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1. INFLATION INDICATORS

Consumer prices increased 0.3% in Q3 2011. In the reporting quarter, the highest increase was in prices under "dwelling" by 3.8%, "other goods and services" by 2.6%, "health care" by 0.9%, "clothing and footwear" by 0.8% and "alcoholic beverages and tobacco" by 0.6%. Monthly increase in consumer prices was recorded in August (0.7%), while July and September recorded respective decline of 0.3% and 0.1%. The annual increase in September was 3.4%, while the current rate (period on period) was 3.1%. In relation to 2010 year-end, prices in September 2011 increased by 3%.

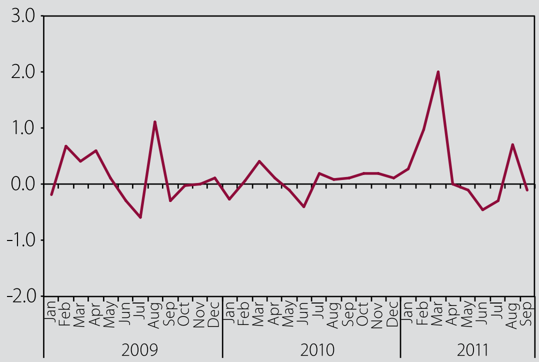
The inflation increase of 0.3% in Q3 2011, in relation to the previous quarter, was mostly the result of higher prices under dwelling (3.8%), due to higher prices of water supply and other services by 34.5%. Within the category "clothes and footwear", prices of clothes increased by 2.4%, while prices under "health care" grew by 0.9%, primarily due to the increase in pharmacy products by 1.3%. In the reporting period, there was an increase in prices of alcoholic beverages by 1.8%, which resulted in 0.6% increase in prices under alcoholic beverages and tobacco, while prices under category "transportation" were 0.3% higher due to the respective increase in price of fuel and lubricants and transport services by 0.4%. Prices under "communication" and "culture and entertainment" recorded respective increase by 0.1%, while prices under other goods and services increased 2.6%, primarily due to higher prices under other devices and personal care products by 4.7%. In Q3 2011, lower prices under the category "food and non-alcoholic beverages" were recorded by meat (0.3%), wheat flour (5.6%), milk, cheese and eggs (1.1%), oils and fats (2%) and fruit (10.5%), while prices of vegetables and non-alcoholic beverages grew by 0.3% and 0.5%, respectively. In the reporting quarter, there was a slight decrease in prices under "education" (0.2%), while prices under "restaurants and hotels" decreased by 1.2%, primarily due to lower prices of catering services by 1.3%. In Q3 2011, there was no change in prices under housing furnishings.

Table 1 – Inflation, %

	2010				2011		
	III	VI	IX	XII	III	VI	IX
Change in relation to the previous year end	0.2	-0.2	0.2	0.7	3.3	2.7	3.0
Annual change	0.7	0.2	0.3	0.7	3.7	3.5	3.4

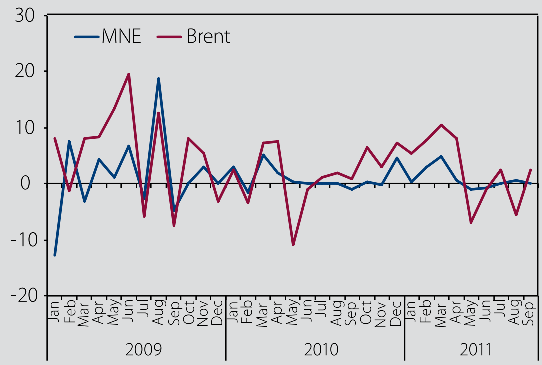
Source: Monstat

Graph 1 - Consumer prices, monthly rate



Source: Monstat

Graph 2 - Oil prices, monthly growth rate



Source: Monstat and "Monthly Oil Market Reports", OPEC

Annual **core inflation** rate amounted to 1.1% in September 2011 and it was by 2.3 percentage points lower than total annual inflation. Since January 2011 annual base inflation was lower than total inflation whereby observed in the first two months, annual core inflation rate was negative.

In Q3 2011, the average price of OPEC reference basket amounted to USD/barrel 108.5, which was by 3.4% less in relation to the average price recorded in Q2 2011. Average price of Brent amounted to USD/barrel 113.5 in Q3 2011, which is by 3.5% less in relation to Q2 2011, yet 31.2% more in relation to the average price of Brent

Table 2 – Share of individual categories in total inflation*

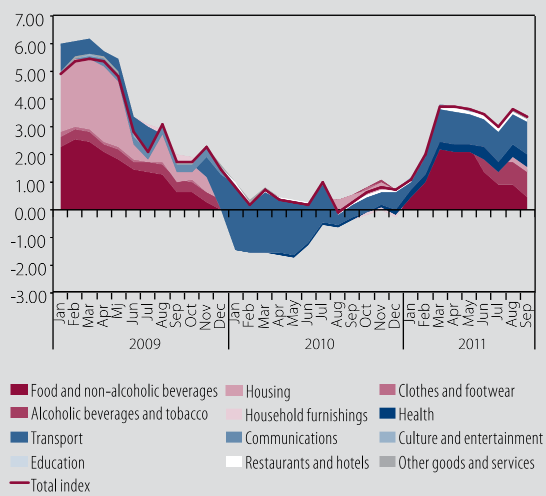
	Weights	IX 11/VI 11	Growth rate	Contribution	Share in total inflation
TOTAL	10000	100.3	0.3	0.3	100.0
Food and non-alcoholic beverages	3755	98.9	-1.1	-0.4	-130.4
Alcoholic beverages and tobacco	372	100.6	0.6	0.0	7.3
Clothes and footwear	761	100.8	0.8	0.1	18.8
Housing	1287	103.8	3.8	0.5	157.4
Furniture and appliances	494	100.0	0.0	0.0	0.3
Health	280	100.9	0.9	0.0	8.4
Transportation	1216	100.3	0.3	0.0	10.6
Communications	558	100.1	0.1	0.0	2.1
Culture and entartainment	321	100.1	0.1	0.0	1.4
Education	218	99.8	-0.2	0.0	-1.5
Restaurants and hotels	296	98.8	-1.2	0.0	-11.1
Other goods and services	442	102.6	2.6	0.1	36.8

***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

in the last quarter of 2010. Weaker economic indicators in the USA, the Eurozone and the fiscal crisis in some countries of the Eurozone, as well as the uncertainty of its resolution, with the slowdown of Chinese economy, deteriorate the global growth perspectives. The revision of the economic growth rates to the lower value affected the slowdown in the demand for oil and oil derivatives, which resulted in lower prices of this product in September 2011 in relation to price from April, which the highest price of Brent was recorded in 2011 at the amount of USD/barrel 123.7. Prices under "fuel and lubricants" increased by 0.4% in Q3 2011.

In September 2011, annual consumer price rate amounted to 3.4%, being by 0.1 percentage points lower in relation to the annual rate from June. The highest annual increase was recorded in prices under alcoholic beverages and tobacco (25.6%), health (16.5%) and transport (9.9%).

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



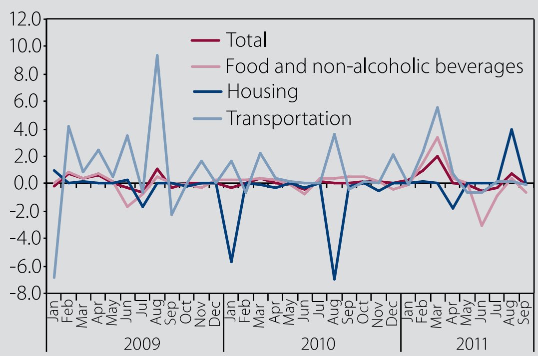
Source: Monstat and CBM calculation

In Q3 2011, **producers' prices of manufactured products** increased by 0.8% in relation to the previous quarter, whereby mining and quarrying prices increased by 2.2%, and in manufacturing industry by 0.9%, while prices under electricity, gas and water supply remained unchanged. In relation to 2010-end, producers' prices of manufactured products recorded 3.1% increase in September, while their annual growth amounted to 3.2%.

Graph 4 – Consumer prices, annual rate

Source: Monstat

Graph 5 – Selected categories – consumer prices, monthly rate

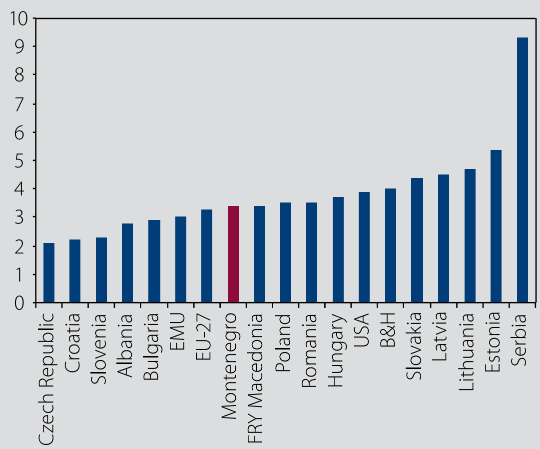


Source: Monstat

The comparison of annual inflation recorded in Montenegro to the inflation in selected countries shows that most of selected countries recorded higher annual rate. The highest annual growth in selected countries was recorded in Serbia (9.3%), while the lowest rate was recorded in Czech Republic (2.1%).

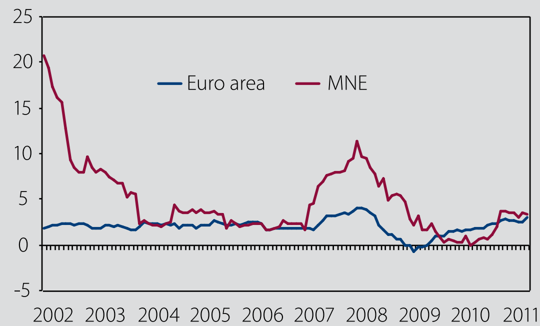
Annual rate recorded in Euro area, measured by harmonized consumer prices index (HCPI) amounted to 3%, while CPI inflation in Montenegro amounted to 3.4%.

Graph 6 - Annual inflation rate in selected countries, September 2011



Source: National Statistical Offices and Eurostat

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



Source: Monstat and Eurostat

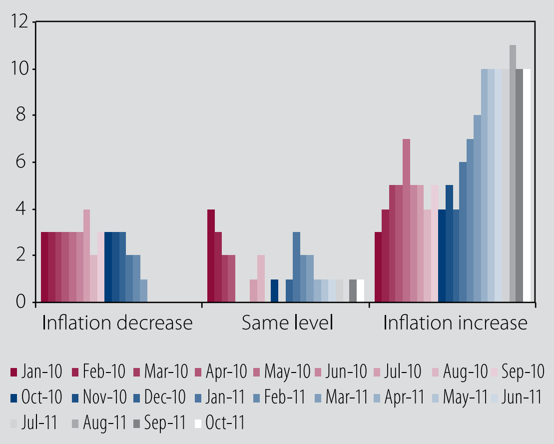
2. INFLATION FORECASTS

Banks' expectations

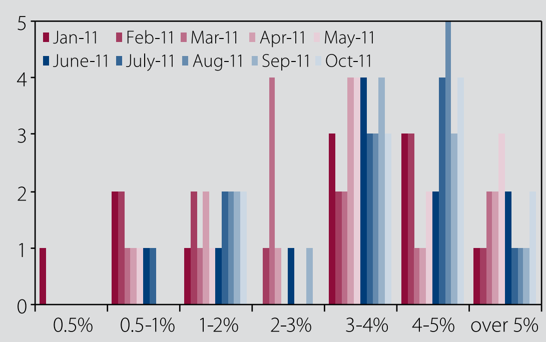
Regarding inflatory expectations of banks, based on the survey conducted in October 2011, ten banks expected higher rate, while only one bank expected the same inflation rate in 2011, in relation to 2010 (Graph 8).

There were different expectations of banks with regards to the trend and the inflation until the end of year. Two banks expected the inflation in the range of 1% - 2% and two banks expected inflation over 5%. Three banks expected the inflation groeth in the range of 3%- 4% and four banks expected inflation in the range of 4%- 5%.

Graph 8 - Inflation forecasts (banks)



Graph 9 – Forecasted inflation level (banks)

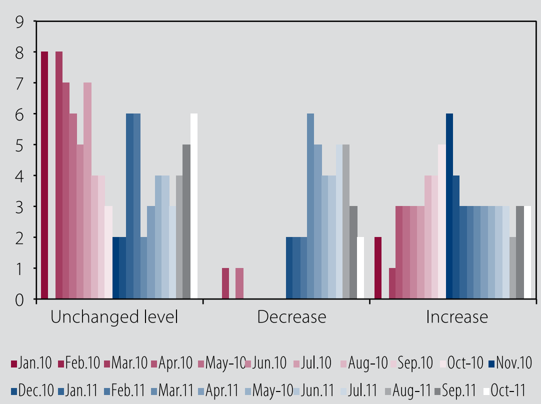


Concerning the forecasts on lending interest rates, six banks forecasted the same level of nominal interest rates, three banks forecasted increase, while two bank forecasted lower nominal interest rates. Five banks expected the increase in effective lending interest rates, four banks forecasted lower and two banks expected unchanged effective lending interest rates in 2011 in relation to 2010.

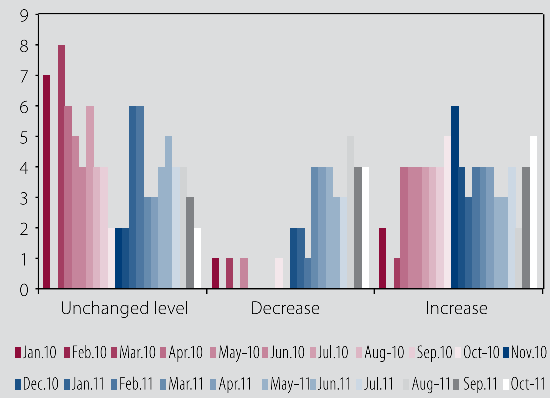
Regarding the deposit interest rates, five banks expected unchanged level, three bank forecasted growth, and three banks expected decline of deposit interest rates in 2011 in relation to 2010.

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 the value is, the lower the inflation forecast is, and vice versa, while higher positive value means higher inflation level forecasts. Therefore, Graph 12 shows that the inflation forecast started increasing in 2011, thus they were at the significantly higher level in April 2011 (ending with expectations from October) in relation to the 2010 trend.

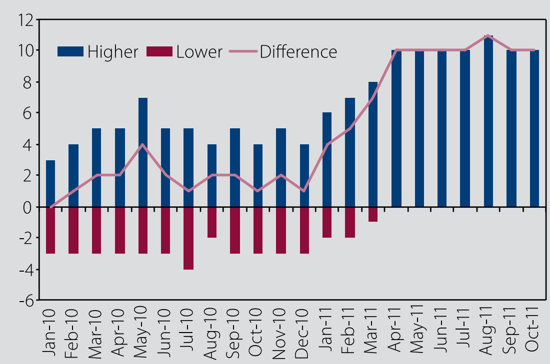
Graph 10 – Nominal lending interest rates forecasts



Graph 11 – Effective lending interest rates forecasts



Graph 12 – Market trend indicator



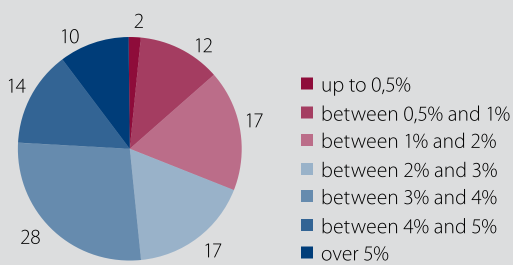
Expectations of economy (except banks)

Inflation

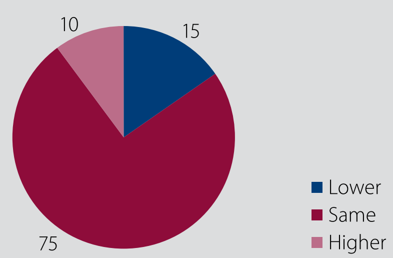
Out of total surveyed companies, 28% expected that inflation in 2011 would range between 3% and 4%, while 17% expected inflation in 2011 to range between 1% and 2%, another 17% expected inflation to range between 2% and 3%. Some 14% of surveyed companies forecasted that the inflation would range between 4% and 5%, while 12% forecasted inflation between 0.5% and 1%.

Only 2% forecasted inflation lower than 0.5%, while 10% forecasted inflation higher than 5%. Some 15% of companies expected decrease in salaries, 10% expected increase, while 75% expected the unchanged level. Most of surveyed companies (66%) expected the higher level of production input prices, while 56% of them forecasted same prices of their products (services) in 2011. In relation to 2010, as for the number of employees, 51% of surveyed companies expected the unchanged level by the 2011-end, 22% of them believed in increase and 27% expected a decrease.

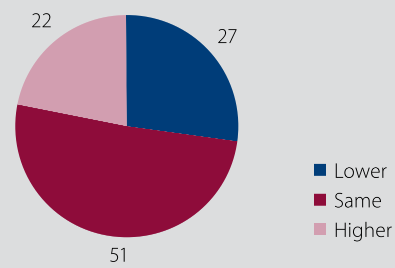
Graph 13 – Forecasted inflation in 2011



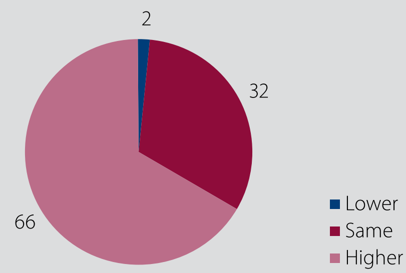
Graph 14 – Expected level of salaries by end-2011



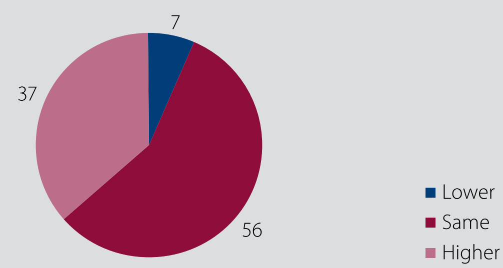
Graph 15 – Expected level in number of employees by end-2011



Graph 16 – Expected level of prices of production inputs by end-2011



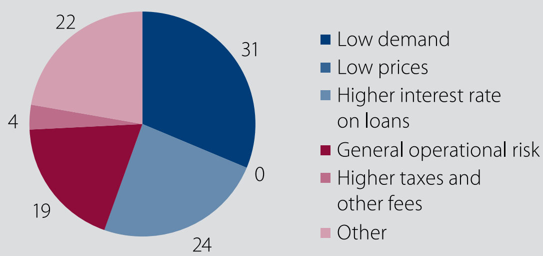
Graph 17 – Expected level of products' (services) prices by end-2011



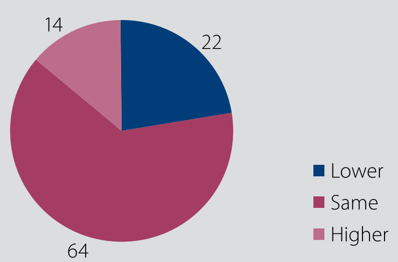
Business Environment

The survey results showed that most of the surveyed companies saw low demand (31%), while 24%, 22% and 19% of companies saw higher lending interest rates, other barriers and general operational risks as obstacles to business, respectively. Besides, 64% of surveyed companies expected unchanged, 22% expected the lower, while 14% of them expected higher lending interest rates in 2011 in relation to 2010.

Graph 18 – Business barriers



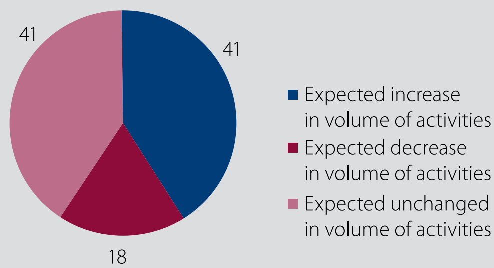
Graph 19 – Expected level of lending interest rates in 2011 in relation to 2010



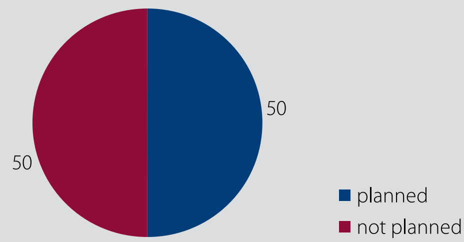
Investments

Out of the total number of surveyed companies, 41% planned the increase in volume of activities by the end of 2011, while 50% planned new investments. Most investments (53%) referred to the increase in fixed assets and 20% were to other investments, while insufficient exploitation of existing capacities and low demand were described as largest obstacles to new investments.

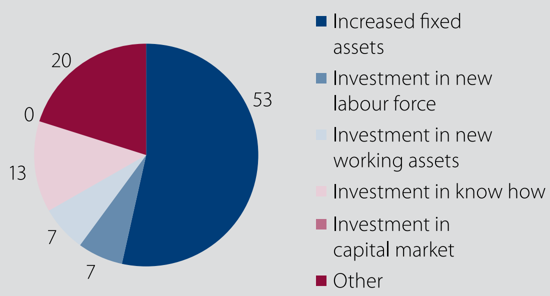
Graph 20 - Forecasted volume of activities in 2011



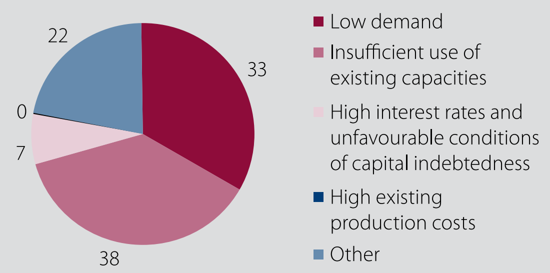
Graph 21 - New investments by the end-2011



Graph 22 - Types of forecasted new investments in 2011



Graph 23 - Obstacles to new investments in 2011



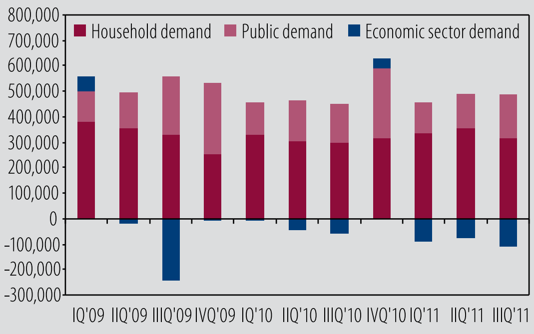
3. INFLATION DETERMINANTS

3.1. DEMAND

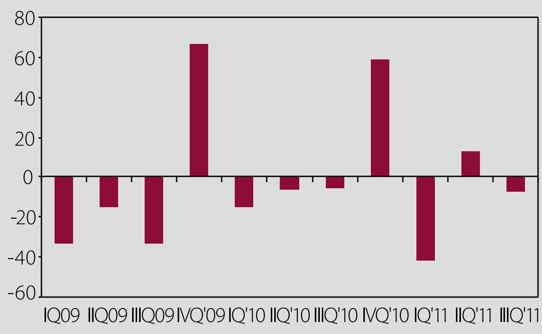
In Q3 2011, aggregate demand recorded decline in relation to the previous quarter. Observed by sectors, public spending was higher than in the previous quarter, while household demand decreased. The structure of total demand, compared to the structure in the previous quarter, shows the decrease in share of household and economic sector demand, and the increase in public demand.

In Q3 2011, the aggregate demand level was lower than the level of total demand recorded in the previous quarter, as well as compared to the Q3 2010 level.

Graph 24 - Aggregate demand, EUR thousand



Graph 25 - Quarterly rates of aggregated demand



Box 1 - Aggregate demand calculation methodology

For the purpose of complete monitoring of aggregate demand as the inflation determinant, the CBM 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 the 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 incomes, non-observed economy revenues, and the like. The methodology for calculating the aggregate demand is given in 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)

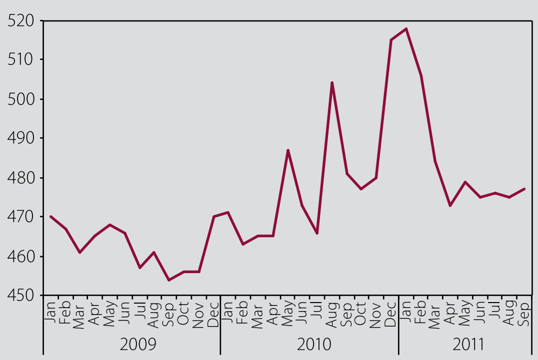
G = public consumption – paid pensions – salaries paid from the budget – net savings by the Government (deposits – loans – Treasury bills)

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

3.1.1. Salaries and other available demand determinants

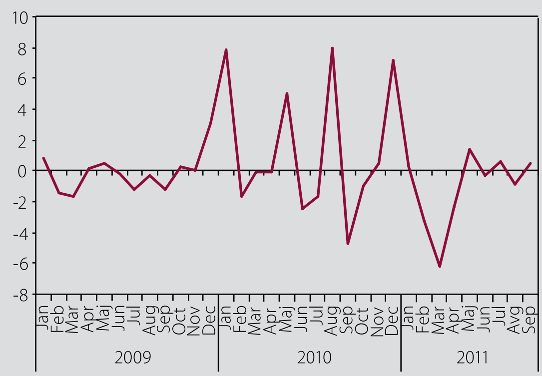
In the Q3 2011, the average salary in Montenegro amounted to EUR 710, while average salary without taxes and contributions amounted to EUR 476. In relation to the previous quarter, average salary and average salary without taxes and contributions increased by 0.2% and 0.1%, respectively.

Graph 26 - Average salaries without taxes and contributions in Montenegro



Source: Monstat

Graph 27 – Real wages (monthly rate)



Source: Monstat

Taking into account the consumer prices, i.e. salaries in real amounts, it can be concluded that real salaries in Q3 2011 declined in August, while the increase was recorded in July and September.

At the end-September 2011, households' loans amounted to EUR 843.9 million being 2.3% lower than at end-2010 and by 2.5% lower in relation to the same period of 2010. In the first nine months of 2011, households' loans declined at the average monthly rate of 0.2%, which is a slowdown in relation to the same period of 2010, when the average monthly decline rate was 0.6%.

At the Q3 2011-end, debt per capita[1] amounted to EUR 1,361, being 2.2% lower in relation to the 2010-end, or by 2.4% lower than in the same period of 2010.

Household loans at MFIs amounted to EUR 33.6 million at end-September 2011, which is 22% lower in relation to end-2010 and by 29.8% lower in relation to September 2010.

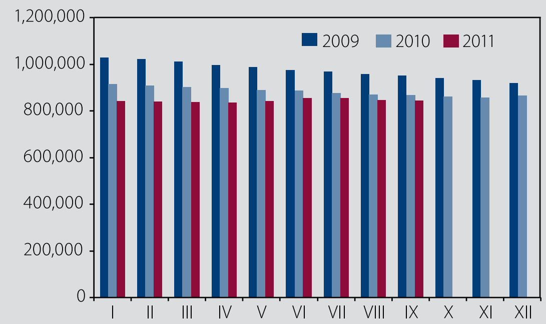
Household deposits amounted to EUR 1,034.9 million at the Q3 2011-end, which is by 8.7% more in relation to end-2010 and 13.4% more in relation to the same period of 2010.

Loans to deposits ratio for household in this sector amounted to 0.82 at end-September 2011 and it improved in relation to end-2010 (0.91), as well as in relation to the same period of 2010 (1.02), when this sector was the net debtor. As a result, the net household savings amounting to EUR 191.0 million was recorded at end-September 2011, and it increased in relation to 2010-end when it amounted to EUR 88.3 million, while in end-September 2010, households' sector was the net debtor to banks at the total amount of EUR 16.9 million.

The balance of payments statistics shows that the remittances to natural persons decreased in the Q3 2011 in relation to the previous quarter, as well as significantly higher in relation to Q3 2010. Moreover, at the annual level, there is constant increase in inflow of these funds despite the crisis. This inflow includes compensations to employees, pensions, remittances and other transfers.

The total demand of household sector by quarters shows minor decline of demand in Q3 2011 in relation to the previous two quarters, yet slightly higher demand than in the Q3 2010.

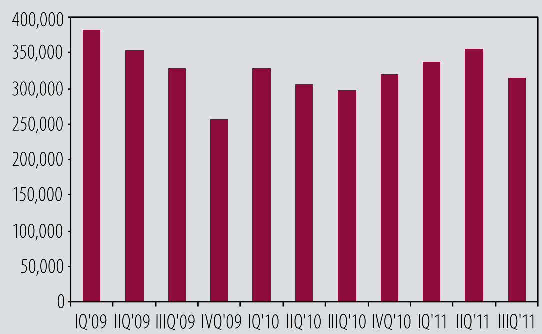
Graph 28 – Loans to households, in EUR thousand



Graph 29 - Inflow of foreign funds to households, EUR thousand

Source: CBM

Graph 30 – Households' demand, EUR thousand



[1] *The data from the Population Census 2011 (the latest) were used.*

3.1.2. Budgetary analysis

In the period January – September 2011, Montenegrin Budget, according to Ministry of Finance preliminary data, recorded total revenues[2] amounting to EUR 1,026.4 million.

Current revenues amounted to EUR 829.7 million or 25.3% of estimated GDP, and in relation to the plan, they decreased by 1.6%, while they were slightly higher in relation to the same period of 2010 (0.6%). Tax revenues recorded the highest share in the structure of current revenues (64%), followed by contributions (30.2%), fees (2.2%), other revenues (1.8%), duties (1.5%) and repayment of loans granted (0.3%).

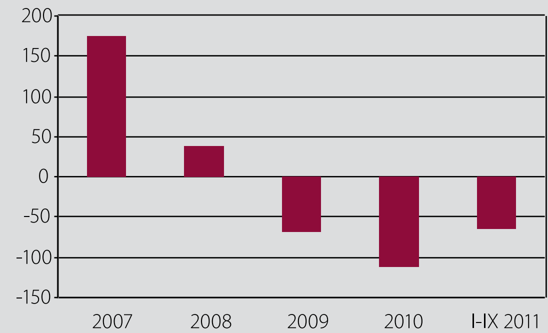
Tax revenues amounted to EUR 530.7 million and were by 1.8% lower than planned. Lower collection of taxes was mostly the result of decrease in tax on real estates profit, excise and tax on international trade and transactions. The collection of VAT in the first nine months of 2011 amounted to EUR 296.7 million, and it was recorded at the insignificantly lower level than planned, yet being 6.3% higher in relation to the comparative period in 2010.

Revenues from contributions amounted to EUR 250.4 million, or 3.9% more in relation to plan.

In the first nine months of 2011, **budget expenditures** amounted to EUR 893.4 million or 27.3% of GDP and they were 8.2% higher in relation to the same period of 2010. Current budget spending amounted to EUR 853 million or 26.1% of GDP, while capital budget amounted to EUR 40.5 million or 1.2% of GDP. In relation to the same period in 2010, current expenditures increased by 30.3%, mostly as the result of increased expenditures for gross salaries at the amount of 39.4%.

The Montenegrin Budget deficit was estimate at the EUR 63.7 million, or 1.9% of GDP.

Graph 31 – Budget surplus/deficit in the period 2007 – September 2011, in EUR million



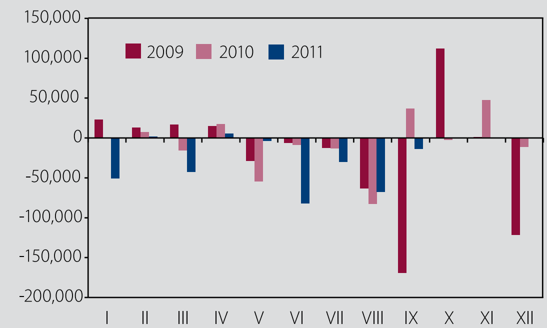
Source: Ministry of Finance

3.1.3. Economy

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

Loans granted to the corporate sector were substantially lower than their deposits in the first three quarters of 2011. Thus, net debt of the corporate sector at end-September 2011 amounted to EUR 486.6 million, and it was by 36.6% lower in relation to 2010-end, as well as by 33.7% lower than in relation to September 2010.

Graph 32 - Net indebtedness of the corporate sector, monthly change, EUR thousand



[2] *Total current public revenues include current revenues (direct and indirect taxes adn non-tax revenues), borrowings, donations and revenues from privatization and sale of properties.*

3.1.4. External demand and balance of payments current account

The first nine months were characterized by the continued decline in current account deficit, resulting from the recovery in export of goods and services and positive trends at the income and current transfers' sub-accounts. In the first nine months of 2011, according to preliminary data, current account deficit amounted to EUR 374.7 million, or 23.5% lower in relation to 2010.

Visible trade in the first nine months of 2011 recorded the increased volume, due to the increase in the value of exports and imports of goods. According to preliminary data, deficit at the goods subaccount amounted to EUR 984.7 million[3], or 3.3% more than in the same period of 2010. The increase in exports was largely the result of higher export of aluminium and products thereof (54.6%), while the increase in imports was due to the increased value of import of products under mineral fuels, mineral oils and products of their distillation (63.4%).

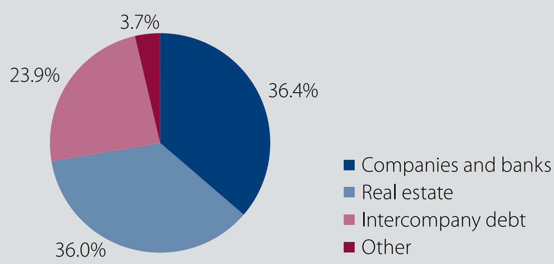
Positive balance at the services account in the first nine months of 2011 amounted to EUR 521.8 million, or 28% more than in the same period of 2010. Higher surplus was the result of a 13.7% increase in revenues from services (EUR 751.8 million) in 2011, and the decrease in expenditures by 9.3%. The higher value of revenues was mostly the result of higher revenues from travelling – tourism (EUR 542.6 million) and transport (EUR 115.1 million). The increase in revenues from travelling – tourism was the result in positive trends in Q3, when the highest revenues were recorded, due to extreme seasonal character of tourism.

In the reporting period, factor income subaccount recorded surplus amounting to EUR 6.9 million. Factor income revenues in first nine months of 2011 amounted to EUR 137.9 million, which is an increase of 14.5% in relation to 2010. The largest portion of revenues was fro compensations to employees amounting to EUR 128.7 million. Expenditures amounted to EUR 131 million, which is 9.5% less than in 2010. Most of expenditures were due to interest repayments (EUR 80.4 million or 9% more than in 2010). In the reporting period, expenditures for paid dividends decreased by 56.6%.

Current transfers subaccount recorded surplus amounting to EUR 81.3 million, which is 2% more than in the same period of 2010. Total revenues from current transfers amounted to EUR 109.8 million in Q3 2011 or 7.3% more in relation to the previous year, of which EUR 8 million referred to the state sector, while EUR 101.8 million referred to other sectors. In the same period, current transfers outflow amounted to EUR 28.6 million, or 25.7% more than in 2010.

Net inflow of foreign direct investments in the period January – September 2011 amounted to EUR 265.9 million which is by 35.5% less in relation to the same period of 2010. Total inflow of foreign direct investments in the observed period amounted to EUR 348.8 million which was by 29.3% less in relation to the same period of 2010. The highest portion of inflow was from investments in domestic companies and banks amounting to EUR 127 million, or 43.3% less in relation to the same period of 2010. Inflow from investments in the form of the intercompany debt amounted to EUR 83.5 million, which is a 31% decline. Investments into real estates amounted to EUR 125.5 million, or 4.3% less than in the same period of 2010. Inflow from cash withdrawal invested by residents abroad amounted to EUR 12.8 million.

Graph 33- Structure of total FDI inflow in the period January – September 2011



Source: CBM

[3] *Monstat's data with adjustments done at the balance of payments pursuant to the IMF methodology (Balance of Payments Manual, Fifth edition, IMF, 1993).*

Total FDI outflow in the period January – September 2011 amounted to EUR 82.9 million, being 3% higher. In the structure of outflow, investments by residents abroad amounted to EUR 26.2 million, while the outflow from withdrawal of non-residents' funds amounted to EUR 56.6 million.

In the first nine months of 2011, *portfolio investments* sub-account recorded net inflow amounting to EUR 170.8 million, or 8.9% less than in the same period of 2010. As in the previous year, high portfolio investments inflow was the result of state borrowing at the international capital market by issuing Eurobonds at the amount of EUR 180 million.

In the first nine months of 2011, *other investments* sub-account recorded net outflow amounting to EUR 476.6 million, being by 7.1% higher in relation to the same period of 2010. In the reporting period, banks' depositis abroad increased by EUR 144.6 million, while banks reduced their liabilities from loans taken by EUR 129.9 million. The inflow from withdrawal of funds from loan taken from the private sector amounted to EUR 300.2 million, which is 64.8% more than in 2010 (EUR 182.2 million), while the outflow from repayment of principal amounted to EUR 181 million or 40% more than in 2010.

3.2. SUPPLY AND PRODUCTION

In the first nine months of 2011, industrial output decreased by 6.2% in relation to the same period of 2010, due to decrease in electricity, gas and water supply sector by EUR 27.5%. The output increase was recorded in mining and quarrying sector and manufacturign inductry sector by 12.7 and 9.8%, respectively. Monthly data on industrial output in the Q3 2011 show increase in all three months, July, August and September, by 5.7%, 1% and 6.3%, respectively.

In the first nine months of 2011, 1,304.5 thousand tourists visited Montenegro, which was by 8.4% more than in the same period of 2010. The number of domestic tourists arrivals decreased by 2.3%, while foreign tourists' arrivals increased by 10.1%. The number of overnights in the observed period amounted to 8,519.1 thousand or 10.2% more than in the same period of 2010.

In the first nine months of this year, total *wood production* amounted to 204.4 thousand m^3 or 1.7% more than in the same period of the previous year.

According to preliminary data of Monstat, the value of executed *construction works* in the first nine months of 2011 was by 19% higher in relation to the comparative period. Measured by the effective working hours, construction activity recorded 25.8% increase.

In the first nine months of 2011, road passenger transport recorded 7.9% decline in relation to the same period of 2010. Railway passenger transport declined by 30.9%, while air passenger transport increased by 7.8%.

In the first nine months, road freight transport declined by 32.3% (measured by tonne kilometres), while air freight transport and railway freight transport (measured by tonne kilometres) recorded respective decreases by 46.2% and 2.3%.

Total turnover in harbours amounted to 1,315.6 thousand tonnes in the first nine months of 2011 or 1.8% lower in relation to the same period of the previous year, whereby the export increased by 8.2% and the import by 3.5%.

Graph 34 - Industrial output, annual growth rate

Source: Monstat

3.3. STOCK EXCHANGE INDICES

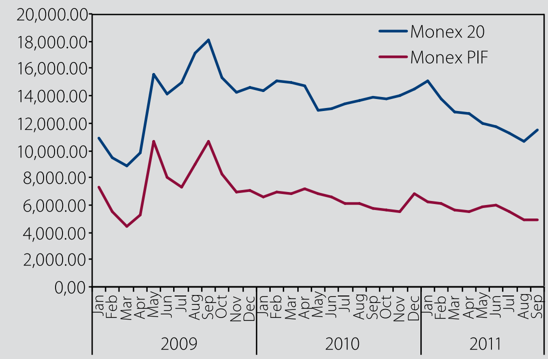
Since the beginning of 2011, both indices have been recording decline with slight oscillations. At end-September 2011, Monex 20 and Monex PIF recorded respective declines by 21.2% and 27.6% in relation to end-2010.

In relation to end-September 2010, both indices recorded decline. Monex 20 recorded an absolute decline of 2,423.72 index points or 17.5%, while Monex PIF decreased by 798.08 index points or 14.0%.

In relation to Q2 2011, both indices recorded decline. Monex 20 and Monex PIF recorded respective decline by 2.2% and 17.3%.

At end September 2011, compared to their maximum historical values (reached in 2007), Monex 20 and Monex PIF were by 4.2 times and 10.4 times lower.

Graph 35 - Montenegro stock exchange indices



Source: Montenegro stock exchange

Table 3 – General Data on Indices

	MONEX 20		MONEX PIF	
Value as of 30 September 2011	11,446.54		4,905.64	
Absolute change in 2011	-3,075.99		-1,872.12	
Starting index value	1000.00	March 2003	1000.00	March 2003
Maximum value over 2011	15,723.86	24.01.2011.	6,673.19	15.02.2011.
Maximum historical value	48,617.88	07.05.2007.	50,780.54	17.08.2007
Minimum historical value	918.57	14.04.2003	959.53	02.04.2003
Growth (decline) in 2011	-21.2		-27.6	

Source: Montenegro stock exchange

4. MONETARY POLICY

In Q3 2011, the Central Bank of Montenegro enacted the new Decision on Reserve Requirements Kept with the Central Bank of Montenegro (OGM, 35/11). By amending the reserve requirement policy from providing liquidity to the banking sector to improving maturity adjustments of sources and banks' placements, the CBM tried to impove the maturity structure of deposits by favouring long term time deposits, thus decreasing potential banks' vulnerabilities in operations.

The new Decision foresees that calculate reserve requirements by applying rates of:

- 9.5% to portion of principal from demand deposits and time deposits with maturity up to 1 year, i.e. up to 365 days
- 8.5% to portion of principal from time deposits with maturity over 1 year, i.e. over 365 days.

This Decision came into force on 1 October 2011, whereby banks were enabled gradual adjusting to the new reserve requirements regime.

5. INFLATION FORECAST IN 2011

The "Fan Chart" model is applied for the forecast of inflation in Montenegro. This is a graphic presentation of the distribution of projected inflation forecasts expressed in the form of Consumer Price Index (CPI Montenegro[4]). To wit, instead of identifying some specific points, by using the Fan Chart, through the distribution of forecasts, any potential risks and uncertainties that could affect the inflation movements over the following period of time are also taken into consideration. The purpose of the Fan Chart is to point out and take into consideration any existing uncertainty in real economy, consequently reflecting on the growth of inflation rate (higher prices of energy sources, an increase/decrease in foreign trade deficit).

The Fan Chart of Montenegro for 2011 is based on the following three assessment components:

- **Values of the central projection:** The values of the Fan Chart central projection are deducted from the ARIMA model, and also by applying the Tramo/Seats simulation in order to obtain the most efficient model.
- **Level of uncertainly** - determines the Fan Chart width. The level of uncertainly ratio is a result of analytic analysis and calculation of relative effects of potential internal (expected increase in electricity prices) and external impacts (oil and food prices) that may occur in the Montenegrin economy in 2011.
- **The Fan Chart curve** – Following the curve showing the level of distribution of the projected inflation, the Fan Chart adjusts to the forecast in the sense that the values of the central projection forecasting the inflation rate movements are either "overrated" or "underrated". The position of an average value of the inflation distribution will depend on this direction.

Fan Chart Central Projection - ARIMA Model for 2011 and 2012

For the purpose of Fan Chart preparation, the ARIMA (Auto-Regressive Integrated Model with Variable Averages) model of temporal series of inflation in Montenegro was developed and expressed by Consumer Price Index[5].

ARIMA model was used for the purpose of short-term forecasts (12 months) where an iteration of 344 ARIMA models was prepared. All models were ranked according to their respective diagnostics efficiency and quality. Selected Arima model, ARIMA (5,1,3)[6] has sufficient reliability level for the needs of this forecast.

[4] *CPI – Consumer Price Index*

[5] *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"*

[6] *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.*

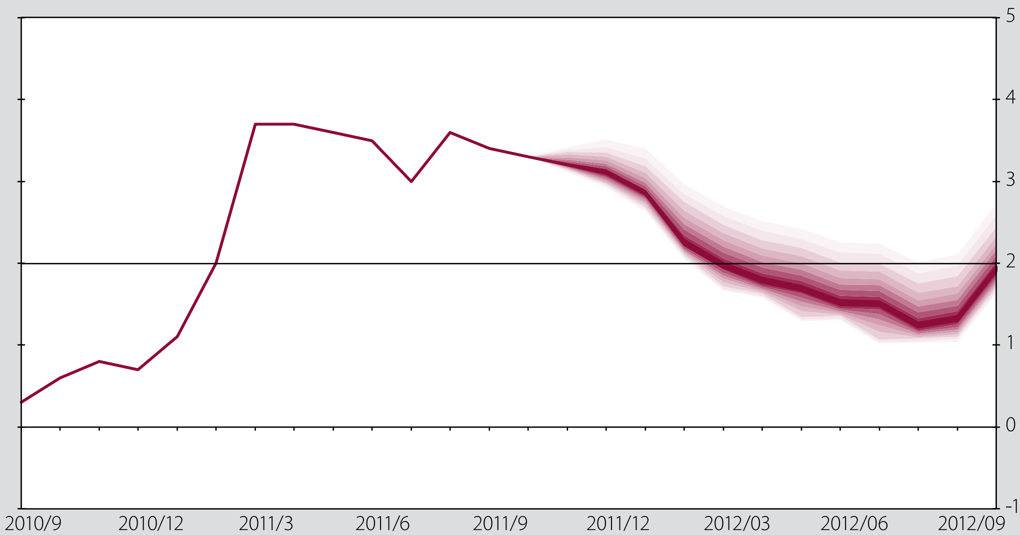
Following the Tramo/Seats[7] procedure, seven breaking points were identified (Chow Test for the identification was used) in the previous series; those substantially corresponded to the changes of the inflation structure from 2001 to October 2012, which was included in the ARIMA model through dummy variables.

Results of ARIMA projection were compared to the values of projected values by Tramo/Seats procedures which expressed substantial level of compatibility.

The monthly forecasts value was used as the value of central projection of the Fan Chart of CPI for 2011 and first ten months of 2012. Obtained values represent the distribution mode, i.e. the values with the highest frequency in distribution of this time series.

Mean value of the produced model is 2.7, curve ratio varied between -0.8 and 0.5, while the values of standard deviations amounted to σ2=0.03 or σ1=0.11. Like in the previous two years, this showed that the central span was located in the lower part of the distribution, which means that the corresponding range of uncertainty was concentrated towards the higher levels of inflation. This is shown in the graph as a "thicker" range concentrated above the central "dominantly red" range. Fan Chart explains 90% of the probability of the inflation distribution. The central projection is usually in the deepest shade of the Fan Chart, i.e. in the central 10% of probability.[8] 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 36 – Projected Consumer Price Index of Montenegro for 2011 and Q3 2012



Source: CBM, 2011

[7] *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 program is used to extract the elements of time series than cannot be directly extracted; those elements are extracted as a trend, season, cycle, and occurrence of Easter or Christmas effect, which allows a superior analysis and projection of ARIMA model. For more details see manual Tramo and Seats (Gómez and Maravall, 1996).*

[8] *The mode value (central projection) is, by construction, always in the deepest band shade, but in the 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.)*

The Fan Chart showing the inflation in Montenegro based on an ARIMA model assessment and Tramo/Seats simulation for 2011 and Q3 2012 shows with 90% probability that the inflation, measured by CPI depending on month, will range between 1.4% and 3.5%. To wit, as the uncertainty increases so does the time horizon for making projection, consequently widening the range of the forecast. *The 90% probability shows that the inflation will range from 2.9% to 3.5% at end-2011*. The central Fan Chart projection, referring to the darkest area on the chart represents a probability range of 10% shows that the inflation will range from 1.2% to 3.2% in the 2011 and Q3 2012.

Assumptions referring to inflation forecast:

1. The price of oil and oil derivatives will not exceed 10% of the price from June 2011;
2. The price of aluminium will not decline more than 10% in relation to that from June 2011;
3. Prices of real estates will be on the standstill in relation to the Q2 2011
4. Annual real wages increase is up to 4% at end – October 2012;
5. There will be no significant increase in prices of food products in relation to September 2011;
6. There will be no significant increase in taxes or excise duties.
7. There will be no changes in controlled prices.

Derogation from some of these parameters would require also forecast correction.

6. EXPECTED INFLATION IN 2011

The economic activity level is higher than expected, and the key growth triggers in the first nine months were tourism, construction and trade. The fact that 50% of surveyed companies have planned the increase in investments, as well as that many companies announce the increase in economic activity (compared to the number of companies expecting the decline in economic activity), indicates that the similar trend in economic activity growth may be expected by the end of the year, which would surely act anti-inflatory. Slower lending activity also acts anti-inflatory.

Rapid inflation growth in the beginning of year, and their decline in Q2 2011 and slight growth in Q3 2011 acted confusingly to the economy, thus we received very "different" forecasts both of real sector and from banks about the expected inflation in 2011. Still, we may state that we may undoubtedly expect higher inflation rate than in the previous year, which is proved by statistical indicators on inflation in the first nine months, as well as the increase of inflatory expectations. Observing the inflation in Montenegro and in the region in 2010 and 2011, it may be noted that region suffered the inflation growth in 2010 and that the price adjustment with some delay was present in Montenegro in Q1 2011.

The 90% probability shows that the inflation will range from 2.9% to 3.5% at end-2011.

It is evident that, after swift inflation growth in Q1, when the inflation in March amounted to 3.7%, the EU debt crisis, problems in the USA, natural disasters in Japan and the like affected the significant slowdown of global growth. Lowed global growth, which meant lower aggregate demand affected the global inflation decrease, and especially to prices of food and fuels that were the key inflation factor in the beginning of the year. Thus, we revised our inflation forecast to the lower level, and therefore we expect the 2011 inflation to range between 2.75% and 4%.

Table 4 – Estimated inflation rate

Optimistic assessment	Realistic assessment	Pessimistic assessment
2.75%	3.25%	4%

Experts' assessment os based on the same assumptions as the econometric forecast, thus the change of any parameter would require the change in the forecast.