CENTRAL BANK OF ARMENIA

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Monetary Policy Program

Quarter 3, 2011

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Q2, 2011 ACTUAL INDICATORS AND DEVELOPMENTS

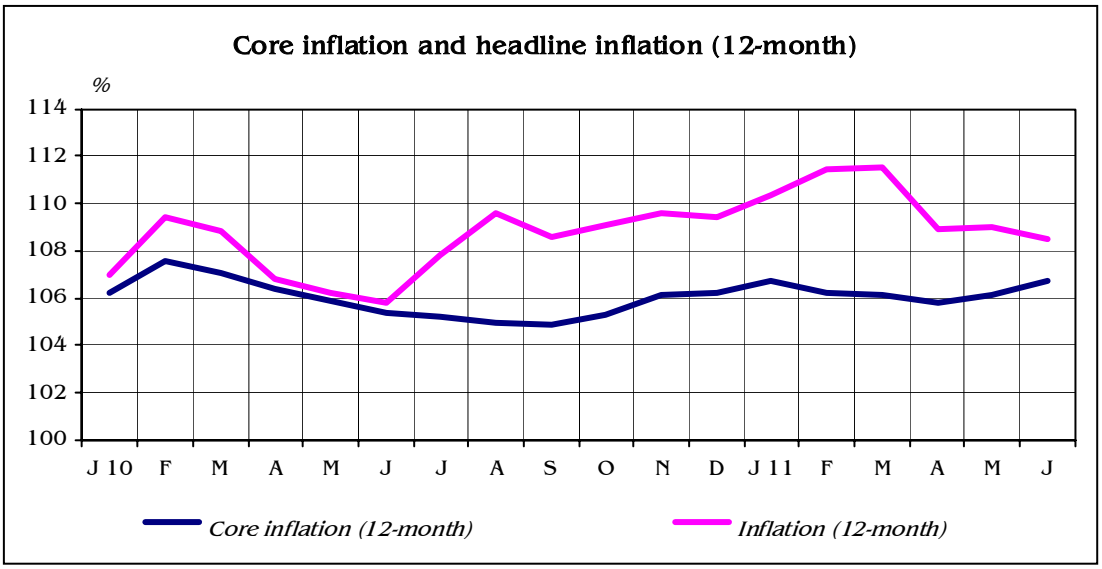
Somewhat a moderate inflationary environment relative to the previous quarter as well as gradual balancing of risks was forecast for the second quarter of 2011. The following were to contribute to the mitigation of the inflationary environment:

- Lagged impact of monetary conditions tightened since the start of the year and the change in the reserve requirement mechanism;
- Weakened inflationary pressures transmitted to the Armenian economy from external sector;
- Neutral impact of private spending;
- Somewhat a weaker inflationary impact (relative to the previous period) from the labor market;
- Restrictive impact of fiscal policy;
- Expected fall in prices of agricultural products in the wake of increased output volumes in domestic agriculture, relative to the previous year.

In spite of the aforementioned impulses, mostly non-inflationary, the level of the 12-month inflation were to remain high until the end of the quarter, still containing price increases of agricultural products transmitted from 2010, price increases of primary goods in world markets, second-round effects of lasted high inflation and inflation expectations.

In the second quarter of 2011 the inflationary environment was shaped under possibly positive demonstration of the aforementioned factors (dual-sided, balanced risks were outlined in respect of domestic demand and agricultural sector). So, 1.6 percent deflation was recorded, and the 12-month inflation made up 8.5 percent instead of the forecast 9.2 percent. However, contribution of food price increases is still high enough, as much 7.3 pp, of which 4.2 pp alone coming from agricultural products and about 3 pp from imported food products. Contribution from non-food prices and service tariffs to the 12-month inflation made up 0.5 pp and 0.8 pp, respectively. Deflation recorded during the quarter was conditioned by the falling of prices of food products, with contribution making up 1.7 pp.

During the quarter core inflation was added by 1.2 percent, still incurring the impact of high prices of food products. As a result, the 12-month core inflation reached 6.7 percent.



Because the second quarter monetary policy program had projected gradual deceleration of inflation for the upcoming 12-month time horizon, determined by both developments in domestic economy and external sector and partial

neutralization of the factors that were the main cause for the previous year's inflation, the Board of the Central Bank had left the refinancing rate unchanged after last raising in April by actively using liquidity adjustment tools since then.

The Board's position with regard to the refinancing rate was based on a consensus that the likelihood of further expansion of the inflationary environment is very little, and that the formed interest rates in financial market[1] will further restrain existing inflationary environment, as a result of which inflation in the forecast time horizon will be in the range of 4%±1.5.

External environment

In the second quarter global output continued to slow down due to increased oil prices and economic fallouts of Japan disaster. According to the IMF estimates, in the first half of 2011 the global output growth reached 4.1 percent on average. It made up 2.1 percent in developed countries and 6.8 percent in emerging countries. In the first half of 2011 inflation accelerated in both developed and emerging countries and amounted to 2.5 percent and 6.5 percent, respectively.

International markets of primary goods reported mostly declining and stabilizing trends during the first quarter and early second quarter of 2011, after substantial price fluctuations and new peaks due to certain sluggishness in world economic activity. Despite high volatilities, some price stabilization trends were seen in global markets of raw materials and food products during the quarter.

In the second quarter international oil prices rose by 11.6 percent q-o-q, with Brent crude price averaging USD 117.1 (y-o-y growth - 48.8 percent). International oil prices were highly volatile due to political developments in the Middle East as well as decisions made by OPEC and International Energy Agency. In particular, a failed proposal to increase extraction volumes, which was discussed in one of OPEC meetings in early June, pushed prices upside, although prices were soon adjusted following IEA initiative for deciding to export 60 million barrels of oil from strategic reserves of developed countries.

In the second quarter of 2011, prices of base metals fell driven by some slowing of world economic growth rates whereas prices of precious metals remained high. At the London Metal Exchange, the copper price fell by 4.8 percent q-o-q and amounted to USD 9177.5 per ton on average (y-o-y growth - 30.6 percent). In the face of low interest rates and high inflationary environment, gold prices rose by around 8.9 percent on average and amounted to USD 1508 per Troy oz (y-o-y growth - 26.2 percent). Such a rise in gold price was mainly due to escalated debt issues in Euro-area and a notable increase in investment demand for gold in the times of uncertainty with US dollar and Euro exchange rate behaviors in financial markets.

During the second quarter prices of food products mainly tended to stabilize. In the second quarter, food price index, released by FAO, dropped by 0.1 percent relative to the previous month. At the Chicago Commodity Exchange average quarterly wheat price reached USD 8.8 a bushel, which is a 2.6 percent increase against the previous quarter's average, and a 91.1 percent increase compared with the second quarter of 2010. Global wheat market was characterized by high volatility deriving from the tightness of the market fundamentals. Changing information on the expected crops and decisions on an export policy also added some volatility. In the second quarter international rice prices rose by 1.7 percent q-o-q and reached USD 14.9 US hundredweight (45.4 kg), which exceeded the respective indicator of the previous period by 27.1 percent.

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[1] *In spite of an unchanged level of the refinancing rate, the dram market in the second quarter of 2011 responded to the 1.25 pp rise in interest rates in February-April by somewhat a stronger increase of interest rates, thus mitigating the inflationary environment of the upcoming period.*

According to international sugar prices index, released by the New York Board of Trade, in the second quarter of 2011 the sugar price dropped by 17.6 percent q-o-q, resulting in average quarterly sugar price of US cents 28.6 a pound (y-o-y growth -41.1 percent). Downward trends of sugar prices were associated mainly with more than expected yields in Thailand, India's decision to resume exports and Brazil entering the marketing cycle of exports.

In the second quarter debt issues in Euro-area again tensed up. The IMF in collaboration with the EU endorsed a three-year support package of EUR 78 billion to Portugal to overcome the problem. Though this created notable US dollar and Euro exchange rate volatility in financial markets, the US dollar depreciated versus Euro by 5.1 percent q-o-q, reaching USD 1.44 per one Euro (the US dollar's y-o-y depreciation was 11.6 percent) due to pessimism over the US economic developments.

In the light of intensified inflationary pressures in Euro-area driven by the increase of international prices of food products, after a long time interval, in early April the European Central Bank tightened the monetary policy conditions by raising the policy rate by 0.25 pp to a 1.25 percent level. Later on, at the beginning of July the ECB raised the policy rate by another 0.25 pp. On the other hand, the US Federal Reserve System preferred to maintain a moderate monetary environment by further implementing the QE2 policy. Though closing date of the QE2 policy at the end of the quarter *per se* means certain tightening of monetary conditions, another quantitative easing is not ruled out because of relatively feeble developments in the US economy. More on that, during the second quarter the three-month LIBOR dropped, making up 0.26 percent.

In the second quarter of 2011 price volatility in world commodity markets grew but this was mainly consistent with expectations, while relative stabilization of prices was observed.

Aggregate supply[2]

The National Statistics Service of Armenia has changed the economic growth calculation methodology, so, according to that methodology the y-o-y GDP growth in the first quarter reached 1.2 percent[3].

Considering higher-than-expected economic activity in industry and services during the second quarter, the Central Bank estimates that there will be somewhat a higher economic growth of 3.9-5 percent y-o-y[4] in the period January-June.

In **Industry** the growth of value added has been around 15 percent y-o-y mainly due to the increased volumes in *metal ore mining (13.9 percent), food production (18 percent), beverage production (11.1 percent), metallurgy (15.6 percent)* and *items of finished metal manufactures (65.5 percent),* which is a result of consistent improvement in external and domestic demand as world and domestic economies recover. Unprecedented growth in electricity and gas production volumes (22.6 percent), driven by increased electricity exports to Iran, further contributed to the growth of value added.

In **Construction** the value added has reduced by 4.6 percent y-o-y. The reduction in construction volumes financed by *state budget, local budgets* and *international loans* was partly compensated by the increase of the construction volumes financed by private *organizations, households* and *humanitarian aid.*

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[2] Indicators of sub-branches of the economy are for the period January-June.
[3] The economic growth indicator of 2.7 percent was reached on a basis of the former calculation methodology, which is in line with the Central Bank estimates.
[4] See the 90 percent probability interval of the Real GDP Growth (Cumulative) Projection Probability Distribution Chart in this paper.

In **Services** the growth of value added was estimated around 4.2 percent mainly as a result of increased *retail trade turnover* and *wholesale trade turnover* by 2.5 percent and 3.3 percent, respectively. At the same time, the volume of services rendered has increased by 6.3 percent, with *financial* and *insurance* (25.1 percent), *transport* (3.1 percent) and *education* (7.5 percent) having largely contributed to the growth of value added in Services.

In **Agriculture** the growth of value added was almost unchanged, due to 17.6 percent increase in plant vegetation and 2 percent decline in animal breeding. The decline in animal breeding was conditioned entirely by 24.3 percent reduction in egg production volumes which, however, was partly offset by growth in milk production (0.7 percent) and slaughter animal and poultry (4 percent).

Labor Market[5]

According to the Central Bank estimates, in the second quarter of 2011 the growth of average nominal wages was nearly 6 percent, reflecting an increase in wages in private sector and moderate increase of wages in some budget-supported organizations. Increased productivity in industry and services, growing demand for labor as well as inflation recorded in the previous year had a significant impact on the growth of nominal wages in the private sector.

In the second quarter demand for labor continue to increas mostly due to a reported increase of output in industry and services. As a result, the average quarterly unemployment rate fell against the same period of the previous year by 0.8 pp and reached 6.3 percent.

In the second quarter the growth of nominal wages in the economy was consistent with the productivity growth as economic activity remained strong. As a result, there have been no significant changes to unit labor costs, so that the labor market's impact on prices has been neutral.

Aggregate Demand[6]

According to the Central Bank estimates,n the second quarter of 2011 private spending in real terms grew by around 6 percent, due to real growth of private investments and consumer expenditures. At the same time, public expenditures in real terms have reduced by nearly 9 percent. As a consequnece of upper mentioned developments , the domestic demand has grown by 4 percent.

The growth of private investments was estimated at around 3 percent, owing to increased profitability in a number of sectors of the economy as a result of a slowly but steadily growing domestic and external demand. Growing private investments were financed mainly through loanable funds provided to the private sector and, in part, by own funds generated as a result of domestic economic growth.

Private consumption in real terms has increased by around 7 percent due to the growth of private sector disposable income as a result of increased private remittances from abroad and reported domestic economic growth. Expanded volumes of lending to the economy somewhat contributed to the growth of private consumption. The moderate growth of private investments and consumption reflects increased volumes of construction financed by organizations as well as trade turnover.

Composite economic indices[7] as calculated and published by the Central Bank point out to the above developments with private consumption and investments. In

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[5] *The labor market data for the second quarter of 2011 are the Central Bank estimates which are based on actual April and May 2011 figures and June 2011 estimations. The growth indicators represented in this sub-section are relative to the same quarter of the previous year, unless otherwise specified.*

[6] *The data on real growth of private sector consumption and investments for the second quarter of 2011 are the Central Bank estimates. Actual figures of these indicators are as of the first quarter of 2011. The growth indicators represented in this sub-section are relative to the same quarter of the previous year, unless otherwise specified.*

the second quarter the consumer confidence index rose by 4.3 percent and the economic activity index, by 6 percent, relative to the same period of the previous year.

In the second quarter of 2011, continued growth of private spending resulted in neutralization of the gap between private spending and their potential level, which was caused by the crisis in 2009. As a result of the aforementioned developments, private spending had no impact on inflation.

In the light of developments in world and domestic economies, in the second quarter current account[8] deficit has reduced y-o-y. Given the surpassing growth in industry (which exceeded expectations) as well as persistently high prices of metals in world markets, the growth of exports also topped expectations and export of goods and services in dollar terms[9] was estimated to have increased by 23.2 percent y-o-y and by 11.4 percent y-o-y in real terms during the quarter.

With y-o-y growth of import prices and positive developments in the domestic economy, in the second quarter the import of goods and services[10] in dollar terms was estimated to have grown by 12.6 percent y-o-y, which exceeded expectations. This was mostly associated with increased private consumption as well as upside revision made for estimations on import of tourism. However, the import of goods and services in real terms has reduced by 4.1 percent y-o-y against a projected more reduction, so the price indicators were mainly within the forecast.

In the second quarter the net inflow of non-commercial remittances of individuals grew by 26.8 percent y-o-y, and the outflow grew by 26.1 percent y-o-y. As a result, the growth of net inflow of non-commercial remittances has been 27.0 percent y-o-y, exceeding the latest forecast made for the second quarter.

Consolidated budget[11]

In the second quarter of 2011, the fiscal policy's impact on aggregate demand, hence on prices, can be characterized as continuation of the policy to macroeconomic stabilization that reflected, in particular, savings on public expenditures[12].

Budget revenues collection was in line with projected proportions, with no reported deviation. Relative to the second quarter of the previous year, revenues have grown by 8.2 percent. As was the case in the first quarter, notable savings were reported in the second quarter on public expenditures against quarterly proportions of the Government mostly because of non-disbursement of expenditures due to the shortfalls in foreign grant programs and some savings on expenditures that were planned to be made from domestic sources. As a result of such savings, actual expenditures of the second quarter were about 2.1 percent less compared with the same quarter of the previous year, and the expenditures impulse made up 3.0 pp restrictive instead of the projected estimation of neutral.

The budget deficit, too, was considerably below the program level in the light of the above-said revenues and savings on expenditures.

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[7] See http://www.cba.am/am/SitePages/statsscci.aspx.

[8] In 2011, the share of private remittances of individuals via the banking system in total transfers was revised. As a result, the 2010 current account deficit deteriorated by USD 73.1 million and made up 14.5 percent of GDP instead of the former figure of 13.9 percent.

[9] In January-June of 2011, the growth of export of goods (FOB) has been 31.1 percent. The second quarter indicator of export of services is a forecast.

[10] In January-June of 2011, the growth of import of goods (FOB) has been 12.6 percent. The second quarter indicator of import of services is a forecast.

[11] The fiscal sector analysis was made using preliminary actual indicators of the second quarter of 2011, including expenditures financed by PIU funds. The fiscal impulse was estimated against 2010 consolidated budget indicators. The impact of revenues was calculated against the actual nominal GDP indicator, and the impact of expenditures, against estimated potential GDP indicator.

[12] Comparison of budget revenues, expenditures and deficit indicators was made by weighing their projected levels against quarterly proportions set by the Government (including PIUs) and the Central Bank quarterly forecasts of the state budget.

In the outcome, based on the half-year results, the fiscal impulse had 2.9 pp of restrictive impact on the aggregate demand. Furthermore, it is estimated that the latter has neutralized the lagged impact of the expansionary policy transmitted from the end of 2010. Nevertheless, based on the semiannual results, restrictive impact of the fiscal policy has been prevailing.

To sum up, the restrictive impact of the Q1 and Q2 2011 budget outweighed the lagged impact of the Q4 2010 expansionary policy. Also, taking into account neutral impact of the labor market and private spending, one may conclude that net impact of domestic demand and labor market in the second quarter has been deflationary and estimated in the range of 0.4-0.5 pp.

Money and credit

In view of the inflationary environment transmitted from end-2010 and still persisting over the first half of 2011, which also contained risks to second round effects of high inflation and inflation expectations for months, the Central Bank continued tightening monetary conditions by raising the refinancing rate by 0.25 pp in April. In the next two months, however, the Board of the Central Bank left the refinancing rate unchanged, 8.5 percent, based on an estimated neutral impact on the aggregate demand from developments in domestic economy, expected lagged impact from tightening of monetary conditions since the start of the year, deflationary expectations with regard to domestic agricultural products and price stabilization trends observable in world markets of food products and raw materials.

In primary market of treasury bills in the second quarter of 2011, average interest rate of securities of up to 1-year of maturity rose by 1.47 pp in relation to the previous quarter, amounting to 9.37 percent and average interest rate of mid-term notes, by 0.16 pp, reaching 13.85 percent. In repo market, average interest rate rose by 1.79 pp, amounting to 9.95 percent and average interest rate in interbank repo market went up by 1.59 pp, making up 9.19 percent.

In the foreign exchange market in the second quarter, relative to the previous quarter, average market exchange rate of dram depreciated as follows: AMD versus USD by 2.15 percent, reaching 374.18 drams for one dollar; AMD versus EUR by 7.08 percent, reaching 539.15 drams for one euro and AMD versus RUB by 6.35 percent, reaching 12.38 drams for one ruble.

The monetary environment of the second quarter was mostly consistent with the projection. With the dram base and monetary base having increased by 5.6 percent and 2.7 percent, the dram broad money and broad money have grown by 6.5 percent and 4.5 percent, respectively. The growth of the dram base was due to currency outside the banking system and dram deposits, having grown by 8.5 percent and 4.1 percent, respectively. Unlike the first quarter, in the second quarter foreign currency deposits grew at a slower rate, 2.0 percent, compared to the dram deposits, making the dollarization to subside by 2.4 percent or 1.1 pp. Economy lending has increased by 8.7 percent during the quarter, with dram and foreign currency loans almost identical by growth rate. However, in absolute terms, foreign currency loans still prevail.

The 12-month monetary indicator developments during the second quarter of 2011 were as follows: the dram broad money and broad money have grown by 23.0 percent and 25.9 percent, respectively, and the monetary base has increased by 19.7 percent. The currency outside the banking system has grown by 13.9 percent; dram deposits have grown by 45.2 percent and foreign currency deposits, by 19.5 percent, bringing the level of dollarization down by 2.8 percent. Faster growth rates in economy lending observed in the course of the first half of the year led the 12-month growth rate indicator to report as high as about 38 percent growth. As such, the growth of dram lending was 23.6 percent and foreign currency lending, 51.4 percent.

UPCOMING 12-MONTH PERIOD FORECASTS

External environment[13]

In June 2011, the IMF and World Bank released regular reports on global economic prospects, predicting that expected world output growth rate in 2011 will reach 4.3 percent[14] (some 0.1 pp lower from the IMF April forecasts). For 2011, economic growth is forecasted to be 2.2 percent (0.2 pp lower from the April forecast) in developed countries and 6.6 percent (0.1 pp higher from the April forecast) in developing countries. High inflation will persist, making up 2.6 percent (0.4 pp higher from the April forecast) in developed countries and 6.9 percent (unchanged against the April forecast) in developing countries. Though world economic growth rates are expected to accelerate in the second half of 2011 and during 2012, both the IMF and World Bank talk about an increase of risks to the slowdown of world economic growth (imbalances in financial and fiscal sectors and, therefore, escalation of controversies in developed countries; even more signs of overheating in developing countries; and inflation tightness in world commodity markets, even though risks deriving from it have reduced to some extent).

World commodities markets in the second half of 2011 and early 2012 will develop depending on the recovery rates of world economic growth, the absence of additional stimulatory monetary policy measures from US Federal Reserve System, tightened monetary and fiscal conditions, rebounding supply in agriculture yet in the context of structural pressures over supply and demand imbalances there.

In the second half of 2011 and early 2012 international oil prices are predicted to fall to some extent due to reduction in investment and speculative demand for and relatively recovered supply of oil in the wake of decreased liquidity driven by tightened world monetary conditions. According to July estimations by International Energy Agency, in 2011 the world demand for oil will make up 89.5 mb/d. (with y-o-y growth of 1.2 mb/d) and in 2012 it will reach 91.0 mb/d. (with y-o-y growth of 1.5 mb/d).

Given negligible increase of oil supply by oil exporter countries other than OPEC, the OPEC needs for production in 2011 and 2012 will be 30.6 and 30.7 mb/d accordingly. Under these circumstances and a partial reduction of oil stocks in developed countries, international oil prices will somehow decrease but will stay at a relatively high level of about USD 110 per barrel.

In the projection period, prices of base metals are expected to stabilize at relatively high levels. This will in part be determined by some increase of demand for metals connected with remedies of fallouts of the Japan disaster but that demand will be neutralized by the world demand as it will weaken as a result of lessening of monetary and fiscal stimuli. Therefore, low inflationary trends will be observable especially in world copper markets where fundamental tightness deriving from an excessive demand over supply will be persisting in the period 2011-2012. As a result, the copper price is expected to be around USD 9650 per ton.

An investment demand somehow persisting amid uncertainties over economic developments in Euro-area and the USA will keep the gold price high. This tendency will tone down in 2012 when the gold market will reach equilibrium in the face of reduction of the investment demand. As a result, in the forecast time horizon the gold price will rest around USD 1580 per troy oz.

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[13] The forecasts of external sector have been based on the information provided from the IMF, World Bank, The Economist, Global Insight, Financial Times, US Department of Agriculture, РосБизнесКонсалтинг and other sources.

[14] See "World Economic Outlook Update", IMF, June 17, 2011, "Global Economic Prospects: Maintaining Progress amid Turmoil", The World Bank, Volume 3, June 2011.

In world markets of agricultural products in 2011-2012, supply is expected to rebound to a certain extent, with even a little surplus to be seen in 2012. While this may imply partial neutralization of inflationary pressures, agricultural products will remain high as far as tightness in the markets persists. According to July estimations of the US Department of Agriculture, some 662 million tons of wheat production is expected for the marketing year 2011/2012 against around 648 million tons recorded in the previous period 2010/2011 (growth of 2.2 percent), mostly owing to expected crops in CIS in spite of anticipation of some reduction in wheat production in North America and EU. World consumption is estimated to be about 670 million tons yet the world wheat stock is predicted to decrease to 182 million tons (190 million tons in the previous year). Considering that under these circumstances the world wheat stock relative to world consumption will decrease from 30% in previous year to 27% and that a considerable part of the actual stock (about 40%) is placed at traditionally non-exporting countries like China and India, the market will stay tight.

However, in favorable weather conditions the tightness in the market will wane only in mid-2012, whereas in 2011 prices will be kept at elevated levels, demonstrating slightly upward trends.

There are still uncertainties in the rice market notwithstanding a record level of crops predicted for the market (456 million tons in 2011-2012). The uncertainties are associated mostly with possible changes in state regulatory mechanisms in Thailand, which means that the tightness in the rice market will persist with potential risks to price increases.

There is some loosening of the tightness observed in the world sugar market thanks to increased production volumes in main producer countries – Brazil, India, China, CIS and Thailand. The US Department of Agriculture predicts 168.5 million tons of production of sugar in the marketing year 2011-2012. Because an estimated world demand is about 162 million tons, the excess production of sugar can replenish the reserves. The recovery of the stocks will be substantial for the countries that had significant reduction of stocks in recent years, like India. Under these developments some decrease of the sugar prices is expected in the forecast time horizon, but high level of prices observed in the third quarter of 2011 will remain.

Although world economic activity, forecasts suggest, will bounce back from the second half of 2011, the IMF however alludes to more downside risks. Adverse consequence from possible loss of confidence and pass-through effects because of debt issues in Euro-area and existing uncertainties about the policies on the adjustment of the public balance in the USA are among key bottlenecks to the world economic growth in the forecast time horizon.

In general a fundamental factor that will weaken the world economic growth in the forecast time horizon is the tightening of monetary and fiscal policies both in developing and developed countries.

Under such conditions, priorities in the context of economic policies for 2011-2012 will be, among others, shaping adequate economic stimuli in line with fiscal consolidation, further strengthening of financial systems in developed countries, and implementing effective policies to prevent overheating of economies in emerging countries. A number of emerging and developed countries already have tightened monetary policy conditions, and in the forecast time horizon, in the context of fiscal consolidation, the monetary environment will be mainly supportive to the economic growth. While the end of the QE2 policy of the US Fed *per se* means tightening of monetary conditions, the Fed may be expected to put off raising policy rates up until 2013 due to current circumstances and fiscal consolidation issues in the US economy. A situation like this presumes that the dollar exchange rate would somewhat depreciate versus euro, also given positive economic developments in the main Euro-area countries – Germany and France.

To sum up, amid slow pace of world economic growth and recovering supply in world commodities markets in the projection period, inflationary pressures spilling over to the domestic economy will weaken in general, while existing risks are predominantly toward price falls.

Aggregate Supply

Economic growth forecasts were revised slightly upside, reflecting expectations for some higher growth of world demand, gradually recovering attractiveness of investment environment and appearance of risks to high economic growth as outlined in previous projections. So, economic growth is expected within 4.7 - 5.5 percent[15] for 2011 and within 3.3 - 4.6 percent for the first half of 2012 if the above mentioned trends in economiy persist.

For **Industry**, forecasts show about 8.3 - 10.3 percent growth of value added for 2011 and 3.1 - 5.1 percent growth for the first half of 2012, due to expected growth in *ore mining* and *metallurgy* as prices of non-ferrous metals in international markets persist at high levels; expected increase of volumes in production of *food* and *beverage* driven by continued recovery of world and domestic economies; effective technologies invested to heat stations during the previous year, commissioning of the Block-5 of Hrazdan Heat Station; as well as expected increases in electricity generation owing to investment in projects, both former and new ones, in renewable energy.

For **Construction**, some acceleration in growth rates is anticipated yet the value added remains relatively small, in the range of 0.6 - 2.6 percent for 2011 and 2.2 - 4.2 for the first half of 2012, mostly owing to increased construction volumes in energy, agriculture, transport and communications. However, no significant changes are expected in construction volumes financed by households.

For **Services,** the forecast of value added is in the range of 3 - 5 percent for 2011 and 2.2 - 4.2 percent for the first half of 2012, mainly due to expected growth in private spending and public expenditures, which will be reflecting both the volumes of trade turnover and other services rendered.

For **Agriculture**, the forecast of value added is in the range of 6.1 - 8.1 percent for 2011 and 6 - 8 percent for the first half of 2012, which will be driven by expected growth in plant vegetation and animal breeding.

Because the share of *plant vegetation* in agriculture is large enough and its output depends mainly on the weather conditions, the least risky scenario was accepted in forecasting the growth of value added in agriculture.

Risks to economic growth are dual-sided and associated with external and internal factors. As such, upside risks are prevailing as they are associated with accelerated recovery rates of global economy and higher-than expected growth of domestic demand.

In particular, upside risks may prevail in industry determined by accelerated recovery in the world economy as well as by the speed with which high-value investment projects could be implemented in construction and services. Risks are balanced in agriculture, as there is high dependence on weather conditions.

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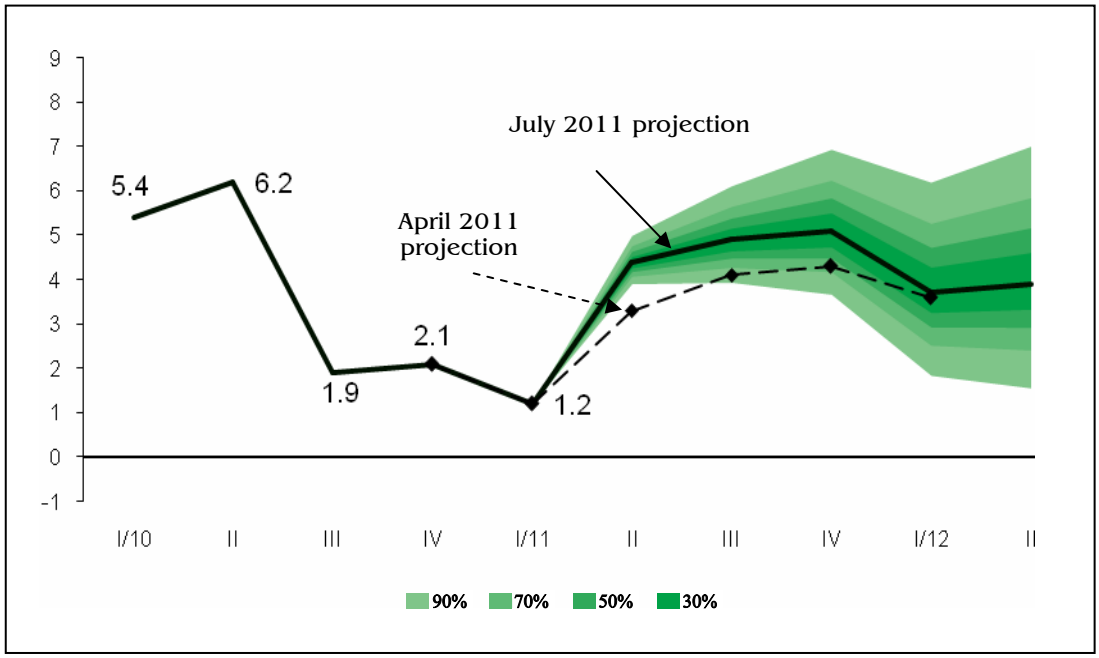
[15] See the 30 percent interval in the Real GDP Growth (Cumulative) Projection Probability Distribution Chart in this paper.

Real GDP Growth (Cumulative) Projection Probability Distribution[16]



Economic Growth Projection Probability Distribution

Economic growth interval	Probability of economic growth interval	
	Q4, 2011	Q2, 2012
< 1%	0.00%	4.75%
1 - 4%	12.05%	41.54%
4 - 7%	75.83%	43.93%
7 - 9%	11.54%	8.29%
9% <	0.58%	1.41%

Real GDP Growth Forecast Probability Distribution

Period	90 percent probability interval		30 percent probability interval	
	min	max	min	max
January-June 2011 to January-June 2010 (estimation)	3.9	5.0	4.3	4.5
January-September 2011 to January-September 2010	3.9	6.1	4.6	5.2
January-December 2011 to January-December 2010	3.7	6.9	4.7	5.5
January-March 2012 to January-March 2011	1.8	6.2	3.3	4.3
January-June 2012 to January-June 2011	1.6	7.0	3.3	4.6

[16] *From now on, the probability distribution chart will be delivered based on the real GDP cumulative growth indicators instead of the previously used real GDP quarterly growth indicators.*

Labor Market[17]

Forecasts of the second half 2011 labor market indicators were revised, reflecting an expectation of somewhat higher economic activity and lower inflationary environment compared to previous projections.

In particular, average nominal wages are expected to grow by around 6 percent, determined by the growth of nominal wages in the private sector as a result of economic recovery, and by a moderate growth in some budget-supported organizations. It should be noted that upside revisions of nominal wages due to inflation recorded in previous months will somewhat contribute to the growth of nominal wages during the second half of the year.

In the first half of 2012 nominal wages are expected to grow by around 5 percent, which will be conditioned by increasing productivity and declining unemployment rate.

In the second half of 2011 the demand for labor will keep on growing mostly due to the output growth in industry and service sectors. This will push the number of the unemployed down, and the average level of the officially unemployed in the economy will reduce by 0.6 pp reaching 6.3 percent in the second half of 2011. In the first half of 2012 the level of the officially unemployed will keep on declining to reach 6.1 percent, getting closer to the pre-crisis level.

In the second half of 2011 and the first half of 2012 the growth of nominal wages will be closer to the labor productivity indicator of the same period, reflecting relatively high elasticity of the labor market in the Armenian economy. Under such conditions, the anticipation is that economic agents will not be going to report any significant increases of unit labor costs, so the impact of unit labor costs on inflation in the forecast time horizon is estimated to be neutral.

Aggregate Demand[18]

Private Sector Spending

Estimations of private sector spending for the second half of 2011 were revised slightly upside, based on the higher economic activity and elevated level of remittances from abroad, as compared to previous forecasts.

According to revised estimations, in the second half of 2011 private expenditures are expected to grow by 6 percent, which is determined by both increased private consumption and private investments. The domestic demand is expected to grow by 6 percent in the event private spending grows but public expenditures remain unchanged in real terms.

In the first quarter of 2012 private spending, public expenditures and domestic demand are expected to grow by 6 percent, 4 percent and 6 percent, respectively.

In the second half of 2011 private investments will grow by nearly 7 percent, and in the first half of 2012, by around 15 percent, reflecting boosted profitability in industry and services as a result of steadily recovering external and domestic demand. Own funds and loans made available to private sector will remain the main source of financing for private investment. The growth of private investments in the projection period will reflect an increase of volumes of construction financed by organizations, which will in turn largely contribute to the sustainable recovery of construction on the whole.

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[17] The labor market data for 2011-2012 are the Central Bank estimates which are based on actual figures of the first quarter of 2011 and actual April and May figures of 2011. The growth indicators presented in this sub-section are relative to the same quarter of the previous year, unless otherwise specified.

[18] The data of real growth of private consumption and investments for 2011-2012 are the Central Bank estimates. Actual figures of these data are as of the first quarter of 2011 and published by the National Statistics Service of Armenia. The real growth indicators represented in this sub-section are relative to the same quarter of the previous year, unless otherwise specified.

Relative to previous forecasts, the growth rate of private consumption was revised upside due to an expectation of even higher economic activity and remittances from abroad. In the second half of 2011 the growth rate of private consumption will reach 6.2 percent, and in the first half of 2012 it will be 4.2 percent. Note that in the forecast time horizon the growth rate of private consumption will pace behind the growth rate of private sector disposable income, reflecting savings recovery after their reduction in the economy in recent years.

In the second half of 2011, continued growth of private spending will somewhat outstrip their potential level, leading to a positive gap close to zero. As a result of such developments, weak inflationary pressures of 0.2 - 0.3 pp will be creat in the economy.

In the first half of 2012 the growth of private demand will be consistent with the supply growth, owing to the declining unemployment rate and more investments in private sector. This will enable economic agents to respond to excess demand by quantitative rather than price adjustments. So, in the first half of 2012 the impact of private spending on inflation is estimated to be neutral.

Current Account

Forecasts of growth rates of current account components of Balance of Payments for the second half of 2011 were revised in the face of continued world economic growth and favorable developments in the domestic economy. In consideration of stabilization of metal prices in the second quarter of 2011, which may persist in future, as well as expected world economic growth and industrial growth in Armenia, the export of goods and services was revised upside for the second quarter of 2011. Also, taking into account high growth recorded in the first half of 2011 and its further revision, the growth of export of goods and services will be within 18 - 20 percent and the growth of real volumes within 9 - 11 percent. Risks to exports remain dual-sided conditioned by more downside risks to world economic growth, metals prices in world markets and industry developments in Armenia. Export growth trends will persist in the first half of 2012, and the growth of export of goods and services by value will be in the range of 6 - 8 percent and the growth of real volumes in the range of 6 - 8 percent, too.

Forecasts of import of goods and services for the second half of 2011 were also revised upside, in line with anticipated more favorable GDP developments. In view of the first half 2011 actual indicator of import of goods and services and further revision, its growth by value is expected to be in the range of 10 - 12 percent in 2011. However, real volumes of import of goods and services are expected to reduce by 2 - 4 percent (previous forecast was 3 - 5 percent). Risks to import are also dual-sided and depend on developments in the domestic economy and international prices. In the first half of 2012 the value of import of goods and services is expected to grow by 2 - 4 percent while growth of real volumes is expected in the range of 1 - 3 percent.

Forecasts of non-commercial remittances by individuals for the second half of 2011 were revised upside in consideration of high growth rate recorded in the first quarter of 2011 as well as further favorable developments of Russian economy[19] (according to June forecasts by the IMF, the economic growth remained unchanged, 4.8 percent in 2011, while for 2012 it was anticipated to be 4.5 percent). As a result, the growth of non-commercial remittances by individuals in 2011 will be within 19 - 22 percent. The growth of non-commercial remittances in the first half of 2012 is expected in the range of 13 - 15 percent.

All aforementioned developments suggest that in 2011 the *current account/GDP* ratio[20] will rest within 11 - 13 percent.

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[19] *The bulk of remittances arrive from Russia.*

[20] *When present forecasts of the level of current account are compared to that of previous quarter forecasts, with any revisions and adjustments to the balance of payment excluded, one can see that the current account / GDP ratio has not quite changed in relation to the previous forecast.*

Consolidated Budget[21]

The fiscal policy implemented in 2011 can be characterized as returning to a balanced policy from the anti-crisis policy while trying not to contribute to the creation of additional inflationary pressures. It should be noted that the 0.3 pp growth mark of tax revenues in GDP against the previous year as well as making public expenditures in compliance with established proportions is the main item in the to-do-list of public spending. However, determined by actual developments in the first half of the year (revenues collection in line with planned proportions as well as savings on expenditures), some savings on expenditures in relation to planned proportions based on yearly results are possible. So, the neutral impact of the fiscal policy estimated for the year could grow into a slightly restrictive one. In consideration of actual state budget performance indicators for the first half of the year, the impacts expected to show up over upcoming quarters were also revised slightly. In particular, a slightly expansionary impact is expected in the third quarter and fourth quarters.

So, given some savings on expenditures (about 2 percent of the annual projection) are in place, the impact of the fiscal policy on aggregate demand will be roughly 1 percent restrictive in relation to 2010.

In the first half of 2012 the fiscal policy will be expected to have a neutral impact, according to the Central Bank estimations based on the "Government Medium-Term Expenditures Program 2012-2014" indicators.

To sum-up, in the second half of 2011 somewhat an expansionary impact of the consolidated budget on domestic demand will lose to the restrictive impact transmitted from the first half of the year. Taking into account minor inflationary pressures from private spending and neutral impact of the labor market, one may conclude that net impact of domestic demand and labor market on consumer market in the second half of 2011 is estimated to be deflationary, in the range of 0.3 - 0.4 pp.

In the first half of 2012 state budget will be trending restrictive, which will create deflationary pressures in the range of 0.2 - 0.3 pp in the consumer market in the event of a neutral level of the labor market and private spending.

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[21] The fiscal sector's impact has been estimated using consolidated budget indicators based on the proportions laid down in the Republic of Armenia Law on State Budget 2011. The fiscal impulse has been estimated against consolidated budget indicators of 2010 as a base year, which was determined by positive trends for economic recovery and the return move to a more balanced fiscal policy from an expansionary one. It should be noted that the revenues impulse has been calculated against an estimated nominal GDP indicator and the expenditures impulse has been calculated against an estimated potential GDP.

INFLATION FORECASTS AND MONETARY POLICY DIRECTIONS IN THE PROJECTED 12-MONTH PERIOD

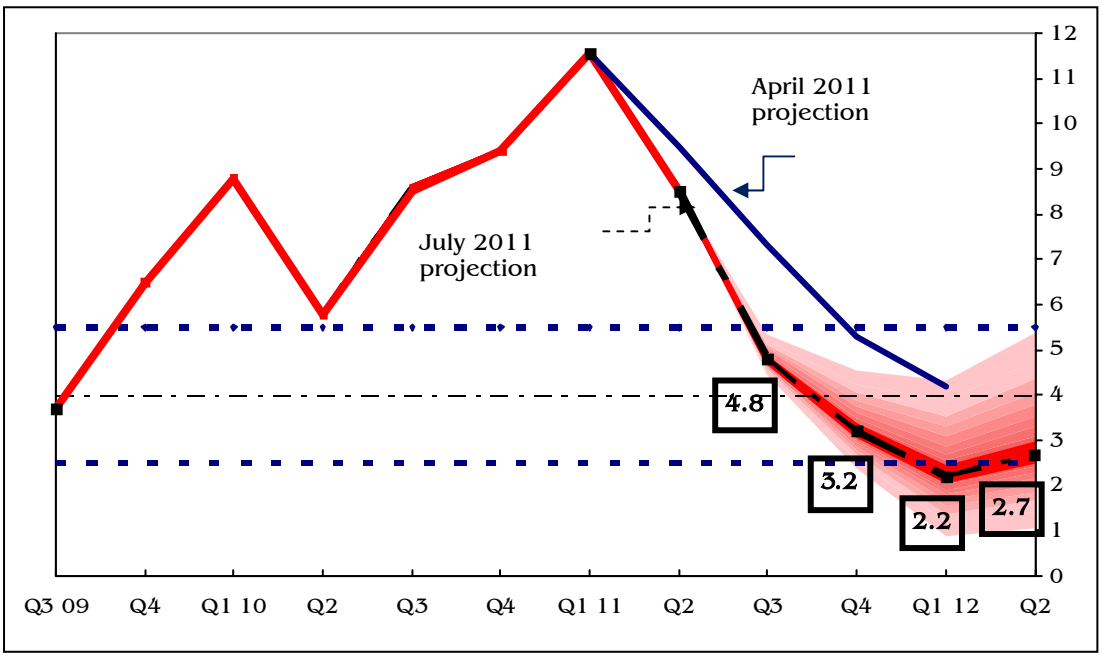
In view of actual and projected macroeconomic conditions, inflation forecasts were made and monetary policy directions for the forecast 12-month horizon projected through inflation forecast model by commodity groups and the Quarterly Projection Model.

The results of the inflation model by commodity groups were based on an assumption of constant market rates, which means an unchanged level of interest rates during the forecast time horizon.

In consideration of the deflationary environment transmitted from the external sector, particularly declining trends in prices of food products and raw materials and formation of an favourable setting for agricultural products, conditional forecasts built on an assumption of constant interest rates were revised downside. So, starting from the third quarter of 2011, the 12-month inflation will trend downward and get closer to the lower bound of the target band at the end of the year. For that period of time, the central value is forecast to be 3.2 percent. At the end of the 12-month horizon, i.e. the second quarter of 2012, the central value of inflation is forecast to be 2.7 percent.

While inflation forecasts were revised downside, upside risks are, nevertheless, prevailing due to possible appearance of risks to derive from both agriculture and external markets. At the end of the year the 12-month inflation will be in the range of 3.0 - 5.5 percent with more than 74.2 percent probability, and at the end of the second quarter of 2012 it will be in the range of 1.0 - 4.0 percent with 70.5 percent probability.

Inflation Projection Probability Distribution Chart
(12-month)



Inflation Projection Probability Distribution

Inflation interval	Probability of inflation interval	
	Q4, 2011	Q2, 2012
< 1.0%	0.03%	3.3%
1.0-3.0%	25.4%	43.8%
3.0-4.0%	53.8%	26.7%
4.0-5.5%	20.4%	21.0%
5.5-7.5%	0.3%	5.04%
7.5% <	0.06%	0.15%

Inflation forecasts and projection of monetary policy directions made through the **Quarterly Projections Model used by the Central Bank** are generally in compliance with the results generated by the use of the Inflation Forecast Model by commodity groups. These results were produced on a basis of actual macroeconomic conditions for the second quarter of 2011. In particular, in the second quarter inflation environment eased considerably, which was driven by domestic and external macroeconomic developments, on the one hand, and the policy implemented to tighten monetary conditions, on the other.

Forecasts made under the above said preliminary macroeconomic conditions suggest that macroeconomic developments determining further behavior of inflation will move through the directions as were outlined at the beginning of the year. In the forecast 12-month time horizon, however, inflation is expected to subside at faster rates in the face of a weaker inflation environment and more favorable developments in agriculture. GDP, still lower from its potential level up until the end of the year, and such other factors as the lack of new inflationary pressures from the external sector and the influence transmitted from the tightening of monetary conditions will further contribute to the easing of the inflation environment.

The aforementioned developments suggest that in the third quarter the rates of inflation will subside notably and at the end of the forecast time horizon the 12-month inflation will be in the vicinity of the lower bound of the band. In this case, to bring inflation closer to the band, the direction of the monetary policy will need to be re-steered by easing monetary conditions. This will also contribute to the creation of a more favorable environment for the recovery of the economy.

In this context, the forecasts of **monetary indicators** for the coming 12 horizon are based on the actual macroeconomic environment of the previous quarter, macroeconomic developments projected for the next year and the fiscal policy scenario envisaged for the same period of time. Further, in consideration of some stabilization trends in external and domestic inflation environments and anticipation for easing of inflationary pressures in the course of the next one-year period, the main revisions of growth rates of monetary indicators based on 12-month period were made upside. So, broad money and dram broad money are expected to grow by 19.6 percent and 20.8 percent y-o-y, respectively, and monetary base, by 13.6 percent. Currency in circulation is expected to grow by 14.4 percent y-o-y; dram deposits and FX deposits to grow by 28.8 percent and 18.1 percent y-o-y,

respectively. The dollarization of the economy is expected to subside by more than 1.3 percent while monetization and dramization are expected to increase by around 12.0 percent.

In the upcoming 12-month period the financial system will remain pro-active in economy lending as high growth rates in lending to businesses and activation in the mortgage lending market are anticipated in line with revival in consumer loan market. As a result, the 12-month growth rate of that indicator will make up 24.6 percent in the event of an expected more than AMD 260.0 billion growth of lending in absolute terms. It should be mentioned however that foreign currency lending will remain prevailing in the total portfolio of lending to economy.

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