CENTRAL BANK OF
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RESEARCH, STATISTICS AND IT DEPARTMENT

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1. INFLATION INDICATORS

In the second quarter of 2010, consumer prices declined by 0.4%, whereas the largest decrease was recorded in the category "alcoholic beverages and tobacco" (-0.8%), "food and non-alcoholic beverages" (-0.7%) and "housing" (-0.6%). Observed by months, consumer prices decline was recorded in May (-0.1%) and June (-0.4%), while the growth in prices was recorded in April (0.1%). Observed annually, consumer prices were 0.2% higher, while the average rate (period-on-period) amounted to 0.4%.

Despite the fact that prices of fruits (15.9%), oils and fats (2%), milk, cheese and eggs (0.4%) increased, lower prices of vegetables (-15.9%) and meet (-0.3%) affected the decline of food and non-alcoholic beverages prices by 0.7%. In this period, „housing" prices declined due to lower renting prices -6.5% (product is included in the consumer basket as of January 2010) and lower prices of alcoholic beverages and tobacco (-0.8%), due to decline of alcoholic beverages (-1.8%), while lower prices of clothes (-0.4%) and footwear (-0.1%) influenced the decline in prices of "clothes and footwear" category by 0.2%. Prices of furniture and appliances declined by 0.2% and 0.7%, respectively, which affected the decrease in category "furniture and appliances" by 0.4%. The decline of 0.5% was recorded in categories "culture and entertainment" and other "goods and services". In the second quarter, prices of fuels and lubricants increased by 2.2%, which affected increase of transportation prices by 0.5%, while the health care prices increased by 0.7% mostly due to the growth of dentist services (1.2%) and medical products (0.8%). Prices of communications and education remained the same in comparison with the previous quarter.

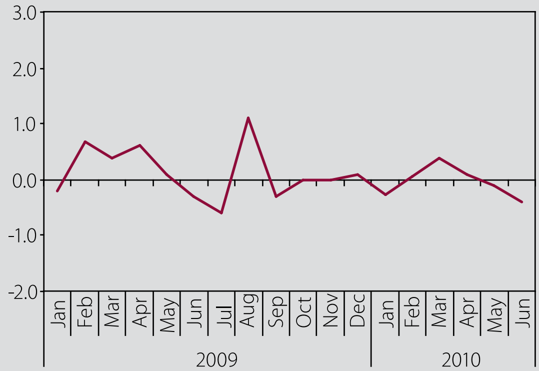
Annual **core inflation rate** amounted to 0.04% in June and as of October 2009 it was continuously lower than total inflation. In June, total annual inflation was by 0.19 percentage points higher than core inflation. Observed in the first six months consumer prices declined by 0.2%.

Table 1 – Inflation, %

	2009				2010	
	III	VI	IX	XII	III	VI
Change in relation to the previous year-end	0.8	1.2	1.4	1.5	0.2	-0.2
Annual change	5.5	2.8	1.7	1.5	0.7	0.2

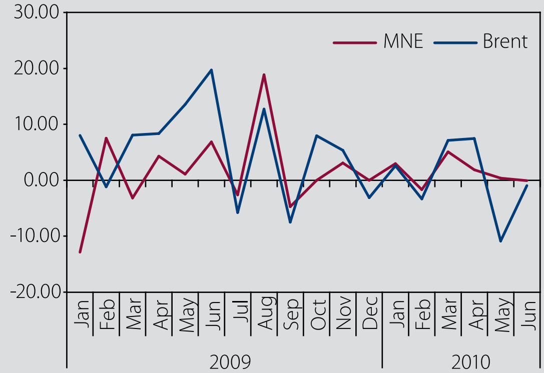
Source: Monstat

Graph 1- Consumer prices, monthly rate



Source: Monstat

Graph 2 - Oil prices, monthly growth rate



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

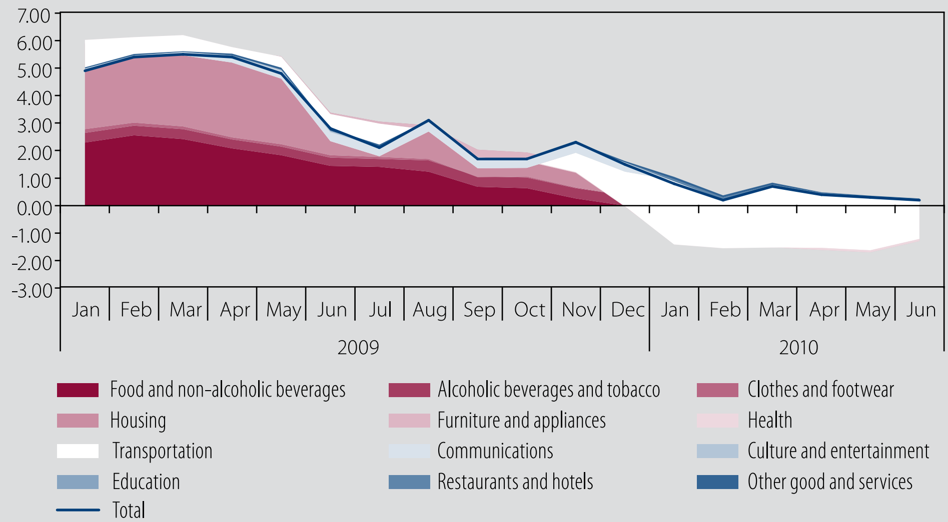
The price of OPEC reference basket averagely amounted to USD/barrel 76.59 in the second quarter, which was by 1.6% more in relation to the first quarter of 2010. Average "brent"oil price amounted to USD/barrel 78.40 in the second quarter, which is by 2.8% more in relation to the average price from the previous quarter and 5.6% more in relation to December 2009. The highest "brent" oil price was recorded in April, amounting to USD/barrel 84.79 and that is the highest price since September 2008, when it amounted to USD/barrel 98.13. Growing expectations related to global economic recovery stimulate demand for oil. Thus, forecasts regarding the growth of fuel prices and decline of stocks are optimistic. However, this recovery has to be monitored, due to European problem with state debt, China's ability to prevent economy "overheating" and high unemployment level in OECD countries.

Table 2 – Share of individual categories in total inflation

	Weights	VI 10/III 10	Growth rate	Contribution	Share in total inflation
TOTAL	**10000**	**99.6**	**-0.4**	**-0.4**	**100.0**
Food and non-alcoholic beverages	3755	99.3	-0.7	-0.3	72.7
Alcoholic beverages and tobacco	372	99.2	-0.8	0.0	7.6
Clothes and footwear	761	99.8	-0.2	0.0	5.0
Housing	1287	99.4	-0.6	-0.1	22.1
Furniture and appliances	494	99.6	-0.4	0.0	5.8
Health	280	100.7	0.7	0.0	-5.2
Transportation	1216	100.5	0.5	0.1	-17.3
Communications	558	100.0	0.0	0.0	0.4
Culture and entertainment	321	99.5	-0.5	0.0	4.0
Education	218	100.0	0.0	0.0	-0.2
Restaurants and hotels	296	100.1	0.1	0.0	-0.5
Other goods and services	442	99.5	-0.5	0.0	5.5

Source: Monstat and CBM calculations

Graph 3 – Components of consumer prices: Contribution to annual rate (index points)



Source: Monstat and CBM calculation

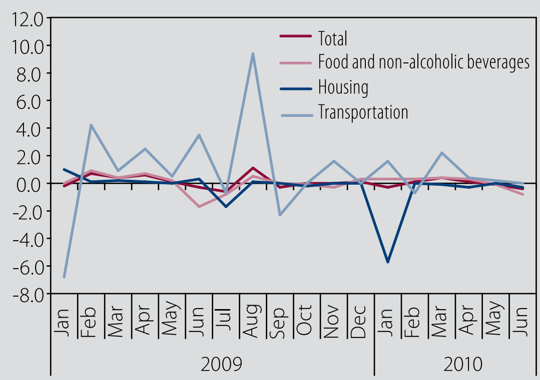
The annual consumer price rate amounted to 0.2% in June and was by 0.5 percentage points lower in relation to the annual rate from March. Although the transportation prices increased by 12% at the annual level, lower prices of food and non-alcoholic beverages (-0.5%), housing (-7.6%) and furniture and appiances affected low annual inflation rate.

Producers' prices of manufactured products increased by 4.6% in the second quarter in relation to the first quarter, whereby manufacturing industry prices increased by 8.1% while prices in and mining and quarrying sector declined by 14.4%. Production of electricity, gas and water remained unchanged. In relation to the end of the previous quarter,

Graph 4 – Consumer prices, annual growth rate

Source: Monstat

Graph 5 – Selected categories – consumer prices, monthly rate

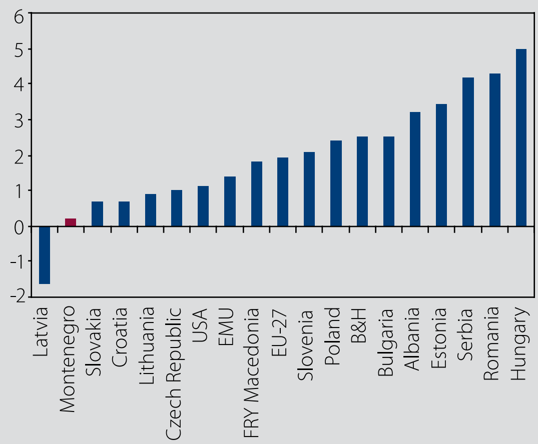


Source: Monstat

producers' prices of manufactured products increased by 0.7%, while at the annual level that growth amounted to 7.8%.

If we compare annual inflation recorded in Montenegro and selected countries, we can see that the annual rate was higher in selected countries except Latvia, which in June recorded decline of 1.6%.[1] The highest annual growth in selected countries was recorded in Hungary (5%).

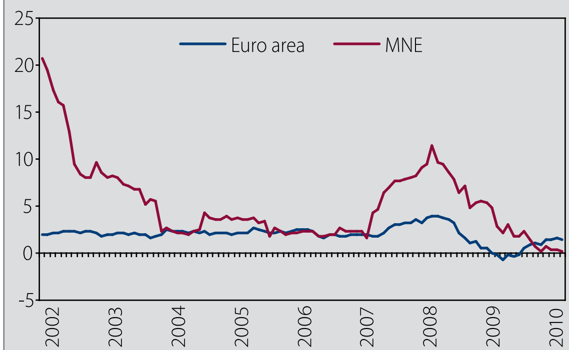
Graph 6 - Annual inflation rate in selected countries, Jun 2010



Source: National Statistical Offices and Eurostat

Annual rate recorded in Euro area, measured by harmonized consumer prices index amounted to 1.4%, while, measured by consumer prices in Montenegro it amounted to 0.2%.

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



Source: Monstat and Eurostat

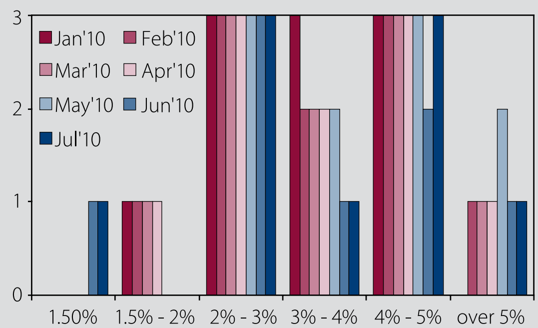
[1] *Negative inflation rate is considered as positive, since it cannot contribute to recession.*

2. INFLATION FORECASTS

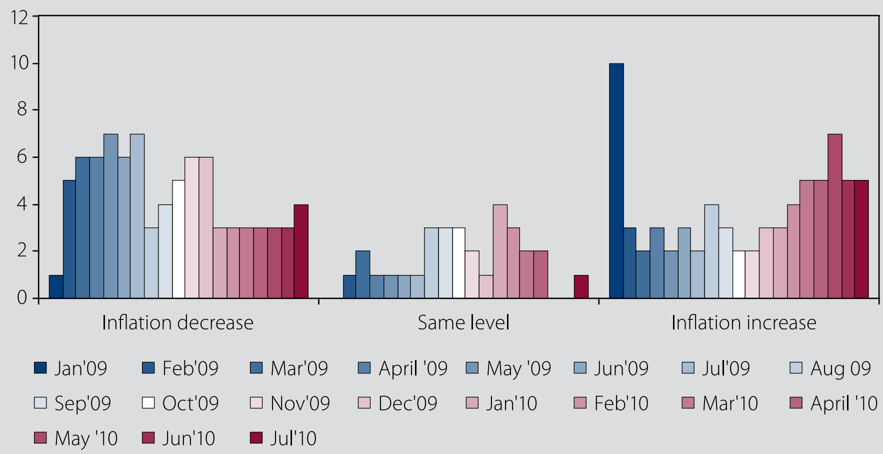
BANKS' EXPECTATIONS

Regarding inflatory expectations of banks, based on surveys conducted in July 2010 (ten of elevel banks responded), four banks expected lower rate, five expected higher rate, while only one bank reported the same inflation rate in 2010, in relation to 2009 (Graph 8).

Graph 9 – Forecasted inflation level (banks)



Graph 8 - Inflation forecasts (banks)

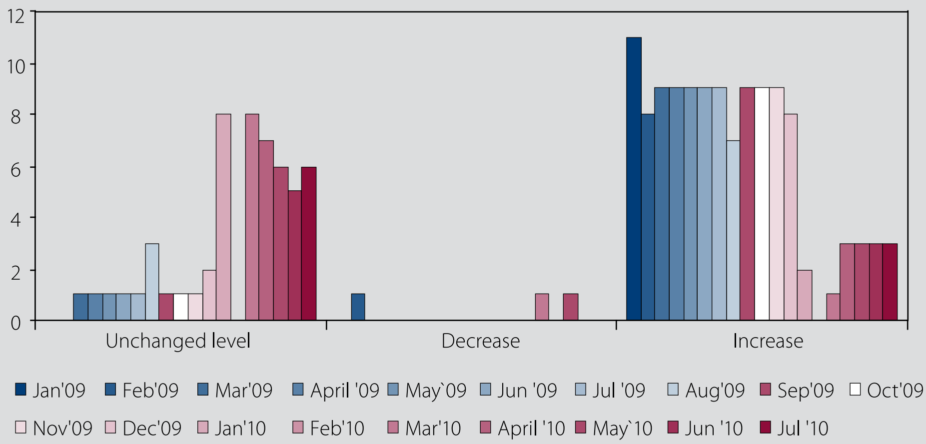


Concerning the expectations on the lending interest rates, no bank forecasted a decrease either in nominal or effective interest rates. Seven banks expected that nominal lending interest rates will not change, while three banks expected growth. Four surveyed banks expected growth of effective interest rates while six banks did not expect changes in 2010 in relation to 2009.

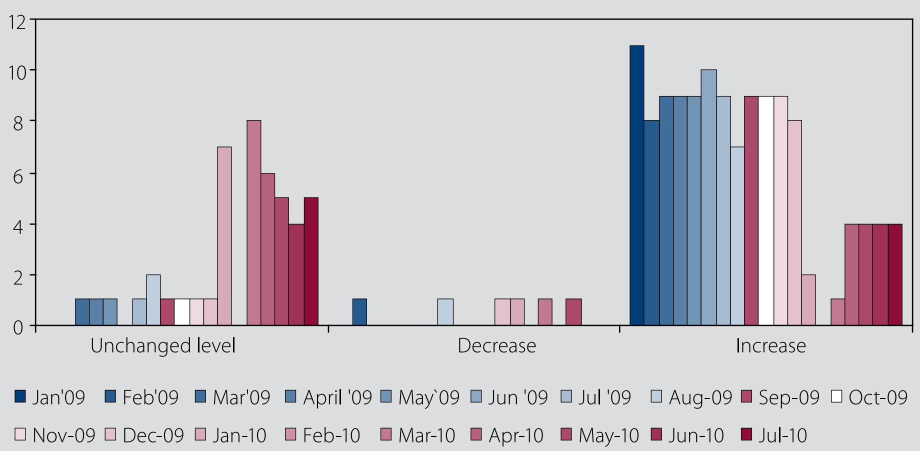
Regarding the deposit interest rates, six banks expected unchanged level, one bank forecsted growth while three banks expected decline of deposit interest rates in 2010 in relation to 2009.

For the purpose of calculating inflation forecasts market trend indicator is used (black line in Graph 12). It is calculated as the difference between the number of banks expecting an inflation increase (blue columns) and the number of banks expecting an inflation decrease (red columns).

Graph 10 – Nominal lending interest rates forecasts

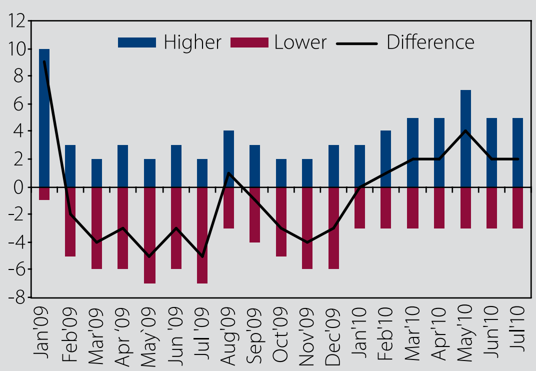


Graph 11 – Effective lending interest rates forecasts



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 value, the lower inflation forecast, while higher positive value affects higher inflation. Thus, Graph 12 shows expectations of unchanged inflation level in July 2010 in relation to March 2010, that is, banks expect minor inflation growth.

Graph 12 – Market trend indicator

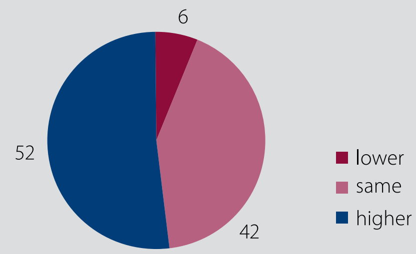


EXPECTATION OF ECONOMY (EXCEPT BANKS)

Inflation

The company survey results show that 52% of companies expect higher inflation, 42% believe that there will be an unchanged level while 6% expects lower inflation rate in 2010 in relation to 2009. In addition, 33% of surveyed companies believe that the inflation in 2010 will amount between 1.5% and 2%, while only 4% expects that the inflation will be higher that 5%. Some 22% of companies expects lower salaries, 7% expects higher level, while 71% expects unchanged level. Most of surveyed companies (65%) expect the same level of prices of production inputs, while 29% of them believes that the prices of their products (services) will increase by the end of 2010. Regarding the number of employees, 65% of surveyed companies expects unchanged level by the year-end, while 18% believes this number will increase and 17% expects a decrease.

Graph 13 - Forecasted inflation in 2010, in relation to 2009 (responses by percentage share*)



** Answers to all questions from the companies' survey are presented as the share, and it will not be especially emphasise any more*

Table 3 – Forecasted inflation (responses by percentage share)

	2009				2010	
	I Q	II Q	III Q	IV Q	I Q	II Q
Lower	31	29	29	9	5	6
Same	24	31	29	34	48	42
Higher	45	40	42	57	47	52
Quarterly CPI	5.5	2.8	1.7	1.5	0.7	0.2

Graph 14 – Forecasted inflation in 2010

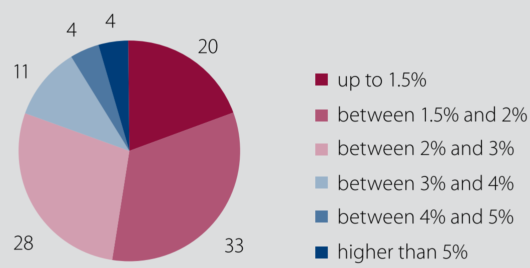
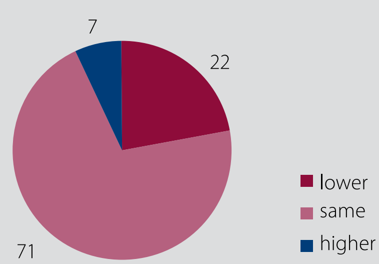


Table 4 - Forecasted inflation

	2009				2009	2010	
	I Q	II Q	III Q		IV Q	I Q	II Q
Up to 3%	7	5	7	Up to 1.5%	12	24	20
Between 3% and 3.5%	10	2	9	Between 1.5% and 2%	43	27	33
Between 3.5 and 4%	5	7	7	Between 2% and 3%	24	27	28
Between 4% and 4.5%	0	0	0	Between 3% and 4%	14	15	11
Between 4.5% and 5%	0	2	4	Between 4% and 5%	2	2	4
Between 5% and 5.5%	5	7	7	Higher than 5%	5	5	4
Between 5.5 and 6%	7	18	13				
Between 6.5% and 7%	15	17	16				
Higher than 7%	51	42	37				
Realised inflation	5.5	2.8	1.7		1.5	0.7	0.2

Tables 3 and 4 show that private sector does not have high quality perception on inflation, thus there is no strong corelation between forecasted and realised CPI.

Graph 15 – Expected level of salaries by end-2010



As we can see from the Table 5, the level of expected salaries is highly adjusted to realized values, measured by average net monthly earnings. In addition, we can confirm that private sectors properly forecasts net salaries movements, that is, there is a high corelation of realized net salaries value and expectations regarding the level of salaries in the past 6 quarters.

Graph 16 – Expected level in number of emloyees by end-2010

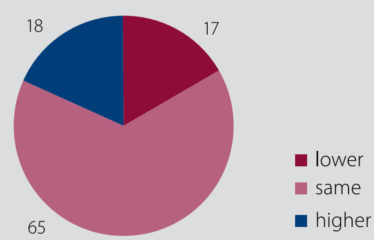


Table 5 – Expected level of salaries

	2009				2010	
	I Q	II Q	III Q	IV Q	I Q	II Q
Lower	17	18	17	25	23	22
Same	50	64	73	73	73	71
Higher	33	18	10	2	4	7
Realised average net salaries in EUR	466.0	466.3	457.3	460.7	466.3	475.0

Table 6 – Expected level in number of employees

	2009				2010	
	I Q	II Q	III Q	IV Q	I Q	II Q
Lower	12	13	21	20	20	17
Same	64	66	60	57	62	65
Higher	24	21	19	23	18	18
Number of employees	169,861	175,202	178,191	173,354	171,707	n.a.

Regarding number of employees, Table 6 shows that private sector does not have good perception of its movements. Thus, there is no strong corelation between forecasts about the number of employees in the private sector regarding relaized number of employees.

Graph 17 – Expected level of prices of production inputs by end-2010

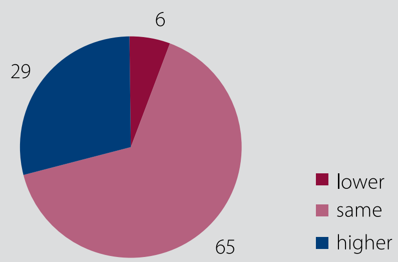


Table 7 – Expected level of prices of production inputs

	2009				2010	
	I Q	II Q	III Q	IV Q	I Q	II Q
Lower	27	26	22	12	9	6
Same	35	46	54	56	66	65
Higher	38	28	24	32	25	29

Graph 18 – Expected level of products' (services) prices by end-2010

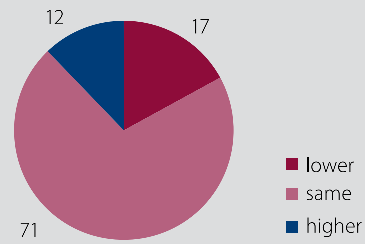


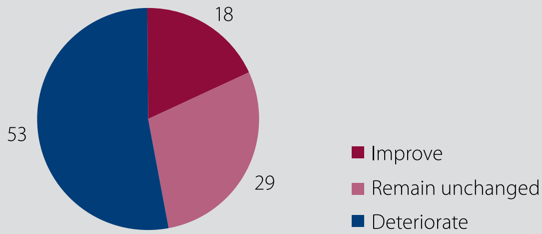
Table 8 – Expected level of products' (services) prices

	2009				2010	
	I Q	II Q	III Q	IV Q	I Q	II Q
Lower	36	36	27	20	18	17
Same	56	56	66	64	71	71
Higher	8	8	7	16	11	12

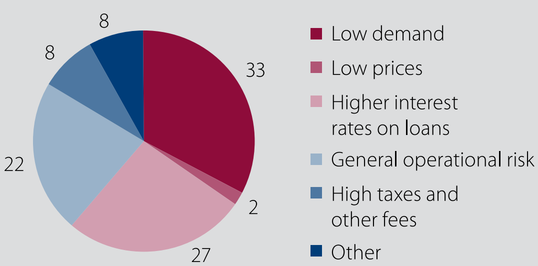
Business Environment

The survey results showed that most of the surveyed companies (53%) expect deterioration of the business environment. Some 29% expects unchanged business environment in 2010. In addition, 19% of the surveyed companies expect lower, 51% unchanged and 30% expects higher lending interest rates in 2010 in relation to 2009. Concerning business barriers, most of the survey participants consider low demand (33%), high lending interest rates (27%)) and general operational risks (22%) as obstacles.

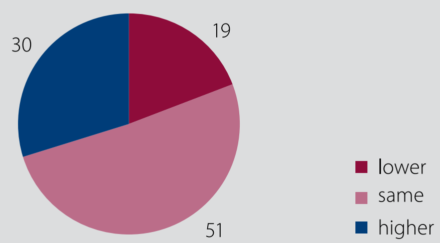
Graph 19 – Expected business environment in 2010 in relation to 2009



Graph 20 – Business barriers



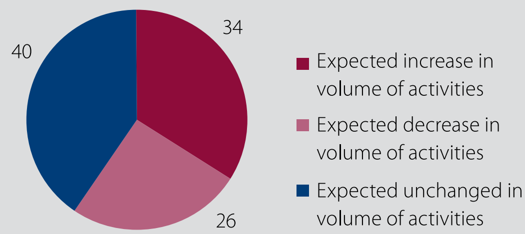
Graph 21 – Expected level of lending interest rates in 2010 in relation to 2009



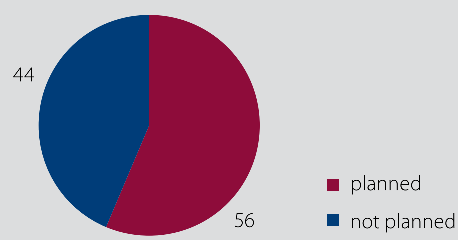
Investments

Out of the total number of surveyed companies, 34% plan to increase the volume of activities in 2010, while 56% of them plan new investments. Most investments (66%) related to the increase in fixed assets and 21% to other investments, while high interest rates, unfavourable conditions for capital indebtedness and insuficient exploitation of existing capacities are described as the largest obstacles to new investments.

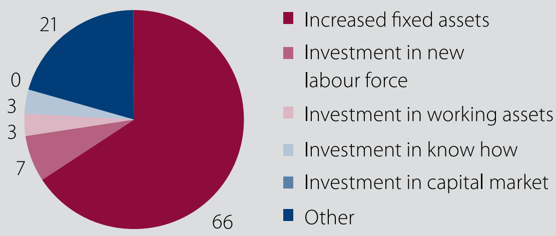
Graph 22 - Forecasted volume of activities in 2010



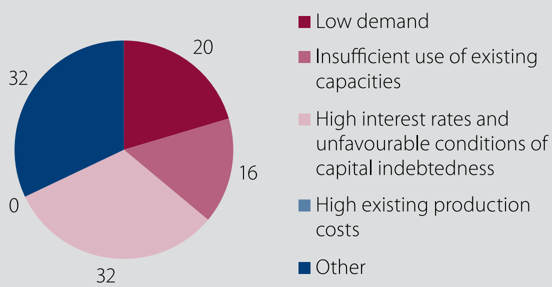
Graph 23 - New investments by the end-2010



Graph 24 - Types of forecasted new investments in 2010



Graph 25 - Obstacles to new investments in 2010



3. INFLATION DETERMINANTS

3.1. DEMAND

Data on the number of employees for the period April-June 2010 are not available, thus it was not possible to calculate households' demand, and consequently aggregate demand as well.

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 strating 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 consuption. 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 is 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:

$$AD=C+I+G$$

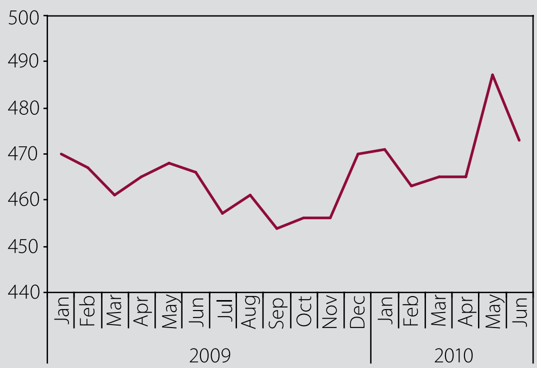
C=sum of paid salaries + sum of paid pensions + paid frozen foreign currency deposits + net compensations to households- net savings by households (savings- loans granted)
I= net savings of economy (deposits-loans)
G= public consumption- paid pensions- salaries paid from the budget- net savings by the 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 second quarter of 2010, the average salary in Montenegro amounted to EUR 709, while the average salary without taxes and contributions amounted to EUR 475, the same as in the first quarter of the previous year. In relation to the previous quarter, the average salary without taxes and contributions increased by 1.9%.

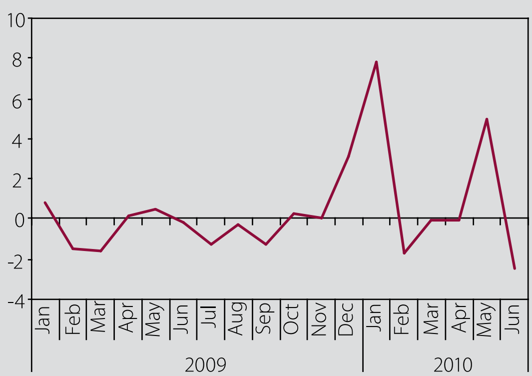
Taking into account the consumer prices, i.e. salaries in real amounts, it can be concluded that real salaries grew only in May, while they declined in April and June.

Graph 26 - Average salaries without taxes and contributions in Montenegro



Source: Monstat

Graph 27 – Real wages (monthly rate)



Source: Monstat

At the end of the second quarter of 2010, households' loans amounted to EUR 885.2 million and were by EUR 90.4 million or 9.3% lower in relation to the same period of 2009, or by EUR 34.1 million or 3.7% lower than at end-2009. Households' loans declined at a monthly rate of 0.6% (in 2009 they declined at a monthly rate of 1%).

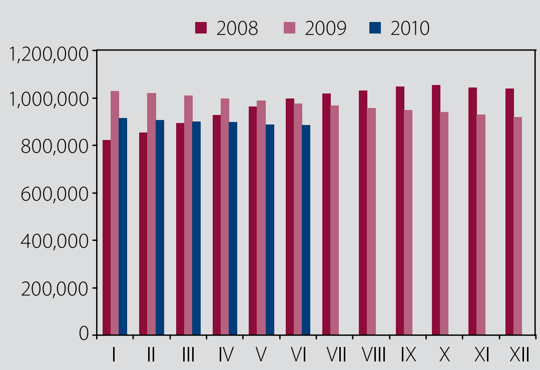
The decline of households' loans continued with the average indebtedness trend of this sector. Thus, per capita debt amounted to 1.405 EUR at the end of the second quarter of 2010, and was by 3.7% lower in relation to end-2009.

Loans of households in MFIs amounted to EUR 54.3 million at end-June 2010. In relation to the same period of the previous year, loans of households in MFIs declined by EUR 18.0 million or 24.9%, while they were EUR 11.5 thousand or 17.5% lower in relation to end-2009.

Households' deposits amounted to EUR 868.3 million at the end of the second quarter of 2010, which is by EUR 118 million or 15.7% more in relation to the same period of the previous year and by EUR 24.4 million or 2.9% more than at end-2009.

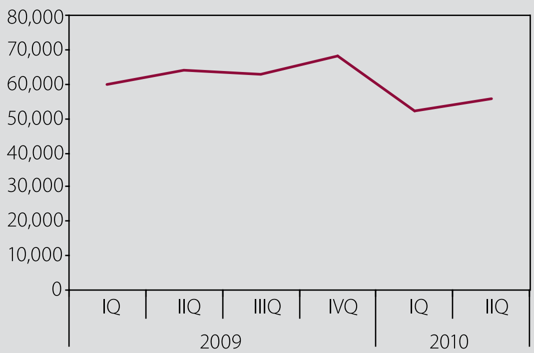
As a result of decrease of loans and households' deposits increase, loans to deposits ratio in this sector improved amounting to 1.02 at end-June 2010 (at end-2009 it amounted to 1.09). Households' net debt to banks amounted to EUR 16.9 million and it substantially decreased in relation to the first half of the previous year (92.5%) as well as in comparison with the end-2009 (77.6%).

Graph 28– Loans to households, in EUR thousand



The balance of payments statistics shows that the inflow of foreign funds to natural persons was higher in the second quarter of 2010 in relation to the previous quarter. This inflow includes inheritance, pensions, allowances and other gifts and assistance.

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



Source: CBM

3.1.2. BUDGETARY ANALYSIS

Montenegrin Budget

In the period January-June 2010, according to preliminary data of the Ministry of Finance, Montenegrin budget with state funds recorded revenues in amount of EUR 532.6 million. Current revenues amounted to EUR 508.8 million or 15.9% of forecasted GDP, while revenues from borrowings and loans from foreign sources amounted to EUR 20.9 million or 0.7% of forecasted GDP. Revenues from privatization and donations amounted to EUR 2.9 million or only 0.1% of GDP. Current budget revenues were 2.5% lower in relation to the plan for the period January - June 2010, while in relation to the same period of 2009 they were by 1.4% higher.

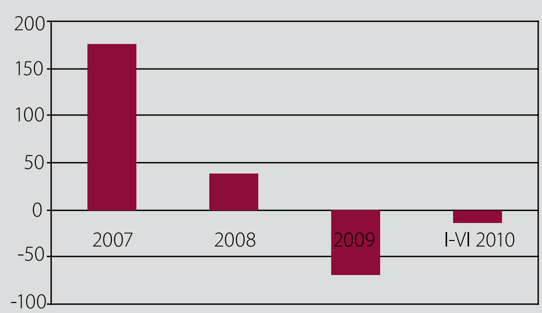
Tax revenues with 60.0% recorded the highest share in the structure of current revenues, followed by contributions (32.4%), fees (2.4%), other revenues (2.8%) and repayment of loans granted (0.3%). Tax revenues amounted to EUR 305.3 million and were by 9.1% lower than planned. The highest tax revenues came from VAT, excise and custom duties in amount of EUR 244.3 million making up 47.8% of current budget revenues. In relation to plan for the observed period, revenues from contributions increased by 16.1%.

Consolidated budget expenditures (total expenditures without debt repayment) in the second quarter of 2010 amounted to EUR 522.9 million or 16.3% of GDP. In relation to the first half of 2009, expenditures increased by 8.3%. In the structure of budget expenditures, current expenditures recorded the highest share of 41% or EUR 214.3 million, of which 23.1% referred to gross salaries. In the second quarter there were no expenditures on the basis of guarantees.

In comparison with the second quarter of the previous year, tax revenues declined by 0.5% due to lower revenues from taxes on legal persons' profit (55.3%) which resulted from the changes in legislation referring to the cancellation of profit tax prepayment. Other tax revenues increased: VAT (5.3%), custom duties (8.4%), natural person's income tax (9.5%), excise duties (1.4%) and other taxes (22%). In other categories of current revenues, contributions increased by (24.8%), fees (3.3%) and compensations (5.5%) while other revenues and receipts from loan repayment recorded decline by 10.5% and 93.1%, respectively. Expenditures were 8.3% higher in relation to the same period of the previous year, resulting from increased current expenditures (11.6%), social protection transfers (25.6%) and rents (28.8%).

In the first six months of 2010, the Montenegrin Budget recorded deficit of EUR 11.9 million or 0.4% of GDP.

Graph 30 – Budget surplus/deficit in the period 2007-June 2010, in million EUR



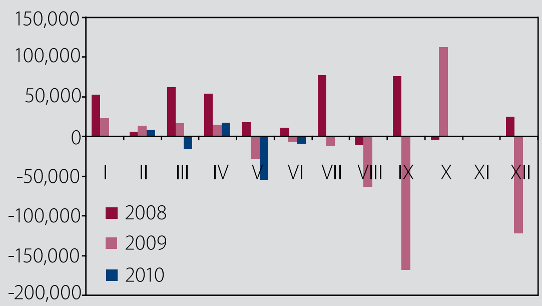
Source: Ministry of Finance

3.1.3. ECONOMY

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

Loans granted to the corporate sector were substantially higher than their deposits in the first half of 2010. Net debt of the corporate sector at end-June 2010 was 27.9% lower in relation to the same month of the previous year or 6.4% in relation to end-2009. The structure of loans granted to the corporate sector shows that the share of long-term loans in total loans disbursed to this sector amounted to 71.7% at the end of the observed period, whereby loans with maturity over 3 years made up 47.8% of total loans granted to the corporate sector. Such loans' structure points to their dominant use for increasing the economic activity.

Graph 31 - Net indebtedness of the corporate sector, monthly change, EUR thousand



3.1.4. EXTERNAL DEMAND AND BALANCE OF PAYMENTS CURRENT ACCOUNT

According to preliminary data, trends in the balance of payments current account were relatively favourable. Data show recovery of the export, while the import is on a downward trend. Current account deficit was by 7.7% lower in relation to the same period of 2009 amounting to EUR 508.8 million. The decline of external trade deficit is a basic reason for current account deficit decline. It resulted from increase of exported goods value (15.4%) and decrease of import (1.5%). Surplus growth was recorded at the services and current transfers' accounts, while income account recorded surplus decline.

Total Montenegrin external trade exchange amounted to EUR 917.7 million in the first two quarters of 2010, which is almost at the same level as in 2009. In the observed period, import amounted to EUR 762.6 million or 1.5% less than in the same period of 2009. At the same time, Montenegrin export amounted to EUR 155 million or 15.4% more in relation to 2009. Coverage of import by export amounted to 20.3% which is still exceptionally low coverage. In relation to the previous year, deficit in amount of EUR 607.4 million or 5% less was a consequence of such movements. Coverage of external trade deficit by surplus recorded at another current account's sub-accounts amounted to 16% and was by 2.5 percentage points higher in relation to the same period of 2009.

Observed by services, Montenegro recorded surplus in amount of EUR 43.8 million which is by 7.8% more in relation to the previous year. Revenues from services amounted to EUR 188.9 million and were 4.6% higher in relation to the same period of 2009. Positive result was recorded in transportation, where surplus increased by 54.6% and travelling with the growth of surplus of 7.5%, mostly due to higher decline in expenditures (30.8%), while revenues remained unchanged in relation to the previous year. Other services' deficit (construction, other business services, communications) increased by 20.8%. Expenditures from services amounted to EUR 145 million, or 3.6% more than in 2009.

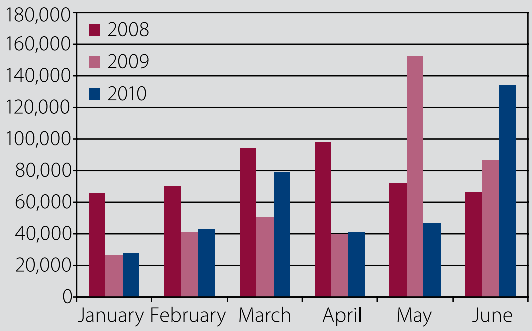
Deterioration was recorded at the income account, with the surplus of EUR 1 million, due to decrease of revenues and increase of expenditures. Factor income revenues amounted to EUR 76.4 million or 6.7% less in relation to 2009. Total expenditures amounted to EUR 75.4 million, or 3.9% more than in 2009. Most of expenditures were due to interests' repayments (52.3 million or 8.3% more in relation to the same period of 2009).

Cash inflow growth trend at the current account transfers continued in 2010. Current transfers balance amounted to EUR 53.8 million or 41.6% more in relation to the same period of 2009. Total revenues from current transfers amounted to EUR 68.1 million or 24.8% in relation to the previous year, of which EUR 11.7 million referred to the state sector, while EUR 56.4 million referred to other sectors. At the same period, outflow from current transfers amounted to EUR 14.4 million or 13.6% less in relation to 2009.

Capital-financial account recorded outflows mostly from the direct investments. Total inflow of foreign direct investments in the period January – Jun 2010 amounted to EUR 314.3 million. In relation to the same period of 2009 net FDI inflow declined by 3.7% but it should be taken in consideration that in the first six months of this year there were no larger privatizations in comparison with the previous year, when the highest inflow was recorded from EPCG privatization. Total FDI inflow in Montenegro amounted to 370.5 million. Unlike in the previous year, when investments in the energy sector were substantial, in the FDI structure in 2010, investments in the financial, telecommunications and tourism sectors were dominant.

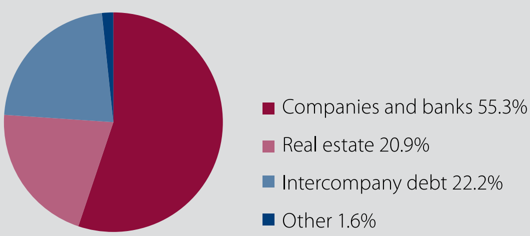
In the FDI structure, the highest inflow was recorded from investing in domestic companies and banks (EUR 204.8 million). In the form of the intercompany debt, inflow of EUR 82.4 million was recorded, while investments in real estates amounted to EUR 77.3 million. Inflow from cash withdrawal invested by residents abroad amounted to 5.9 million.

Graph 32 - FDI inflow, in EUR thousand



Source: CBM

Graph 33 – Structure of FDI inflow in the period January- June 2010 .



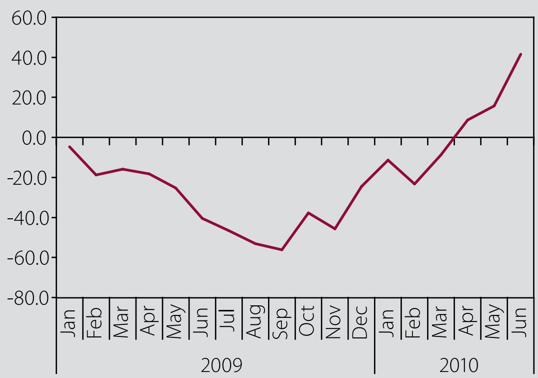
Source: CBM

Total FDI outflow in the period January-Jun 2010 amounted to EUR 56.2 million or 22.6% less in relation to the same period of 2009. The largest outflow was recorded from the intercompany debt in amount of EUR 40.4 million. Residents' investments in foreign banks and companies amounted to EUR 5.7 million. Outflow from real estates amounted to EUR 7.2 million, while the outflow from withdrawal of assets invested in domestic banks and companies amounted to EUR 2.8 million. In the first six months of this year, net outflow in amount of EUR 617 thousand was recorded at the **portfolio investments** accounts, which is substantially less in relation to the same period of 2009 when net outflow amounted to EUR 29 million. **Other investments'** accounts recorded net outflow in amount of 79.9 million unlike in the same period of 2009, when net inflow amounted to 23.2 million.

3.2. SUPPLY AND PRODUCTION

Physical volume of industrial production decreased by 0.1% in the first half of 2010, in relation to the same period of the previous year. Observing monthly data on industrial output, the decline was recorded in April (-4.2%) and May (-10.2%), while it increased in June by 8.9%. If we compare the first six months of this year with the same period of 2009, the increase of production was recorded only in the electricity, gas and water supply sector (27.3%), while the decline was recorded in manufacturing industry (-18.5%) and mining and quarrying sector (-1.8%).

Graph 34 - Industrial output,annual growth rate



Source: Monstat

In the first six months of 2010, Montenegro was visited by 274.9 thousand tourists or 0.3% less than in the same period of 2009. The number of overnights in the observed period amounted to 1.474,5 thousand or 0.5% less than in the same period of previous year. Foreign tourist recorded 84.6% of total overnights.

In the first six months of this year, **total wood production** amounted to 81.8 thousand m^3 or 14.4% more than in the same period of the previous year.

According to preliminary data, value of executed **construction works** for the first six months amounted to EUR 92.7 million and was by 8.4% lower in relation to the comparative period. Construction activity declined by 10.2% which was measured by the effective working hours.

Road transport recorded 27.8% less passengers than in the same period of the previous year, while cargo transport declined by 15.2%. Railway passenger transport declined by 7.7%, while the railway cargo transport increased by 66%. Positive trend was recorded in air transport, where 427,4 thousand passengers were transported in the first six months, which is 17.8% more in relation to the same period of the previous year, while cargo transport increased by 97.4%.

Total turnover in harbours amounted to 839.7 thousand tonnes or 13.6% higher in relation to the same period of the previous year, where the export accounted for 47.7% and the import for 38.9%. In this period export increased by 34.4%, while the import decreased by 23.7%.

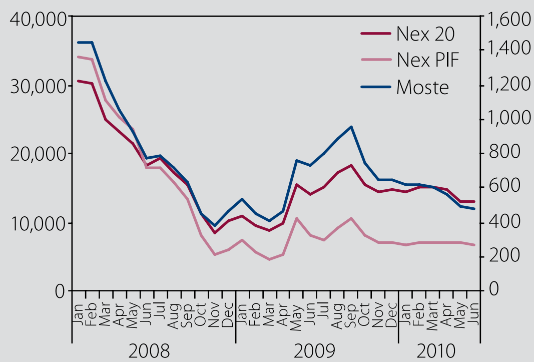
3.3. STOCK EXCHANGE INDICES

All three indices, with minor oscillations, recorded decline at the end of the second quarter of 2010. In relation to the first quarter of 2010, Moste recorded absolute decline of 124.6 index points or 20.6%, NEX20 declined by 1.866,8 index points or 12.5%, while NEXPIF decreased by 305.6 index points or 4.4%.

In relation to end 2009, Moste declined by 24.9%, NEX20 by 10.5% and NEXPIF by 6.4%.

Compared to their maximum historical values (reached in 2007), at end-June 2010 indices decreased: Moste – 5.1 times, NEX20 – 3.7 times, and NEX PIF – 7.7 times.

Graph 35 - Nex Montenegro and Montenegro stock exchange indices (NEX20 i NEX PIF - left scale and MOSTE - right scale)



Source: Montenegro and Nex Montenegro stock exchanges

Table 9 – General Data on Indices

	MOSTE		NEX 20		NEXPIF	
Value as on 30 March 2010	479.88		13,063.41		6,572.19	
Absolute change of indices for the first 6 months of 2009	-159.11		-1,533.47		-448.47	
Starting index value	100.0	March 2003	1,000.00	March 2003	1,000.00	March 2003
Maximum value over 2009	623.92	18.02.2010.	15,164.99	01.03.2010.	7,438.70	22.04.2010.
Maximum historical value	2,455.4	07.05.2007	48,617.88	07.05.2007.	50,780.54	17.08.2007
Maximum historical value	94.8	23.06.2004	918.57	14.04.2003	959.53	02.04.2003
Increase from 31 December 2009 to 30 June 2010	-24.9		-10.5		-6.4	

Source: Montenegro and Nex Montenegro stock exchanges

4. MONETARY POLICY

In the first half of 2010, there were no changes in existing decisions referring to the CBM monetary policy. New decisions were not enacted.

5. INFLATION FORECAST IN 2010

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[2]). 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 2010 and the first half of 2010 is based on the following three assessment components:

1. **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.

2. **Level of uncertainly** - determines the Fan Chart width. The level of uncertainly ratio is a result of analytic assessment and calculation of relative effects of potential internal (expected increase in electricity prices) and external impacts (oil prices) that may occur in the Montenegrin economy in 2010.

3. **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 2010

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[3].

ARIMA model was used for the purpose of short-term forecasts ARIMA models (12 months – August 2010—June 2011) by making iteration. All models were ranked according to their respective diagnostics' efficiency and quality.

[2] *Consumer Price Index*

[3] *A detailed explanation of the ARIMA model of Montenegro is provided 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", 2007. In addition to this, although the CBM monitors, as the basic indicators of price levels, the Costs of Living Index (CLI), and CPI (Consumer Price Index), inflation forecast is based on the retail price index for two reasons. First of all, the Costs Living Index, before it was improved in 2006, used to contain a set of negative values, which made the preparation of a projection more difficult; due to non-stationary series it had to be prepared in DLog format. Secondly, the CPI index has series is too short to create a model.*

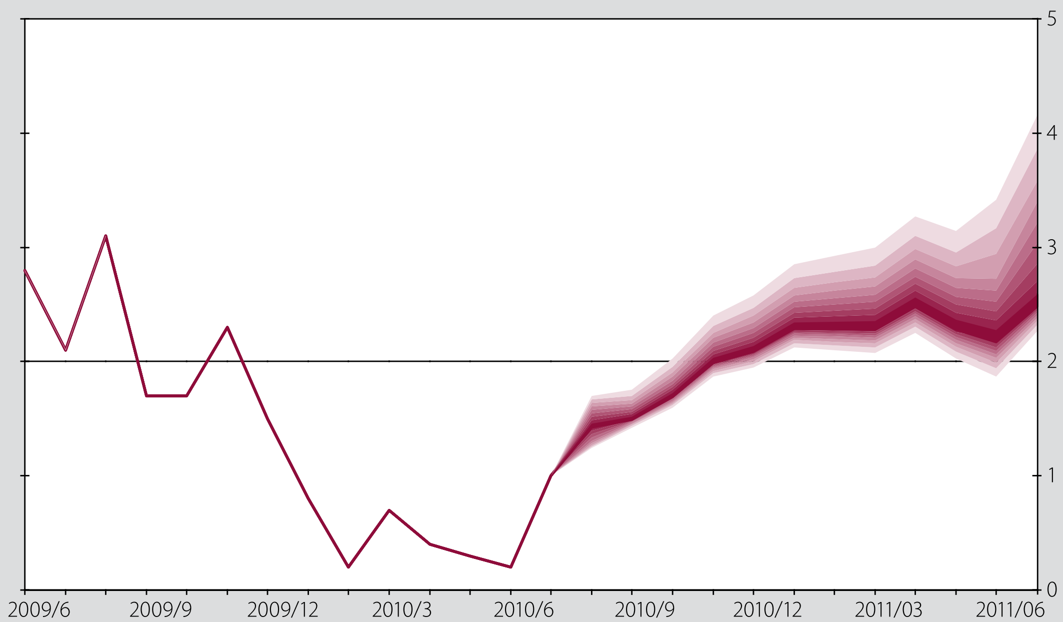
The selected ARIMA model, ARIMA (5, 1, 5)[4] has a sufficient levels of certainty for the forecasting purposes. The CPI time series were used for the forecasting purposes for the first time, which will be used as the basis for inflation forecasting in the future.

Following the Tramo/Seats[5] procedure, 4 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 mid-2010, 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 values of monthly projections were entered as the value of central projection of the Fan Chart of CPI for 2010. The resulting values represented a distribution style, meaning the values with the highest frequency in the distribution of this time series.

Graph 36 – Projected Consumer Price Index of Montenegro for 2010 and the first half of 2011



Mean value of the produced model is 1.25, curve ratio varied between 0.24 and 1.25, while the values of standard deviations amounted to σ2=0.25 or σ1=0.14. 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

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.

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 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, please see the manual Tramo and Seats (Gómez and. Maravall, 1996).

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.

The Fan Chart showing the inflation in Montenegro based on an ARIMA model assessment and Tramo/Seats simulation for 2010 and the first half of 2011 shows 90% probability that the inflation, measured by Consumer Price Index, will move within an interval between 1.24% and 4.2% depending on the month. Namely, the uncertainty increases as the time horizon for making a projection increases, and consequently the range of a forecast becomes wider. The 90% probability shows that the inflation, in the end 2010 will move within an interval between 2.1% and 2.8%.

The central Fan Chart projection relating to the darkest area on the chart represents a range of probability of 10%, forecasting that the inflation in 2010 and the first half of 2011, measured by Consumer Price Index, will range between 1.43% and 2.6%, depending on the forecasted month. The 10% probability shows that the inflation, in the end 2010 will move within an interval between 2.2% and 2.4%.

Observed from the economic aspect, according to the model forecast, it is realistic to expect that the inflation will be low the first half of the year, primarily due to a slow down in economic growth, lower aggregate demand, unemployment growth, stagnation in earnings and available income.

External assumptions referring to the calculation of the uncertainty level were based on the statistical approach:

1. The price of oil and oil derivatives will not exceed +15% of the price from June 2010;
2. The price of aluminium will not decline more than 10% in relation to that from June 2010;
3. Real estates prices will not decline more than 5% in relation to the last quarter of 2009;
4. Real wages increase is 3%;
5. Increase in prices of food products shall not exceed 15% in 2010
6. There will be no substantial corrections of taxes and excise duties.

[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.)

6. EXPECTED INFLATION IN 2010

The second quarter of 2010 was somewhat more favourable in relation to the first quarter so either slight decline or slight growth of economic activity may be expected in 2010. It means that the economy is still characterized by the recession, so there is no pressure to the inflation growth.

Inflation rate is still extremely low. In the second quarter consumer prices declined by 0.4% in relation to the previous quarter. In the first six months, we had the negative inflation rate of -0.2%, while the inflation rate was 0.2% in the last twelve months. The core inflation rate was low amounting to 0.04% (at the annual level).

Data on the aggregate demand are not available at the moment; therefore it cannot be assessed how it would affect the inflation. In relation to the previous quarter, import is on a downward trend and the public expenditure is increasing.

The conjuncture indicators estimate that the inflation in 2010 will be slightly higher than in 2009, whereas the most of surveyed companies believe that it will range between 1.5% and 2%.

In the coming period, we may expect the increase in prices of food products, due to the decline in yields of the most important crops and already announced shortages in some large economies. The slight increase in oil prices may also be expected, while their movements will largely depend on the economic recovery.

Model-based assumption shows 90% probability that the inflation rate in 2010 will range from 1.24% to 4.2%, while the central assessment shows that it might be ranging from 2.2% to 2.4% at the year-end. Our experts' assessment is somewhat lower in relation to the forecast from the previous quarter (by a half percentage points), and it indicates that inflation in this year might be ranging from 0.5% to 2.5%.

Table 10 – Forecasted inflation rate

Optimistic forecast	Realistic forecast	Pessimistic forecast
0.5%	1.5%	2.5%

Assumptions on which this forecast is based as well as forecast from the Fan Chart are the following:

- The prices of oil and oil derivatives will not increase more than 15% in 2010;
- Aluminium prices will not fluctuate over 10% in relation to June 2010;
- Real estates prices will not fluctuate more than ±10% in relation to the last quarter of 2009;
- Growth of real wages will not increase over 5%;
- World's economic growth in 2010 remains at the level of the IMF forecast from April 2010;
- There will be no significant corrections of taxes and excise duties;
- Food prices will not increase more than 10% in 2010.

Deviation of any of these indicators would require revision of the forecast.