



INFLATION REPORT QUARTER II, 2012

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Bulevar Svetog Petra Cetinjskog 6
81000 Podgorica
Telephone: +382 20 664 997, 664 269
Fax: +382 20 664 576

WEB SITE: <http://www.cb-cg.org>

CENTRAL BANK COUNCIL: Radoje Žugić, PhD, Governor
Milojica Dakić, MS, Vice-Governor
Velibor Milošević, PhD, Vice-Governor
Asim Telaćević
Milivoje Radović, PhD
Milorad Jovović, PhD
Srđa Božović, PhD

TRANSLATED BY: Translation Services Division

DESIGNED BY: Andrijana Vujović

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1. INFLATION INDICATORS

Consumer prices in Q2 2012 recorded a 1% increase with the highest prices growth recorded in the following categories: "hotels and restaurants" (7.6%), "recreation and culture" (4.4%), "clothing and footwear" (3.5%) and "food and non-alcoholic beverages" (2.1%). Observed by months, the growth of consumer prices was recorded in April (0.5%), May (0.4%) and June (0.2%). The annual increase in June was 3.9%, while the average rate (period-on-period) was 3.6%.

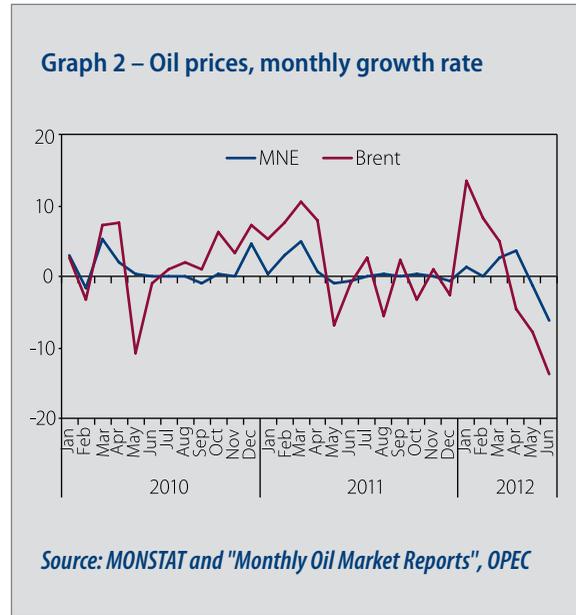
The growth in the prices of fruit of 25.3%, vegetables 4.1%, fish 5.3% and non-alcoholic beverages 6.6% were the main contributors to the 2.1% growth of prices in the category "food and non-alcoholic beverages". In this period prices in the category "hotels and restaurants" increased as a result of a 23.5% increase in the prices of accommodation, while the increased prices of newspapers, books and

stationery (9.9%) have induced a 4.4% growth of prices in the category "recreation and culture". Growth of 3.5% was recorded in the "clothes and footwear" category, mainly as a result of the increase in the prices of clothes (6.5%), while the prices in the categories: "alcoholic beverages and tobacco", "health", "furnishing, household equipment and routine household maintenance" and "communications" recorded growth of 0.4%, 0.3%, 0.2% and 0.1%, respectively. In Q2 the most significant decline was recorded in the "other products and services" (-3.6%) as a result of the decline in the personal hygiene products' prices of 4.1%, while the prices in the categories "dwelling, water, electricity, gas and other fuels" and "transport" declined 0.2% and 1.8%, respectively. Prices in the category "education" recorded no changes.

Table 1 - Inflation, %

	2011				2012	
	III	VI	IX	XII	III	VI
Change in relation to previous year-end	3.3	2.7	3.0	2.8	2.2	3.2
Annual change	3.7	3.5	3.4	2.8	2.7	3.9

Source: Monstat



Prices of oil in the global markets remain high; however a decline was recorded in relation to Q1. The price of reference OPEC basket in Q2 amounted to 106.74 USD/barrel, which is 9.1% lower in relation to the average price in Q1 2012. The average price of Brent in Q2 amounted to 108.39 USD/barrel, which is 8.5% lower in relation

to the average price in Q1 2012. The lowest price of Brent was recorded in June and it amounted to 95.19 USD/barrel. This is the lowest price recorded since December 2010, when it amounted to 91.53 USD/barrel. Analysts assess that the decline of oil prices was due to worrying data on global economy, as well as due to the decline in demand for this product.

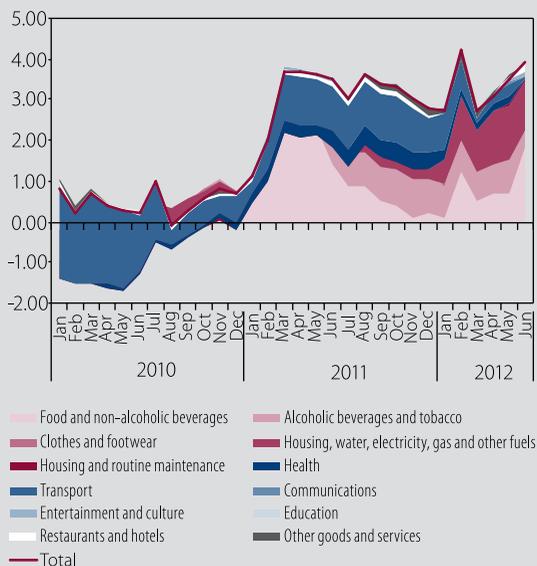
Table 2 - Share of individual categories in total inflation

	Weight	VI 12/ III 12	Growth rate	Contribution	Share in total inflation
TOTAL	10000	101.0	1.0	1.0	100.0
Food and non-alcoholic beverages	3755	102.1	2.1	0.8	74.9
Alcoholic beverages and tobacco	372	100.4	0.4	0.0	1.3
Clothes and footwear	761	103.5	3.5	0.3	25.1
Dwelling, water, electricity, gas and other fuels	1287	99.8	-0.2	0.0	-2.8
Furnishing, household equipment and routine household maintenance	494	100.2	0.2	0.0	0.8
Health	280	100.3	0.3	0.0	0.9
Transport	1216	98.2	-1.8	-0.2	-20.4
Communications	558	100.1	0.1	0.0	0.3
Entertainment and culture	321	104.4	4.4	0.1	13.5
Education	218	100.0	0.0	0.0	0.0
Restaurants and hotels	296	107.6	7.6	0.2	21.5
Other goods and services	442	96.4	-3.6	-0.2	-15.1

We would like to note that, despite the index changes, the share of certain categories is recorded only at the second or the third digit, due to the weighting structure.

Source: MONSTAT and CBM calculations

Graph 3 - Consumer prices' components: contribution to annual growth rate (index points)



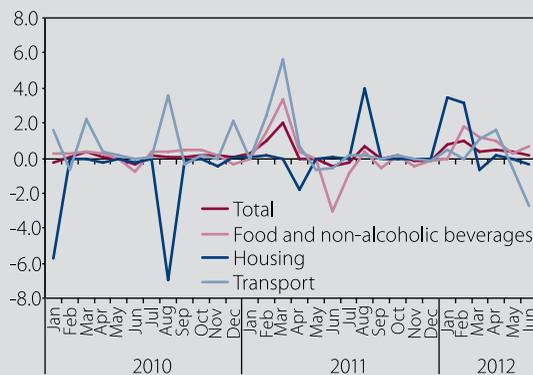
Source: Monstat and CBCG calculations

Graph 4 - Consumer prices, annual rate



Source: Monstat

Graph 5 - Selected categories - consumer prices, monthly rate



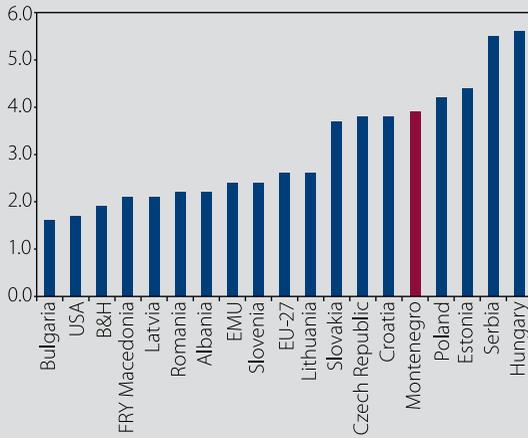
Source: Monstat

Annual consumer prices rate in June amounted to 3.9% showing an 1.2 percentage points increase in relation to the annual rate recorded in March. This rate was influenced mostly by the increase in the prices of the following categories: "alcoholic beverages and tobacco" (11.9%), "dwelling, water, electricity, gas and other fuels" (9.6%), "hotels and restaurants (6.2%), "food and non-alcoholic beverages" (4.8%) and "recreation and culture" (4%).

In Q2 2012, **producers' prices of manufactured products increased** 1.7% in relation to Q1 2012, whereby manufacturing industry prices increased 2.5%, while mining and quarrying prices declined 2%. Electricity, gas and water supply prices remained unchanged. Observed in relation to end-2011, producers' prices of manufactured products in June recorded increase of 3.1%, while observed annually, this growth amounted to 1.8%.

Comparison of the annual inflation recorded in Montenegro with the inflation recorded in selected countries shows that Montenegro recorded higher inflation than the most of the countries. Compared to neighbouring countries, lower annual rate was recorded in Bosnia and Herzegovina (1.9%), Macedonia (2.1%) and Albania (2.2%), while Serbia recorded annual inflation of 5.5%. The highest annual growth in selected countries was recorded in Hungary (5.6%).

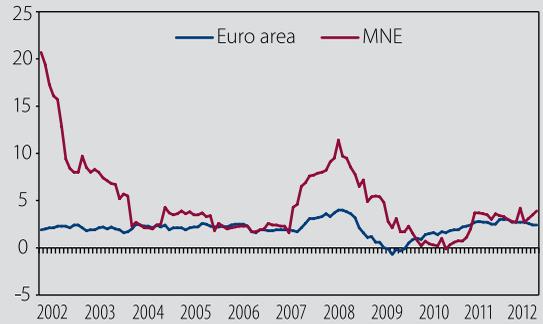
Graph 6 – Annual inflation rate in selected countries, June 2012



Source: National Statistical Offices and EUROSTAT

The annual rate recorded in Euro area, measured by harmonized consumer prices index (HCPI) amounted to 2.4%. The annual inflation rate in Montenegro measured by CPI amounted to 3.9% and measured by HCPI it amounted to 4.4%.

Graph 7 – Inflation in the Euro area and Montenegro since the introduction of euro (annual rates)



Source: Monstat and EUROSTAT

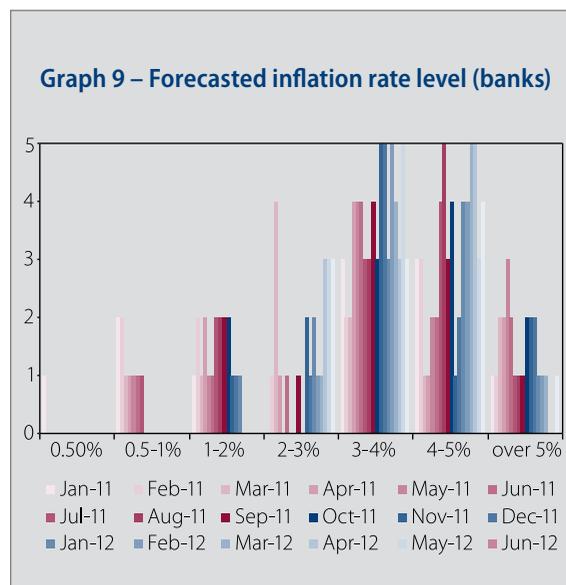
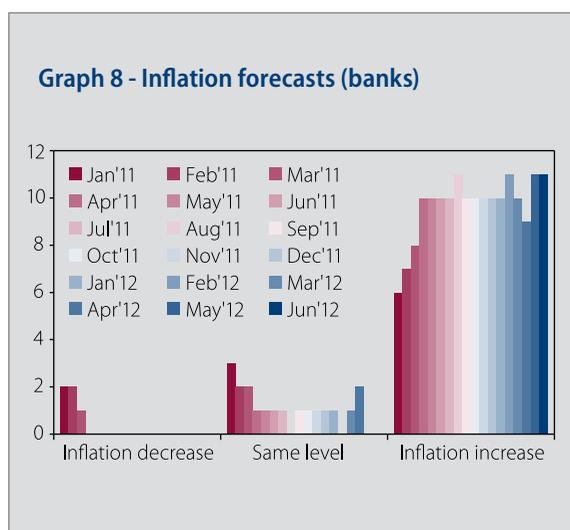
2. INFLATION FORECASTS

BANKS EXPECTATIONS

regarding inflation forecasts of banks, based on the survey conducted in June 2012, all the eleven banks expected higher inflation rate in 2012, in relation to 2011 (Graph 8).

As shown in Graph 9, banks have different expectations regarding the movements and the level of inflation by the end-2012. Three banks expect inflation in the range of 2% - 3% and 3% - 4%. Four banks expect the growth of inflation ranging between 4% and 5% while only one bank expects inflation growth over 5%.

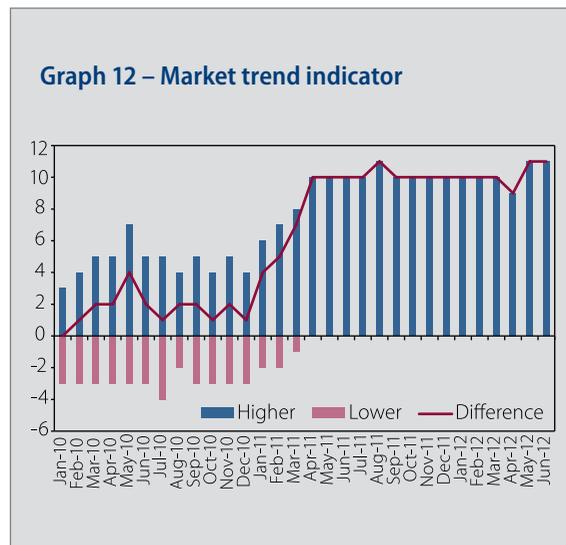
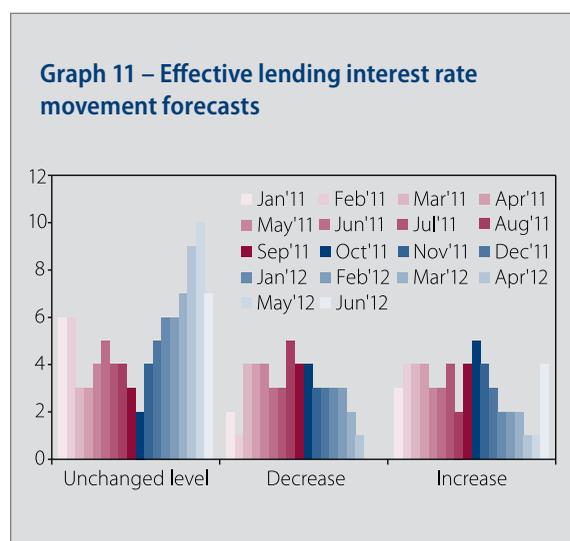
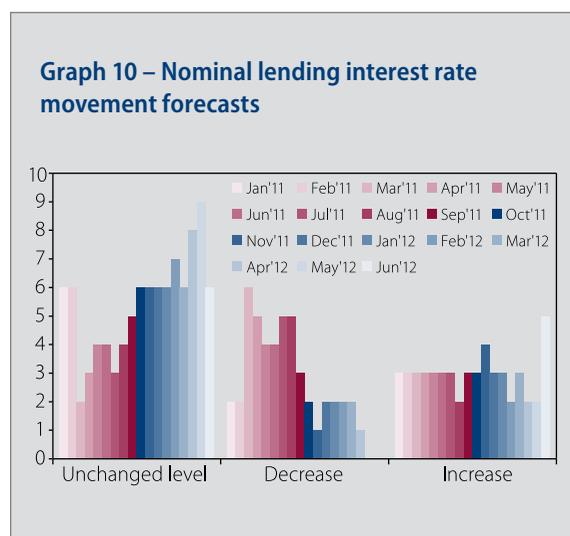
As for the forecasts on lending interest rates trends, five banks expect the growth of nominal interest rates, while six banks expect the nominal interest rates to remain the same. As for the effective lending interest rates, four banks expect their growth, while seven banks expect them to remain the same as in 2011.



With regard to forecasts on deposit interest rates trends, two banks expect a decline; three banks expect growth, while six banks expect the deposits interest rates to keep their 2011 levels.

For the purpose of calculating inflation forecasts we use market trend indicator (red line in Graph 12). It is calculated as the difference between the number of banks expecting an inflation growth (blue columns) and the number of banks expecting inflation decrease (red columns). If the market trend indicator has a negative value, a decrease in the inflation rate is expected in the upcoming period. If it has a positive value, then an increase in the inflation rate can be expected. If it has a zero value, an unchanged inflation rate can be expected in the upcoming period. The more negative its value is,

the lower the inflation forecast is, while higher positive value means higher inflation level forecasts. Inflation forecasts started growing in 2011 (Graph 12), and as of April 2011 until and including June 2012, they are at a significantly higher level.

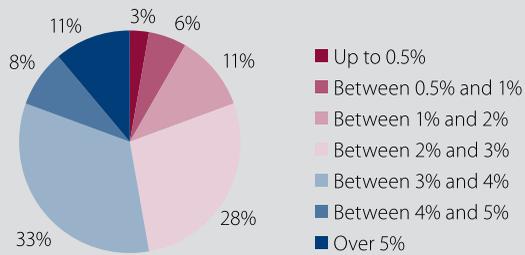


EXPECTATIONS OF ECONOMY (EXCEPT BANKS)

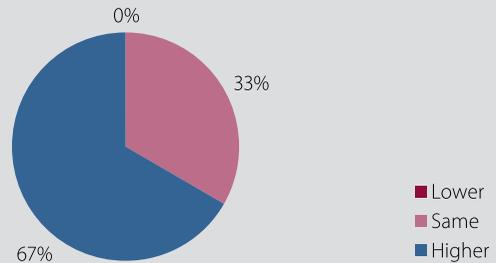
Inflation

Out of total surveyed companies, 33% expected inflation to range between 3% and 4% in 2012, 28 % expected inflation between 2% and 3%, while 11% of surveyed companies expected inflation between 1% and 2%, and 11% expected inflation over 5%. Inflation between 4% and 5% is expected by 8% of surveyed companies, 6% of surveyed companies expect inflation to range between 0.5% and 1%, and only 3% of them expect inflation up to 0.5%. Lower salaries are forecasted by 23% of surveyed companies, 74% expect that salaries will not change in 2012 in relation to 2011, while the increase is expected by only 3% of surveyed companies. Relative to 2011, as for the number of employees, 50% of surveyed companies expect the unchanged number, 25% of them expect increase and 25% expected a decrease. Most of surveyed companies (67%) expected increase of production input prices, while 69% of them expected the prices of their products' (services) to remain unchanged in 2012 in relation to 2011.

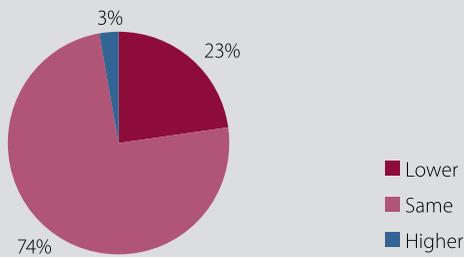
Graph 13 - Forecasted inflation in 2012, in relation to 2011



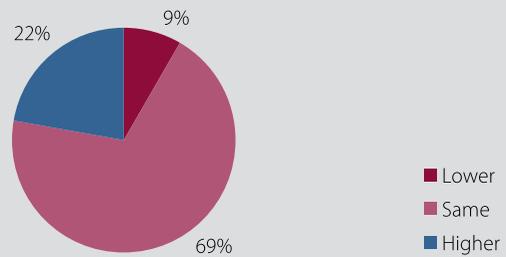
Graph 16 - Expected level of prices of production inputs in 2012 in relation to 2011



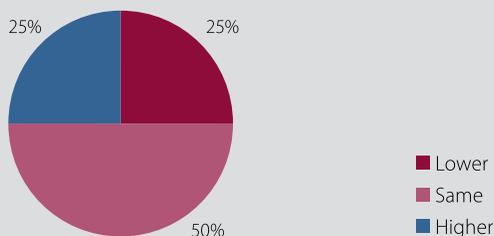
Graph 14 - Expected level of salaries in 2012 in relation to 2011



Graph 17 - Expected level of prices of products (services) in 2012 in relation to 2011



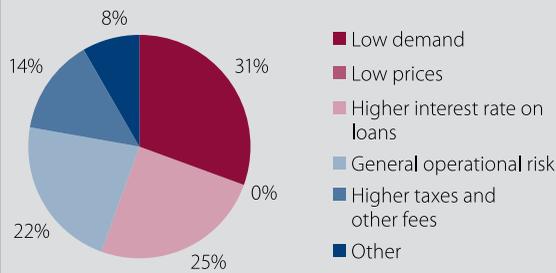
Graph 15 - Expected level of the number of persons in employment in 2012 in relation to 2011



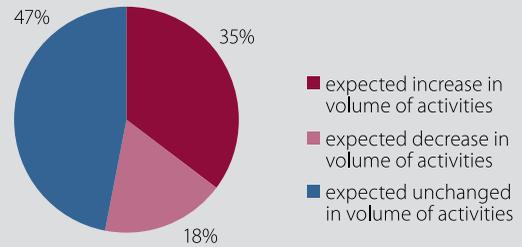
Business Environment

The survey results showed that most of the surveyed companies saw lower demand (31%), high lending interest rates (25%) and general operational risks (22%) as business barriers. In addition, 69% of surveyed companies expected unchanged lending interest rates, 17% expected them to be lower, while 14% of them expected higher lending interest rates in 2012 relative to 2011.

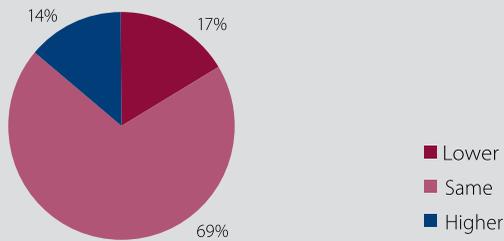
Graph 18 – Business barriers



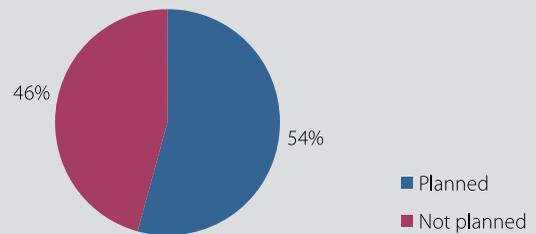
Graph 20 – Expected volume of activities in 2012



Graph 19 – Expected level of lending interest rates in 2012 relative to 2011



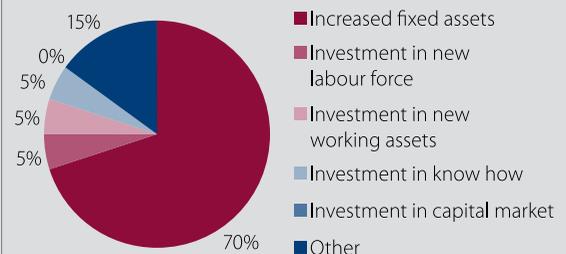
Graph 21 – New investments in 2012



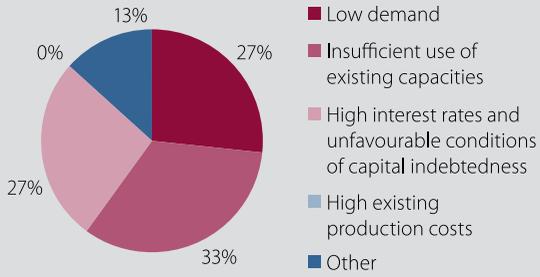
Investments

Out of the total number of surveyed companies, 35% planned the increase in the volume of activities by the end of the year, while 54% planned new investments. Most investments, 70%, referred to the increase in fixed assets, while insufficient exploitation of existing capacities (33%), low demand (27%), and high interest rates and unfavourable conditions for capital borrowings (27%) were described as largest barriers to new investments.

Graph 22 - Types of new investments planned in 2012



Graph 23 – Obstacles to new investments in 2012

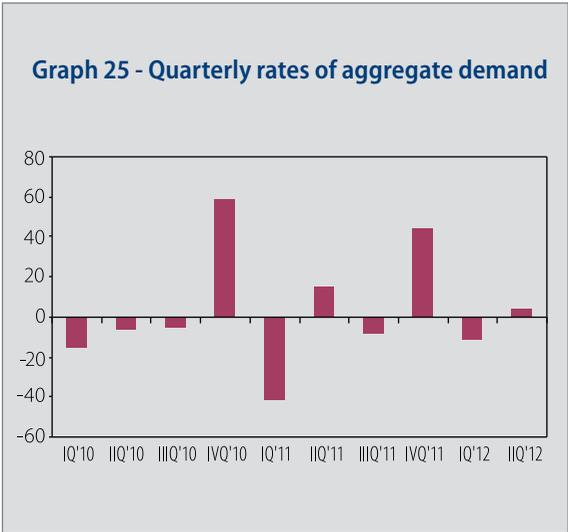
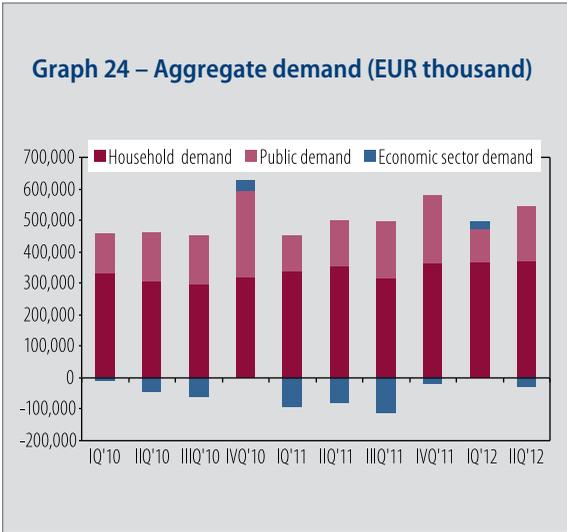


3. INFLATION DETERMINANTS

3.1 DEMAND

As per preliminary data, in Q2 2012, the aggregate demand recorded an increase in relation to Q1 2012. Observing the structure of total demand, in relation to its structure in the previous quarter, the share of households slightly declined, while the share of public consumption increased.

The level of aggregate demand in Q2 2012 increased in relation to Q1 2012, and declined significantly in relation to the level of demand recorded in the final quarter of 2011.



Box 1 – Aggregate demand calculation methodology

For the purpose of complete monitoring of aggregate demand as the inflation determinant, the CBCG has developed the aggregate demand calculation methodology. The starting point of this methodology is that the aggregate demand is the total demand of three sectors: personal consumption (households), investment consumption (corporate sector) and public consumption. However, taking into account the lack of numerous data necessary for calculating the aggregate demand, the existing data should not be treated as an indicator of the exact amount of aggregate demand, but as an indicator showing the aggregate demand trend. In the existing methodology, a number of substantial data were not available, such as: corporate investments, revenues from selling shares, non-market income, non-observed economy revenues, and the like. Methodology of calculation of the aggregate demand is expressed by the following equation:

$$AD = C + I + G$$

C = sum of paid salaries + sum of paid pensions + paid frozen foreign currency deposits + net compensations to households – net savings by households (savings – loans granted)

I = net savings of economy (deposits – loans)

G = public consumption – paid pensions – salaries paid from the budget – net savings by the Government (deposits – loans – Treasury bills)

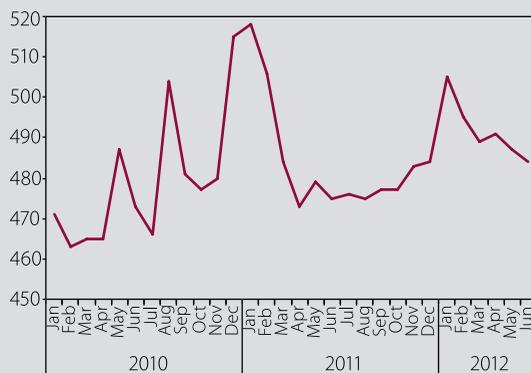
AD – aggregate demand, **C** – personal consumption, **I** – investment consumption, **G** – public consumption

3.1.1. Salaries and other available demand determinants

in Q2 2012, the average salary in Montenegro amounted to EUR 727, while average salary without taxes and contributions amounted to EUR 487. Average salary and average salary without taxes and contributions recorded q-o-q decline of 1.7% and 1.8% respectively.

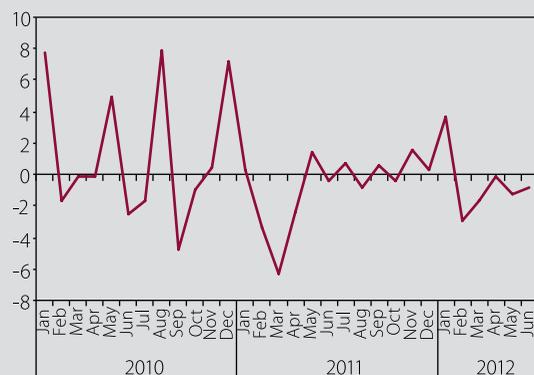
Taking into account the consumer prices, i.e. movements of salaries in real amounts, it can be concluded that in Q2 real salaries declined in all three months.

Graph 26 – Average salaries without taxes and contributions in Montenegro



Source: Monstat

Graph 27 – Real salaries (monthly growth rate)



Source: Monstat

Households' loans amounted to EUR 831.6 million at end-June 2012. In relation to end-2011, households' loans were 0.2% lower, while in relation to the same month of 2011 they were 2.8% lower. Over the course of H1 2012, households' loans declined at an average monthly rate of 0.04%, which is a deceleration of the decline rate in relation to the same period 2011, when loans granted to this sector declined at an average monthly rate of 0.1%.

Per capita debt¹ amounted to EUR 1,341 at end-Q2 2012, recording a slight decline in relation to end-2011 (EUR 3), i.e. EUR 39 lower than in the same period of 2011.

Households' loans with MFIs amounted to EUR 30.8 million at end-H1 2012, which is 5.8% lower than at end-2011, i.e. 15.5% lower than in the same period of 2011.

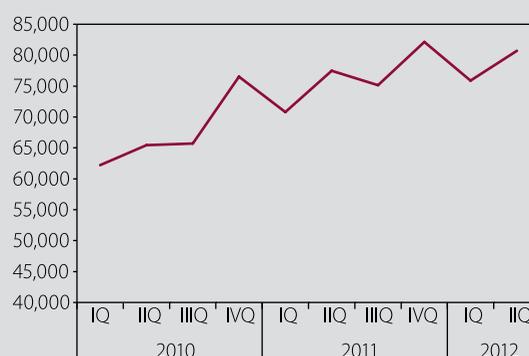
Households' deposits amounted to EUR 1,051.4 million at end-June 2012 recording a 1.7% increase in relation to end-2011, i.e. a 7% y-o-y increase.

Loans to deposits ratio for the household sector amounted to 0.79 at end-June 2012 improving in relation to end-2011 (0.81), as well as in relation to the same period of 2011 (0.87). As of July 2010, the household sector is a net depositor. Net household savings amounted to EUR 219.8 million at end June 2012, being EUR 20.1 million or 10.1% higher in relation to end-2011, while in relation to the same period of 2011, net savings of this sector increased EUR 93.3 million or 73.8%.

Balance of payment statistics showed that in Q2 2012, an increase was recorded in the inflow of remittances in favour of domestic natural persons as well as in the inflow of salaries and compensations to employees.

Observation of the total household sector's demand by quarters showed that demand in Q2 2012 slightly increased in relation to demand recorded in the previous two quarters. Significant increase in the household sector's demand was recorded in comparison to Q3 2011.

Graph 29 – Inflow of foreign funds to household sector, (EUR thousand)

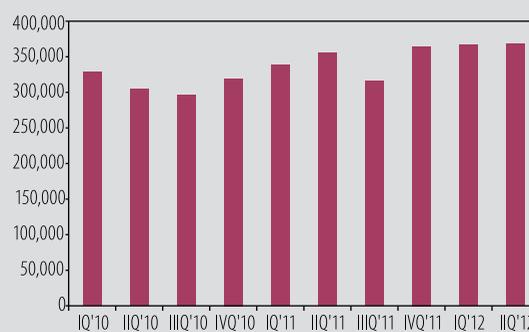


Source: CBCG

Graph 28 – Loans granted to households, EUR thousand



Graph 30 – Demand of household sector (EUR thousand)



¹ Data on population is a result of 2011 census.

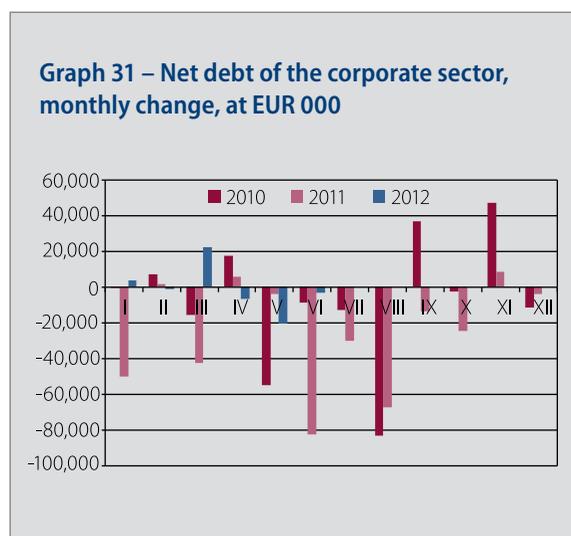
3.1.2. Budgetary analysis²

3.1.3. Economy

Due to the absence of data on investments by the corporate sector, the net indebtedness of corporate sector can be used for demand approximation.

In H1 2012, loans granted to corporate sector were significantly higher than this sector's deposits with the banks. Net debt of the corporate sector amounted to EUR 462 million at the end of the observed period being 1.1% lower in relation to end-2011, i.e. 22.7% lower y-o-y.

The structure of loans granted to the corporate sector shows that the share of long-term loans in total loans granted to this sector amounted to 72% at end-June 2012, whereby loans with maturity over 3 years accounted for 47% of total loans granted to the corporate sector. This structure of loans points to their dominant use for increasing the volume of economic activity.



3.1.4. External demand – balance of payments

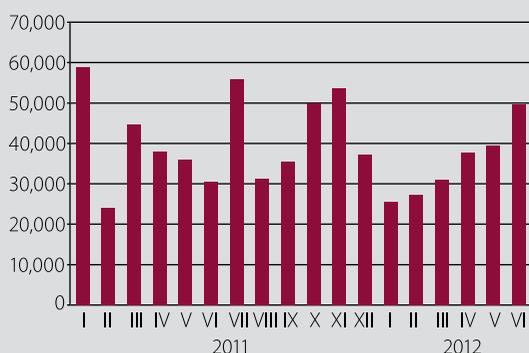
In H1 2012 balance of payment current account deficit amounted to EUR 479 million or 8.7% more than in H1 2011. Trends recorded in the goods account had the most significant influence on the balance of current account. Deterioration of the import to export of goods ratio was obvious in the observed period. As per preliminary Monstat data, in H1 2012 visible export declined 14.6% in relation to H1 2011, while the value of visible import increased 2.6%. The export declined as a result of a decrease in the export of aluminium and aluminium products and electricity while at the same time visible import increased due to the increased import of energy-generating products (electric energy and electricity).

In the international invisible trade in H1 2012, Montenegro recorded a surplus in the amount of EUR 94.3 million, as a result of the increased tourism and travel revenues. In relation to 2011, surplus increased 21.6%. In the factor income account, surplus declined 43.9% (EUR 14.6 million) due to the increase in the outflow arising from interests and dividends. Surplus in the current transfers account increased 15.8% and it amounted to EUR 62.9 million, which is the highest surplus recorded over the first two quarters since 2006. Increased inflow from remittances and from heritage, support and other gifts and assistance helped in recording surplus at this subaccount.

Uncertainty in the international financial markets and the debt crisis in the EU countries have largely influenced the decline in the inflow of FDI over the past several years. As per preliminary data, in H1 2012, net FDI inflow amounted to EUR 144.9 million or 21% lower than the inflow recorded in the same period of 2011. Total FDI inflow amounted to EUR 210.4 million which is 9.2% lower than in the same period of 2011. In the structure of gross FDI inflow, the share of EUR 149.7 million referred to equity investments, while inflow arising from intercompany debt amounted to EUR 57.7 million. The encouraging fact is encouraging that, as of the beginning of 2012, FDI inflow has been trending upward, with the biggest monthly inflow in the amount of EUR 49.6 million recorded in June.

² Fiscal data were not available at the moment of compiling of this report.

Graph 32 – Total FDI inflow in the period 2011 – June 2012, in EUR thousand



Source: CBCG

In H1 2012, portfolio investments account recorded a net outflow in the amount of only EUR 851 thousand, unlike 2011, when it amounted to EUR 175.6 million as a result of the state's indebtedness in the international market through Eurobond issuance. Trends in the other investments account are characterised by the increased borrowing of the state sector, while the banks and other sectors reduced their foreign credit commitments. Such trends in the other investments' account in H1 2012 resulted in recording net inflow in the amount of EUR 109.6 million.

3.2. SUPPLY AND PRODUCTION

In H1 2012, total industrial output recorded a 7.5% y-o-y decline. Decline in output was recorded in the mining and quarrying sector (-25.8%) and supply of electricity, gas and steam sector (-23%), while the manufacturing sector recorded growth (4.3%). Analysis of monthly data on industrial output trends showed that growth was recorded in February (6.9%), March (9.5%) and April (6.8%), while in January, May and June output recorded decline of 4.6%, 25.9% and 10.3%, respectively.

In the first six months, Montenegro was visited by 318.2 thousand tourists, which is a 6.9% y-o-y increase. In the same period, Montenegro recorded 1,678.2 overnights, which is 7% more in relation to

Graph 33 – Industrial output, annual growth rate



Source: Monstat

the same period previous year. Foreign tourists accounted for 87.3% of total recorded overnights.

In the first three months of this year, total **wood production** amounted to 51.0 m³ recording a y-o-y decline of 47.9%. This decline was a result of unfavourable weather conditions and impossibility to cut wood in state woods in Q1 2012, especially in February.

As per preliminary data the value of executed **construction works** in the first six months of 2012 declined 15% in relation to comparative period, while the construction activity measured by effective working hours declined 8.5%.

In the first six months, road transport recorded 26.7% more passengers than in the same period of 2011, while cargo transport declined 33%. In the observed period, railway passenger transport and railway cargo transport declined 22.7% and 46.1%, respectively. In the first six months, air transport recorded 8.7% more passengers than in the same period of 2011, while cargo transport declined 45%.

Total turnover in ports amounted to 743.9 thousand tonnes showing a y-o-y decrease of 14.7%, whereby the export accounted for 34.9% and the import accounted for 64.1%. In this period, exports declined 48.6%, while imports increased 37.8%.

3.3. STOCK EXCHANGE INDICES

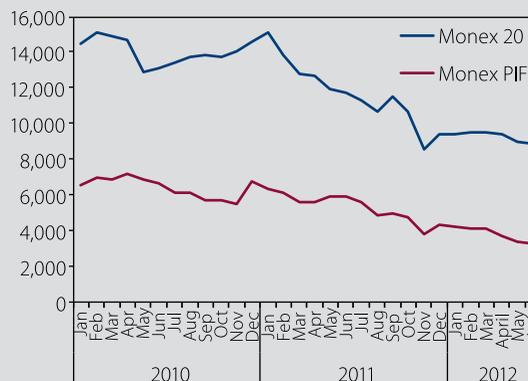
After recording positive trends recorded in the first three months of 2012, the Monex20 index recorded continuous monthly decline over the entire Q2. On the other hand, investment funds index, Monex PIF, has also been recording negative trend as of the beginning of H1 2012. Monex PIF has been on such a trend since the beginning of 2011, with some mild oscillations.

In relation to end-2011, at end-June, Monex20 recorded an absolute decline of 510.04 index points or 5.5%, while Monex PIF declined 1,039.01 index points or 24.4%.

In relation to end-June 2011, Monex20 Monex PIF recorded respective declines of 24.7% and 45.6%.

In relation to their historical maximum values (reached in 2007), at end-June 2012, both indices declined: Monex20 – 5.5 times and Monex PIF – 15.7 times.

Graph 34 - Montenegro stock exchange indices



Source: Montenegro Stock Exchange

Table 3 – General data on indices

	MONEX 20		MONEX PIF	
Value as at 30 June 2012	8,814.86		3,226.28	
Absolute change of index in 2012	-510.04		-1,039.01	
Initial index value	1000.00	March 2003	1000.00	March 2003
Maximum value in 2012	9,807.33	23 March 2012	4,272.97	12 February 2012
Maximum historical value	48,617.88	07 May 2007	50,780.54	17 August 2007
Minimum historical value	918.57	14 April 2003	959.53	02 April 2003
Growth (decline) in 2012	-5.5%		-24.4%	

Source: Montenegro Stock Exchange

4. MONETARY POLICY

Decision Amending the Decision on Bank Reserve Requirement to be Held with the Central Bank of Montenegro (OGM 22/12) was passed in April 2012. Pursuant to this decision, the banks were given the possibility to increase the allocation of the reserve requirement to be

held in the form of T-bills from 25% to 35% of total reserve requirement. The above decision is of temporary character, and it shall stay in force until 31 December 2013.

5. INFLATION FORECAST FOR 2012

5.1. Model assessment

Montenegro's inflation fan chart represents a graph of probability distribution of inflation rate expressed through the consumer price index. Therefore, instead of determining concrete points, using the distribution of probability the "Fan Chart" includes the potential risks and uncertainties which in the future period might influence the movement of inflation. The purpose of the Fan Chart is to point out and take into consideration any existing uncertainty in real economy, consequently reflecting on the inflation rate trends (higher prices of energy generating products, increase/decrease in foreign trade deficit, etc.).

Montenegro's fan chart for 2012 and H1 2013 was based on the following three estimated components:

1. **Central projection values** – The values of the Fan Chart central projection are derived from the ARIMA model, and also by applying the Tramo/Seats simulation in order to obtain the most efficient model.
2. **Degree of uncertainty** – determines the fan chart width. The degree of uncertainty ratios are obtained through analytical assessment and calculation of a relative impact of potential internal (expected increase in prices of electric energy) and external shocks (movement in oil and food prices) which are possible in Montenegrin economy during 2012.
3. **Fan chart curve** – based on the level of the curve in the distribution of inflation projection, the fan chart is adjusted to the forecast to show whether the values of the central projections have "overestimated" or "underestimated" the inflation rates. This will also influence the position of the mean value of inflation distribution.

Fan Chart central projection - ARIMA model for 2012 and H1 2013

For the purpose of Fan Chart preparation, the ARIMA (Auto-Regressive Integrated Model with Variable Averages) model of temporal series of inflation in Montenegro expressed through the Consumer Price Index³ was developed.

ARIMA model was used for short term forecasts (12 months), whereby iteration of 635 ARIMA models was made, which were ranked based on their efficiency and quality of diagnostics. The selected ARIMA model, ARIMA (3,1,5)⁴ has sufficient confidence level for forecasts.

³ A detailed explanation of the ARIMA model of Montenegro is given in the working study of the Central Bank of Montenegro No. 11 „Inflation Forecast: Empirical Research of Retail Price Index Movements in Montenegro in 2007 –Application of ARIMA Model”.

⁴ ARIMA model is generally referred to as an ARIMA (p,d,q) where p represents the number of autoregressive variables, d refers to the level of dependent variable that needs to be made stationary, and q is the number of variables, moving averages, in the certain model.

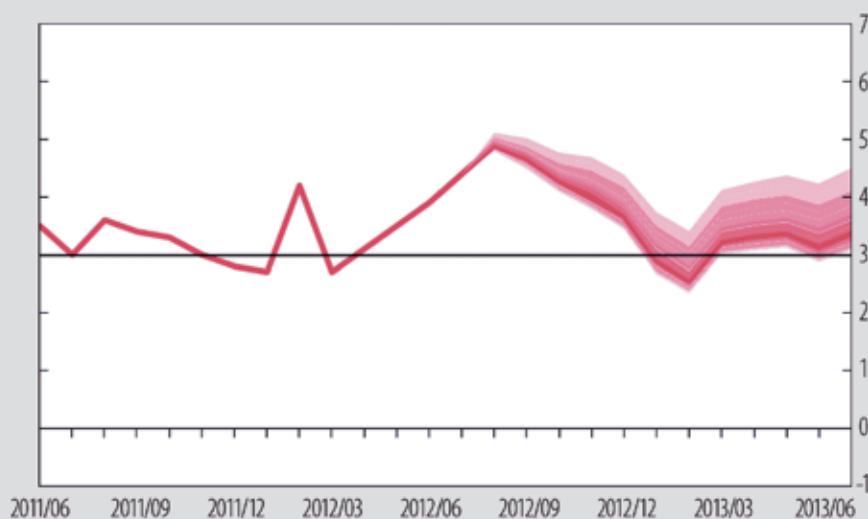
Based on Tramo/Seats⁵ procedure, 4 breakpoints (Chow Test was used for identification) have been identified so far, which correspond to a significant change in inflation structure from 2001 to end-2012 and which are included in the ARIMA model through dummy variable.

The result of ARIMA model projection was compared to forecasted values using Tramo/Seats procedure which have shown high level of compatibility.

The monthly forecasts value was used as the value of central projection of the Fan Chart of CPI for 2012 and H1 2013. The obtained values represent the distribution mode, i.e. values with the highest frequency in the distribution of this time series.

Mean value of the obtained model was 3.8, while the curve varied from -0.6 to 0.8, and standard deviation values were $\sigma_2=0.15$ and/or $\sigma_1=0.07$. This pointed out that central band, as in the last two years, was placed in lower part of distribution, i.e. the corresponding degree of uncertainty was concentrated towards higher inflation levels, which are reflected in the graph through “thicker” band concentrated above central “the deepest shade of red” band. The fan chart presents a 90% probability of inflation distribution. The central projection is usually in the deepest shade of the Fan Chart, i.e. in the central 10% of probability.⁶ The fan chart has an equal number of bands (eight) on either side of the central band whereby every band is of the same colour, both above and below the central band, cumulatively takes the inflation projection to the next 10% of probability. As the degree of uncertainty grows over time, so the fan chart spreads.

Graph 35 – Projected Consumer Price Index of Montenegro for 2012 and H1 2013



Source: CBCG, 2012

⁵ Tramo program represents a program for model assessment and design (mostly ARIMA) having problems with a lack of data, data errors and the presence of a large number of extreme data in time series. SEATS programme is used to extract time series elements that cannot be directly separated, separating elements such as trend, season, cycle, existence of Easter and Christmas effect, which enables better analysis and projection of ARIMA model. (For more details, see Handbook Tramo and Seats (Gómez and Maravall, 1996)

⁶ The mode value (central projection) is, by construction, always in the deepest band shade, but in case of a heavily unbalanced risk, the central projection may not cover either of these values. (Britton, E, Fisher, P.G. and Whitley, J.D. (1998), 'The Inflation Report projections: Understanding the Fan Chart', Bank of England, Quarterly Bulletin, 38, pp. 30–37)

Montenegro's inflation Fan Chart, based on the ARIMA model and Tramo/Seats simulation for 2012 and H1 2013 shows that with a probability of 90%, the inflation, measured by the consumer price index, will vary from 2.7% to 5.1%, depending on the month. It is projected that the inflation shall range from 3.3% to 4.3% at end-2012. To wit, as the time span for forecasting grows, uncertainty will also grow and the forecast span for central projections of the "Fan Chart" referring to the thickest part spreads, showing the probability range of 10%.

The following external assumptions have been taken into account when forecasting the inflation in 2012 and H1 2013:

1. Oil and oil derivative prices will not exceed 6% of the prices in May 2012;
2. Aluminium prices will not exceed more than 5% of the prices in May 2012
3. Real estate prices are stagnant relative to end of 2011;
4. Price of electricity growth will not exceed 7%;
5. Real wages in 2012 and 2013 will remain at the 2011 level;
6. There will be no significant increase in prices of food products in relation to March 2012;
7. There will be no significant increase in VAT or other taxes.

Deviation of any of abovementioned parameters would require the correction of the forecast.

6. EXPECTED INFLATION IN 2012

Inflation rate as well as inflation forecasts trended up in the first half of the year. Unlike the previous quarter, when it was at the EU inflation rate level, at end-Q2 inflation rate was significantly higher.

Inflation trend in this year is largely influenced by the growth of regulated prices, excise duties, as well as the growth of food products in the global market which is transferred to Montenegro (under the influence of unfavourable weather conditions and reduced output).

Increase of inflation was expected by all the surveyed banks as well as by most of the surveyed companies. Most of surveyed banks expected inflation rate between 4% and 5%, while most of surveyed companies expected inflation rate between 3% and 4%.

Most sectors, except for tourism, recorded declines in the volume of activity, which has an unfavourable effect on the inflation trends (supply decline). In addition, expectations of the corporate sector regarding the volume of activity have deteriorated in relation to the previous quarter. On the other hand, the aggregate demand is trending up, putting additional strains on the growth of inflation.

Model-based assessment shows 90% probability that the CPI inflation in 2012 will range between 2.7% and 5.1%. The inflation at end-2012 is forecasted between 3.3% and 4.3%. Our experts' assessment were increased by 1 percentage point in relation to model-assumption and in relation to the previous quarter, primarily as a result of the announced increase in the prices of electric energy and food in the international market. Our expectation is that at end-2012, the inflation will range between 3.50% and 6%.

Table 4 – Inflation rate forecast

Optimistic assessment	Realistic assessment	Pessimistic assessment
3.50%	4.75%	6%

Experts' assessment is based on the same assumptions as the model assessment. The change in any parameter used for this forecast would require the revision of the forecast.

