a movement which is in line with the newest calculations in the world primary commodity prices. Apart from the lower food and energy prices, the core inflation was maintained in the positive zone, even though the growth is minimally lower compared to the previous quarter. **Thus, the core inflation in the fourth**

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[25] The core inflation calculated by NBRM which is obtained by subtracting the food category (01.1 food) and energy (04.5 electric energy, gas and other fuels and 07.2.2 liquid fuels and lubricants as part of the personal transport equipment) from the total consumer index through using the "null weight" method.
[26] The annual growth of tobacco prices in the fourth quarter is a combination of the flat increase in cigarette prices by five denars per box in March 2016 and the increase in the price of a certain type of cigarettes in June 2016. In July 2016, the cigarette excise additionally 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 change in tobacco prices in the second part of the year did not show any price adjustment.
[27] These indices of consumer prices are processed by SSO and were published for the first time in December 2016.
[28] The calculation of foreign effective inflation derives from the weighted sum of consumer price indices of 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 2010-2012. The calculation of this indicator includes Bulgaria, Germany, Greece, France, Italy, Austria, Slovenia, Croatia and Serbia.

Crude oil and food prices

Commodity Food Price Index, 2005 = 100, includes Cereal, Vegetable Oils, Meat, Seafood, Sugar, Bananas, and Oranges Price Indices (left axis)

Crude Oil (petroleum); Dated Brent, US$ per barrel (right axis)
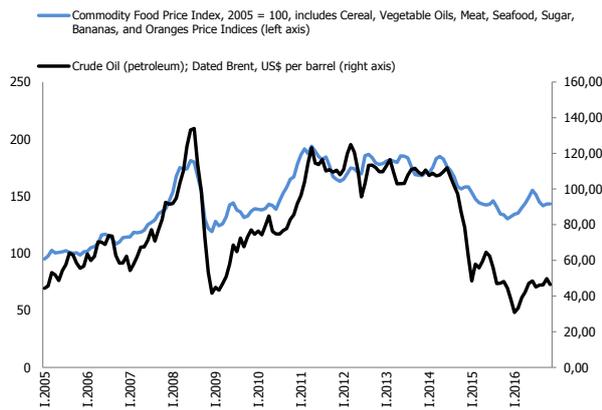
Source: IMF Primary Commodity Prices.

Foreign effective food prices* and domestic food prices
(indices, 2005 =100)

Foreign effective food prices   Domestic food prices
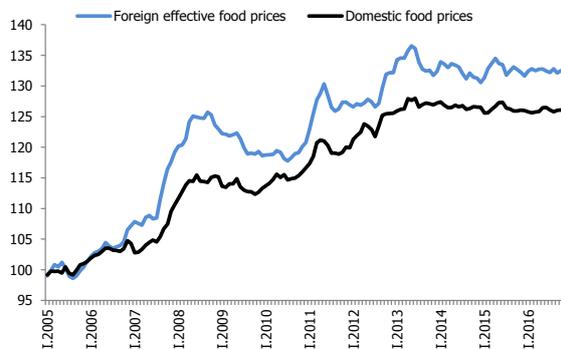
* Foreign effective food prices are calculated as weighted sum of food prices in countries that are major trade partners with Macedonia.
Source: State statistical office, Eurostat and NBRM calculations.

Inflation and industrial producer prices
(annual growth rates, in %)

Inflation
Producer prices
Prices of non durable goods
Prices of produced energy (right axis)
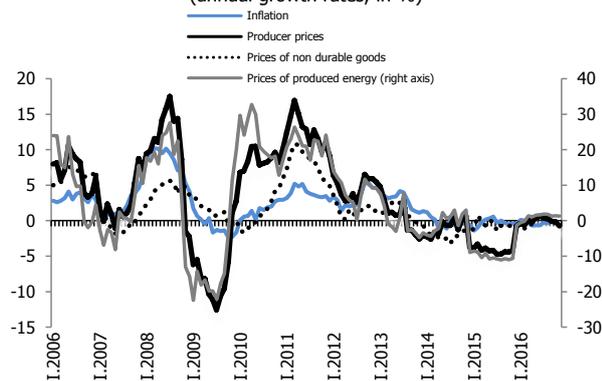
Source: State statistical office and NBRM calculations.

quarter amounted to 1.2% (compared to 1.3% in the third quarter), and the minor shift is mainly explained by the slower growth of shoe prices, decline in IT equipment prices (compared to the growth in the previous quarter) and the accelerated decline in the product prices for personal hygiene. Clothing prices had an opposite impact (where increase was registered compared to the decrease in the previous quarter), home maintenance products prices, tobacco prices, as well as catering services (slower growth is registered in both product categories compared to the previous quarter).

On a quarterly basis, in the fourth quarter of 2016, consumer prices were lower by 0.1%[29] (seasonally unadjusted rate), mainly explained by the lower food prices, amid small increase in commodity prices within the core inflation and energy prices.

The annual increase of producer prices in the domestic market registered in the two previous quarters was halted and prices registered a decline in the fourth quarter of 2016. The annual decline in consumer prices in the first two months of the fourth quarter amounts to 0.5%. Within the index, prices of the manufacturing industry made a negative contribution, as a result to lower food prices and clothing production. On the other hand, producer prices in the area of mining, production of fabricated metallic products, except machinery and equipment and equity products made a positive contribution. **Producer prices registered a quarterly decrease of 0.3%. On the other hand, the annual growth of producer prices which influenced the domestic component of inflation[30] continued during the last quarter** (growth of 0.5%, compared to the growth of 0.9% in the previous quarter)**.** On a quarterly basis[31], these prices registered a slower decline of 0.2%, compared to the decline of 0.6% in the previous quarter. Such shifts of these producer prices generally correspond with the slower annual decline of consumer prices in the second half of the year. Even though the shifts are moderate, the continuation of such trends could bring to certain pressures in the upward direction on total consumer prices in the following period.

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[29] Seasonally adjusted quarterly growth rate was negative and amounted to -0.2%.
[30] Consumer goods (durable and non-durable) and energy.
[31] The quarterly growth has been calculated using seasonally adjusted data.

Factors affecting consumer prices
(indices, 2011=100)
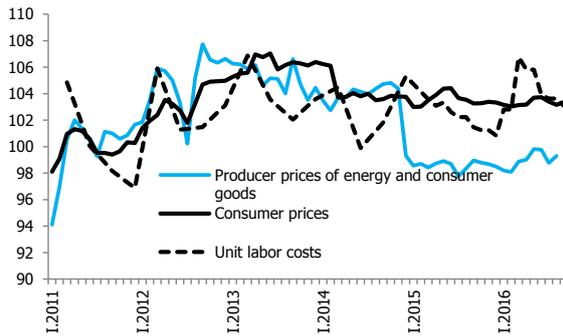
Source: State statistical office and NBRM calculations.

In the third quarter of 2016, unit labor costs registered a minimally higher growth of 1.2% on an annual basis compared to the previous quarter, when an annual growth of 1.1% was registered. Considering the estimates for a positive output gap[32], the growth of labor costs indicates potential upward pressures on prices of final products through this channel in the future period.

Box 1: Inflation Expectations Survey

Chart 1. Normal distribution of answers of the respondents

Survey conducted in December 2016

- rise faster than at present
- rise at the same rate
- rise more slowly
- stay at their present level
- go down

Survey conducted in September 2016

- rise faster than at present
- rise at the same rate
- rise more slowly
- stay at their present level
- go down
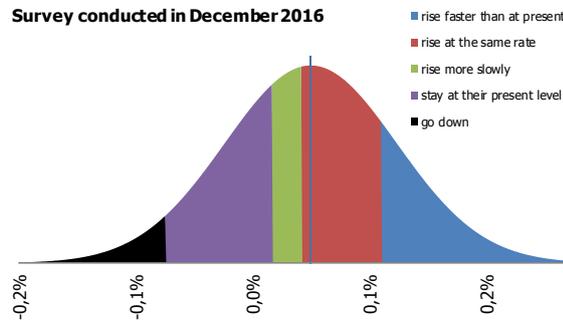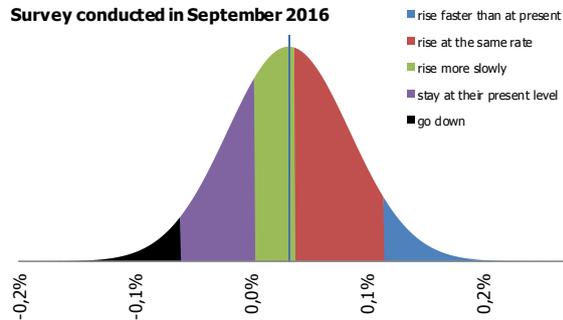
Inflation Expectations Survey includes three groups of respondents: economic analysts, companies, and financial institutions. The questionnaire contains two questions to measure inflation expectations, one qualitative and one quantitative in nature. For the first question on inflation expectations, the respondents indicate the direction and extent of price changes compared with the change in the previous 12 months[33]. Carlson and Parkin (1975) probability approach has been used for quantification of qualitative answers, which assumes that amid a sufficiently large number of respondents, the expected change in prices is normally distributed among the population. The second question requires from the respondent to quantify precisely the expected average rate of change of prices in the next two years[34]. The overall expected rate is calculated as a simple average of the responses of all participants. The resulting indicator is useful for obtaining indications for the direction of the respondents' expectations.

The Inflation Expectations Survey was conducted in December 2016[35]. Same as in the previous survey cycle, **the average inflation rate for the previous 12-month period[36]**

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[32] The NBRM assessments show that domestic production is above the potential level (positive output gap) in the second half of 2016.

[33] The qualitative question of expectations reads as follows: "Compared with the past 12 months, how do you expect consumer prices to change in the next 12 months? a) will have a faster growth; b) will grow at the current pace; c) will grow at a slower pace; d) will remain almost unchanged; e) will decrease; f) it is difficult to determine"

[34] The quantitative question reads as follows: "What are your expectations/forecasts for the average inflation rate for 2017 and 2018?".

[35] The percentage of responsiveness to the Survey conducted in June was 29.2%, which compared to the previous quarter, represents an increase of responsiveness. Analyzed by group of respondents, the financial institutions' responsiveness is 55.6%, followed by companies with 27.2% and economic analysts with 25.4%.

[36] Refers to the period December 2015 to November 2016.

remained in the negative zone[37]. The results of the survey indicate unchanged inflation expectations relative to the previous survey, i.e. as in September, respondents expect inflation to be around 0% in the next 12-month period. Expectations for the inflation rate of around 0% are common for all three groups of respondents (economic analysts, companies, and financial institutions).

In terms of the quantitative question on the expected rate of inflation for 2017 and 2018, the respondents' inflation expectations for 2017 are by 0.2 percentage points lower compared to the previous survey. Respondents expect the inflation to accelerate in 2018 compared to 2017.

1.6. Balance of Payments[38]

In the third quarter of the year, the current account balance recorded a surplus, which is a common seasonal development encouraged by the favorable shifts in the balance of trade of goods and services in secondary income. Unlike the previous quarter, when the balance of the secondary income deteriorated on an annual basis, the same stagnated in this quarter due to the political crises effects. These developments are favorable and point to the exhaustion of the negative effects from the political crisis present in the second quarter of 2016. Observed cumulatively, the current account registers a moderate deficit since the beginning of the year, which is still higher than in the same period of the previous year. The main factors of such shifts are the decrease of surplus of the secondary income (caused by the unfavorable events on the domestic political environment in the second quarter of the year), as well as moderate higher deficit in the primary income. In the financial account, during the third quarter, high net inflows were registered, mostly due to the net inflows in portfolio investments of the government, i.e. by issuing the fifth Eurobond. Higher net inflows were also registered in long-term loans, primarily due to the borrowing of the public corporations for infrastructure projects, while net outflows were registered in currencies and deposits, as well as trade loans and advances. Bearing in mind these developments in individual components of the balance of payments, in the third quarter foreign reserves registered a high growth.

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[37] In conditions of a negative price growth, the interpretation of the results of the survey can be blurred, and therefore, it is necessary to change the method of calculation of the indicator for inflation expectations. Thus, in the procedure for quantification, the negative rate is replaced with the last positive growth rate. This is the way to avoid the contradictory responses from the survey that assume a positive price growth. Taking into account that changes in the method are of a purely technical nature, the quantification of qualitative answers for the expected rate of inflation in periods of negative inflation should be taken with caution, while the indicator for inflation expectations as approximate.

[38] Starting from the Quarterly Report October 2014, the analysis of the movements in the balance of payments is based on data compiled under the *Manual on the Balance of Payments and International Investment Position, sixth edition (IMF, 2009) (IMF, 1993).* For more information on the methodological changes, visit the NBRM website (http://nbrm.mk/WBStorage/Files/Statistika_Informacija_za_promenite_vo_platniot_bilans_megunarodnata_investiciska_pozicija_i_nadvoresniot_dolg_koisto_proizleguvaat_od_primenata_na_novite_megunarodni_statisticki_standardi.pdf).

	2015					2016					2015					2016				
	Q1	Q2	Q3	X	I-X	Q1	Q2	Q3	X	I-X	Q1	Q2	Q3	X	I-X	Q1	Q2	Q3	X	I-X
	euro mil.										% GDP									
I. Current account	**-62**	**-97**	**114**	**-42**	**-87**	**-42**	**-199**	**130**	**-12**	**-122,4**	**-0,7**	**-1,1**	**1,3**	**-0,5**	**-1,0**	**-0,4**	**-2,1**	**1,4**	**-0,1**	**-1,3**
Goods and services	**-319**	**-388**	**-280**	**-151**	**-1.137**	**-293**	**-432**	**-265**	**-118**	**-1.108**	**-3,5**	**-4,3**	**-3,1**	**-1,7**	**-12,5**	**-3,1**	**-4,5**	**-2,8**	**-1,2**	**-11,5**
Credit	988	1095	1.160	401	**3.643**	1.103	1.149	1.341	416	**4.009**	10,9	12,1	12,8	4,4	**40,2**	11,5	12,0	14,0	4,3	**41,7**
Debit	1306	1482	1.439	552	**4.780**	1.397	1.581	1.606	533	**5.117**	14,4	16,4	15,9	6,1	**52,8**	14,5	16,5	16,7	5,5	**53,2**
Goods	-427	-440	-419	-169	**-1.455**	-409	-508	-417	-137	**-1.470**	-4,7	-4,9	-4,6	-1,9	**-16,1**	-4,3	-5,3	-4,3	-1,4	**-15,3**
Services	109	53	139	18	**318**	116	75	152	19	**362**	1,2	0,6	1,5	0,2	**3,5**	1,2	0,8	1,6	0,2	**3,8**
Primary income	**-70**	**-74**	**-70**	**-24**	**-237**	**-90**	**-88**	**-89**	**-31**	**-298**	**-0,8**	**-0,8**	**-0,8**	**-0,3**	**-2,6**	**-0,9**	**-0,9**	**-0,9**	**-0,3**	**-3,1**
Secondary income	**327**	**364**	**464**	**132**	**1.287**	**342**	**321**	**485**	**137**	**1.284**	**3,6**	**4,0**	**5,1**	**1,5**	**14,2**	**3,6**	**3,3**	**5,0**	**1,4**	**13,4**
II. Capital account	**2**	**1**	**2**	**0**	**5**	**2**	**3**	**5**	**0**	**10**	**0,0**	**0,0**	**0,0**	**0,0**	**0,1**	**0,0**	**0,0**	**0,1**	**0,0**	**0,1**
Net lending (+) / net borrowing (-) (balance from current and capital account)	**-60**	**-96**	**116**	**-42**	**-82**	**-40**	**-196**	**135**	**-12**	**-112**	**-0,7**	**-1,1**	**1,3**	**-0,5**	**-0,9**	**-0,4**	**-2,0**	**1,4**	**-0,1**	**-1,2**
III. Financial account	**126**	**-44**	**152**	**-18**	**216**	**-64**	**-67**	**-428**	**-24**	**-583**	**1,4**	**-0,5**	**1,7**	**-0,2**	**2,4**	**-0,7**	**-0,7**	**-4,5**	**-0,3**	**-6,1**
Direct investment	-79	-61	8	-52	**-183**	-117	-36	-10	-14	**-177**	-0,9	-0,7	0,1	-0,6	**-2,0**	-1,2	-0,4	-0,1	-0,1	**-1,8**
Portfolio investment	-11	5	34	2	**30**	7	-6	-432	0	**-432**	-0,1	0,1	0,4	0,0	**0,3**	0,1	-0,1	-4,5	0,0	**-4,5**
Currency and deposits	65	71	87	70	**293**	60	46	47	22	**175**	0,7	0,8	1,0	0,8	**3,2**	0,6	0,5	0,5	0,2	**1,8**
Loans	135	-5	-43	1	**88**	-56	-33	-37	-30	**-156**	1,5	-0,1	-0,5	0,0	**1,0**	-0,6	-0,3	-0,4	-0,3	**-1,6**
Trade credit and advances	16	-54	66	-40	**-12**	43	-37	5	-2	**8**	0,2	-0,6	0,7	-0,4	**-0,1**	0,4	-0,4	0,1	0,0	**0,1**
Other accounts receivable/payable	0	0	0	0	**0**	0	0	0	0	**0**	0,0	0,0	0,0	0,0	**0,0**	0,0	0,0	0,0	0,0	**0,0**
Special drawing rights (Net incurrence of liabilities)	0	0	0	0	**0**	0	0	0	0	**0**	0,0	0,0	0,0	0,0	**0,0**	0,0	0,0	0,0	0,0	**0,0**
IV. Net errors and omissions	**20**	**-10**	**3**	**1**	**19**	**-11**	**-4**	**-4**	**7**	**-12**	**0,2**	**-0,1**	**0,0**	**0,0**	**0,2**	**-0,1**	**0,0**	**0,0**	**0,1**	**-0,1**
V.Reserve assets	**-167**	**-62**	**-32**	**-23**	**-277**	**14**	**-133**	**559**	**20**	**459**	**-1,8**	**-0,7**	**-0,4**	**-0,3**	**-3,1**	**0,1**	**-1,4**	**5,8**	**0,2**	**4,8**

Source: NBRM.

1.6.1. Current account
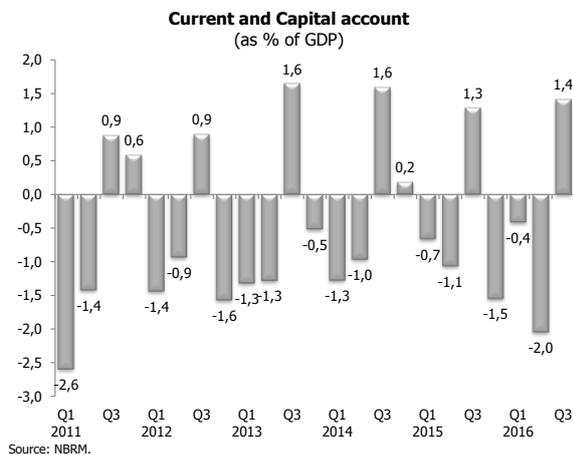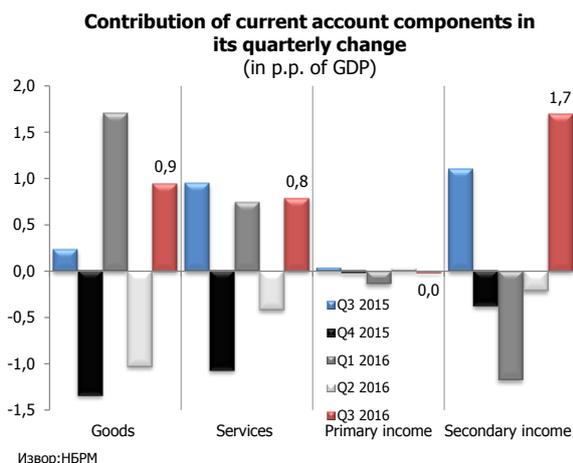
In the third quarter of 2016, the current account of balance of payments registered a surplus of Euro 130 million, or 1.4% of GDP[39], which is an improvement of 3.5 p.p of GDP compared to the previous quarter, when the current account ended up in a deficit (of 2.1% of GDP). The quarterly change is due to the positive movements registered in all individual components of the current account, except in the primary income where no changes were registered. The higher net inflows in secondary income (of 1.7 p.p. of GDP) made a more significant contribution, which is partially a seasonal effect, but also partially suggests exhaustion of the negative effects from the political crisis present in the first half of 2016. The decreased deficit in goods and services (by 1.7 p.p. of GDP) also made a positive contribution in improving the current account. Seasonal factors also influenced the improved developments in services, through higher inflows from traveling, increased production services for customization of goods in a foreign possession and transport services. The positive quarterly changes in the balance of goods, primarily are due to the increased export of the new industrial facilities and of the metal industry, as well as export of tobacco.

The annual analysis of the current account indicates to a moderately higher surplus by 0.1 p.p. of GDP in the third

Current and Capital account
(as % of GDP)

Source: NBRM.

Contribution of current account components in its quarterly change
(in p.p. of GDP)

Извор:НБРМ

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[39] The calculations use the projected amount for the nominal GDP.

**Contribution of current account components in
its annual change**
(in p.p. of GDP)

Source: NBRM.

Balance of goods and services
(annual change, in EUR million)
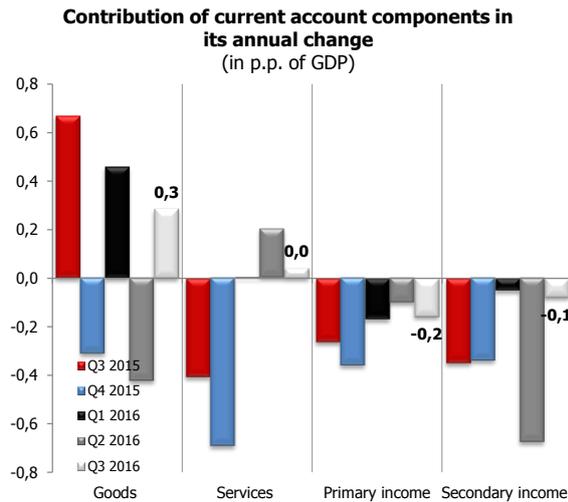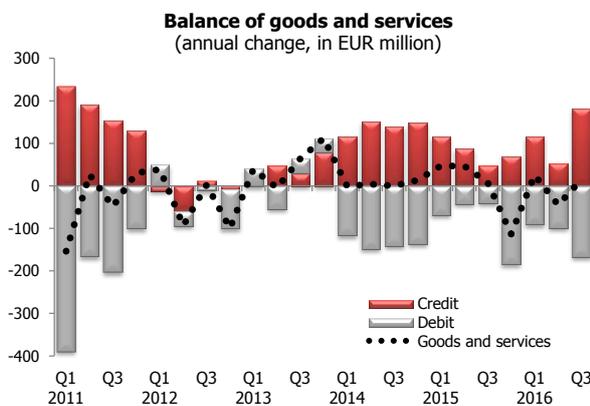
* Postive change in the import of goods mean it's decrease.
Source: NBRM.

*quarter of 2016 compared to the same
period in the previous year, which is due to
the narrowing of the deficit in goods and
services, amid simultaneous slight increase
in primary income and relatively stable
secondary income.* The narrowing of the deficit
in trade of goods is due to the increased export,
driven by the good performances of the new
facilities in the economy, amid minor increase of
the import. In services, a decrease is registered in
inflows on the basis of production services for
processing as a result to the weaker conjecture of
metal processing industry. However, the higher
inflows from telecommunication services, tourism
and transport as well as lower outflows in
construction services contributed to improve the
positive balance of services compared to the
performance in the same period of 2015. In the
third quarter of 2016, the secondary i.e. inflows
based on private transfers as well as
governments' transfers were on the same level as
in 2015. At the same time, the deficit in primary
income registered a slight increase compared to
the same period in 2015, due to the higher
outflows on the basis of investments income.

According to the latest data on the balance of
payments, in October 2016 the current account
registered a deficit of Euro 11.8 million, which is
significantly lower compared to the same month
last year. The favorable annual change arises
from the narrowing of the deficit in goods and
services, driven by the moderate decline of import
of goods, in conditions of stable deficit in the
primary income and surplus in secondary income.
Cumulatively, in the first ten months of the year,
a deficit of the current account is registered which
is moderately higher than in the same period of
the previous year, under the influence of
deterioration of the surplus in primary and deficit
in secondary income, compared to the shifts in
the negative balance of trade of goods and
services.

Box 2: Foreign trade of goods and movement of the Nominal and the Real Effective Exchange Rate (NEER and REER)[40]

In the third quarter of 2016, the foreign trade amounted to Euro 2,688.6 million, or 28% of GDP, and compared to the same quarter of the previous year, it increased by 10.8%, amid stronger growth of both of its components. In the third quarter, the export of goods registered an evident improvement and reached an annual growth of 11.3%, significantly exceeding the growth of 2% in the previous quarter. The intensified activity in the new foreign facilities remains the driving force of positive export results. Within traditional export sectors, the increase export of tobacco has provided an additional impulse to the annual growth. Simultaneously, export of metal processing industry registered an annual decrease, but significantly more moderate compared to the previous four quarters, thereby legging behind greater downward pressures on export. Thus, the reduced export of iron and steel reflected the price effect, while the exported quantity significantly increased on annual basis. **Performances in export were reflected on the side of import of goods, which registered a stronger growth of 10.5% on annual basis** (compared to the growth of 5.1% in the previous quarter)**.** Increase in import is mostly due to the higher import of raw materials component for the new industrial facilities, as well as investment import and import of iron and steel. Categories such as non-ferrous metals, machines and transport equipment, iron and steel and non-metallic manufactures stand out as categories which mostly contributed to the import growth. Opposite to this, negative but relatively more mitigated contribution compared to the

Exports, imports and trade deficit
(quarterly rate of change, in %)

Exports of goods
Imports of goods
Trade balance

Source: SSO and NBRM.
Negative change in the trade balance indicates contraction of the deficit.

previous quarter was made by the annual decline of energy import, more precisely, by the lower import of oil derivates and the electric energy. Such annual changes in the import of energy correspond with the slower decline of the oil price in the global markets. **The changes of both components of foreign trade compared to the third quarter of the previous year lead to increase by 8% of the deficit in the trade of goods.** This is a result to the consumption of the non-energetic deficit, whereas the negative energetic balance continues to narrow.

Export, by SITC
(contributions to the annual change, in p.p.)

Miscellaneous manufactured articles
Machinery and transport equipment
Manufactured goods classified by materials
Chemical Products
Mineral fuels, lubricants and related materials
Crude materials, inedible, except fuels
Food, beverages and tobacco
Total

Source: SSO and NBRM.

Import, by SITC
(contibutions to the annual change, in p.p.)

Miscellaneous manufactured articles
Machinery and transport equipment
Manufactured goods classified by materials
Chemical Products
Mineral fuels, lubricants and related materials
Crude materials, inedible, except fuels
Food, beverages and tobacco
Total

Source: SSO and NBRM.

The analysis of the import of goods under the System of National Accounts (SNA) indicates that in the third quarter of the year, the import of intermediate products made the dominant contribution to the annual growth of total imports. At the same time, import growth was driven by the higher import of both personal consumption goods and capital goods, while the lower energy imports acted in the opposite direction. In terms of imports for private consumption, the annual growth of this component reflects the

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[40] According to the Foreign Trade Methodology, data on the export of goods are published on an f.o.b. basis, and on the import of goods, on a c.i.f. basis.

higher imports of consumer goods and passenger vehicles, with relatively smaller positive contribution by the import of food and passenger vehicles. Overall, the annual growth in imports for private consumption remains moderate and continues to decelerate, indicating presence of moderate pressures on imports by the private consumption.

Imports of goods, SNA*
(contributions to the annual change, in p.p.)

* Classification: System of national accounts (SNA).
Source: NBRM.

Imports of goods for personal consumption
(contributions to the annual change, in p.p.)

Source: NBRM.
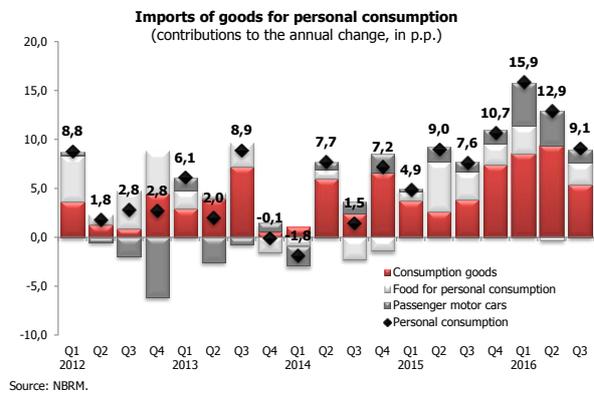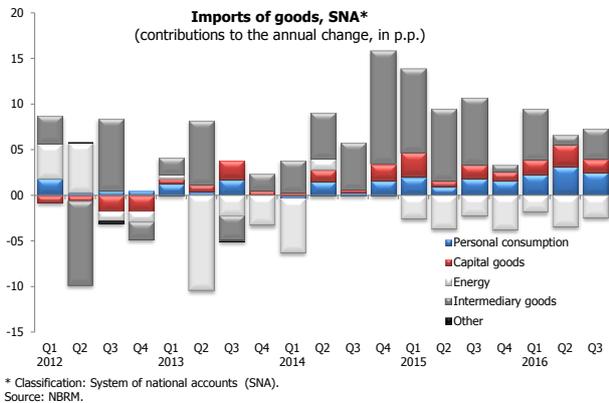
The latest available data on foreign trade for October and November indicate small growth of export and stagnation of import on an annual basis. Export of goods registered an annual growth of 1.5%, driven by the export activity of part of the new industrial facilities, compared to the weaker export of metal processing industry. The import of goods was almost unchanged on annual basis, while the increase of import of non-ferrous metals was neutralized with import of machines and equipment.

The foreign trade analysis by country shows that in the third quarter of 2016, the European Union was our major trading partner (making up 69.6% of total trade). Observing the export side, by country, the exports to Germany, as a market to which the export activity of the new facilities in the domestic economy is largely targeted, remain the main driver of the annual growth. Also, the increased placement of tobacco to Belgium and USA positively contributed to the export growth in the third quarter. On the other hand, in accordance with the weaker performances in the metal processing sector, during this quarter, the trend of significant decrease of the export of iron and steel to China resumed. In terms of import, import from Britain is a major contributor, and Hungary to a lesser extent which portrays the import of raw materials for the needs of new industrial facilities. Annual growth was also registered in the import of iron and steel from Russia. Opposite to this, the import from the Republic of South Africa declined, as a result of redirecting part of the demand for raw materials for the new companies to the British market. In terms of balances, the annual widening of the trade deficit is due to the increasing negative trade balance with Great Britain, as well as with China, Russia and Ukraine. The negative developments are partially mitigated through the increased trade deficit with Germany and Belgium, as well as decreased trade deficit with the Republic of South Africa.

Export of goods, by countries in the third quarter of 2016 (share, in %)
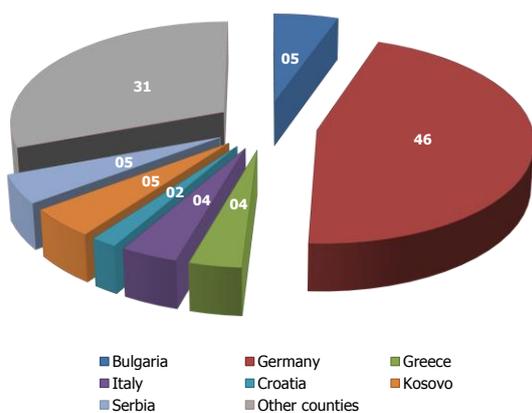
Source: SSO.

Import of goods, by countries in the third quarter of 2016 (share, in %)
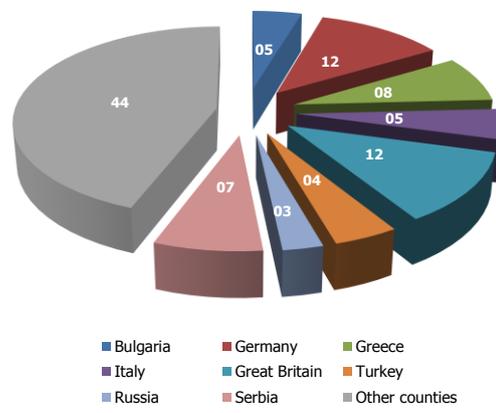
Source: SSO.

In the third quarter of 2016, indicators of price competitiveness of the Macedonian economy show appreciation of the real effective exchange rate. REER deflated by consumer price index appreciated by 1.2% while REER deflated by the producer price index registered an annual appreciation of 3.5%. Thus, the upward pressures arise from NEER, which registered an annual growth of 2.5%, due to the appreciation of denar against the British pound, and Serbian dinar, Russian ruble and Ukrainian hryvnia. As for relative prices, the relative consumer prices registered a decline of 1.3%, while the relative producer prices increased by 1% on an annual basis.

NEER and REER
(according to CPI and PPI, 2010=100)

Source:NBRM.

Relative prices
(2006=100)
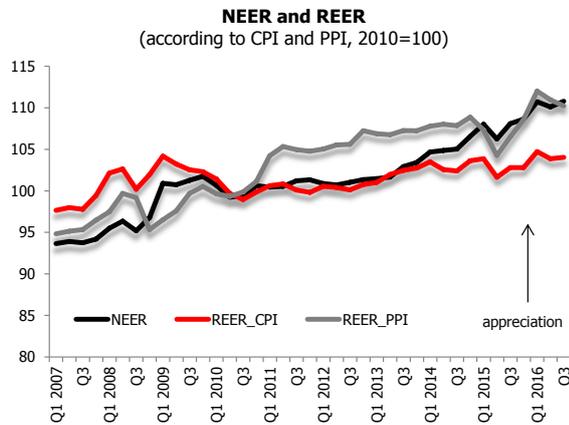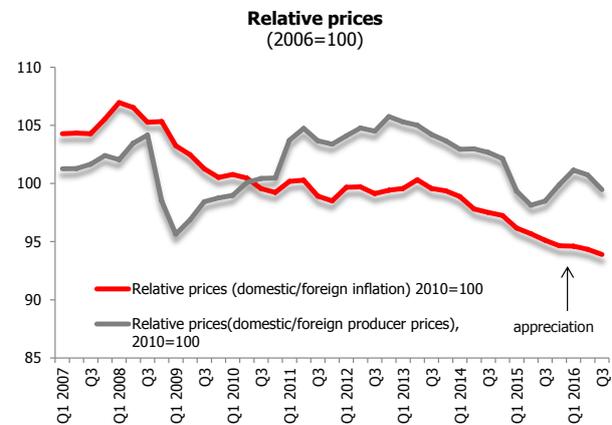
Source:NBRM.

The analysis of REER indices as measured using weights based on the foreign trade without primary commodities[41] also indicate that they have appreciated on an annual basis. Namely, REER calculated by consumer prices appreciated by 0.4%, while REER based on producer prices appreciated by 3.1% on an annual basis. The NEER index appreciated by 1.2%, while the relative prices registered divergent movements, i.e. an annual decline in the relative consumer prices and increase in the relative producer prices.

NEER and REER, excluding primary commodities
(according to CPI and PPI, 2010=100)

Source:NBRM.

Relative prices, excluding primary commodities
(2010=100)
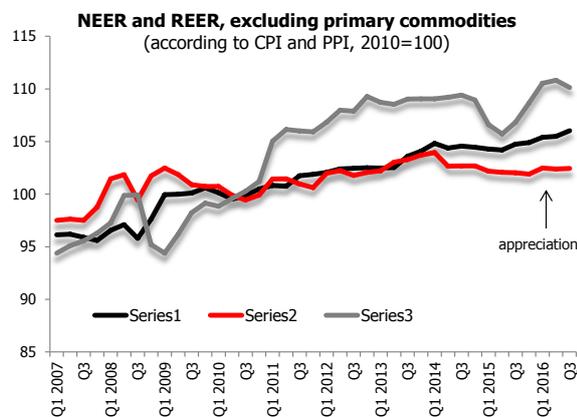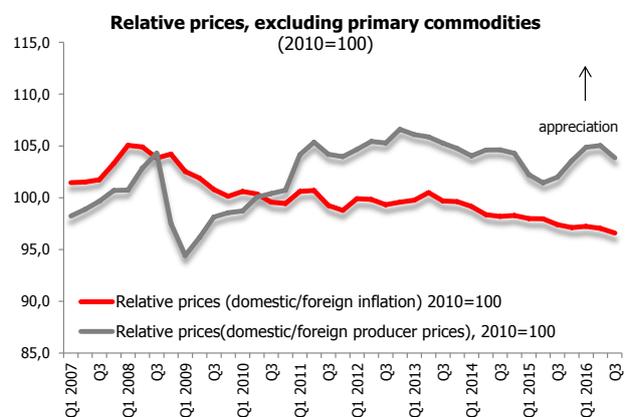
Source:NBRM.

The latest data on price competitiveness for the period October-November 2016 indicate a moderate annual appreciation of the REER, as measured using weights of the total trade of goods, as well as weights based on foreign trade without primary commodities. In both indices, annual changes from the appreciation of the NEER (of 2.4% and 1.5%, based on the weights on the overall trade and foreign trade-based weight excluding primary commodities, respectively). Within the REER based on the total foreign trade, the index deflated by consumer prices has appreciated by 0.9%. Similar trends have been

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[41] 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. For more detailed information on the methodology for calculating the real effective exchange rate visit: http://nbrm.mk/WBStorage/Files/Statistika_REDK_Informacija_za_promenite_na_metodologijata_za_presmetuvanje_na_realniot_ef ektiven_devizen_kurs_na_denarot_mak.pdf

registered in the REER measured using weights based on foreign trade excluding primary commodities, when the CPI-deflated index and the PPI-deflated index have appreciated by 0.5% and 0.9%, respectively.

1.6.2. Financial account

In the third quarter of the year, the financial account of the balance of payments registered net inflows of Euro 428 million or 4.5% of GDP[42]. Net inflows were registered in portfolio investments, foreign direct investments and in loans, while outflows were registered in trade loans and currencies and deposits. Inflows in portfolio investments are almost entirely due to the fifth issued Eurobond[43], while in the third quarter of 2016, higher net inflows were registered in long-term loans, primarily as a result of loans to public companies for infrastructure projects. Positive trends were also registered in foreign direct investments, with positive developments in equity capital and reinvested earnings and negative developments in debt instruments. Trade credits and advances registered net outflows which are typical for this period of the year, accordingly to the seasonal improvement of the balance of goods and services. Additionally, currencies and deposits continued to have an unfavorable impact on the financial account, this quarter driven by outflows in other sectors, while depository institutions registered net outflows. Such developments in depository institutions are partially due to the Decision of NBRM on currency deposit[44]. *The quarterly analysis shows higher net inflows in the third quarter* compared to the previous quarter. Such movements are mostly due to significantly higher net inflows based on portfolio investments (issued fifth Eurobond). Foreign direct investments deteriorated on a quarterly basis i.e. lower net inflows, primarily as a result to lower net inflows in reinvested earnings and higher net outflows in debt instruments, in conditions of better net outflows in equity capital. On the other hand, trade credits and advances registered a net outflow (compared to net inflows in the previous quarter), which is a seasonal flow in accordance

Financial account
(excluding reserve assets, in % of GDP)

Source: NBRM.

Financial account structure (as % of GDP)

Legend: Direct investment; Portfolio investment; Loans; Trade credit and advances; Currency and deposits; Other accounts receivable/paya; Financial account, net

Source: NBRM.

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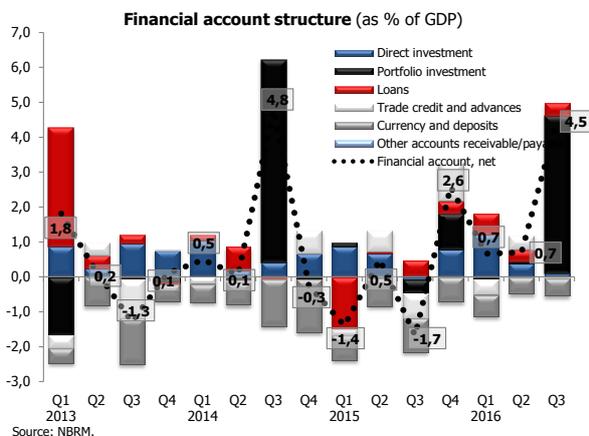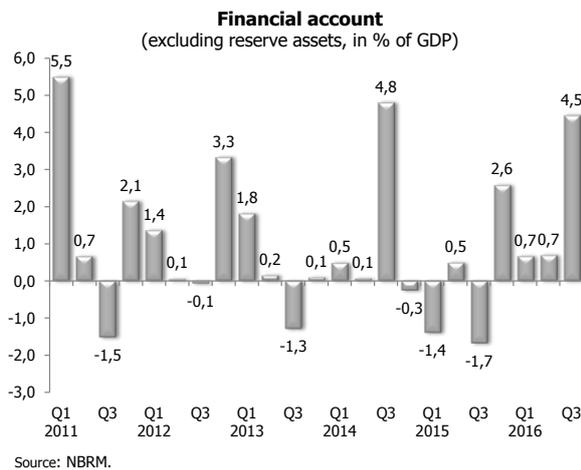
[42] According to the new methodology for compilation of the balance of payments BPM6, the terms net inflows and net outflows denote net incurrence of liabilities and net acquisition of financial assets, respectively.

[43] During the third quarter of 2016, the government borrowed on the international financial markets through the issuance of the third Eurobond in the amount of Euro 450 million, with a coupon interest rate of 5.625% and maturity of 7 years.

[44] The growth of foreign currency deposits of domestic banks with the NBRM stems from the Decision on foreign currency deposit with the National Bank of the Republic of Macedonia, adopted on 6 May 2016, which allows interest rates to be determined at a level higher than the level of interest rates which domestic banks receive in placing funds in euros abroad. The right to place such deposits with the NBRM was withdrawn on 25 October 2016.

Contribution of financial account components to its quarterly change
(in p.p of GDP)

Contribution of financial account components in its anual change (in p.p. of GDP)

Factors of change of the foreign reserves in 2016
(in EUR million)

Source: NBRM.
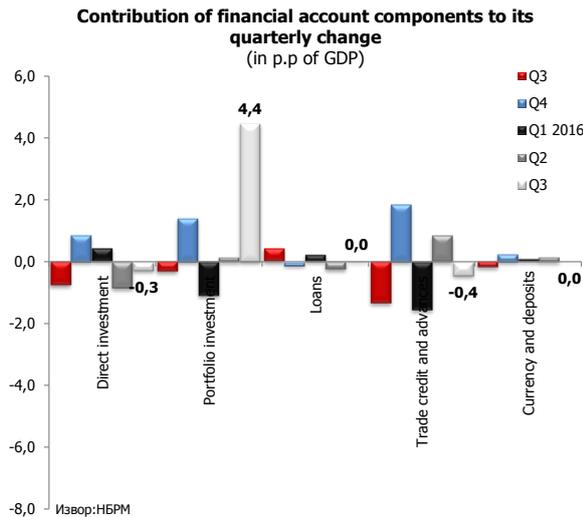
with improvements in the balance of goods and services. Developments in other flows of the financial account did not register any major changes compared to the previous quarter.

The annual analysis shows significant change compared to the third quarter of the previous year, i.e. high net inflows in the financial account, unlike the realized net outflows in the same quarter of 2015. The change is mostly due to higher inflows in portfolio investments i.e. by issuing the fifth Eurobond. Even though more moderate, on annual basis, the effects of other flows were mainly favorable.
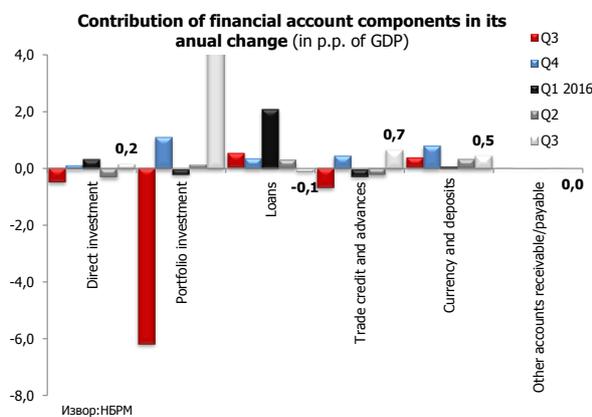
The latest balance of payment data as of October 2016 suggest net inflows of around Euro 24.2 million in the financial account, as a result of the net inflows based on loans and foreign direct investments, amid simultaneous net outflows in currencies and deposits. In October 2106, flows in other categories have no significant impact on the balance of the financial account. Cumulatively, in the first ten months of the year, the financial account registered high net inflows primarily due to issuing the fifth bond, as well as net inflows based on the foreign direct investments and loans, and in conditions of outflows in currencies and deposits.
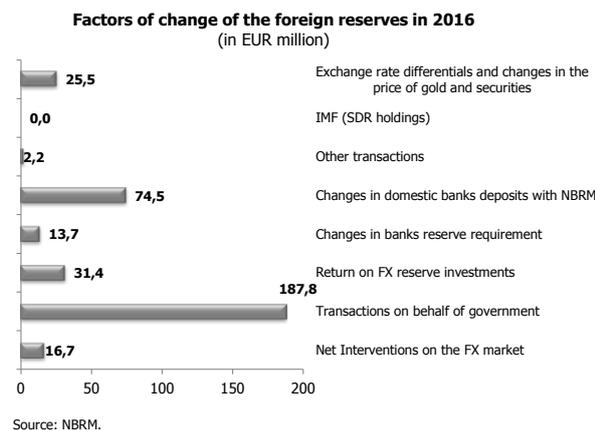
The gross foreign reserves at the end of the third quarter of 2016 amounted to Euro 2,698.9 million, which is an increase of Euro 540.2 million compared to the previous quarter. The increase in foreign reserves mainly arises from transactions on behalf of the government, i.e. the issued Eurobond, followed by the foreign currency deposits of domestic banks with the NBRM and the NBRM interventions on the foreign exchange market, which acted towards increase in the foreign reserves through the realized net purchase. The other transactions have no significant influence on the amount of foreign reserves. *According to the latest available data, on 31.12.2016, the foreign reserves amounted to Euro 2,613.4 million,* which is an increase of Euro 351.6 million compared to the end of 2015. All factors contribute to the foreign reserves growth, where net transactions on behalf of the government made the highest contribution[45], as well as to the increase of

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[45] During July 2016, the government borrowed from the international financial market by issuing the fifth Eurobond, while in November 2016, the government conducted a larger repayment towards foreign creditors. However, on net basis, the effect on foreign reserves for the whole year was positive.

Factors of change of the foreign reserves in 2016
(in EUR million)

Exchange rate differentials and changes in the price of gold and securities

IMF (SDR holdings)

Other transactions

Changes in domestic banks deposits with NBRM

Changes in banks reserve requirement

Return on FX reserve investments

Transactions on behalf of government

Net Interventions on the FX market

Q.1
Q.2
Q.3
Q.4

Source: NBRM.
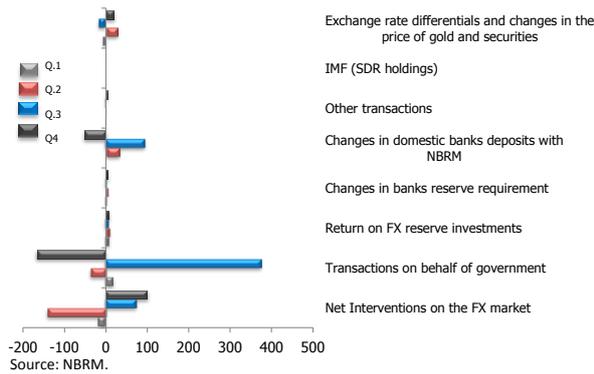
foreign currency deposits of commercial banks with the NBRM[46]. NBRM interventions on the foreign exchange market also made a minor positive contribution. Thus, major interventions through selling foreign currencies were conducted in the first half of 2016 (mostly as a result of the increased demand due to the political crisis), which was offset in the second half of the year when the interventions acted toward purchasing foreign currencies.

1.6.3.   International investment position[47] and gross external debt

International investment position (% of GDP)

International assets   International liabilities   IIP, net

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3
2012   2013   2014   2015   2016

Source: NBRM.

The negative international investment position[48] of the Republic of Macedonia at the end of the third quarter of 2016 reached Euro 5,488.6 million, or 57.1% of GDP, which is a slight widening of 0.5 p.p. of GDP on a quarterly basis. The change is due to the faster growth of the international liabilities in relation to the growth of the international assets. The sector-by-sector analysis shows that the change compared to the previous quarter was driven by the higher net government liabilities, as a result of the issue of the fifth Eurobond, and to a lesser extent, by the higher net liabilities of other sectors in the economy (higher trade credit liabilities). At the same time, there was a significant quarterly growth of net assets with the central bank, in particular, of foreign reserves[49].

On annual basis, net liabilities to the rest of the world grew by 3.9 percentage points of

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[46] The growth of foreign currency deposits of domestic banks with the NBRM stems from the Decision on foreign currency deposit with the National Bank of the Republic of Macedonia, adopted on 6 May 2016, which allows interest rates to be determined at a level higher than the level of interest rates which domestic banks receive in placing funds in euros abroad. Since 25 October 2016, foreign currency deposits have not been offered as an alternative for placing foreign assets of commercial banks.

[47] The analysis in this section relies solely on IIP data compiled under the new methodology. Namely, since July 2014, the NBRM started disseminating data on the international investment position (IIP) and gross external debt of the Republic of Macedonia, according to the new international statistical standards defined by the Balance of Payments and International Investment Position Manual (BPM6) and External Debt Statistics (2013). For more information on the methodological changes, visit the NBRM website (http://nbrm.mk/WBStorage/Files/Statistika_Informacija_za_promenite_vo_platniot_bilans_megunarodnata_investiciska_pozicija_i_nadvoresniot_dolg_koisto_proizleguvaat_od_primenata_na_novite_megunarodni_statisticki_standardi.pdf).

[48] In the second quarter of 2011, the NBRM began concluding repo and reverse repo transactions. These transactions represent an investment opportunity to use portfolio securities to provide additional income. Conclusion of repo transactions incurs liabilities. At the same time, claims created from reverse repo agreements tend to increase gross claims. The NBRM simultaneously carries out matched repo and reverse repo agreements in nearly identical amounts. In general, as they are concluded concurrently, these transactions have a neutral net effect, i.e. they appear in almost identical amount on both liabilities and assets side, and therefore do not affect the total net IIP nor the total net external debt.

[49] The growth of foreign reserves is largely driven by the deposited funds from the issued Eurobond.

Changes in the IIP
(in p.p. of GDP)

Other sectors, net
-1,4290
-,5597

Deposit-taking corporations, net
-,4102
-,2112

Central bank, net
4,0115
5,6402

Government, net
-6,0776
-5,3908

-8,00 -6,00 -4,00 -2,00 ,00 2,00 4,00 6,00 8,00

■ contributions to the annual change   ■ contributions to the quarterly change

Gross external debt, by debtors (% of GDP)

63,7 | 64,5 | 64,2 | 64,0 | 62,2 | 63,6 | 70,5 | 70,0 | 67,0 | 67,2 | 66,7 | 69,4 | 67,7 | 68,6 | 74,4

Q1 2013 | Q2 | Q3 | Q4 | Q1 2014 | Q2 | Q3 | Q4 | Q1 2015 | Q2 | Q3 | Q4 | Q1 2016 | Q2 | Q3

■ Public debt   ■ Private debt   ◆ Gross external debt

* Without repo-transactions.
Source: NBRM.

Changes in private sector debt

Intercompany lending
2,3
0,1

Non-banking private sector
-0,8
-0,1

Banks
-0,3
0,1

-1,00 -,500 ,00 ,500 1,00 1,500 2,00 2,500

■ Contributions to the annual change (in p.p. of GDP)
■ Contributions to the quarterly change (in p.p. of GDP)

Source: NBRM.

GDP, amid faster growth of international liabilities (of 8.3 percentage points of GDP) and simultaneous more moderate increase in assets (of 4.4 percentage points of GDP). The annual analysis, analyzing by sector, indicates that the sectors that drive the annual change mainly correspond to the quarterly factors of change. Namely, the higher net government liabilities, as a result of the issue of the Eurobond, are the dominant factor that drives the deepening of the negative net investment position in relation to the same period last year, coupled with the increase in net liabilities in other sectors (due to increased net liabilities to direct investors). These movements were largely mitigated by the higher net assets of the central bank (higher foreign reserves).
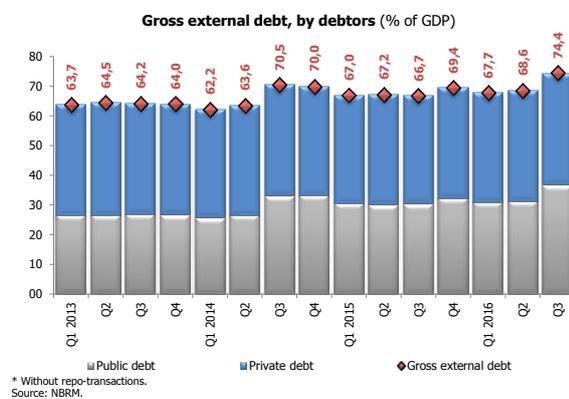
As of 30 September 2016, the gross external debt stood at Euro 7,503.9 million, or 78.1% of GDP, which is an increase of 6.5 percentage points of GDP, on a quarterly basis. By excluding the effect of repo transactions[50], the gross external debt in the third quarter was 74.4% of GDP, which is a quarterly increase of 5.8 percentage points. The higher gross external debt was mostly due to the increase in public external debt, amid a slight upward correction in private sector debt. Government borrowing on the international capital markets, through the issue of the fifth Eurobond, is the main factor behind the quarterly change in the public debt, and the growth of the debt of public companies made significantly smaller contribution, driven by their external borrowing intended for financing infrastructure projects. On the other hand, the small increase in the private external debt was driven by the increased long-term debt of the banking sector and the higher intercompany debt, i.e. the rise in liabilities to direct investors.
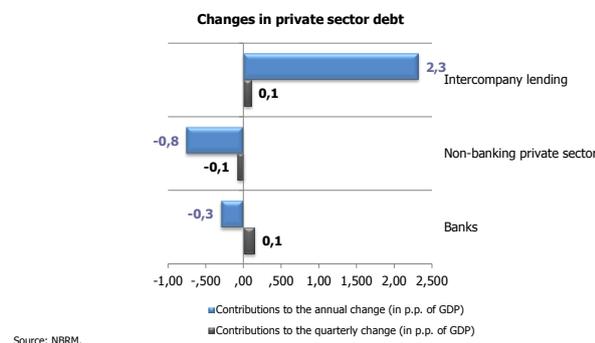
Compared to the third quarter of 2015, gross external debt is higher by 7.7 percentage points of GDP, given the higher debt of both the public and private sectors. Long-term government borrowing on the international markets is the main factor that drives the annual change of the public external debt. Additionally, the external debt of public companies also registered a slight increase on long-term financial loans. The annual growth of

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[50] The overall analysis below relates to gross external debt without the central bank liabilities based on repo transactions.

Gross external debt, by institutional sectors
(% of GDP)

	Government	Central bank	Deposit-taking corporations	Other sectors	Intercompany lending
Q3	27,6	06	20,2		19,8
Q2	22,3	06	19,9		19,7
Q1 2016	22,1	06	19,7		19,2
Q4	23,1	06	20,4		18,6
Q3	21,9	06	20,1		17,5
Q2	21,8	07	19,8		18,0
Q1 2015	22,3	07	19,3		17,8
Q4	24,8	07	22,0		15,1
Q3	25,1	07	22,5		15,2
Q2	18,7	07	22,3		14,6
Q1 2014	19,0	07	20,9		14,3
Q4	19,7	07	21,6		14,3
Q3	20,0	08	21,7		13,8
Q2	20,7	08	21,5		13,2
Q1 2013	20,8	08	21,3		13,0

* Without repo-transactions.
Source: NBRM.

private debt stems from the higher loans between related parties, i.e. the higher intercompany debt. On the other hand, moderate deleveraging was registered in the private non-banking and banking sector, as a result of the reduced long-term liabilities of these economic sectors.

External indebtedness indicators of the national economy still show that the gross external debt is in the safe zone. The only indicator that classifies the economy in the group of highly indebted countries is the gross external debt to GDP ratio. The dynamic analysis of external indebtedness[51] indicates negative trends in three solvency indicators on an annual basis (the share of the repayment of interest in exports of goods and services and other inflows, the share of gross debt in GDP and the ratio between gross debt and exports), while the indicator of the share of the repayment of gross debt in the export of goods and services and other inflows registers an improvement. Improvement was also observed in all individual liquidity ratios, providing full coverage of short-term debt liabilities and short-term debt with residual maturity, with foreign reserves.

At the end of the third quarter of 2016, net external debt, which is an additional indicator of external indebtedness of the national economy, amounted to Euro 2,586 million, or 26.9% of GDP, which is a quarterly increase of 0.3 percentage points of GDP. The higher net debt is due to the growth of government debt and other sectors in the domestic economy.

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[51] The analysis of the external indebtedness indicators is prepared on the basis of balance of payments data in accordance with Balance of Payments and International Investment Position Manual (BPM6) and data on gross external debt according to the External Debt Statistics (2013). The methodological changes caused no changes in the overall level of external debt, but only affected the maturity and sector structure of the debt. Accordingly, under the new methodology, the level of short-term debt is lower on account of the increase in long-term debt component, which caused changes in the liquidity indicators, i.e. their improvement relative to the analyses based on data from the previous methodological framework. On the other hand, the methodological changes in the export of goods and services and other inflows caused deterioration of the indicators for the share of export of goods and services and other inflows in the gross external debt and debt service in relation to export of goods and services and other inflows, compared with the indicators relevant prior to the methodological changes.

Indicators for external indebtness	Solvency				Liquidity		
	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	30,3
31.12.2005	2,66	147,0	54,2	11,06	1,67	1,04	26,7
31.12.2006	3,44	131,3	49,8	21,7	1,95	1,34	29,0
31.12.2007	2,78	119,3	51,3	19,4	1,35	1,08	39,8
31.12.2008	2,66	116,9	54,1	10,2	1,29	0,95	35,2
31.12.2009	2,43	131,0	57,8	11,8	1,29	0,94	32,9
31.12.2010	3,22	140,4	59,7	13,9	1,49	0,99	27,9
31.12.2011	3,12	148,4	64,6	16,8	1,78	1,18	25,2
31.12.2012	2,92	142,1	67,6	13,1	1,64	1,03	26,7
31.12.2013	2,51	137,3	67,3	15,8	1,64	1,08	23,3
31.03.2014	3,01	132,5	65,8	17,2	1,41	0,95	25,9
30.06.2014	3,01	135,4	67,2	17,2	1,33	0,90	25,8
30.09.2014	3,01	150,1	74,5	17,2	1,74	1,16	23,2
31.12.2014	3,01	149,1	74,0	17,2	1,82	1,13	22,3
31.03.2015	2,69	138,8	70,6	20,0	1,66	1,09	23,4
30.06.2015	2,69	139,3	70,9	20,0	1,56	1,03	23,8
30.09.2015	2,69	138,4	70,4	20,0	1,57	1,03	23,1
31.12.2015	2,69	143,9	73,2	20,0	1,69	1,13	21,3
31.03.2016	2,79	135,8	71,7	16,1	1,52	1,05	22,9
30.06.2016	2,79	137,6	72,6	16,1	1,42	0,98	23,1
30.09.2016	2,79	149,2	78,8	16,1	1,75	1,16	21,5
Moderate indebtedness criterion	12 - 20%	165 - 275%	30 - 50%	18 - 30%	1,00		

*The moderate indebtness criterion is accordng to the World bank's methodology of calculationg indebtness indicators, which implies 3-year moving averages of GDP and exports of goods and services in the calculation of the indicators.
to the "Greenspan-Guidotti rule", a country should maintain full coverage of short-term debt at remaining maturity with gross foreign reserves.
*According to the "Greenspan-Guidotti rule", a country should maintain full coverage of short-term debt at remaining maturity with gross foreign reserves.

Source: NBRM.

2.   Monetary policy

During the fourth quarter of 2016, the NBRM cut its policy rate by 0.25 percentage points, from 4.00% to 3.75%. The decision to cut the policy rate was taken amid evident stabilization of the expectations of economic agents, present continually for several consecutive months. There were signs of stabilization on two points where the political crisis hit the most - foreign exchange market and deposits in the banking system. On the foreign exchange market, the same as in the third quarter, the NBRM during the last quarter of the year continued to intervene by purchasing the excess foreign currency from market makers, and the banks' currency position remained relatively high. Amid stabilizing the situation on the foreign exchange market, towards the end of October, the NBRM withdrew the possibility of banks for placing foreign currency deposits with the NBRM, which was introduced in May 2016. Stabilization of the expectations and confidence of economic agents was also evident through the continuous growth of household deposits in the banking system, in the period from June onwards. However, the uncertainty associated with the political developments in the country and the global environment is still present. In the period ahead, the NBRM will continue to monitor closely the situation for the timely and appropriate adjustment of monetary policy.

In December, the NBRM cut its policy rate by 0.25 p.p. i.e. from 4.00% to 3.75%. During the fourth quarter, the NBRM continued to

Nominal interest rate on CB bills and inflation (in %)

Source: NBRM.

Inflation (in %)
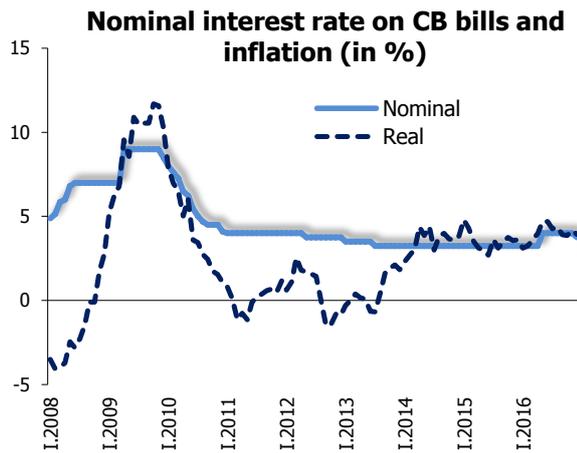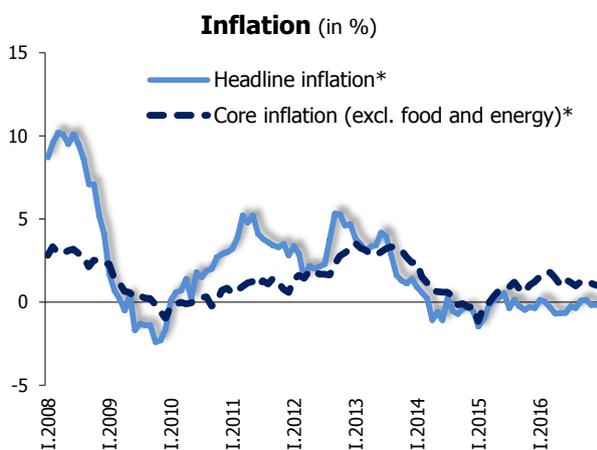
*Current month/same month of the previous year.
Source: SSO.

Interventions on the foreign exchange market by NBRM (in EUR million)

Source: NBRM

review the monetary setup adequacy on a regular basis, whereby at the December meeting of the Operational Monetary Policy Committee, the Committee decided to cut the policy rate from 4.00% to 3.75%. The decision was taken amid stabilizing the expectations of economic agents, reflecting the growth of household deposits, for several consecutive months and increased supply of foreign currency on the foreign exchange market. The interest rate cut followed after the decision of the regular meeting of the Operational Monetary Policy Committee on 25 October not to offer additional foreign currency deposits of banks, an instrument that was activated in May 2016.

The comparison of the performances in the main macroeconomic indicators with their forecast dynamics with the October forecasts does not indicate significant deviations in the individual segments of the economy. In the period October-November, the inflation rate averaged 0% on an annual basis, amid a decline in food and energy prices, while core inflation remained in the zone of positive annual changes (1.3%). Compared with the October forecasts, the realization with the inflation is moderately lower than estimated. On the other hand, the growth of economic activity in the third quarter, of 2.4% on an annual basis, is moderately higher compared with the October forecasts. Data on economic activity, available during October-November, suggest divergent movements, which hampers the assessment of the situation in the economy for the fourth quarter. The decline in foreign reserves in the fourth quarter of the year was under the dominant influence of the government deleveraging, based on past due liabilities to foreign lenders, and the maturities of the foreign currency deposits placed with the National Bank acted in the same direction[52]. On the other hand, the NBRM foreign exchange interventions with market makers (net purchase of foreign currency), for the second consecutive quarter, acted towards increasing foreign reserves. The reduction of foreign reserves was smaller than expected, indicating a better balance of payments position than forecasted. Foreign reserves adequacy analyses suggest that the level of

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[52] At the regular meeting held on 25 October 2016, the NBRM's Operational Monetary Policy Committee decided to leave the possibility the banks to place foreign currency deposits with the NBRM.
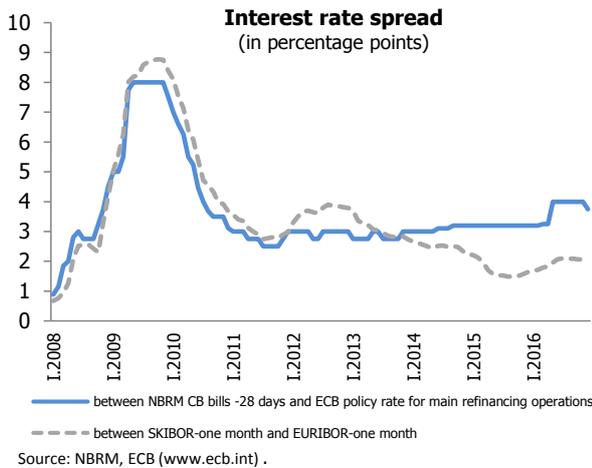
foreign reserves is appropriate and sufficient to deal with any future shocks. Bank deposit base in the period October-November continued to grow at a solid pace (from 3.8% in September to 4.4% in November, annually), with growth of household savings from June, all months in a row. In terms of developments on the credit market, lending registered a moderate slowdown in the pace of growth (from 7.7% in September to 6.6% in November, annual growth), which is still higher than estimated with the October forecasts for the fourth quarter (of 5.6%)[53]. However, the uncertainty associated with the domestic political upheavals and the global surrounding is still present. In the period ahead, the NBRM will continue to monitor closely the situation for the timely and appropriate adjustment of monetary policy.
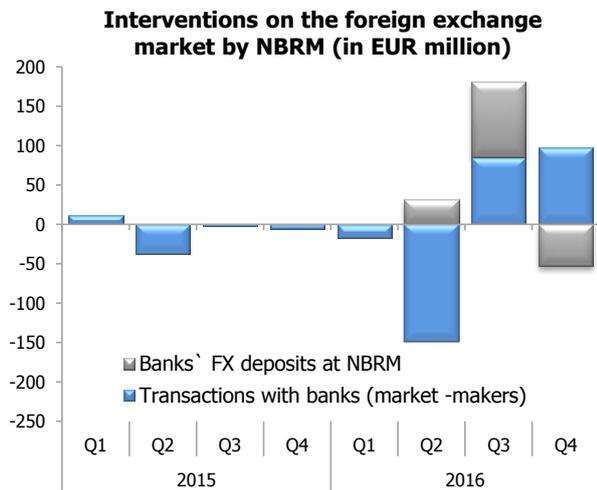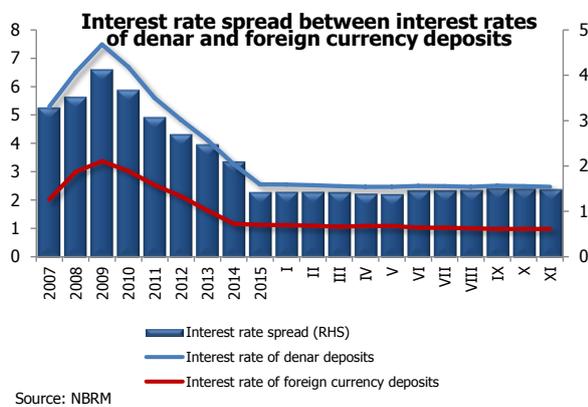
Interest rate spread between the policy rates (of the ECB and the NBRM) and the indicative market interest rates (in RM and in the euro area) narrowed. Thus, in the fourth quarter of the year, amid reduction of the policy rate of the NBRM (of 0.25 p.p.) and relatively milder reduction of 1M SKIBOR (of 0.03 p.p.), the interest rate spread between the policy rates (of the ECB and the NBRM) and the indicative market interest rates (in RM and in the euro area) narrowed. The ECB maintained its policy rate at an unchanged level (of 0.00%), and 1M EURIBOR averaged -0.37% for the fourth quarter.
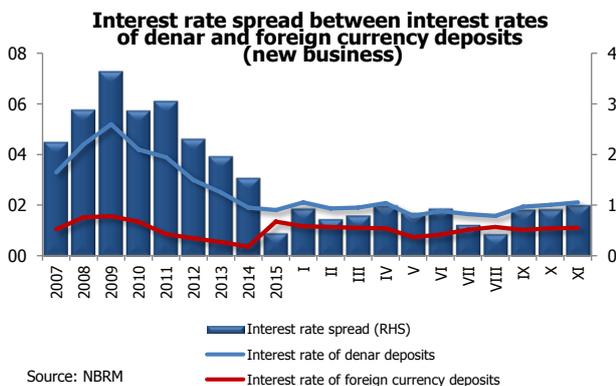
Interest rates in the banking sector in the domestic economy remained relatively stable. Interest rates on total Denar and total foreign currency deposits in the banking sector registered no changes, whereby the spread did not change and at the end of November equaled 1.5 p.p.. For the newly accepted deposits, the interest rate on Denar deposits in November increased compared to September (from 1.9% to 2.1%), which amid a simultaneous milder increase in the interest rate on foreign currency deposits (from 1.0% to 1.1%), widened the interest rate spread of Denar compared to foreign currency deposits from 0.9 to 1.0 percentage point[54].

Interest rate spread
(in percentage points)

— between NBRM CB bills -28 days and ECB policy rate for main refinancing operations
--- between SKIBOR-one month and EURIBOR-one month

Source: NBRM, ECB (www.ecb.int) .

Interest rate spread between interest rates of denar and foreign currency deposits

■ Interest rate spread (RHS)
— Interest rate of denar deposits
— Interest rate of foreign currency deposits

Source: NBRM

Interest rate spread between interest rates of denar and foreign currency deposits (new business)

■ Interest rate spread (RHS)
— Interest rate of denar deposits
— Interest rate of foreign currency deposits

Source: NBRM

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[53] The annual credit growth, including the effect of transferring doubtful and contested claims based on loans from the on-balance sheet to the off-balance sheet record, equals 1.3% in November, compared to 2.5% in September 2016.
[54] The interest rates on newly received deposits are volatile, which can result in frequent and temporary adjustments of the interest spread.

2.1. Banks' liquidity

Factors influencing banks` liquidity
changes, in Denar million

- Autonomous factors, net
- Monetary policy instruments, net
- Banks` accounts at NBRM

Autonomous factors
changes, in Denar million

- NBRM`s interventions on FX market
- Government transactions
- Currency in circulation
- Other autonomous factors
- Autonomous factors, net

Monetary policy instruments
changes, in Denar milion

- Central Bank bills
- ON Deposit facility
- 7 days Deposit facility
- Monetary policy instruments, net

In the fourth quarter of 2016, bank liquidity[55] on the accounts with the NBRM decreased by Denar 1,311 million.

Autonomous factors acted towards creating net liquidity in the banking system in the amount of Denar 7,056 million. Analyzed individually, the NBRM foreign exchange interventions (purchase of foreign currency from market makers) had a dominant effect on the growth of bank liquidity (of Denar 6,113 million), and government transactions increased liquidity (by Denar 4,334 million). On the other hand, currency in circulation, influenced by seasonal factors, in the last quarter of the year grew, thereby reducing the banks' liquidity by Denar 2,678 million.

At the same time, liquid assets from the banking system in the amount of Denar 8,367 million were withdrawn through the NBRM's monetary instruments. Three volume tender (limited amount) CB bill auctions with fixed interest rate[56] were held in the fourth quarter of the year. Amid relatively higher level of liquidity in the banking system under the influence of autonomous factors, the CB bill auction in December offered a higher amount of CB bills, by Denar 1,000 million[57]. Demand from banks at all three auctions was at the level of the offered amount, so that the stock of CB bills in the fourth quarter increased (by Denar 1,000 million) and the end of December amounted to Denar 23,000 million. Amid relatively higher liquidity position, banks have increased the amount of short-term deposits with the National Bank (overnight and 7-day deposits) by Denar 7,367 million. Excess banks' assets on the accounts with NBRM above the reserve requirement, in the fourth quarter, averaged 8.4%, and was higher compared to the third quarter of the year (7.4%).

Reserve money in the fourth quarter of the year grew. The growth of the reserve money[58] was 7.1% on an annual basis, which is

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[55] Refers to the change in banks' account balances with the NBRM.
[56] The interest rate on CB bills at the December auction was lower than the previous two auctions and amounted to 3.75%.
[57] Decisions on the amount of CB bills to be offered at auctions are adopted in the monthly meetings of the Operational Monetary Policy Committee.
[58] Includes reserve requirement in foreign currency.

CB bills
(stocks, in Denar milion)

Source: NBRM

Reserve money
(contribution to annual change, in p.p.)

■ Currency in circulation   ■ Banks' accounts
● Reserve money (y-y change, in %)

Source: NBRM.
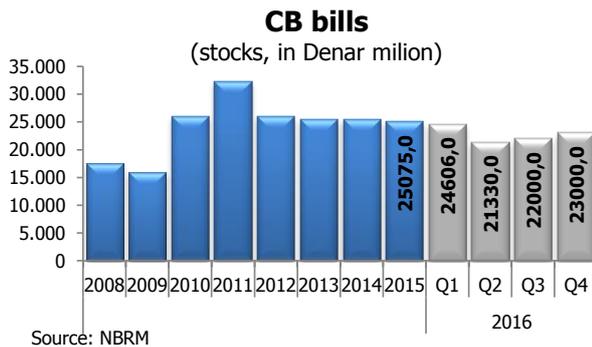
higher compared to the end of the third quarter of 2016 (6.2%). Regarding the projection for the fourth quarter of the year (9.3%), the growth of the reserve money is lower.
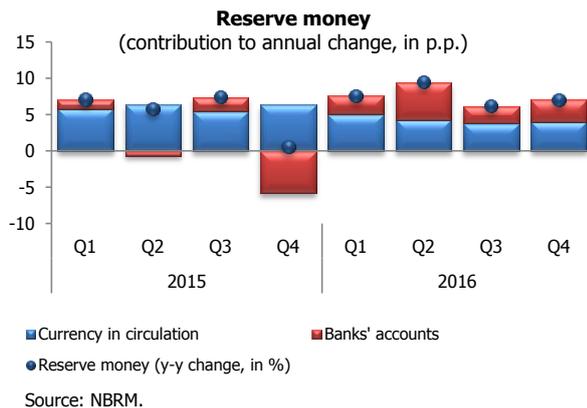
3.   Financial market developments

On the domestic financial markets, in the fourth quarter of the year, given the high liquidity in the system, interbank trading in uncollateralized deposits reduced. After the reduction of the NBRM policy rate in December, banks moderately reduced the indicative interest rates for interbank trading in deposits (SKIBOR), while short-term deposit market interest rates (MKDONIA and MBKS) remained unchanged. On the primary government securities market, in the fourth quarter of the year, new securities were issued, which were mostly purchased from pension funds, while the portfolio of banks remained relatively stable. The secondary securities market turnover was dominated by CB bill transactions, followed by trade in government securities. The yields from the realized securities transactions on the secondary market registered no changes compared to the previous quarter. Macedonian Eurobond yields in the fourth quarter registered a moderate growth, which caused a widening of the spread in terms of yields from the German government bonds, which remained relatively stable.

3.1. Interbank market for uncollateralized deposits

Banks` excess liquidity above resereve requirements*
in Denar million
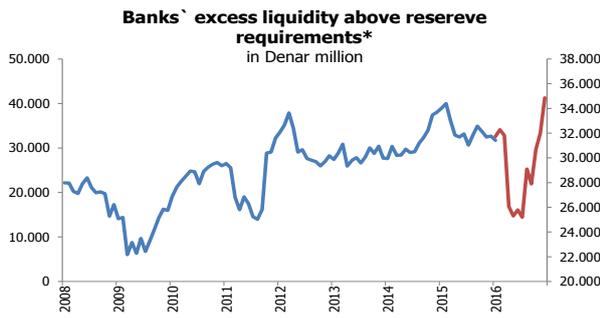
- it refers to bank assets on accounts with the NBRM above the amount of reserve requirement and placed in instruments with the NBRM for liquidity withdrawal

Trading with interbank deposits
turnover, in Denar million

3 months
1 month
1 week
ON
Liquidity coeficient, in %, r.s.
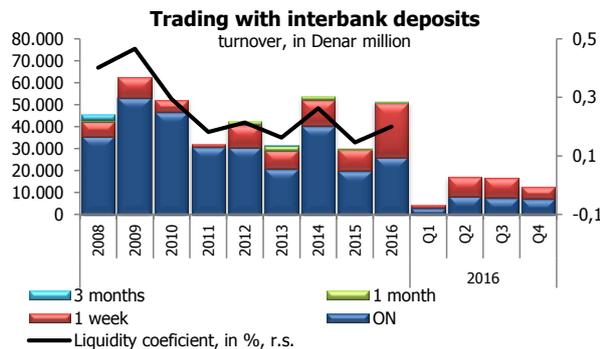
* the liquidity ratio is calculated as the ratio between the banks' liquid assets on the accounts with the NBRM and the uncollateralized deposit market turnover.

Interest rates, in %

MKDONIA
ON Deposit Facility
CB bills
7-day Deposit Facility
MBKS
ON credit facility

SKIBOR

ON 1W 1M 3M 6M 9M 12M CB bills
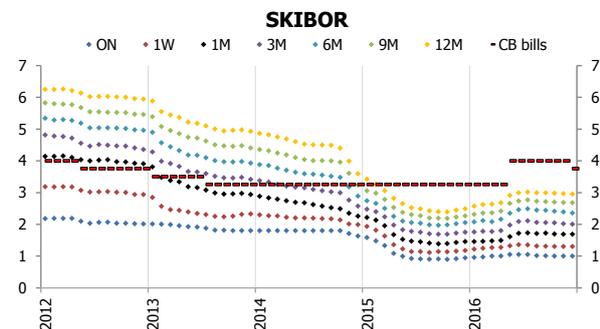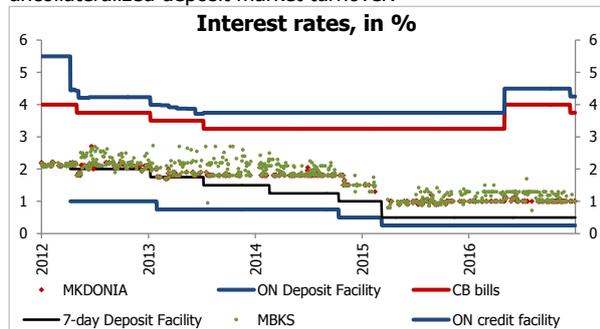
In the fourth quarter of 2016, there was a decrease in interbank trading in uncollateralized deposits. These achievements are a result of the increased liquidity in the system created through autonomous factors (foreign exchange interventions and government transactions), which caused a reduction of the demand for liquid assets and consequently lower trading volume on the uncollateralized deposit market. Total realized turnover of this segment in the fourth quarter of the year amounted to Denar 14,811 million, which was by 22% lower on a quarterly basis. Transactions with overnight maturity and up to 7 days, with a share of 56% and 42%, respectively, were almost equally represented in the turnover, followed by 1 month trading. Total realized turnover with uncollateralized deposits in 2016 amounted to Denar 51,447 million and was almost twice higher compared to the previous year.

After the reduction of the NBRM policy rate in December, SKIBOR quotations[59] registered moderate downward movement, while short-term interest rates (MKDONIA and MBKS[60]) remained stable. The reduction of the policy rate by 0.25 percentage points in December was followed by a moderate downward movement of SKIBOR quotations, whereby more pronounced reduction was observed in 3 and 6 months SKIBOR (of 0.04 percentage points and 0.08 percentage points). However, the interbank interest rate on overnight transactions (MKDONIA) remained stable at 1.0%, and MBKS registered no changes, which as in the previous quarter, ranged from 1.00% - 1.30%, depending on the terms of the transactions.

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[59] Indicative interest rates for selling Denar deposits on the interbank market, with overnight maturities, 1 week, 1, 3, 6, 9 and 12 months, calculated from the quotations of reference banks.
[60] Interbank interest rate realized from transactions on the interbank deposit market with maturity up to 3 months.

3.2. Government securities market

Outstanding amount of GS
in MKD million
GS - by years (l.s.)
GS - by quarters (r.s.)
78.334 81.370 82.902 79.794 80.126 81.370

GS maturity composition, stocks
in MKD million
3m, 6m, 12m, 2y, 3y, 5y, 10y, 15y

GS ownership composition, stocks
in MKD million
Other investors Banks

GS currency composition, stocks
in MKD million
GS with FX clause
GS DEN
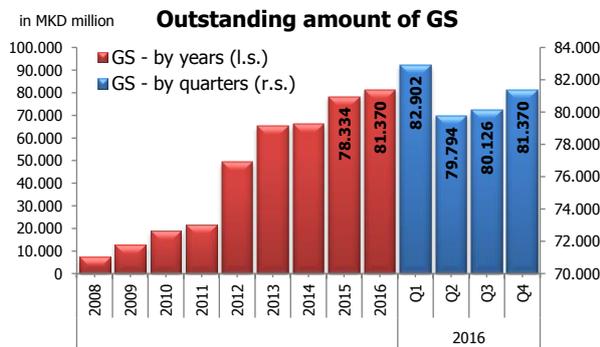
In the last quarter of 2016, the stock of government securities increased by Denar 1,245 million, compared to the previous period. The growth was almost entirely driven by pension funds and less by insurance companies, while the government securities portfolio with banks and the deposit insurance fund declined. Observing maturity, the increase in government securities of 12 months and 15 years dominated, amid moderate growth of government securities with maturity of 10 years. Other maturity categories registered a quarterly decrease. According to the currency structure, in the last quarter, the change in government securities is entirely due to government securities with FX clause, given the quarterly drop in Denar government securities.
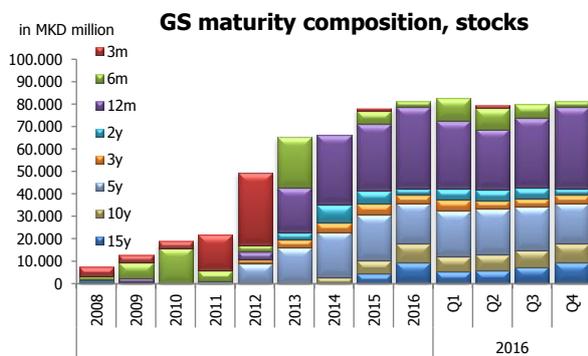
Compared to 2015, the stock of government securities at the end of 2016 was higher by Denar 3,037 million. The growth is mostly driven by institutional investors (pension funds and insurance companies), while the government securities portfolio with banks declined. Observing the maturity structure, in 2016, the trend of diversion of due securities to longer maturities continued. Thus, the stock of treasury bills with a maturity of 3 and 6 months decreased, while the treasury bills with a maturity of 12 months increased. Simultaneously, a decrease was registered in government bonds with maturity of 2, 3 and 5 years, while the stock of government securities with maturity of 10 and 15 years increased. Regarding the currency structure, the annual increase in total government securities is a result of the growth of government securities with FX clause, amid an annual decline in Denar government securities. This shift mainly results from changes in government bonds i.e. the reduction of Denar government bonds with a shorter maturity (2, 3 and 5 years) amid a simultaneous growth of government bonds with currency clause in longer maturities (10 and 15 years). As a result of these performances, the share of government securities with FX clause in total government securities increased from 32.2% to 38.3% annually.
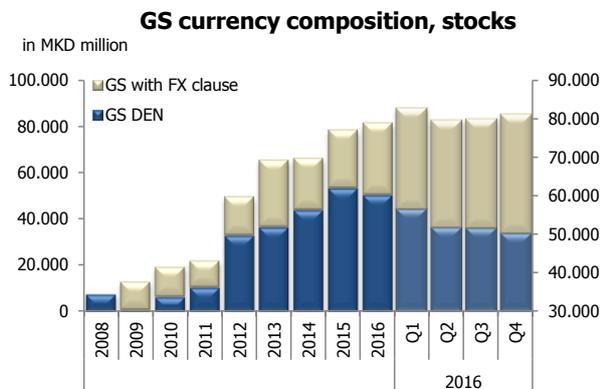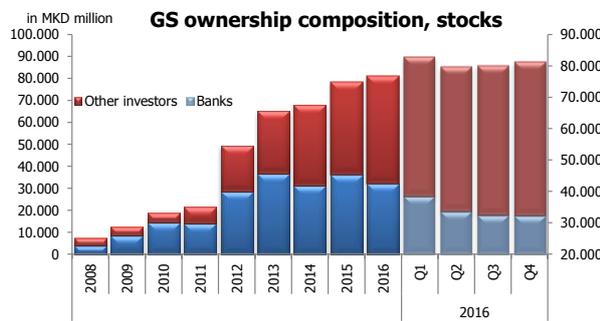
Interest rates on government securities on the primary market in the fourth quarter remained unchanged. In the last quarter of the year, treasury bills with a maturity of 6 and 12 months and government bonds with a maturity of

GS yields on primary market
in %

- 3m T-Bills
- 6m T-Bills
- 12m T-Bills
- 2y T-bonds
- 10y T-bonds
- 3m T-Bills with FX clause
- 6m T-Bills with FX clause
- 12m T-Bills with FX clause
- 2y T-bonds with FX clause
- 10y T-bonds with FX clause

Yields on government securities without FX clause | Yields on government securities with FX clause

Trading on secondary market

(in DEN million)

- Repo transactions
- Turnover with T-bonds
- Turnover with T-bills
- Turnover with CB-bills

2008 2009 2010 2011 2012 2013 2014 2015 2016 | Q1 Q2 Q3 Q4 | 2016

GS yields on secondary market
in %

Time to maturity:
- CB bills - 14 days
- CB bills - 21 days
- CB bills - 26 days
- CB bills - 27 days
- CB bills - 28 days
- CB bills - 34 days
- TBills up to 1m
- TBills 1-3m
- TBills 3-6m
- TBills 6-12m
- TBonds 2-3y
- TBonds 10-15y

CB bills | T-bills | T-bonds

GS yields in USA and eurozone
in %

- EUR 5Y
- EUR 10Y
- US 5Y
- US 10Y

2, 10 and 15 years, with and without currency clause were realized. Compared to the end of the previous year, interest rates on government securities are moderately higher. On the secondary market, trading in securities also recorded a moderate decline. In the fourth quarter of the year, the secondary securities market registered turnover in the amount of Denar 1,844 million, which was by 14% lower compared to the previous quarter. The structure of turnover, similar to the previous quarter, was dominated by outright CB bill transactions (with a share of 71.6%), and outright transactions with treasury bills and government bonds were realized. During the fourth quarter, there were no realized repo transactions. Thus, in 2016, total realized turnover of this segment amounted to Denar 10,466 million (historically highest level) and was higher by 48% annually.

The yields for the realized transactions on the secondary market registered no significant changes compared to the previous quarter. The secondary market in the fourth quarter of the year registered 7 transactions (3 with CB bills, 1 with treasury bills and 3 with government bonds). CB bill transactions were realized between banks, while the definitive purchases and sales of government securities, except between banks, were also realized with non-banking financial institutions.

Regarding the conditions on the international financial markets, at the beginning of the fourth quarter, there was an increased uncertainty in anticipation of the effects of the US presidential elections. However, expectations stabilized relatively rapidly, and long-term yields were changing according to the perceptions of the economic fundamentals and the expected changes in monetary policies. Thus, amid conduct of divergent monetary policies in the US and the euro area, the government securities yields continued to move in the opposite direction. Yields on government bonds in the US in the last quarter of the year, in expectations for a relaxed fiscal policy and monetary policy tightening, registered significant growth, while yields on government bonds in the euro area[61] registered a more moderate shift in the positive direction. The last quarter of the year was marked by the exit of yields on 10-year government bonds from the negative zone, amid better economic performance

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[61] Those are generic government bonds derived from the yield curves of government bonds of Germany and France.

German and macedonian sovereign securities yields and spreads

Source:NBRM.
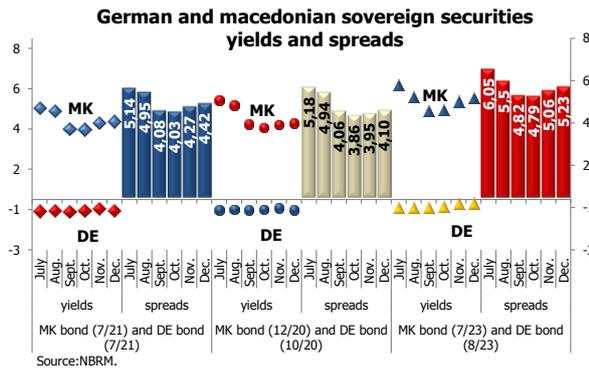
in the euro area.

The spreads between the Macedonian Eurobonds and German government bonds widened. Yields on the issued Macedonian Eurobonds[62] in the fourth quarter of the year registered a moderate growth, unlike the previous quarter when they were decreasing. On the other hand, the yield on German government bonds remained relatively stable. In such circumstances, the spreads between the Macedonian Eurobonds and German government bonds in the fourth quarter of the year grew.

4. Monetary and credit aggregates

In the fourth quarter of 2016, the broadest monetary aggregate M4 registered a significant acceleration in the pace of growth. The acceleration is usual for this time of year, reflecting the path of movement of the money supply determinants. However, the intensity of acceleration in 2016 is greater than usual, signaling stabilization of the expectations and confidence of the entities and return of part of deposits, withdrawn in response to the political crisis. Analyzing structure, around half of the registered growth is due to the increase in liquid assets (currency in circulation and demand deposits), which is partly due to the higher demand for money for transaction purposes before the New Year and Christmas holidays. However, the positive contribution of term deposits is also significant. Observing the currency, the growth is mostly due to the increase in Denar deposits, amid decreased contribution of foreign currency deposits, which is a signal for the stabilization of the propensity of the private sector to hold domestic currency. Analyzed by sectors, corporate deposits registered more intensive increase, amid simultaneous strong growth of household deposits, which corresponds to the credit market developments in this period. Thus, around 2/3 of the total quarterly growth arises from corporate lending, despite the realized reduction in the previous three quarters, amid further solid support to banks and the household sector. Despite the acceleration in the quarterly growth, on an annual basis, the growth of total loans in December slowed down to 1% from 2.5% at the end of September (6.5% and 7.7%, respectively, if we isolate the effect of regulatory changes).

4.1.1. Monetary aggregates

During the last quarter of 2016, there was a significant acceleration in the money supply growth, whereby the quarterly growth rate at the end of December rose to 6.6%, from 2.2% in September. Realized flows

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[62] It refers to the Macedonian Eurobonds issued in July 2014, in December 2015, and in July 2016. Eurobonds are issued in the nominal amount of Euro 500 million, Euro 270 million, and Euro 450 million, respectively, with a maturity of 7, 5 and 7 years, respectively, and annual interest rates of 3.975%, 4.875% and 5.625%, respectively.

Contribution to the quarterly change of M4, from structural point of view
(in percentage points)

Source: NBRM.

Legend:
- Currency in circulation
- Demand deposits
- Short-term deposits
- Long-term deposits
- M4, quarterly change (in %)
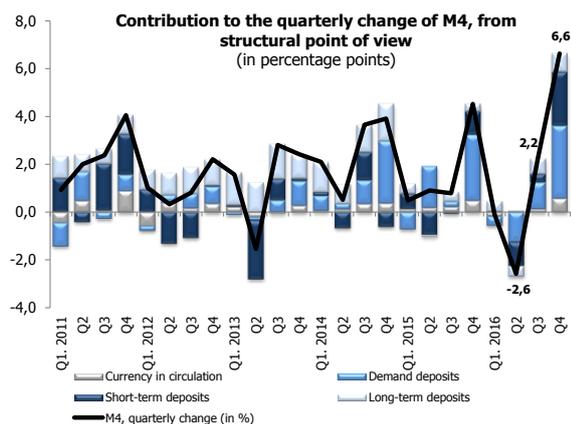
in this period are significantly higher compared to the realization in the previous quarter and are the main driver of the overall annual growth of money supply during 2016. The intensified pace of growth of the broadest monetary aggregate is common for this time of year, reflecting the path of movement of the fundamental factors. However, its acceleration is more pronounced than usual and provides signals for return of part of deposits, withdrawn during April and May as a result of the increased speculations because of the political crisis.

Structurally speaking, the quarterly growth stems from the increase in all money supply components from maturity and currency aspect, amid more pronounced contribution of liquid assets (currency in circulation and demand deposits). Thus, the most liquid monetary aggregate M1 explains half of the realized growth (54%), which in part reflects the increased demand for liquid assets in the eve of the New Year and Christmas holidays. Term deposits also made significant positive contribution to the growth, with a share of around 34% and 12% of short-term and long-term deposits, respectively. Favorable trends were also observed in the currency structure of money supply. Namely, around 70% of the realized growth in the last quarter is explained by the new denar savings, which is a clear signal for the incentives of the private sector to hold domestic currency. Growth was also registered in the savings in foreign currency, but its share in the total increase is twice lower compared to last quarter (share of 22% in the total increase compared to 44% in the third quarter). These favorable developments in the currency structure of the engines of the money supply growth have contributed to a lower degree of euroisation at the end of the year. Thus, the share of foreign currency deposits in total money supply at the end of December decreased by 1 p.p. and amounted to 37.8%. Simultaneously, the share of foreign currency household deposits in total deposits (with demand deposits) decreased by 0.8 p.p. and the end of December amounted to 48.8%, while the share of foreign currency household deposits in total deposits (without demand deposits) remained relatively stable at 58%. The intensified pace of growth in the last quarter enabled higher **annual growth rate** of money supply, which was 6.1% at the end of the year, versus 4% in the previous quarter.

During the last three months of 2016, there is more intensive widening of the deposit base of the banking system, whereby

Total deposits

	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
q-o-q growth, %								
Total deposits	0,4	0,8	0,6	4,6	0,1	-2,9	2,3	6,3
contributions to quarterly growth, p.p.								
Deposit money	-0,8	1,9	0,3	3,2	-0,4	-1,3	1,2	3,0
Denar deposits	0,0	-1,1	0,3	0,3	0,01	-1,6	0,0	1,7
Foreign currency deposits	1,2	0,0	0,1	1,1	0,5	0,1	1,1	1,6
Short-term deposits	0,7	-1,0	-0,1	1,1	0,03	-1,0	0,4	2,5
Long-term deposits	0,5	-0,1	0,4	0,3	0,5	-0,5	0,7	0,8

Source: NBRM.

Household deposits

	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
quarterly change, in %								
Total household deposits	1,8	-0,7	0,7	2,3	0,8	-3,5	1,8	3,7
contribution to quarterly change of total deposits, in p.p.								
Deposit money	0,1	-0,2	0,3	1,8	0,1	-0,9	0,6	2,1
Denar deposits	0,7	-0,4	-0,1	0,1	0,3	-2,6	0,0	0,6
FX deposits	1,0	-0,1	0,6	0,4	0,4	0,0	1,1	0,9
Short-term deposits	1,1	-0,7	0,1	0,2	0,1	-1,8	0,6	0,6
Long-term deposits	0,6	0,1	0,4	0,3	0,6	-0,8	0,5	0,9

Source: NBRM.

Enterprise deposits

	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
квартални промени, во %								
Total household deposits	-4,2	5,9	-1,2	12,7	-1,7	-3,6	4,2	14,9
contribution to quarterly change of total deposits, in p.p.								
Deposit money	-4,3	8,1	0,6	8,3	-2,3	-3,4	2,9	6,5
Denar deposits	-1,7	-2,6	-0,4	0,7	-0,1	0,0	-0,7	4,5
FX deposits	1,8	0,5	-1,4	3,7	0,6	-0,3	1,9	3,8
Short-term deposits	-1,1	-1,6	-1,2	4,3	-0,2	0,7	0,5	7,9
Long-term deposits	1,2	-0,6	-0,6	0,1	0,8	-0,9	0,8	0,4

Source: NBRM.

the quarterly growth rate at the end of December is 6.3%, versus 2.3% in the previous quarter. Growth of total deposits in this period largely stems from the higher corporate deposits, but the contribution of household savings is significant. **Thus, total household deposits register an acceleration in the quarterly growth rate, which is 3.7% at the end of December and is twice as high compared to the previous quarter (1.8% at the end of September).** The growth is largely realized in December, which in addition to the favorable fundamental factors, in part is also related to the higher and early[63] payment of pensions and usual bonuses for the end of the year, and the payments based on the purchase of tobacco in this period. However, the pace of growth also points to further stabilization of the expectations of the entities and returning part of the withdrawn deposits. Analyzing the maturity structure, the quarterly growth of household deposits is largely due to long-term deposits, amid simultaneous growth of short-term deposits. However, most of the growth of total household deposits (about 59%) is due to the growth of demand deposits. Observing the currency, the last quarter registered intensification of the contribution of Denar household deposits to total growth, whereby deposits in local currency explain about 75% of the realized increase in this period (versus 38% in the previous quarter). Foreign currency household deposits continued to grow, but at a slower pace compared to the performances in the third quarter. Along with the intensification of the quarterly growth, **on an annual basis,** the growth of total household deposits accelerated and at the end of December was 2.5%, compared to 1.2% at the end of September.

Total corporate deposits in the last quarter of the year registered a significant acceleration in the pace of growth of 14.9%, compared to 4.2% in the previous quarter. Higher flows in this period were realized in conditions of retaining the positive performances in the real economy and additional increased credit support of banks to this sector of the economy. Analyzing the maturity structure, the quarterly increase in corporate deposits is predominantly explained by the increase in short-term deposits, amid small growth of long-term deposits. In terms of currency structure, the quarterly increase in

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[63] Some banks paid the December pension at the end of December.

Interest rate of newly received deposits of households, in %

- Interest rate spread
- Denar interest rate
- FX interest rate

*refers to November 2016.
Source: NBRM.

Interest rate of newly received deposits of enterprises, in %

- Interest rate spread
- Denar interest rate
- FX interest rate

*refers to November 2016.
Source: NBRM.

Quarterly growth of M4 and contributions to growth, from balance sheet point of view
(in p.p.)

- NBRM's net foreign assets
- Banks' net foreign assets
- Net credit to government
- Credit to private sector
- Other items, net
- M4, quarterly changes in %

Source: NBRM.

corporate deposits is largely due to the growth of Denar deposits, amid a simultaneous increase in foreign currency deposits. **Annually**, at the end of December, corporate deposits increased by 13.4%, compared to 11.3% at the end of September.

According to the analysis of return on new savings, interest rates[64] on newly accepted Denar and foreign currency household deposits at the end of November registered minimal changes in divergent directions. Thus, interest rates on Denar deposits dropped compared to September, while interest rates on foreign currency deposits increased (by 0.1 percentage point, respectively), amounting to 2.3% and 1.2%, for Denar and foreign currency deposits, respectively. With companies, the interest rate on newly received Denar deposits increased by 0.4 p.p., while the interest rate on foreign currency deposits remained at the level of the previous quarter. In such circumstances, the interest rate spread between the new Denar and foreign currency household savings was reduced to 1.2 percentage points, while in companies the interest rate spread widened and amounted to 0.9 percentage points. In terms of total deposits, interest rates on Denar and foreign currency household deposits in November amounted to 2.5% and 1%, respectively, while on Denar and foreign currency corporate deposits they equaled 2.4% and 1.4%, respectively.

The structural analysis of the realized quarterly increase in the money supply (from balance sheet aspect) indicates significant positive contribution of net government loans, and to a lesser extent, loans to the private sector and net foreign assets of banks also acted in the same direction. On the other hand, the net foreign assets of the NBRM[65] decreased money supply in the last quarter.

4.1.2. Lending activity

The banking sector in the last quarter of 2016 intensified credit support to the

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[64] As of January 2015, data on interest rates of banks and savings houses have been collected under the new interest rate methodology. For more information see Quarterly Report, May 2015, p 53.
[65] The decrease in the net foreign assets of the NBRM mostly arises from transactions on behalf of the government for regular settlement of past due government liabilities to foreign lenders.

Total credits of private sector

|	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
quarterly change, in %								
Total credits of private sector	1,1	2,7	1,2	4,2	0,1	-2,0	0,2	2,7
Contribution in quarterly change of total								
Denar credits	0,7	3,2	1,6	3,7	0,6	-1,1	0,5	3,2
Foreign currency credits	0,4	-0,5	-0,3	0,5	-0,6	-0,9	-0,3	-0,4
Short-term credits	-0,5	0,0	-0,4	1,8	-1,1	-0,3	-0,5	1,6
Long-term credits	1,2	2,5	0,3	2,9	1,0	2,2	0,9	1,7
Households	1,0	1,8	1,4	1,1	1,1	0,1	0,8	1,0
Corporations	0,1	0,9	-0,2	3,2	-1,0	-2,1	-0,6	1,6

Source: NBRM.
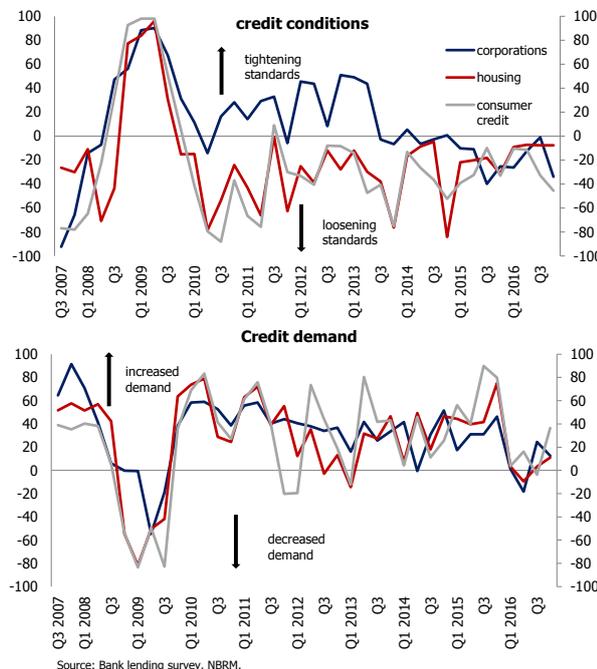
Source: Bank lending survey, NBRM.

private sector. The lending of the banking sector registered accelerated growth of 2.7% in the fourth quarter, versus 0.2% in the preceding quarter. Most of the credit growth was realized in the last month of 2016, which is a feature of the credit market developments in the last three years. The fourth quarter registered further depletion of the effect of the amendments to the regulation of the NBRM[66] to transfer part of the banks' doubtful and contested claims to the off-balance sheet record. The effects of these amendments were the strongest in the second quarter of 2016. By excluding the effect of regulatory changes, the total loans in the fourth quarter registered acceleration in the quarterly growth from 0.5% to 3.1%. Performances in lending activity correspond to the results of the latest Bank Lending Survey[67], according to which, in the fourth quarter, more intensive net easing of the lending terms in both sectors is evident, amid net increase in credit demand.

From a structural point of view, the increase in lending to the private sector in the fourth quarter was affected by the growth of corporate loans, amid further growth of loans to households. In terms of currency structure, the increase in lending activity in this period completely stems from the growth of Denar loans, amid further reduction of foreign currency loans, but at a moderately faster pace. The analysis of the maturity structure on a quarterly basis indicates that short-term loans increased in the last quarter of 2016, after the reduction in the last three quarters. Long-term loans continue to grow on a quarterly basis, at a faster pace compared to the previous quarter. As a result of these performances, short-term and long-term loans made almost equal contribution to the quarterly growth of total loans, unlike the previous period when long-term loans completely dominated. In terms of doubtful and contested claims, at the end of December, there was a quarterly decrease in households and companies. The share of doubtful and contested loans in total loans was 6.5% and decreased by 0.8 percentage points compared to September.

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[66] On 17 December 2015, the National Bank Council adopted the Decision on amending the Decision on credit risk management that requires from banks by 30 June 2016 to write off (and to continue to write off) all claims that have been fully booked for more than two years, and where the bank has identified and fully covered the credit risk of default at least two years before. Despite the write-off of these claims, i.e. their transfer to the off-balance sheet record, banks reserve the right for their collection.
[67] For more information, also see Lending Survey at http://nbrm.mk/?ItemID=F7AC78DEE498764FBAF39049F726CE3C.

Share of doubtful and contested claims in total loans

Legend:
- Doubtful and contested claims of corprates in total loans
- Doubtful and contested claims of households in total loans
- Doubtful and contested claims in total loans
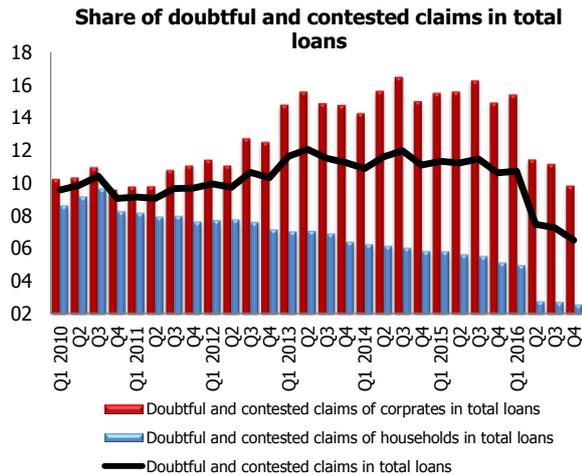
Source: NBRM.

Total credits of households

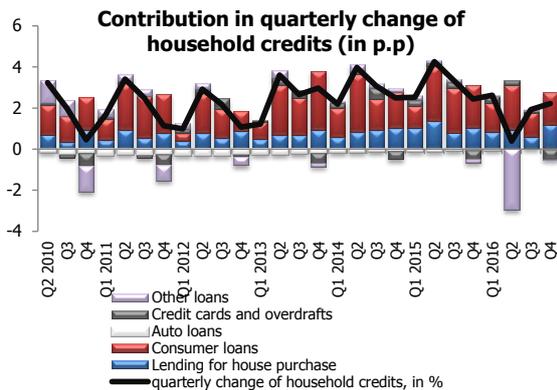|	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
quarterly change, in %								
Total credits of households	2,4	4,2	3,3	2,5	2,5	0,2	1,9	2,2
Contribution in quarterly change of								
Denar credits	2,3	3,9	3,2	2,4	2,5	0,1	1,7	2,1
Foreign currency credits	0,1	0,2	0,1	0,1	0,1	0,2	0,1	0,1
Short-term credits	0,2	0,2	0,2	-0,3	0,2	0,2	0,1	-0,4
Long-term credits	2,0	3,9	3,0	3,0	2,4	3,1	1,8	2,7

Source: NBRM.

Contribution in quarterly change of household credits (in p.p)

Legend:
- Other loans
- Credit cards and overdrafts
- Auto loans
- Consumer loans
- Lending for house purchase
- quarterly change of household credits, in %

*Total loans to households do not include loans to self-employed individuals.
Source: NBRM.

Total credits of corporations

	2015				2016			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
quarterly change, in %								
Total credits of corporations	0,1	1,6	-0,4	5,7	-1,8	-3,8	-1,1	3,1
Contribution in quarterly change of corporation credits (in p.p)								
Denar credits	-0,5	2,7	0,3	4,7	-0,7	-2,0	-0,4	4,0
Foreign currency credits	0,6	-1,1	-0,7	0,9	-1,1	-1,8	-0,7	-0,9
Short-term credits	-1,1	-0,1	-0,9	3,4	-2,0	-0,8	-0,9	3,3
Long-term credits	0,6	1,4	-0,1	2,8	0,0	1,4	0,2	0,8

Source: NBRM.

On an annual basis, total loans in December grew by 1%, which is lower compared to the annual increase in September (2.5%), largely due to the high base effect. Excluding the effect of regulatory changes, the total loans in December registered annual increase of about 6.5% compared to the growth of 7.7% in the previous quarter. The credit-to-deposit ratio indicator[68] equaled 87.8% at the end of December (92.6% excluding the effects of regulatory changes), which shows smaller use of the deposit potential for lending to the private sector compared to the previous quarter.

In the fourth quarter of 2016, the lending to the households sector registered accelerated growth of 2.2%, as opposed to the quarterly growth of 1.9% in the previous quarter. Excluding the effects of regulatory changes, total loans to households register acceleration in the quarterly growth from 2% to 2.3%. **Consumer loans made the largest contribution to the quarterly growth of loans to households,** which recorded relatively higher growth in the last quarter. Increased contribution was also registered by housing loans, due to their faster growth in this period. Performances are in line with the results of the Bank Lending Survey that indicate more intensive net increase in the demand for loans by the households, as well as further moderate easing of the lending terms. Also, consumer loans registered more intensive increase in demand, amid higher net easing of the lending terms compared to the previous period. The currency analysis shows that for the second consecutive quarter the main generators of the increase in the loans to households are the Denar loans, given small rise in the loans in foreign currency. **Annually**, at the end of December, total loans to households increased by 7% (7.3% at the end of September). However, if we isolate the effect of the decision, the total loans register annual increase of 10.9%, at the end of the period.

Most of the lending to the private sector in the fourth quarter was directed to the corporate sector. As a result, corporate loans registered a quarterly increase of 3.1%, compared to the decrease in the previous three quarters. Without the effect of regulatory changes, the lending to the corporate

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[68] According to monetary statistics data.

Interest rate of total newly granted household credits, in %

*Q4 2016 refers to the end of november.
Source: NBRM.

Interest rate of total newly granted corporate credits, in %

*Q4 2016 refers to the end of november.
Source: NBRM.
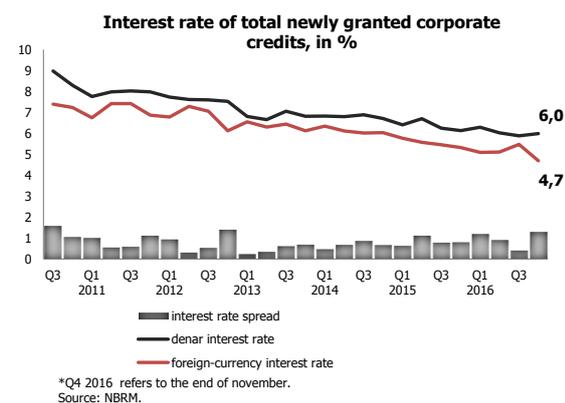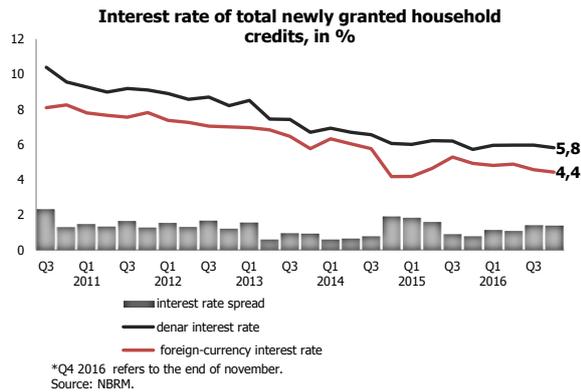
sector in the fourth quarter increases by 3.6%, compared to the decline of 0.6% in the previous period. According to the Bank Lending Survey, in the fourth quarter the demand for corporate loans registers a further net increase, amid a more intensive net easing of the lending terms. From the viewpoint of currency, the changes in the total loans are entirely a result of the increase in the Denar loans, unlike the previous three quarters, when they registered a decrease. Foreign currency loans still register a quarterly decrease, with greater intensity compared to the previous period. **On annual basis,** at the end of December, the credit growth of enterprises was lower by 3.7%, but excluding the effect of the decision, the total corporate loans grew by 3.2%.

According to the data on the interest rates on the newly approved loans as of November[69], the downward trend of the interest rates on loans to households and enterprises continues. The interest rate on Denar corporate loans is exception, since they registered moderate quarterly increase. The downtrend trend in interest rates, in this period, also continued in total loans to households and enterprises. Compared to the end of 2015, interest rates on total loans to households and enterprises in November declined by 0.2 and 0.4 percentage points, respectively.

V. Public finances

During the third quarter of 2016, the total revenues and expenditures in the Budget of the Republic of Macedonia (central budget and budgets of funds) were higher by 11.4% and 5.2%, respectively on an annual basis. The growth of budget revenues was largely due to higher tax revenues, mostly excise duties, as well as the revenues based on contributions that provided a positive input to the annual growth. Analyzing budget expenditures, the increase in the third quarter largely reflected the higher current costs, with positive but smaller contribution to growth made by capital costs, too. In the third quarter of 2016, the budget deficit was 0.4% of GDP, which is lower than last year (0.8% of GDP). The deficit was financed by government borrowing on the international financial markets, with part of the funds being accumulated as deposits with the National Bank. Counting the performances in the period from October to November, the cumulative budget deficit was 2.3% of GDP, constituting 59% of the forecast budget deficit for 2016. In this period, the budget deficit was mostly financed through foreign borrowing.

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[69] As of January 2015, data on interest rates of banks and savings houses have been collected under the new interest rate methodology. For more information see Quarterly Report, May 2015, p 53.

Contribution to annual change in total budget revenues, in p.p.
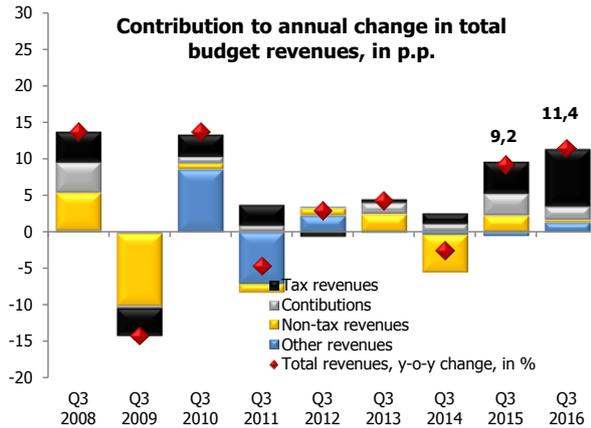
*Other revenues includes capital revenues, foreign donations and revenues from due loans.
Sources: Ministry of finance and NBRM`s calcualtions.

Contribution to annual change in total tax revenues, in p.p.

Source: Ministry of finance and NBRM`s calculations

Contribution to annual change in total budget expenditures, in p.p.
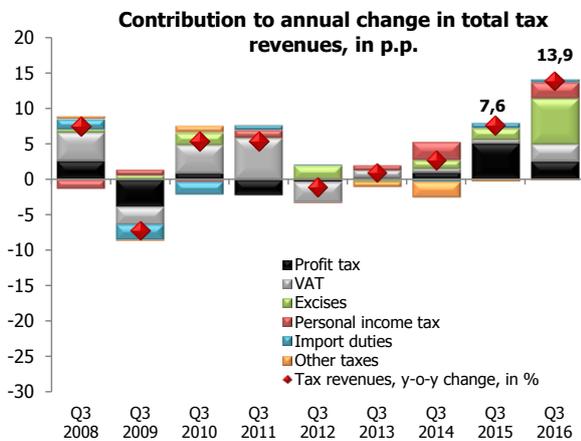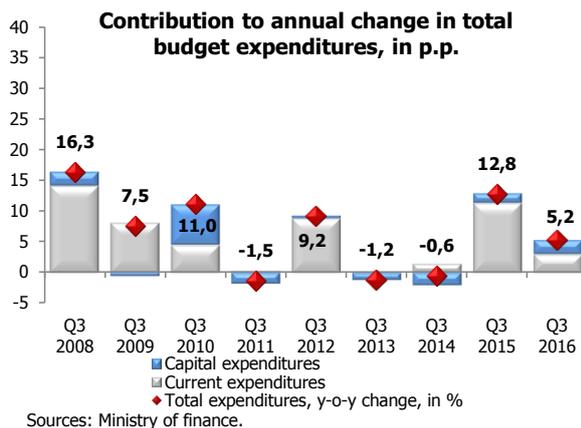
Sources: Ministry of finance.

In the third quarter of 2016, total revenues in the Budget of the Republic of Macedonia[70] increased by 11.4%, on an annual basis. The growth of budget revenues was driven by higher revenues from taxes, accounting for 7.9 percentage points in the annual growth rate of total income, while contributions and other income made moderate positive contribution to the annual growth of 1.8 percentage points and 1.3 percentage points, respectively.

Total tax revenues in the Budget of the Republic of Macedonia registered an annual growth of 13.9% in the third quarter of 2016. The growth was generated by income from indirect taxes, that increased by 12.1%, annually. Observing indirect taxes, positive contribution (of 6.4 percentage points and 2.1 percentage points, respectively) was made by excise duties[71] and VAT, while analyzing direct taxes, the contribution of corporate tax and income tax was 2.5 percentage points and 2.3 percentage points, respectively.

Total budget expenditures increased by 5.2% annually. Observing budget expenditures, in the third quarter of the year, current costs contributed 3.0 percentage points to the annual growth rate, and for the first time since the beginning of the year, capital costs have made positive contribution (2.2 percentage points). The annual growth rate of current costs was 3.3%, mainly driven by transfers (contribution of 4.3 percentage points to the annual growth). Same as in the previous two quarters, transfers were dominated by the growth of social transfers, with small positive contribution to the growth made by the category of other transfers that includes subsidies (moderately lower than in the previous two quarters).

Total Budget deficit was Denar 2,146 million or 0.4% of GDP in the third quarter of 2016, which is a weaker performance compared to the same period last year (0.8% of GDP). The deficit in the third quarter of the year was financed through government borrowing on the international financial markets, with a portion of the funds being accumulated on

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[70] Central budget and budgets of funds.
[71] Part of the higher revenues from excise duties are attributable to the higher rates of the specific and minimum excise duty on cigarettes.

Contribution to annual change in total current expenditures, in p.p.

- 15,4 — Q3 2008
- 9,0 — Q3 2009
- 4,9 — Q3 2010
- 0,4 — Q3 2011
- 10,0 — Q3 2012
- 0,0 — Q3 2013
- 1,6 — Q3 2014
- 12,2 — Q3 2015
- 3,3 — Q3 2016

Legend:
- Interest payments
- Transfers
- Goods and services
- Wages and allowances
- Current expenditures, y-o-y change, in %

Source: Ministry of finance and NBRM`s calcualtions.

Budget realization (central budget and budget funds) October-November 2016/October-November 2015

Total revenues	-0,3
Tax revenues	0,6
Contributions	2,2
Total expenditures	7,2
Current expenditures	10,8
Capital expenditures	-18,4
Budget balance	99,3

Source: Ministry of finance and NBRM`s calcualtions.

Budget balance financing (in Denar million)

- Q1 2016: -5.635
- Q2 2016: -1.307
- Q3 2016: -2.146
- Oct.-Nov. 2016: -4.541
- Jan.-Nov.2016: -13.629

Legend:
- Privatisations inflows
- External financing, net
- Budget balance
- Domestic financing, net
- Change in deposits*

* Positive change - deposits withdrawal; negative change - deposits accumulation.
Source: MoF.

Public debt, in % of GDP

- 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, Q1 2015, Q2 2015, Q3 2015, Q1 2016, Q2 2016 (44), Q3 2016 (49)

Legend:
- External public debt
- Domestic public debt
- Total public debt

Source: MoF and NBRM calculations.

the government accounts with the National Bank.

In the period October-November 2016, total budget revenues decreased insignificantly by 0.3% on an annual basis. Tax revenues increased by 0.6%, while the growth is predominantly driven by inflows of excise and personal income tax, while the growth of income from contribution is slightly higher (2.2%). **In this period, budget expenditures went up by 7.2% on an annual basis.** In the period October-November 2016, current costs made positive contribution to the structure of budget expenditures (9.5 percentage points), while the contribution of capital costs was negative. The deficit for the period October-November was Denar 4.541 million, or 0.8% of GDP. **Given the performances in the period October-November 2016, in the first eleven months, the budget deficit amounted to Denar 13,629 million, or 59% of the forecast deficit in accordance with the second revision of the Budget for 2016.** Since the beginning of the year, budget deficit was mostly financed through government borrowing on the international financial markets.

At the end of the third quarter of 2016, total public debt[72] was 49.4% of GDP, which is by 5.1 percentage points higher compared to the previous quarter[73]. From a structural perspective, the increase was almost entirely due to the growth of external debt (of 5.0 percentage points of GDP). At the end of September 2016, external debt to GDP and domestic debt to GDP ratios were 34.8% and 14.6%, respectively. At the end of the third quarter, the total government debt[74] was 40.9% of GDP (36.2% of GDP at the end of the preceding quarter), while the debt of public companies[75] made up 8.4% of GDP (8.2% of GDP at the end of the previous quarter).

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[72] 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 companies established by the state or municipalities, municipalities within the City of Skopje and the City of Skopje, and companies that are entirely or predominantly owned by the state or by the municipalities, the municipalities within the City of Skopje and the City of Skopje, for which the Government has issued a state guarantee.

[73] Public debt to GDP has been calculated by the NBRM with the October forecast.

[74] Government debt is defined as the sum of debts of the central and the local government.

[75] Refers to guaranteed debt of public companies and joint stock companies owned by the state, according to the public debt definition under the Law on Public Debt (Official Gazette of the Republic of Macedonia No. 165/14).

BUDGET OF REPUBLIC OF MACEDONIA (Central budget and budgets of funds)

	Budget for 2016	Revised Budget (I)	Revised Budget (II)	Q1 2016	Q2 2016	Q3 2016	October-November	Annual changes, perod in 2016 over the same period in the previous year, in %				Contributions in annual changes, perod in 2016 over the same period in the previous year, in %			
	Plan, in mil. denars	Plan, in mil. denars	Plan, in mil. denars	Realization, in mil. denars				Q1 2016	Q2 2016	Q3 2016	October-November	Q1 2016	Q2 2016	Q3 2016	October-November
TOTAL REVENUES	**177.292**	**174.291**	**174.291**	**40.583**	**41.422**	**43.807**	**27.858**	**7,4**	**2,7**	**11,4**	**-0,3**	**7,4**	**2,7**	**11,4**	**-0,3**
Tax revenues and contributions	150.718	149.597	149.597	35.647	37.544	38.695	24.807	7,0	6,1	11,1	1,3	6,1	5,4	9,8	1,2
Taxes	99.543	97.364	97.364	23.714	24.685	25.436	16.244	8,1	6,8	13,9	0,6	4,7	3,9	7,9	0,4
Contributions	49.187	50.145	50.145	11.582	12.455	12.833	8.265	5,9	4,7	5,8	2,2	1,7	1,4	1,8	0,6
Non-tax revenues	18.387	16.576	16.576	3.422	2.557	3.556	2.198	5,6	-4,3	3,4	-13,5	0,5	-0,3	0,3	-1,2
Capital revenues	3.155	2.329	2.329	614	275	806	190	75,4	-78,6	142,8	41,8	0,7	-2,5	1,2	0,2
Foreign donations	4.232	5.369	5.369	815	925	701	596	4,0	9,3	15,3	-16,4	0,1	0,2	0,2	-0,4
Revenues from repayments of loans	800	420	420	85	121	49	67	7,6	-28,8	-50,0	4,7	0,0	-0,1	-0,1	0,0
TOTAL EXPENDITURES	**196.276**	**195.472**	**197.410**	**46.218**	**42.729**	**45.953**	**32.399**	**4,9**	**-1,9**	**5,2**	**7,2**	**4,9**	**-1,9**	**5,2**	**7,2**
Current expenditures	170.929	172.922	175.079	43.076	39.730	41.223	29.353	7,9	-0,9	3,3	10,8	7,1	-0,9	3,0	9,5
Capital expenditures	25.578	22.550	22.331	3.142	2.999	4.730	3.046	-24,2	-13,5	26,2	-18,4	-2,3	-1,1	2,2	-2,3
BUDGET DEFICIT/SURPLUS	**-18.984**	**-21.181**	**-23.119**	**-5.635**	**-1.307**	**-2.146**	**-4.541**								
Financing	18.984	21.181	23.119	5.635	1.307	2.146	4.541								
Inflow	**40.546**	**42.635**	**44.573**	**7.545**	**4.321**	**3.584**	**16.588**								
Privatisation receipts	0	54	54	46	13	1	71								
Foreign loans	22.861	44.387	31.657	2.122	137	28.098	48								
Deposits	-1.209	-10.245	4.423	-113	5.996	-25.656	11.819								
Treasury bills	18.860	8.405	8.405	5.490	-1.836	1.141	4.640								
Sale of shares	34	34	34	0	11	0	10								
Outflow	**21.562**	**21.454**	**21.454**	**1.910**	**3.014**	**1.438**	**12.047**								
Repayment of principal	21.562	21.454	21.454	1.910	3.014	1.438	12.047								
External debt	12.381	12.273	12.273	811	1.020	560	8.819								
Domestic debt	9.181	9.181	9.181	1.099	1.994	878	3.228								

Source: Ministry of Finance and NBRM calculations.

VI. Stock exchange indices and real estate prices

In the last quarter of the year, there was an increased uncertainty on the international financial markets mainly under the influence of the US presidential elections. However, these global developments were fleeting, and had a relatively limited effect on the Macedonian Stock Exchange and regional markets. Analyzing the Macedonian Stock Exchange, MBI-10 continued to grow in the last quarter of the year, same as the bond index value (OMB). The movements of most regional markets are also upward. However, in terms of dynamics, over an extended period, after the fall of stock markets during the global financial crisis, most regional stock indices continued to decline and their value is still below pre-crisis levels. In the fourth quarter, property prices in the domestic market decreased for the third consecutive quarter in the absence of significant changes in supply and demand for real estate.
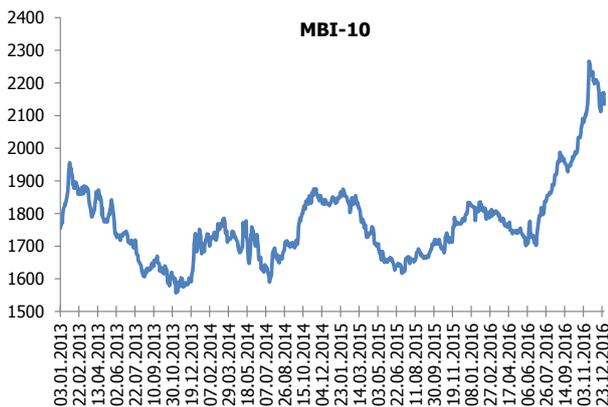

MBI-10

Source: Macedonian Stock Exchange Skopje

During the last quarter of 2016 the value of the Macedonian MBI-10[76] registered a quarterly growth of 9.2%, whereby the index reached 2134.91 at the end of the quarter (1954.4 at the beginning of the quarter). The upward index trajectory is attributed to the increased demand for the shares of two companies from the financial sector that constitute MBI10, which also explains the high increase in the total stock exchange turnover of 60.3% compared to the previous quarter. High growth was also registered in trading through block transactions mainly reflecting the increased demand for the shares of one of the largest banks in the country after the announcement of dividend

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[76] On 15 December 2015, the MBI-10 index was revised, and as of 1 March 2017, it includes Komercijalna Bank AD Skopje, Granit AD Skopje, Alkaloid AD Skopje, Stopanska Bank AD Bitola, Makpetrol AD Skopje, Makedonijaturist AD Skopje, Ohridska Bank AD Skopje, Macedonian Telecom AD Skopje, NLB Bank AD Skopje and Stopanska Bank AD Skopje.
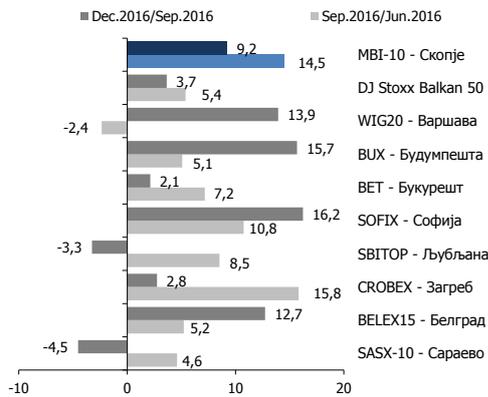
Volatility indexes on stocks and bond markets

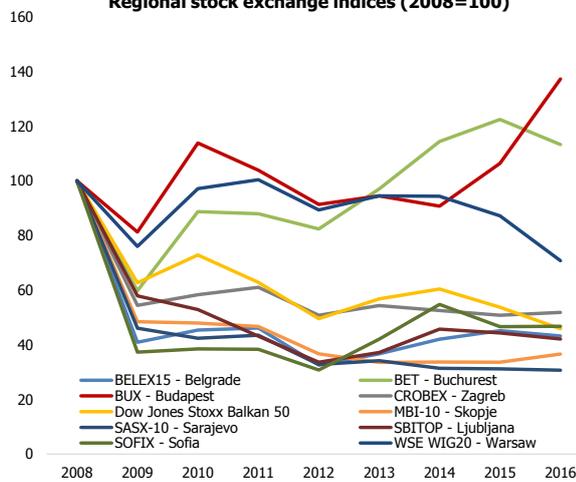- VIX index (stocks)-l.h.s.
- MOVE index (bonds)-r.h.s.
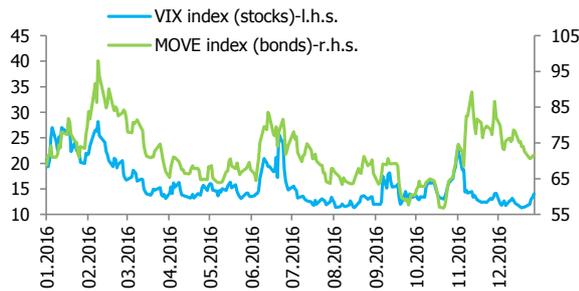
Source: Chicago Board Options Exchange (CBOE)

Changes of the regional stock exchange indices, eop December 2016/eop September 2016 and eop September 2016/ eop June 2016 (во %)

- ■ Dec.2016/Sep.2016
- ■ Sep.2016/Jun.2016

	Dec.2016/Sep.2016	Sep.2016/Jun.2016
MBI-10 - Скопје	9,2	14,5
DJ Stoxx Balkan 50	3,7	5,4
WIG20 - Варшава	-2,4	13,9
BUX - Будумпешта	5,1	15,7
BET - Букурешт	2,1	7,2
SOFIX - Софија	16,2	10,8
SBITOP - Љубљана	-3,3	8,5
CROBEX - Загреб	2,8	15,8
BELEX15 - Белград	12,7	5,2
SASX-10 - Сараево	-4,5	4,6

Source: national stock exchanges.

Regional stock exchange indices (2008=100)

- BELEX15 - Belgrade
- BET - Bucharest
- BUX - Budapest
- CROBEX - Zagreb
- Dow Jones Stoxx Balkan 50
- MBI-10 - Skopje
- SASX-10 - Sarajevo
- SBITOP - Ljubljana
- SOFIX - Sofia
- WSE WIG20 - Warsaw

Source: Macedonian Stock Exchange Skopje, naational stock exchanges.

payment. Despite the growth of stock market during the second half of the year, it is difficult to determine whether the favorable trends will continue or are only temporary, given the high sensitivity and volatility of stock index and the increased risk aversion due to the still uncertain political situation in the country. The bond index (OMB) slightly increased by 0.3% at the end of December 2016 compared to the end of September 2016 (somewhat slower compared to the previous quarter, when the growth was 0.4%).
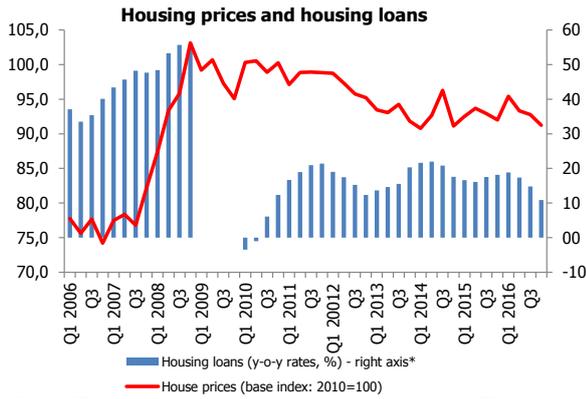
In the last quarter of the year, the uncertainty in international financial markets increased in anticipation of the results of the presidential elections in the United States. Thus, in early November, shortly before the US presidential elections, values of volatility indices in the equity and bond markets rose. By year's end, the value of VIX index stabilized, while the MOVE index remained relatively high[77]. **However, this uncertainty had a relatively limited effect on the regional stock exchanges.** In addition, during the fourth quarter, most of the regional stock indices, following the trends of the previous quarter, continued to grow, with the exception of stock indices in Sarajevo and Ljubljana. In terms of dynamics, over an extended period, after the fall of stock markets during the global financial crisis, most regional stock indices continued to decline, and their value is still below pre-crisis levels. Stock indices in Budapest and Bucharest that are at the level exceeding that in 2008 are an exception.

In the fourth quarter of the year, apartment prices continued to decline, with a slight acceleration in the dynamics[78]. Thus, the price index is lower by 0.9% on an annual basis (down by 0.2% in the previous quarter). This shift is consistent with the downward adjustment of apartment prices (total and newly built), both in the capital and in the country in recent years[79]. Real estate supply and demand indicators do not point to significant changes. The

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[77] MOVE (Merrill Lynch Option Volatility Estimate) index shows the volatility of the US government bond markets. VIX (Volatility Index) index is constructed on the basis of the implied volatility of S&P500 index options. Both indices are used by investors as indicators of conditions and expectations for the financial markets volatility.

[78] Hedonic index of housing prices, prepared by the NBRM on the basis of the notices of sale in the capital city, and published by the agencies dealing with trade in real estate. The price of apartment is a function from the apartment's size, neighborhood, floor, availability of central heating and year of construction.

[79] Data on prices of newly built apartments in Skopje and in the Republic of Macedonia are SSO data, while data on apartment prices (total - old and new buildings) has been compiled by the NBRM.

Housing prices and housing loans

Housing loans (y-o-y rates, %) - right axis*
House prices (base index: 2010=100)

Average price per 1m2 of dwelling surface in RM and Skopje (2010=100)

Total price per 1m2
Total price per 1m2, Skopje
Housing price index, Skopje (NBRM)

construction of residential properties continues registering double-digit growth rate (average annual growth rate of construction of residential properties in the first three quarters of 2016 of 26.4%), whereby the data on approvals for construction of residential properties show slowdown of the growth. In terms of demand for apartments, the solid growth in home loans continued in the fourth[80] quarter of 2016 and suggests further strengthening of demand.

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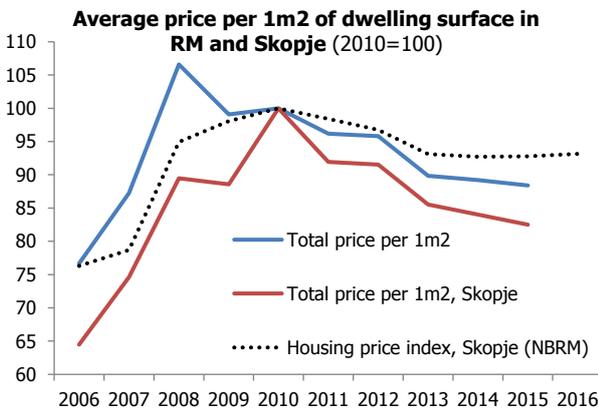
[80] Available data for the first two months of the quarter.

VII. Analytical appendices

Box 1: Debt analysis of the Macedonian corporate sector and adaptation to the post-crisis period

There is consensus that excessive debt is a source of vulnerability, since it increases the macro-financial implications of adverse shocks and reduces the effectiveness of adjustment mechanisms. The recent global crisis led to excessive levels of debt in many countries of the euro area and the region, creating a need for deleveraging, and correcting the corporate balance sheets. Generally, there are various modes of deleveraging that have a different impact on overall economic performance. Active deleveraging[81] implies negative credit flows. However, it has potential detrimental implications, if the downward correction of the levels of debt limits the medium-term economic growth by suppressing investment activity. So-called passive deleveraging is a friendlier alternative, where the reduction of debt to GDP ratio principally derives from the more intensive economic growth relative to the debt growth. Otherwise, debt restructuring remains an alternative.

This brief analysis focuses on changes in the total debt of the Macedonian corporate sector in the period from 2006 to the first half of 2016, using macro-data. The goal is to determine whether domestic companies are in the process of deleveraging in the post-crisis period, and thus to identify channels of debt adjustment. It should be emphasized that the sources of borrowing of the Macedonian corporate sector have relatively simple structure that lacks market financing and issuance of debt securities. Hence, the analysis of domestic debt funding sources focuses on the credit support by the domestic banking system and the gross external debt of private non-financial companies. Also, a comparative regional overview is made to show whether the general deleveraging trends vary among CESEE countries.

In the recent period, the Macedonian corporate sector registers a trend of continual accumulation of debt to domestic and foreign creditors. Total debt of non-financial companies to GDP, as an indebtedness indicator, reached 59.6% in the second quarter of 2016 or by 23.6 percentage points higher compared to the end of 2006. The debt has been increasing continuously, and **domestic companies do not show signs of deleveraging in the post-crisis period, when observed aggregately.** As pointed out in the latest research on the debt of the Macedonian corporate sector[82], the low initial level of debt in the years before the crisis, stable banking system that continues to provide credit support after its onset, as well as certain structural changes faced by the domestic economy are essential reasons for the absence of deleveraging. However, one can note that since 2009, the growth of total debt has slowed down, and thus its share in GDP has stabilized. The downward correction is mostly made in domestic sources, i.e. loans from the domestic banking sector.
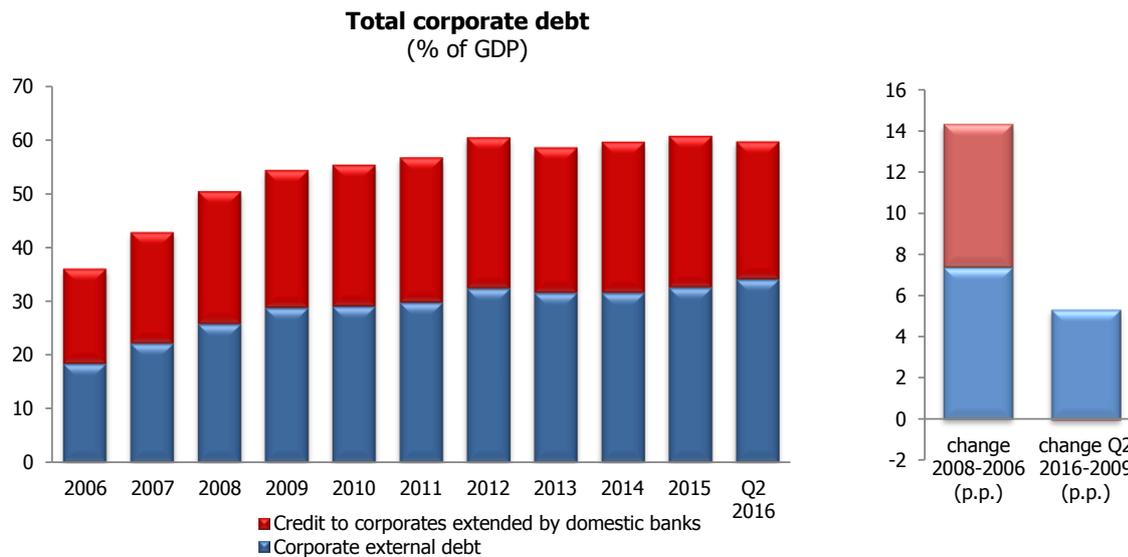
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[81] European Commission (2014), *Private sector deleveraging: where do we stand?*, Quarterly report on the euro area.
[82] Mitreska A., Bojceva-Terzijan S., Debnikov P. (2016), C*orporate Sector Deleveraging in Macedonia in the Aftermath of the Crisis – Has it happened at all?*, NBRM forthcoming.

Macedonian corporate debt

Total corporate debt
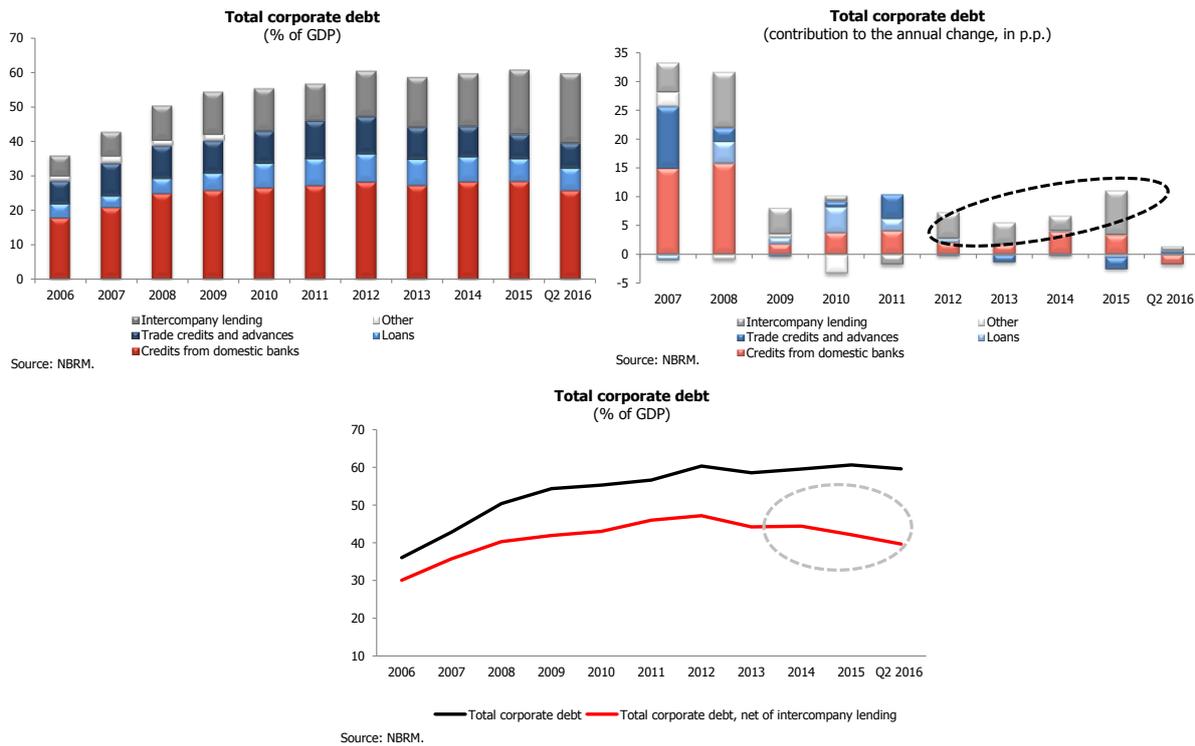(% of GDP)

Source: NBRM.

The structural analysis of the Macedonian corporate debt suggests changes in funding sources in the post-crisis period. Thus, loans from the domestic banking system are an important source of company debt financing (accounting for 42.9% of total debt in the second quarter of 2016). Intercompany debt dominates the debt to nonresidents, followed by trade credits and financial loans (share in total debt of 33.5%, 12.5% and 11.2% in the second quarter of 2016, respectively). The structure of total debt does not include liabilities on issued debt securities, confirming that market financing is not appropriate for domestic companies[83].

Analyzing dynamics, lending by the banking sector has recorded high two-digit growth rates in the years before the financial crisis, supporting the activity of domestic companies. In mid-2009, there was a drastic slowdown in lending, as perceived by the reduced contribution of bank loans to the growth of total debt in the post-crisis period. These developments were a result of the deceleration of domestic economic activity and more conservative credit policy of banks, in line with the deteriorating macroeconomic environment and rising risks. **Despite the deteriorating environment, this trend did not affect external debt, and external sources of debt provided significant financial support for the corporate activity.** Thus, financial loans made positive contribution to the growth, same as the short-term borrowing in the form of trade credits in 2011, which are directly related to foreign trade. In the post-crisis period, especially in the period from 2012 to 2015, the growth of total borrowing was prompted by the increase in intercompany debt. It is explained by structural changes in the domestic economy because of the entrance of new foreign-owned facilities that have intensified the economic activity and have a different way of financing compared to the existing companies. Namely, these foreign facilities are not funded through the domestic banking system, but mostly through loans from parent companies. Given the effect of financing of foreign companies on the overall debt structure, controlling for the effect of the intercompany debt gives a slightly different picture of the changes in the company debt in the post-crisis period. In this case, the last four years **have registered signs of deleveraging of the corporate sector as measured by the debt to GDP ratio.**

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[83] Specifically, this statement refers to the absence of external debt based on issued debt securities.

Macedonian corporate debt structure, by instrument

Total corporate debt
(% of GDP)

Source: NBRM.

Total corporate debt
(contribution to the annual change, in p.p.)

Source: NBRM.
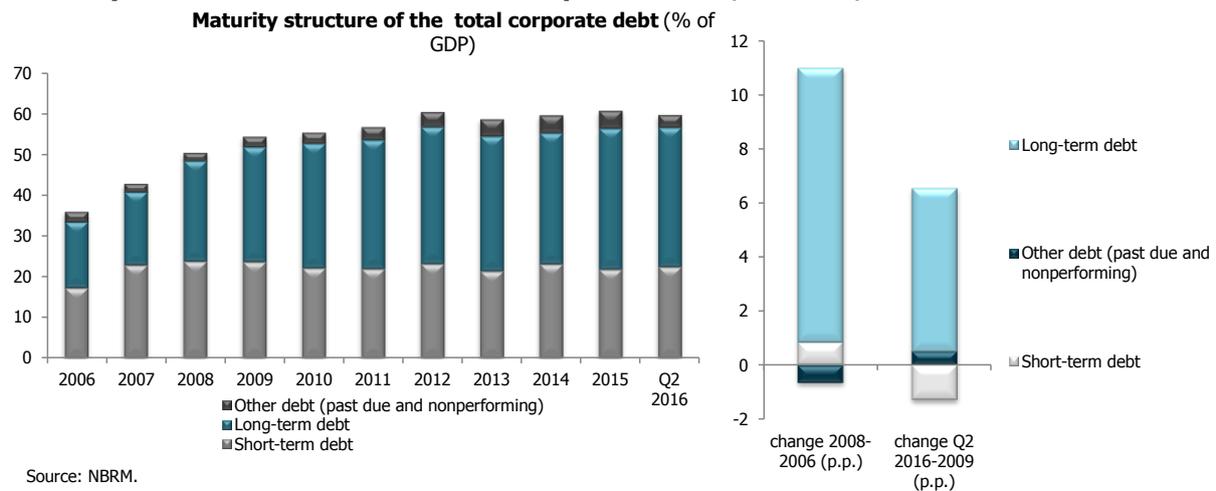
Total corporate debt
(% of GDP)

Source: NBRM.

Changes in the debt structure of the Macedonian corporate sector in the period under observation have implications on its vulnerability. The **maturity structure** is prevailed by long-term financing, which in the second quarter of 2016, accounted for approximately 57.4% of total indebtedness. In economic theory, the high share of long-term debt is an indication of pronounced sensitivity of the corporate sector to changes in interest rates, although it tends to reduce the risk of refinancing. Post-crisis adjustment in maturity structure indicates a downward correction in the share of short-term debt in GDP, compared to the moderate increase in debt with a longer maturity[84]. Although from a low initial position, in this period there was a small increase in the structural share of debt with non-performing or past due status, which may indicate difficulties of companies in servicing liabilities to domestic banks.

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[84] It stems from the reduced share of short-term external debt, as well as short-term loans from the domestic banking system.

Maturity structure of the Macedonian corporate debt (% of GDP)

Maturity structure of the total corporate debt (% of GDP)

Source: NBRM.

Corporate debt currency structure is dominated by debt with currency component, which in the second quarter of 2016 accounted for approximately 74.8% of total debt, which indicates greater exposure to currency risk. It was mostly attributed to external debt, which is mostly denominated in euros[85], followed by borrowing in US dollars. In the post-crisis period, changes in loans from the domestic banking system, i.e. reduced relative share of loans with currency component at the expense of Denar loans, slowed down the growth of borrowing in foreign currencies, relative to Denar borrowing. These structural changes have a favorable effect on the resilience to currency risk.

Currency structure of the Macedonian corporate debt (% of GDP)

Currency structure of the total corporate debt (% of GDP)

Source: NBRM.
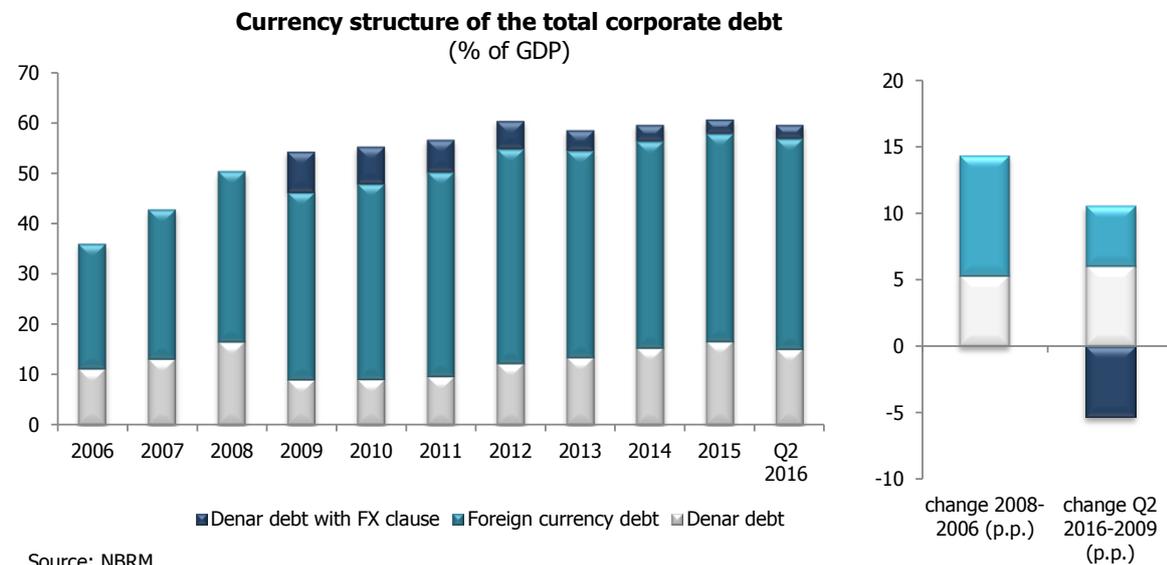
In some CESEE countries, there is a trend of deleveraging of the corporate sector in the post-crisis period. The stylized facts about the region as a whole show that amid increased capital inflows in the years immediately before the financial crisis, credit activity intensified, leading to increased investment and consumption, and deteriorated external position. In this context, the Western Balkan countries, on average, saw significant deterioration of the current account compared

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[85] In the second quarter of 2016, the currency structure of external debt of other sectors and intercompany debt (as a proxy for external corporate borrowing), shows that the debt denominated in euro and US dollar accounts for 82% and 17.3%, respectively.

to CEE. During the global crisis, capital inflows slowed down, particularly in the CEE countries, which caused a decline in lending and domestic demand. Under such adverse circumstances, and increased private debt in some CESEE countries, debt sustainability risks have become more pronounced. Namely, corporate over-indebtedness and weaker economic performance contributed to the growth of non-performing loans, and some risks are still present in certain countries[86]. The process of deleveraging in the post-crisis period was most pronounced in economies that reported the highest inflows in the years before the crisis, such as the Baltic States, Slovenia and Bulgaria[87]. Analyzing the economic costs of deleveraging, the IMF estimates[88] confirm that the countries with the most indebted corporate sector experienced the fastest decline in investment activity and employment.

A brief comparative review of post-crisis adjustment of corporate indebtedness in the CESEE countries is given below. The conclusions should be taken with caution, given the difficulties for an in-depth analysis of corporate debt due to weaknesses in the statistics[89]. Moreover, there are significant differences in the initial level of corporate debt in the countries under observation, measured as a share of GDP. Also, the progress in deleveraging in the post-crisis period is heterogeneous and significant downward debt correction was recorded in Lithuania, Estonia and Slovenia. According to estimates of the European Commission[90], the majority of EU member countries in the region that reduced their debt in 2008-2013, reported to have reduced their debt level by the so-called active deleveraging. On the other hand, in some countries, such as Poland, Slovakia and the Czech Republic, the debt continued to increase. The latest data of the European Commission show that in 2015, most countries (Slovenia, Estonia, Romania and Hungary) reported continued active deleveraging of the corporate sector.

Post-crisis adjustment of the corporate debt, by country

Total corporate debt, by country*
(% of GDP)
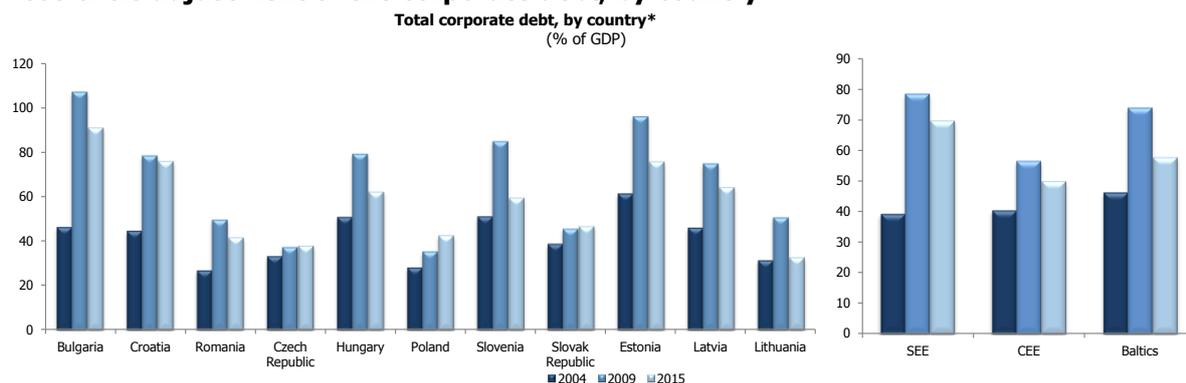
* Southeastern Europe (SEE), consisting of Bulgaria, Croatia and Romania.
Central and Eastern Europe (CEE), consisting of the Czech Republic, Hungary, Poland, the Slovak Republic and Slovenia.
The Baltic region, consisting of Estonia, Latvia and Lithuania.

Source: Eurostat.

In summary, this simple analysis of the total debt of the Macedonian corporate sector indicates continued growth in borrowing in the past and its gradual stabilization in the recent period. Such trends in the indebtedness occur against the backdrop of almost continuous increase in domestic economic and investment activity. However, this picture is incomplete because it also reflects the effect of structural changes in the Macedonian economy due to the entry of new foreign investments with different ways of funding, mainly intercompany debt of parent companies, which means lower interconnectedness with the domestic banking system. When controlled for the effect of the intercompany debt, there are signs of deleveraging of the corporate sector in the recent period, a

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[86] Post-crisis growth of non-performing loans to the corporate sector was more pronounced in the new EU member states (especially Baltic countries) than in the Western Balkans, but they managed to subdue it significantly thanks to the reforms. See: IMF (2015), The Western Balkans: 15 Years of Economic Transition, Regional Economic Issues: Special Report, pg.74.

[87] IMF (2014), 25 Years of Transition: Post-Communist Europe and the IMF, Regional Economic Issues: Special Report, pg.44.

[88] IMF (2015), Mind the Credit Gap, Regional Economic Issues: Central, Eastern and Southeastern Europe, pg.25.

[89] The comparison of the corporate sector debt among all countries under observation uses data on total corporate debt based on loans and debt securities (on a consolidated basis). It is worth mentioning that corporate debt includes the debt of public companies.

[90] European Commission (2014), *Private sector deleveraging: where do we stand?,* Quarterly Report, pg.11.

trend recognized also in some CESEE countries. Also, there are certain changes in the risk profile of the debt. First, in the post-crisis period, the relative share of short-term sources of debt declined, and the importance of long-term debt increased, thus reducing the refinancing risk. Second, in the period after the crisis, the growth of total foreign debt slowed down at the expense of Denar funding, suggesting reduced exposure to currency risk. However, this analysis has a weakness. Namely, it uses aggregate rather than micro data, which prevents consideration of the specifics of individual companies taking into account their heterogeneity.

Box 2: Potential output in Macedonia - growth dynamics analysis

Potential output is defined as the maximum level of output produced without generating inflationary pressures[91] **and is usually associated with structural factors.** Specifically, the potential output is the level of output produced by utilizing the available capacity of capital and labor in a normal period, when the economy is neither in expansion nor in recession, without inducing inflationary pressures. The difference between potential output and current output is called output gap and is an important indicator of the price pressures from excessive (or insufficient) demand in the economy. Hence, the potential output and output gap are important indicators when reviewing and making monetary decisions in the context of price stability as the ultimate goal.

Potential output and output gap are not directly measurable concepts, and there is a whole toolbox of methods and tools intended for their evaluation. Each of these methods has its advantages and disadvantages, and therefore, use of more than one method for calculation and comparison of the results is a common practice in the literature. Despite the shortcomings of the methods of calculation, the structural breaks, supply shocks and problems connected with available time series, such as short time series, low quality of the data and high volatility in the performances, add additional complexity in the process of calculation of the potential growth in transitional economies and developing countries. With respect to volatility of the data, as can be seen in Chart 1, the volatility of the annual growth of GDP in Macedonia is significantly higher than in the European Union (standard deviation of 4.3 vs. 1.9), which further complicates the estimation of trend or potential output growth.

Chart 1 Annual GDP growth

Annual growth rates of GDP (%)
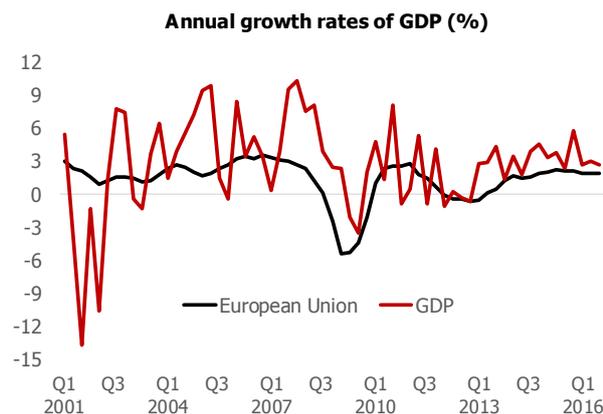
This Box focuses on the calculation of the potential output in Macedonia by using several methods and discussion about changes in the pace of potential growth, with particular focus on the period before and after the global financial crisis. Generally, the methods for calculating potential output could be divided into statistical methods and structural approaches. Statistical methods are relatively simple to use and are based on statistical features of series, and do not use economic theory. Structural approaches start from economic theories and laws, and further, using certain statistical and econometric tools, estimate the unobserved economic concepts. This Box uses the Hodric - Prescott (HP) filter, which is one of the most popular statistical methods. The other three methods are structural, i.e. production function method, a small structural model with the Kalman filter (KF) and structural calibrated model of the NBRM - MAKPAM. For more details about the calculation of the potential output through the production function method, see Jovanovic and Kabashi (2011)[92]. The Kalman filter is based on the research of Belgrave et al. (2015)[93] which

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[91] Okun, A., 1962, *Potential GNP: Its Measurement and Significance*, Cowles Foundation Paper 190.
[92] Jovanovic, B., Kabashi, R., 2011, Potential Product and Output Gap of Macedonia According to Several Methods of Calculation, National Bank of the Republic of Macedonia, Work Paper 2011/04.
[93] Blagrave, P., Garcia-Saltos, R., Laxton, D. and Zhang, F., 2015, "A Simple Multivariate Filter for Estimating Potential Output", IMF Working Paper No. 15/79.

analyzes the potential growth in several developed and emerging economies by using relatively small model with basic structural links such as Phillips curve and Okun's law estimated with Bayesian methods. This model has been applied to the case of Macedonia, by using the recommended values for developing economies and several additional adjustments primarily to cover the volatility of GDP. MAKPAM, which also uses the Kalman filter, is a larger model and relies on a different structure and calibrated parameters, as explained in the research of Hledik et al (2016)[94].

Chart 2 (left) presents growth rates of potential output calculated by using four methods[95]**. Potential output indicators estimated through different calculation methods, generally have a relatively high level of compliance during most of the analyzed period, especially regarding the direction of movement.** Differences mainly relate to the volatility and, in certain periods, to the intensity of changes of the obtained potential output growth indicators. Thus, as expected, the HP filter produces the least volatile estimate of potential growth. On the other hand, estimates obtained from the small model with a Kalman filter and the MAKPAM model (which also uses a Kalman filter) show mutual correlation and are more volatile, which probably reflects methods' features. Specifically, in such structural models, potential growth is calculated taking into account other economic developments, as well as some general rules based on economic theory[96]. In addition, volatility of the potential growth estimates reflects relatively high volatility of the GDP annual growth series, as well (Figure 1).

Given the differences in the potential growth estimated using different methods, and the possible errors in the specification of different methods, following the Medina approach (2010)[97] an aggregate indicator calculated as an average of all four estimates is presented on Figure 2 (right). Figure 2 (right) also presents two additional series constructed from the lowest and the highest estimate for each quarter. These results suggest that the potential growth accelerates in the pre-crisis period and slows down in the period after the crisis, with the tendency of recovery and stabilization in the last period. Despite this, the range of estimates under different methods in recent years is narrower than before (particularly compared to the turning points around 2008, 2009 and 2012), which probably indicates a stabilization of the economy.

Chart 2 Potential output calculated using different methods
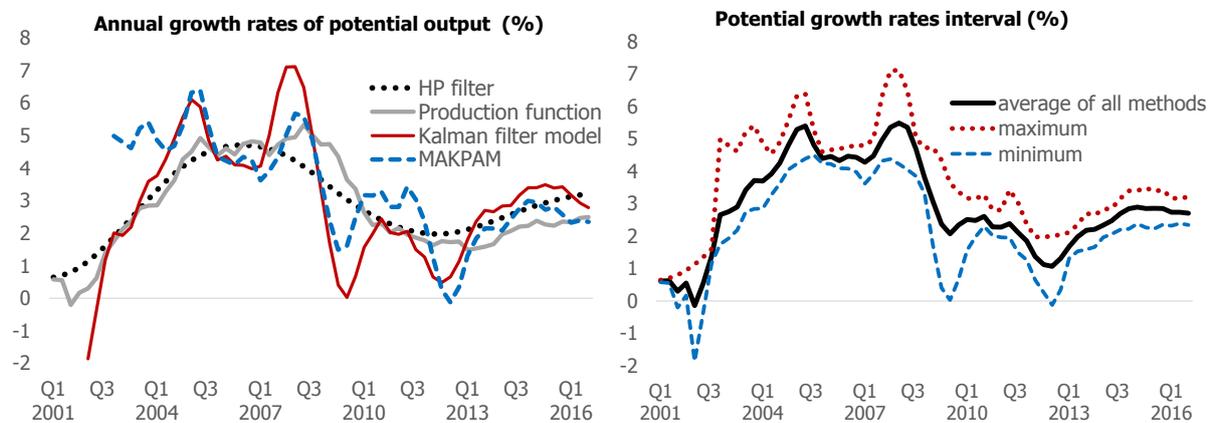
In order to obtain a quantitative insight into the dynamics of GDP growth, Table 1 shows the decomposition of GDP growth to growth of potential output, calculated as average of all methods'

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[94] Hledik, T., Bojceva-Terzijan, S., Jovanovic, B and Kabashi, R., 2016, " Overview of the Macedonian Policy Analysis Model (MAKPAM)", National Bank of the Republic of Macedonia Working Paper No. 2016/04.

[95] The analysis was made using quarterly data as of the third quarter of 2016. HP filter and output function use data as of the first quarter of 2000, while the Kalman filter and MAKPAM use data as of the beginning of 2001 and 2002, respectively.

[96] Key variables for evaluating the potential output in the Kalman filter model include GDP, inflation and unemployment. The MAKPAM model has a richer structure, and the significant difference compared to the Kalman filter is the detailed structure of GDP and balance of payments, and the inclusion of the monetary policy rule.

[97] Medina, L., 2010, *Potential Growth and Output Gap in Peru*, IMF Country Report No. 10/99.

estimates, and changes in the output gap. The decomposition is done for certain sub-periods and for the recent years. Moreover, this decomposition is based on identity, as shown in Equation 1, according to which GDP growth (*Δy*) is a function of potential output (*Δy**) and changes in the output gap (*Δygap*). The average GDP growth in the period 2003-2015 amounted to 3.4%, almost completely reflecting the potential growth. However, there is a significant difference between the period before and after the global economic crisis. In the pre-crisis period, average GDP growth of 4.8% reflects solid potential growth of 4.4% and positive changes in the output gap as an indicator of pressures on the demand side. On the other hand, in the post-crisis period (2009-2015), the GDP growth halved and the potential growth significantly slowed down to 2.3%.

However, the in-depth analysis suggests additional differences in the recovery stages. Thus, immediately after the crisis (2009-2012), the GDP growth was relatively low, with additional slowdown of the potential growth to 2.1% on average, and adverse effects on the demand side (negative changes in the output gap). On the other hand, the last three years have seen a significant acceleration of economic growth reflecting the gradual acceleration of potential growth and the recovery of demand (positive changes in the output gap).

Table 1 GDP growth decomposition[98]

	average 2002-2015	average 2002-2008	average 2009-2015	average 2009-2012	average 2013-2015	2010	2011	2012	2013	2014	2015
a. GDP growth rates, in %	3.2	4.3	2.2	1.2	3.5	3.4	2.3	-0.5	2.9	3.6	3.8
б. Potential GDP growth, in %	3.1	3.9	2.3	2.1	2.5	2.5	2.2	1.2	2.0	2.6	2.9
в. Changes in the output gap, in p.p. (a.-б.)	0.2	0.4	-0.1	-0.9	1.0	0.9	0.2	-1.7	0.9	1.0	1.0

$$\Delta y_t = \Delta y_t^* + \Delta ygap_t \qquad \text{(Equation 1)}$$

Changes in dynamics can also be analyzed through the contribution of each potential growth factor calculated using a production function (Chart 3). The decomposition shows that the potential growth in the pre-crisis period reflects the positive contribution of all factors (excluding labor in early years). On the other hand, in the period after the global economic crisis, the key factor that explains the slowdown in potential growth is the reduction of the total factors productivity (TFP), while labor and capital contributions are still positive and their impact reinforces[99] generally in line with movements in the economy in the same period. Namely, the average annual growth of employees accelerated from 1.4% in the period 2003-2008 to 2.1% in the period 2009-2015, while the average real capital formation to GDP ratio increased from 21.8% in the period before the crisis to 28.4% in the period after the crisis. Such dynamics largely reflects favorable changes in the economic structure due to the investments of several large foreign facilities, and significant infrastructure investments, which had a positive feedback on the labor market, investment and should have a positive effect on the long-term growth potential.

Contrary to the favorable trends in the labor and capital inputs that are generally in line with the performance of the economy, the negative effect of TFP requires careful interpretation. Namely, although the theories of economic growth define TFP as the total factor productivity, in practice TFP can include growth factors that are not explicitly included in the actual production function, such as human capital, and measurement errors (of the individual output factors and the total GDP). Hence, the interpretation of TFP requires a deeper analysis of factors that could explain its dynamics. For example, the research for the CESEE suggests that the TFP slowdown after the global crisis reflects the lower potential growth in trade partner countries, poorer technical progress in the frontier economies and weaker global trade[100].

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[98] The change in output gap indicates the direction of the gap movement, rather than the gap itself. Specifically, positive change indicates decreased negative gap or increased positive gap, and negative change shows a lower positive or larger negative gap.

[99] IMF 2016a, Former Yugoslav Republic of Macedonia - Country Report, IMF Country Report No. 16/356 presents similar structure to the rate of growth of potential product.

[100] IMF, 2016b, "Regional Economic Issues: Central, Eastern, and Southeastern Europe - How to Get Back on the Fast Track", IMF Regional Economic Issues May 2016.

Chart 3 Decomposition of the potential product growth calculated by output function

Contributions of factors of production (in p.p.)
to potential output growth (%) calculated
from the production function approach
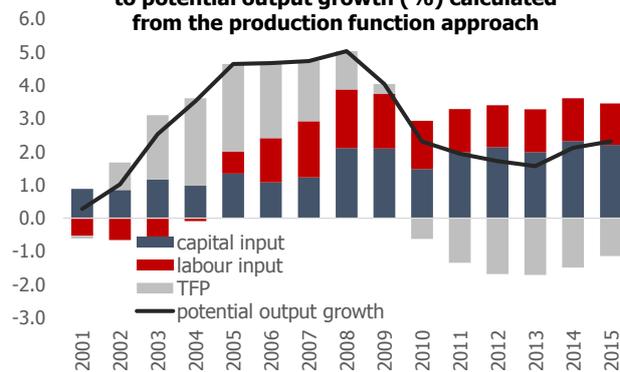
In conclusion, different calculation methods produce generally similar estimate for potential growth, and point to higher potential growth before the global economic crisis and a slowdown after the crisis, with some signs of recovery and stabilization in recent years. Furthermore, decomposition by production function shows that the contribution of labor and capital to the potential growth is positive over the entire period under observation. On the other hand, the contribution of the TFP is positive in pre-crisis period and negative in the post-crisis period. Given the above shortcomings of the TFP concept, further research is necessary on the TFP movement and determinants in Macedonia, which would give a clearer understanding of its driving factors.