

THE CENTRAL BANK  
OF THE  
REPUBLIC OF ARMENIA

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# Inflation Report

*Monetary policy program Q2, 2012*



*Status report on implementation  
of the Monetary Policy Program  
Q1, 2012*

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*Since January 2006 the Central Bank of Armenia has moved to a fully-fledged inflation targeting strategy whereby the monetary policy was steered to minimize any deviations of potential inflation from a 4 percent target.*

*Each quarter, the monetary policy programs of the Bank used to present inflation forecast for the upcoming 12-month period under the assumption of unchanged interest rates as well as forecasts of the response of the policy rate. The programs included a blueprint for monetary policy directions.*

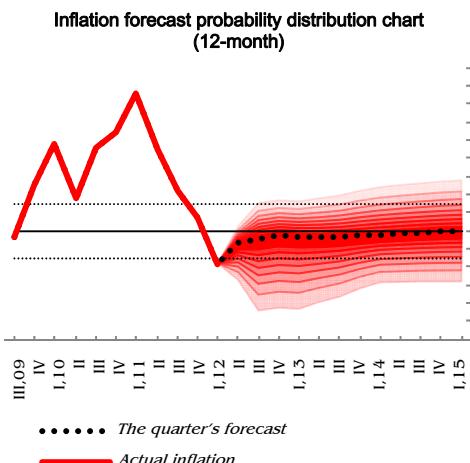
*The forecasting and policy analyses capacities of the Bank have considerably improved recently as the quarterly projections model became a more sophisticated one while the list of short-term models designed to forecast different suites of macroeconomic indicators expanded. Not only the Bank is now able to present inflation forecasts for upcoming 12 months but also it can provide medium-term conditional inflation forecasts.*

*Starting from Q2, 2012, the Bank will present inflation forecasts for a longer time horizon of 3 years instead of previously applied 1-year and will publish non-conditional inflation instead of conditional.*

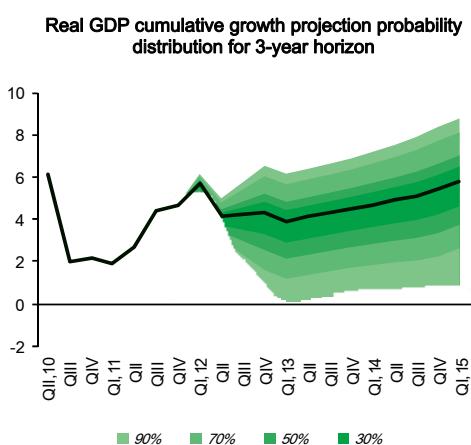
## 1. EXECUTIVE SUMMARY

The monetary policy programs of 2011 predicted that the inflation environment would further ease and inflation would rest within the confidence band, starting from the fourth quarter of 2011. Actual trends were basically in line with the program – the **12-month inflation** reached 4.7 percent at the end of 2011 and 2.2 percent at the end of March of 2012.

In the forecast horizon the developments in both external sector and domestic economy do not predict expanding of the inflation environment; in the upcoming months inflation is expected to be in the lower border of the band. However, provided that the monetary conditions are relaxed, inflation may come closer to 4 percent during the year and will be tamed mainly within this interval until the end of **forecast horizon**.



In 2011 **economic growth** was 4.7 percent per annum. The Economic Activity Indicator for the first quarter of 2012 released by the National Statistics Service of Armenia points to an enlivened economic activity, which is totally due to increased output volumes in industry and services. According to a baseline scenario, there is much probability that economic growth in 2012 will be in the range 3.5–4.8 percent, attributable to expected faster recovering of external and domestic demand in the light of optimistic world economic growth outlook. Economic growth will continue to be driven mostly by increased value added in industry and services: in 2012 these will be roughly 10.0 percent and 3.5 percent, respectively. The outlined trends of economic growth will persist over **forecast horizon** while economic growth will stabilize within the 4–5 percent interval.



In the **labor market** in the first quarter of 2012, average nominal wage grew by 5.5 percent while official unemployment reduced by 0.8 pp and made up 6.2 percent, according to the Central Bank estimates. In the light of expected economic activity, in 2012 the labor market will anticipate 5.3 percent growth of average nominal wages and 0.4 pp reduction of unemployment. Given the baseline scenario-developments with economic growth persist, such growth rates of average nominal wages and reduction of unemployment will continue in the **forecast horizon**, too.

Real growth of **private spending** in the first quarter of 2012 was 2.5 percent, according to the Central Bank estimates. In the light of expected economic activity, 4.6 percent real growth of private spending is anticipated owing to the growth of private consumption and private investment, by 4.3 percent and 5.4 percent, respectively, which are expected to grow somewhat faster in the **forecast horizon**.

In the first quarter of 2012 the impact of **fiscal policy** on aggregate demand, hence prices, was 1.5 pp contractionary instead of expected expansionary, according to the fiscal impulse indicator. This was determined mainly by savings on first quarter public expenditures. For 2012, the baseline scenario's estimation is 0.7 pp contractionary impact, owing to neutral impact from expenditures and contractionary impact

from revenues. In the forecast horizon the fiscal policy will be steered to an effective debt management and maintaining the debt/GDP ratio up to the 3 percent level, under which circumstance the impact of fiscal policy in **forecast horizon** is estimated to be non-inflationary.

In the first quarter of 2012, relative to the first quarter of the previous year, **current account** has improved. The growth of dollar value of export of goods amounted to 31.4 percent y-o-y and that of import of goods, 9.7 percent y-o-y. Y-o-y growth rates in remittances of individuals continued thanks to positive developments in the Russian economy. Over 2012 current account will keep on improving and the current account/GDP ratio will be in 9–11 percent interval, according to baseline scenario. In 2012 dollar value of export of goods and services is expected to grow in the range of 9–11 percent, and that of import, 4–6 percent. Then growth of net inflow of non-commercial transfers of individuals will be in the range of 10–12 percent in 2012.

The current account improvement trends will persist in **forecast horizon** conditioned by recovering external demand and continued growth rates of domestic industry in the light of further positive developments in world economy. The current account/GDP ratio will be within the 7–9 percent interval, as a result.

Trends of minor price inflation were observed in international food markets in 2012 explained by positive trends in economic activity in some leading economies. Previous estimations of **world economic growth** rate were revised upside yet economic growth will be at somewhat a lower level in comparison with actual 2011 indicators. The main reason is 0.3 percent economic decline which is anticipated for the European Union and which is due to, among others, persisting uncertainties over debt problems and stricter lending terms worldwide. In **forecast horizon** world economic growth will be recovering at moderate rates, and is expected to reach 4.4 percent in 2014. As outlined in the baseline scenario, a minor inflationary environment is anticipated as a result of reducing demand in the main commodities and food markets in the face of expected deceleration of world economic growth rates in 2012. In case of favorable weather, international prices of food products will trend slightly deflationary in forecast horizon although growing world demand for food will offset such falling of prices to some extent, whereas international prices of base metals and oil products will show somewhat an inflationary behavior due to moderate growth of world demand and geopolitical developments.

Main risks to world economic developments in **forecast horizon** are pertinent to slower-than-forecast growth rates of world economy due to persisting uncertainties over debt problems in Euro-area as well as higher increases in international prices of oil products resulting from geopolitical developments in the Middle East. In this context, more threatening is the risk to financial stability of the European Union. If materialized, it would bring in even more slowing of

economic growth rates in both industrialized and emerging countries and significant deflationary pressures in international raw materials markets.

In the first quarter of 2012 the Central Bank further implemented a neutral **monetary policy**, leaving the refinancing rate unchanged, at 8.0 percent. The financial market responded to the policy more or less in the same neutrality as market interest rates stayed unchanged despite some segments of the market saw both rises and falls.

In **forecast horizon** in general, economic developments in both external sector and domestic sector do not predict an expansion of the inflation environment. In the upcoming months inflation will rest within the lower border of the confidence band. Under such condition, the Central Bank action will result in easing of monetary conditions, so inflation will come closer to the 4 percent target during the year and will be maintained there up until the end of horizon. Also, in the end of forecast horizon growth rates will remain strong, while dollarization of the economy will keep on reducing and the level of financial intermediation increasing.

Persisting recession in the European Union continues to be named the most probable risk to the world economic outlook, and the Central Bank will consider quicker easing of monetary conditions as the most probable alternative to the baseline scenario in trying to minimize the influence of the Europe recession on the Armenian economy.

## 2. FORECAST, FORECAST CHANGES, RISKS

### 2.1 External environment<sup>1</sup>

In 2012 world economy will enter a territory of slow recovery which will be driven by stimulating monetary policies implemented in industrialized countries, gradual recovery from Thailand and Japan natural disasters, while fiscal consolidation of countries facing debt problems will continue the way it was in 2011. Developments in world economy will depend considerably on the policies steered to debt problems in industrialized countries as well as geopolitical developments. According to IMF April 2012 report *World Growth Outlook*, world economic growth will slow down to **3.5 percent** (from 3.9 percent in 2011) against the January forecast of 3.3 percent. The 2013–2014 world economic growth will recover moderately to reach 4.4 percent in 2014, with expected economic growth of 2.4 percent in developed countries and 6.2 percent in emerging countries in 2014. In the meantime, average annual inflation is predicted to reduce to 1.7 percent in 2014 from 1.9 percent in 2012 in industrialized countries and to 5.1 percent from 6.2 percent in emerging countries.

The upside revision of the 2012 forecast is explained by even more positive developments anticipated in both industrialized and emerging economies. **Economic growth in industrialized countries** in 2012 is predicted to reach 1.4 percent (0.2 pp above the previous forecast). The upside revision pertains to both the U.S.A. (2.1 percent versus 1.9 percent previously) and the European Union (-0.3 percent versus 0.5 percent previously). Also, as debt problems escalate, the Spanish economic growth forecast was taken downside, 1.8 percent economic decline against 1.6 percent decline in previous forecast. Economic outlook for Spain and France is more optimistic in comparison with the IMF January 2012 forecast, and it is expected that over 2012 the two countries will see slight economic growth of 0.6 percent and 0.5 percent, respectively.

More positive trends for economic growth in industrialized countries will have their influence over **emerging economies**: economic growth of 5.7 percent will be reported in 2012 against the previous forecast of 5.5 percent (6.2 percent growth was estimated in 2011).

**Economic growth in Russia**, a principal trade partner, was also forecast upside (4.0 percent against 3.3 percent previously), which is still below the 2011 indicator.

**Economic growth in China**, a huge booster of world demand for raw materials and food products, will somewhat decelerate to 8.2 percent in 2012 from 9.2 percent in 2011 but will slightly accelerate to 8.8 percent in 2013.

<sup>1</sup> 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, Economist Intelligence Unit, International Grain Council, International Energy Agency, Barclays Capital, РосБизнесКонсалтинг and other sources.

In the face of expected slowing of world economic growth rates in 2012 a minor deflationary environment will be seen in the main commodities markets of the world. In addition, individual product markets will develop under fundamental factors specific to the given market.

According to International Energy Agency estimations, the 2012 demand for **oil** will grow moderately against the 2011 demand. About 60 percent of global oil demand will be met by production of oil by non-OPEC countries (it is expected to increase by 1.6 percent against the previous year), under which circumstance average demand for extraction of oil by OPEC countries will remain roughly the same against the previous year's average (30.01 mbd). Under such conditions international oil prices will mainly perform volatile in 2012 but will reduce from the high level recorded as of the end of the first quarter. Brent crude will average USD 118.0 a barrel in 2012. The global oil market will see inflation risks in the face of less stock and limited oil reserve capacities. Moreover, oil production volumes in Iran may reduce because of a pending EU ban on Iranian oil exports, and tension may increase in connection with the quantity of oil produced by OPEC countries.

An even expected slowing of growth rates of world demand will not hamper **base metals markets** to operate under the fundamental tightness; it is expected that the demand will outstrip production volumes. Despite an expected launch of several investment projects, the deficit of supply will persist in these markets by further having pressure on prices. At the same time, the investment demand will reduce in 2012 on the whole conditioned by uncertainties over the ways to tackle debt problems in Euro-area. As a result, base metals prices will tend to stabilize and thus create minor inflationary pressures. Under such conditions, average price of copper will be shaped at a notably lower level in comparison with the previous year.

**Prices of precious metals** are expected to show moderate growth patterns in 2012. Investment demand for gold will more likely be restrictive determined by optimistic expectations about the U.S. growth and anticipated appreciation of the U.S. dollar.

**Food product markets** in 2012 will be mostly balanced and creation of some deflationary environment is possible in the event of increased volumes of crops. According to April estimations of the U.S. Department of Agriculture, some 694 million tons of wheat production is expected for the marketing year 2011/2012 against around 651 million tons recorded in the previous period 2010/2011 (growth of 6.6 percent). As estimated by International Grain Council, sowing areas are expected to grow by about 1.8 percent in 2012 mainly in the North America and the CIS. As a result, world wheat stock will somewhat increase in marketing year 2012/2013 in relation to marketing year 2011/2012. In spite of expected growth of demand for 2011/2012, which will amount to 687 million tons, world wheat stock will be replenished this year reaching 206 million tons (about 3.7 percent increase), which will come closer to the 12-year peak. In this situation, international wheat prices will perform slightly deflationary in 2012.

In marketing year 2011/2012 world production of **rice** will hit record levels, about 464 million tons. This will be concurrent with substantial increase of world consumption, which will make up 459 million tons. The level of world rice stock will grow above the 9-year peak to make up more than 103 million tons. Though bigger part of stock will be accumulated in the main exporter countries, in India and Thailand in particular, enforcement of state regulatory mechanisms will restrict the ability of prices to respond, particularly in the end-year 2012 and early 2013. This means that rice prices may fall slightly in 2012, according to forecasts.

In 2012 the tightness in the world **sugar** market will further loosen thanks to production volumes in Europe, Thailand and Russia, and this is going to offset the influence from slower crop recovery in Brazil on the global market. Though the demand is expected to bounce back, world sugar stock will be replenished to some extent but will nevertheless be at a relatively low level. As a result, international sugar price will mainly trend downward in 2012.

In the event of favorable weather, international prices of food products will trend slightly deflationary in **forecast horizon**. Growing world demand for food, however, will halt the price falls. Moreover, growing demographics and a shift in cultural preferences may possibly create inflationary pressures in world food markets. In the meantime in a moderately growing world demand picture, international prices of base metals and oil products will show minor inflationary patterns; more to the point, developments in the oil market will greatly depend on geopolitical developments.

In 2012 **financial markets** will remain volatile because of lasting uncertainties associated with possible escalation of financial problems in Euro-area and expectations of allowing of the world economic growth.

In the U.S. economy positive developments are discernible yet vulnerable enough. Pessimistic risks to the global economy are persisting. Add to this the need for fiscal consolidation and the picture is that the Federal Reserve System intends to withhold from tightening monetary conditions up until late 2014 and will conduct a low interest rates policy.

In the face of vulnerability in economic and financial system in **Euro-area** the European Central Bank is expected to cut interest rates, while implementing a quantitative easing policy and applying liquidity injection mechanisms. It is anticipated that ECB will carry on implementing stimulating monetary policy by lowering interest rates up until late 2014 and will further implement quantitative easing exercises.

In the foreign exchange market in 2012, **Euro** is expected to experience depreciation pressures whereas the **U.S. dollar** will tend to appreciate in the light of positive prospects of developments in the U.S. economy.

**Risks** to the baseline scenario of global economic projections are mainly associated with more-than-predicted

slowing of the world economic growth rates, due to new difficulties about debt crisis in Euro-area as well as surge in international oil prices driven by geopolitical developments in the Middle East. In particular, risks are increasingly threatening the stability of EU financial system. If materialized, they could result in even more slowing of economic growth rates in both industrialized and emerging countries and significant deflationary pressures in international raw materials markets.

To sum up, risks to further financial and economic hardships in Euro-area and more sluggish external demand will be persisting. No material inflationary pressures from world commodities markets in the face of slowing global economy will be observed.

## 2.2. Aggregate supply and Aggregate demand

**Aggregate supply:** economic growth forecasts were revised slightly upside, reflecting expectations for faster pace of recovery of the external and domestic demand in the light of optimism for global economic growth outlook. So, economic growth in 2012 is expected in the range of 3.5–4.8 percent<sup>2</sup>. The economic growth trends will carry on in forecast horizon and the economic growth will stabilize within 4–5 percent.

Below is the forecast for developments in the sectors of the economy.

For **Industry** value added is expected to grow in the range of 8.5–10.5 percent in 2012. The forecasts were adjusted upside, mainly due to some speeding of growth rates in world and domestic economies. The growth of industry will continue to be driven by *ore mining, metallurgy, food and beverage, diamond processing* and *energy*, owing to expected increase of production capacities of enterprises active in these areas.

For **Construction** forecasts of value added were revised slightly downside due to slower-than-expected growth of value added in this branch in the first quarter. Furthermore, after the peak recorded in 2008, the output volumes in construction halved in the last three years and resulted in somewhat narrowed construction base. In view of the aforementioned developments it is expected that value added will be within 2.5–4.5 percent for 2012, owing to increased construction volumes in energy, agriculture, transport and communication.

For **Services** forecasts were revised a little upside; this was driven by revised forecasts for domestic demand which will affect both the trade turnover and volumes of other services provided. As a result, the value added of services is forecast in the range of 2.8–4.8 percent for 2012.

For **Agriculture** forecasts did not change though; the real growth of value added is expected to be within 3–5 percent for

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<sup>2</sup> See the 30 percent interval in the Real GDP Growth (Cumulative) Projection Probability Distribution Chart in this paper.

2012 owing to expected growth in *plant growing* and *animal breeding*.

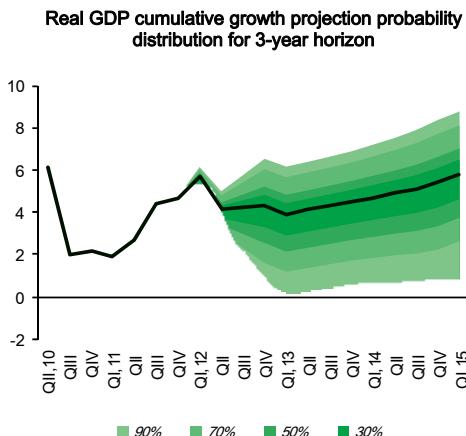
Because the share of *plant growing* in agriculture is large enough and its output depends primarily on the weather, as well as in consideration of medium-term perspective of the planned measures, the least risky scenario was accepted in the forecast.

***Under the baseline scenario*** risks to economic growth are dual-sided and associated with exogenous and indigenous factors. More to the point, downside risks are prevailing as they are associated with decelerated recovery rates of global economy, slower-than expected growth of domestic demand as well as risks to downside performance of indicators in branches of the economy which hold bigger shares in GDP.

In particular, downside risks may prevail in industry and services determined by slower recovery in the world economy and domestic demand. In construction, upside risks to the growth are prevailing in connection with more efficient implementation of major road construction and infrastructures improvement projects. Risks are tantamount in agriculture, as there is high reliance on weather conditions.

More uncertainties over the global economic recovery, in comparison with the baseline scenario, will negatively influence Armenia's economic developments, making downside risks to economic development as outlined in the baseline scenario more likely to appear.

**Chart: Real GDP Growth (Cumulative) Projection Probability Distribution for 3-year horizon**



Period	Real GDP growth projection probability distribution			
	90% probability interval		30% probability interval	
	minimum	maximum	minimum	maximum
January-June 2012/ January-June 2011	2.4	5	3.7	4.3
January-December 2012/ January-December 2011	0.1	6.5	3.5	4.8

**Labor market**<sup>5</sup>: forecasts of labor market indicators for 2012 were revised slightly upside, according to the baseline scenario, since the economic activity is expected to be higher versus previous forecasts. Under such conditions, some more growth of nominal wages and faster subsidence of the unemployment as compared to previous projections are expected. Given such economic growth developments are maintained, the trends in labor market will carry on in 2013 and will persist in the medium-run, too.

In particular, average nominal wages are expected to grow in 2012 by 5.3 percent due to the increase in productivity in the private sector, reduction in unemployment and a moderate growth in some budget-supported organizations. The growth of

<sup>5</sup> The labor market data for 2012 are the Central Bank estimates which are based on figures of 2011 and actual January and February figures of 2012. The growth indicators presented in this sub-section are relative to the same quarter of the previous year, unless otherwise specified.

nominal wages was boosted up by increased productivity reported for industry and services.

Demand for labor will further increase and the number of the unemployed is again expected to decrease. The average level of the officially unemployed in the economy will reduce against the respective indicator of the previous year by 0.4 pp and will reach 5.8 percent in 2012.

Under wage rigidities in the economy, the growth of nominal wages in 2012 will be affected by the growth of wages recorded in 2011. It is predicted that disequilibrium in the labor market may disappear and in the meantime the growth rate of nominal wages will be similar to the growth rate of productivity. 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 horizon is estimated to be neutral.

**Aggregate demand<sup>4</sup>:** forecasts of private sector spending for 2012 were revised upside based on expectations for brisker economic activity and stronger lending to the economy in forecast horizon.

According to revised estimations, in 2012 private expenditures are expected to grow by 4.6 percent in real terms, owing to both more private consumption and private investment. The domestic demand is expected to grow by nearly 3.9 percent as private spending grows and public expenditures reduce (0.6 percent in real terms). In forecast horizon the private spending growth trends are estimated to speed up to some extent.

Relative to previous forecasts, the growth rate of private consumption was revised upside due to an expectation for more revived domestic economic activity, a low inflation environment and medium-term adjustments to the level of private consumption. In 2012 the growth rate of private consumption is estimated to reach 4.3 percent.

Growth rates of private investment were revised downside. The revision was based on less-than-expected growth rate in investment in construction in 2012, although forecasts of economic activity, profitability and lending growth rates were revised upside. As a result, private investment most probably will grow by 5.4 percent in 2012. However, estimations suggest that the growth rate in investments will remain low enough in comparison with the growth rates of investments recorded in pre-crisis times.

Higher economic growth expected in 2012, persistently high growth rates in remittances from abroad and strong growth in lending volumes will drive the negative gap of private spending to narrow. According to the Central Bank estimates, in 2012 the private spending gap will make up – 0.9 percent on

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<sup>4</sup> The data of real growth of private consumption and investments for 2012 are the Central Bank estimates. Actual figures of these data are as of the fourth 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.

average which, however, will wane out to zero at the end of the year, eliminating incongruence between the supply and private sector demand. In 2012 the negative gap will create minor deflationary pressures in the economy, to the extent of 0.2–0.4 pp.

Forecasts of components of **current account** of Balance of Payments were revised in response to upside revision of global and domestic economic growth rates. In view of actually higher-than-expected international prices of metals and further developments connected therewith and stronger performance of the global economy, persisted high growth rates in Armenia's industry, growth rates of real export were revised upside. In 2012 the growth rates of real export of goods and services is expected to be 10–12 percent. In view of export prices developments, growth of export of goods and services by dollar value is expected in the range of 9–11 percent. Risks to exports remain dual-sided, determined by growing downside risks to world economy, international metals prices and industry developments in Armenia.

The developments anticipated in connection with global and domestic economies will be reflected in future behavior of import, too. In 2012 the growth rates of import of goods and services by dollar value is expected in the range of 4–6 percent. In view of import prices developments, growth of import of goods and services by dollar value is expected in the range of 4–6 percent. Risks to import will remain dual-sided and will further depend on developments in the domestic economy and international prices.

Forecasts of growth rates of non-commercial remittances by individuals for 2012 did not change, mainly in response to the developments in the Russian economy. The IMF April 2012 forecasts revised Russia economic growth indicator upside, to reach 4.0 percent. In the light of the aforementioned developments the growth rates of net inflow of non-commercial remittances by individuals in 2012 will be within a 10–12 percent interval.

All aforementioned developments suggest that in 2012 the current account will keep on improving, so the current account/GDP ratio will remain in the range of 9–11 percent, as forecast before.

In 2013-2014 current account will further trend to improve and the current account/GDP ratio is predicted in a 7–9 percent interval, which will be determined by continued recovery in external demand and persisted growth rates in domestic industry, provided that global economy keeps on performing positively.

**Fiscal policy<sup>5</sup>** which the Government implements in 2012 is again steered to macroeconomic stabilization and efforts to facilitating the economic recovery. It should be mentioned that

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<sup>5</sup> 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 2012. The fiscal impulse has been estimated against consolidated budget indicators of 2011. The revenues impulse has been calculated against an estimated nominal GDP indicator and the expenditures impulse has been calculated against an estimated potential GDP.

providing a 0.8 pp growth of tax revenue and social security charges in GDP relative to the previous year as well as execution of public expenditures in line with program proportions is the main benchmark in public expenditures programs.

The 2012 estimation of the impact of fiscal policy remained unchanged – it is forecast to be 0.7 pp contractionary, mainly a result of neutral impact of expenditures and contractionary impact of revenues. However, factual developments in the first quarter (modestly over-performed revenues and savings on expenditures) prompted making some adjustments to the impact expected in relation to upcoming months. Specifically, the impact is expected to be neutral in the second quarter but contractionary in the second half of the year. Incidentally, public expenditures will have expansionary impact in the second half of the year, yet the fiscal policy's contractionary effect will prevail throughout the year because of significantly contractionary impact of revenues (the aforementioned growth of revenues is envisaged in the second half of the year).

**Forecasts of fiscal policy** in forecast horizon are based on the main indicators as outlined in the Republic of Armenia Medium-Term Public Expenditures Program, 2013-2015, which is aimed to effective debt management and maintaining the debt/GDP ratio up to the 3 percent level. The impact of fiscal policy is estimated to be non-inflationary, as a result.

To sum-up, the fiscal sector and recovering private spending will not expand the inflation environment during 2012. The labor market is estimated to have a neutral impact during the year, too. So, one may conclude that net impact of the fiscal sector, private demand and labor market on inflation in 2012 will be predominantly neutral.

### **2.3. Inflation forecasts and monetary policy directions in forecast 3-year horizon**

Starting from 2007, the Central Bank makes the inflation forecast by the use of two models – *Inflation Model by Commodity Groups* and *Quarterly Projection Model*.

The first model is based on an assumption of constant market rates which means that market interest rates existing as of the forecast will be maintained for the upcoming period of time. **The forecast of conditional inflation under this assumption used to be published each quarter by the Central Bank.**

The second model helps to forecast inflation which generates as monetary policy is implemented by the Central Bank or when the Central Bank responds to. This is called a **non-conditional inflation forecast**. The deviation between non-conditional inflation and target inflation minimizes when the Central Bank reacts. **From now on, the Central Bank will publish non-conditional inflation forecasts.**

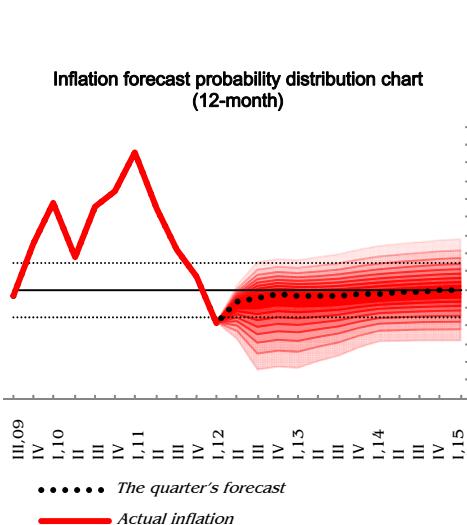
The Inflation Model by Commodity Groups will henceforth be a satellite model<sup>6</sup>, and conditional inflation forecast through it will be used in the Quarterly Projection Model, as appropriate, as the next quarter's inflation indicator.

Inflation forecasts and projection of monetary policy directions made through the Quarterly Projections Model were based on actual macroeconomic conditions of the first quarter of 2012.

As outlined in the baseline scenario, the global economic growth rate was revised upside. It however will rest at a level lower than the actual 2011 indicators. This is mostly determined by an expected 0.3 percent economic decline in the European Union associated with persisting uncertainties over debt problems and already stricter lending terms worldwide, to name a few. These developments will push demand for the main commodities down and will create minor deflationary pressures in these markets in forecast horizon. As well as these developments will influence Russian economy by dragging economic growth rates down to certain extent. High oil prices, nevertheless, currently foster Russia to report relatively high growth rates. In the light of aforementioned developments, in forecast horizon net inflow of remittances of individuals to Armenia is estimated to be 9–12 percent annually.

In view of commitment to maintain the budget deficit/GDP ratio up to the 3 percent level pursuant to the Government's Medium-Term Expenditures Program, the impact of fiscal policy in forecast horizon is estimated to be non-inflationary.

Taking into consideration the above developments in world economy and domestic fiscal policy, aggregate expenditures are expected to be below the equilibrium and only will come up to it gradually. Driven by aggregate expenditures and external demand, GDP will stabilize at 4.5 percent in forecast horizon.



	Inflation Forecast Probability Distribution Chart <sup>7</sup>				
	<1%	1-2%	2.5-5.5%	5.5-7%	7%<
Q2, 2012	4.09%	31.01%	64.89%	0.01%	0.00%
Q2, 2012	19.30%	24.73%	52.52%	3.31%	0.12%
Q4, 2012	17.37%	23.51%	54.61%	4.30%	0.19%
Q1, 2013	18.07%	23.97%	53.86%	3.91%	0.16%
Q2, 2013	13.47%	23.65%	57.67%	4.93%	0.28%
Q3, 2013	10.20%	22.49%	60.55%	6.28%	0.48%
Q4, 2013	6.14%	19.65%	63.81%	9.22%	1.18%
Q1, 2014	4.11%	17.07%	64.70%	11.91%	2.21%
Q2, 2014	4.02%	16.36%	64.05%	12.91%	2.67%
Q3, 2014	3.89%	15.75%	63.60%	13.71%	3.06%
Q4, 2014	3.90%	15.34%	62.79%	14.45%	3.53%
Q1, 2015	3.93%	15.11%	62.24%	14.89%	3.85%

<sup>6</sup> <http://www.cba.am/Storage/AM/downloads/DVQ/FPAS%20hajeren.pdf>.

<sup>7</sup> Starting from Q2, 2012, the inflation probability distribution as forecast in the Central Bank monetary policy programs will be presented for a longer period of time.

In forecast horizon in general, economic developments in both external sector and domestic sector do not predict an expansion of the inflation environment. In the upcoming months inflation will rest within the lower border of the confidence band and GDP will be somewhat below its equilibrium. However, inflation will come closer to the 4 percent target up until yearend as a result of easing of monetary conditions. As well as GDP will reach its equilibrium.

Persisting recession in the European Union continues to be the most probable risk to the world economic outlook, and the Central Bank will consider quicker easing of monetary conditions as the most probable alternative to the baseline scenario to make sure the influence of the Europe recession on the Armenian economy is minimal.

**Forecasts of monetary indicators for the projected time horizon** are based on the actual macroeconomic environment of the previous quarter, macroeconomic developments projected for the next three years and the fiscal policy scenario envisaged for that period. In **forecast horizon** no expanding of the inflation environment as a result of economic developments in both external sector and domestic sector is envisaged. In the upcoming months inflation will rest within the lower border of the confidence band. Under such condition, the Central Bank action will be to relax monetary conditions, so inflation will come closer to the 4 percent target during the year and will be maintained there up until the end of horizon. Also, in the end of forecast horizon growth rates will remain strong, while dollarization of the economy will keep on reducing and the level of financial intermediation increasing.

### 3. ACTUAL DEVELOPMENTS IN Q1 2012

#### 3.1. Inflation

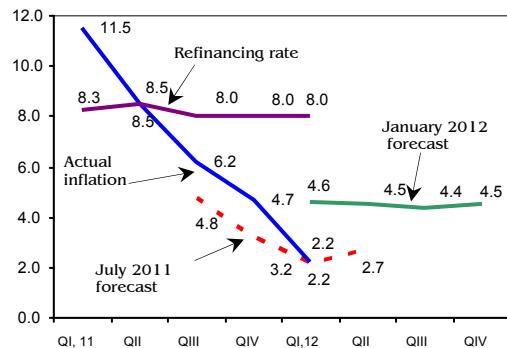
##### 3.1.1. Actual inflation and attainment of target

Actual Q1 2012 results denote 2.7 percent of inflation for the quarter, against 5.2 percent recorded in the same quarter of the previous year. The 12-month inflation further subdued and amounted to 2.2 percent in end-March of 2012 from 4.7 percent in end-December of 2011.

12-month inflation further reduced during Q1, 2012



The diminishing path of 12-month inflation was in line with baseline scenario, supporting implementation of a forward-looking neutral monetary policy by the Central Bank



Inflation somewhat lower from the baseline scenario was conditioned by lower-than-expected rise in prices of both food and non-food products and service tariffs. Item "dairy product" posted a decrease of cheese price, in items "fruit" and "vegetable" prices reduced faster than anticipated while egg prices grew slower than predicted. Though petrol and diesel prices reported faster price increases, inflation of non-food product prices was lower against expectations, which was attributable to insignificant change of partners' currencies vis-a-vis Armenian dram. Low inflation reported in services was determined by less-than-anticipated increase in education and healthcare charges. Price increases on food products further contributed to the 12-month inflation (a total of 2.0 pp of contribution of which 1.2 pp came from such items as "meat product", "coffee, tea, cocoa" and "sugar").

Monetary policy programs of 2011 and the Q1 2012 program predicted that the inflation environment would further ease and, starting from the fourth quarter of 2011, the inflation would rest within the confidence band. Actually, expectations materialized on the whole as high inflation environment reported in early 2011 somehow tempered by the end of the year thanks to relatively stable prices of raw materials and food products in world markets, non-inflationary developments in the Armenian economy (e.g. neutral impact of the labor market and private spending on prices, a contractionary fiscal policy, reduced process of agricultural products as a result of increased volumes of output in agriculture) and moderation of inflationary expectations and second round effects resulting from lagged impact of tightened monetary conditions.

Starting from May of 2011, in view of actual moderation of the inflation environment and in anticipation of price falls in domestic agricultural products due to their increased supply in the sector compared with the previous year, the Board of the Central Bank estimated that the likelihood of the inflation environment expanding again is too low, meaning that interest rates in financial market are such that existing inflationary environment will be possible to restrain. So, in the period May-August the refinancing rate was left unchanged. In September, however, it was lowered by 0.5 pp to 8.0 percent and maintained at that level until the end of the year.

Notwithstanding continued reducing of the 12-month inflation in the first quarter of 2012, the Central Bank admits that Armenia's economy progresses in line with the baseline

scenario provided in monetary policy programs. Meanwhile, inflation entering the confidence band of 4%+1.5 pp in the forecast 12-month horizon is likely in view of global and domestic economic development perspectives. For that period, therefore, the Central Bank kept an unchanged policy rate, which had a neutral impact on the inflation environment.

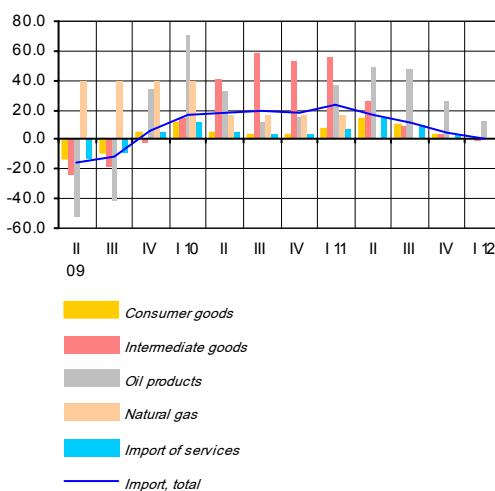
### **3.1.2. Import prices and producer prices**

**Import prices:** in the first quarter of 2012 prices in world commodities markets performed mainly stably, with growth rates of prices of food products and raw materials having slowed down in relation to the same period of the previous year.

According to the Central Bank estimates, in the first quarter of 2012 the dollar prices of import grew by 1 percent y-o-y against 4.4 percent growth recorded in the previous quarter.

Indicators	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q1 2012
Import, total	22.9	17.3	10.7	4.4	1.0
Import, services	6.9	13.7	10.5	3.0	0.6
Import, goods	27.2	18.2	10.7	4.8	1.1
Capital goods <sup>8</sup>	0.0	0.0	0.0	0.0	0.0
Consumer goods	6.9	13.7	10.5	3.0	0.6
Intermediate goods and food products	56.3	25.6	9.1	3.6	-1.3
Diamond <sup>8</sup>	0.0	0.0	0.0	0.0	0.0
Oil products	36.8	48.8	47.2	25.9	13.1
Natural gas	16.9	0.0	0.0	0.0	0.0

Prices of imported goods trended downward in Q1, 2012



The prices of oil products soared during the quarter, posting as much as 13.1 percent growth in relation to the previous quarter. The impact of such an increase of oil prices (1 pp) on import prices was partly offset by fallen prices of intermediate goods and food products (-0.4 pp of contribution)

The impact of dollar prices of imported consumption goods on total import prices made up 0.1 pp. In the first quarter of 2012, in view of 0.4 percent y-o-y growth of import dollar prices as well as 5.7 percent y-o-y depreciation of the average nominal AMD/USD exchange rate, the dram prices of imported goods in the consumer basket have grown an average by 5.9 percent y-o-y.

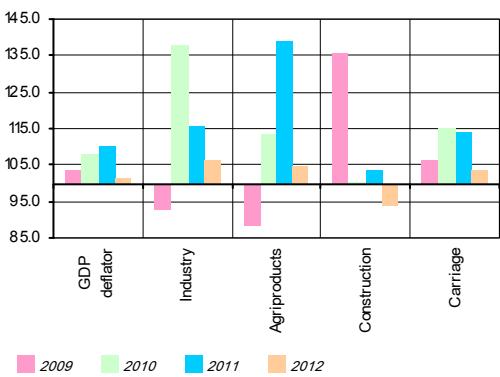
**Producer prices<sup>9</sup>:** in the first quarter of 2012 all branches of the economy (excluding construction) reported an increase of price indexes, with the GDP deflator having reached 101.6 in the period January-March.

**Industry** reported the highest price increases, with quarterly growth having reached 6.2 percent y-o-y due to the

<sup>8</sup> The lack of estimates on prices of capital goods and diamond is due to their sharp volatility. Therefore a change in these prices is estimated to be zero.

<sup>9</sup> The price index change as presented here is relative to the same period of the previous year unless otherwise specified.

In Q1, 2012 highest price indexes were reported in industry and agriculture, and the lowest, in construction



increased volumes reported in *processing industry* (2.7 percent) and *energy and gas production and distribution* (29 percent), which is a result of continued recovery of external and domestic demand as well as relatively higher feed-in tariffs determined for new electric energy plants<sup>10</sup>.

**Agriculture** posted 4.8 percent y-o-y growth of prices<sup>11</sup> totally owing to 11.5 percent price rise reported in animal breeding which somehow was moderated thanks to 18.3 percent deflation reported in plant growing. Moreover, prices of *grains and potato, melons and gourds and fruit* fallen by 16.1 percent y-o-y, 19.1 percent y-o-y and 18.8 percent y-o-y, respectively, notably contributed to such price reduction. In animal breeding, the 19.4 percent increase in meat price was the main contribution to the prices reported in this sub-branch.

**Construction** reported 6 percent y-o-y deflation in the first quarter, mainly attributable to the prices of building materials that responded to the contraction of construction volumes.

**Carriage** costs grew by 3.6 percent in the first quarter mostly determined by increased tariffs on *railroad transport* (13.7 percent) and *air transport* (10.6 percent).

### 3.1.3. Inflation expectations

The Central Bank further conducted regular surveys of inflationary expectations among organizations in the financial sector and households.

Further reducing of the 12-month inflation over the last one year and its resting within the lower border of the confidence band at the end of March were also reflected in inflation expectations. Based on the first quarter 2012 survey results, most financial organizations and households had their expectations of the 12-month inflation anchored in the range of 2.5–5.5 percent, in which banks and credit organizations constituted 48.0 percent and 43.3 percent, respectively. In either case, because adaptive expectations prevail in the Armenian economy, inflation expectations are still for a high inflationary environment, so 43.0 percent of banks and 33.0 percent of credit organizations chose a higher interval - 5.5–8.5 percent. Expectations of households came in a little more moderate, reaching 5.0 percent this quarter from 7.5 percent reported in the previous quarter.

According to the survey results, banks and credit organizations will further anticipate stable market interest rates for the upcoming one-year horizon.

<sup>10</sup> These changes had no impact on end-consumption electricity tariffs.  
<sup>11</sup> Sales prices of producers of agricultural product are presented.

## 3.2. Aggregate supply and Aggregate demand

### 3.2.1. Aggregate supply

**Economic Activity Indicator:** in the period January-December economic growth has been 4.7 percent y-o-y as a result of 5.3 percent y-o-y economic growth indicator published for Q4, 2011.

Pointing out to an enlivened economic activity in the first quarter of 2012 it should be noted that the growth in the period January-March has been 6.1 percent y-o-y as a result of faster growth of EAI in March, which is totally due to increased output volumes reported in industry and services. According to the Central Bank estimates based on EAI the real GDP growth in the first quarter of 2012 will be in the range of 5.5–5.8 percent<sup>12</sup>.

In **Industry** the growth of value added is estimated around 17 percent y-o-y mainly due to the increased volumes in *metal ore mining* (16.3 percent), *food production* (21.2 percent), *beverage production* (24.1 percent), *metallurgy* (10.7 percent), *production of building materials* (34.5 percent) and *items of finished metal manufactures* (2.1 percent), which is the result of consistent improvement in external demand as domestic and world economies recover. High growth in electricity and gas production volumes (16.7 percent), driven by more economic activity as well as increased electricity exports to Iran, further contributed to the growth of value added.

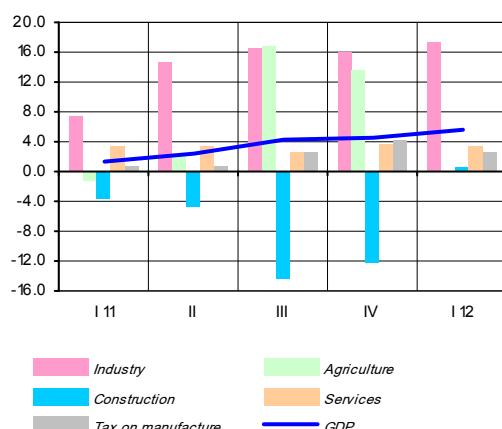
In **Construction** value added is estimated to grow by nearly 1 percent y-o-y. With an exception of *humanitarian aid* (-81.6 percent) and *state budget* (-0.4 percent), all other sources of construction financing posted increases, as follows: *organizations* (8 percent), *international loans* (7.2 percent), *households* (12.5 percent) and *local budgets* (9.7 percent).

The volumes of construction financed by households have grown for the first time after a repeated decline reported in the last three years.

In **Services** the growth of value added is estimated around 3.5 percent y-o-y as a result of increased volume of *services rendered* and *trade turnover* by 11.5 percent and 0.3 percent, respectively. The increase in the volume of services rendered was driven by growth recorded in *financial and insurance activities* (26.5 percent), *information & communication* (7.3 percent), *transport* (8.5 percent), and *travel agency services* (89.3 percent). The growth of trade was totally due to 2.2 percent increase of wholesale trade volumes.

In **Agriculture** the growth of value added is estimated to remain close to the previous year's level, thanks to a 3.1 percent growth in *plant growing* given the output in *animal breeding* remains unchanged. Note that the 2.4 percent decline in *slaughtered animal and poultry* was completely offset by increases reported in *milk production* (2.3 percent) and *egg production* (0.2 percent).

In Q1, 2012 high growths were reported in industry and services (cumulative)



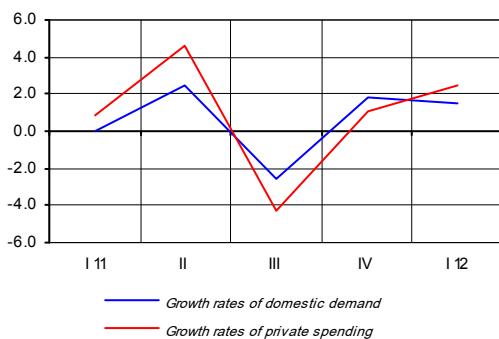
<sup>12</sup> See the 50 percent interval in the Real GDP Growth (Cumulative) Projection Probability Distribution Chart in this paper.

### 3.2.2. Aggregate demand

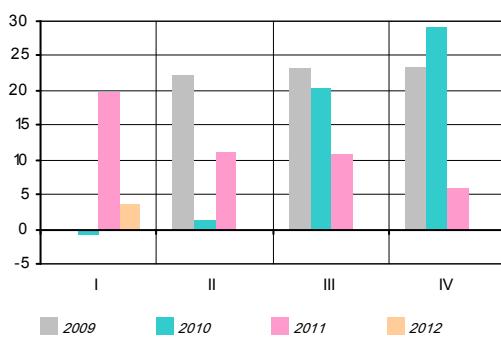
Developments in the Armenian economy over 2011 and in the first quarter of 2012 were generally in line with the baseline scenario provided in monetary policy programs. In 2011 private spending grew by 2.7 percent, reflecting increased private sector disposable income and monetary remittances as a result of economic growth. Notwithstanding increased private sector disposable income, private consumption slowed down in 2011 compared to 3.7 percent growth reported in 2010, largely explained by households' efforts to save after crisis.

In 2011 private investment declined by 6.5 percent, reflecting negative developments in construction. The impact of decline in construction on private investment was somewhat mitigated by continued growth in economy lending volumes. In 2011, private spending grew by 0.2 percent and public expenditures, by 1.6 percent; public consumption increased by 5.4 percent whereas public investment reduced by 11.3 percent, so over the year the domestic demand has grown by 0.4 percent, according to the National Statistics Service data.

**In Q1, 2012 growth rates of domestic demand and private spending were faster relative to previous reference period (y-o-y)**



**Net export position further improved during Q1, 2012 (net real export, y-o-y %, positive sign denotes improvement)**



As estimated by the Central Bank, in the first quarter of 2012 the growth rate of private spending speeded up by 2.5 percent in real terms, driven by real growth of private consumption expenditures. In the first quarter private consumption grew by 4.9 percent in real terms mostly owing to increased private sector disposable income as a result of more private transfers from abroad and positive developments in the domestic economy. An increase in volumes of lending to the economy somewhat contributed to the growth of private consumption.

In the structure of private spending private investment has decreased, which amounted to 10.7 percent, according to the Central Bank estimates.

In the meantime public spending has reduced by 4.6 percent owing to savings on some items of public expenditures. Under such conditions the growth of domestic demand is estimated 1.5 percent.

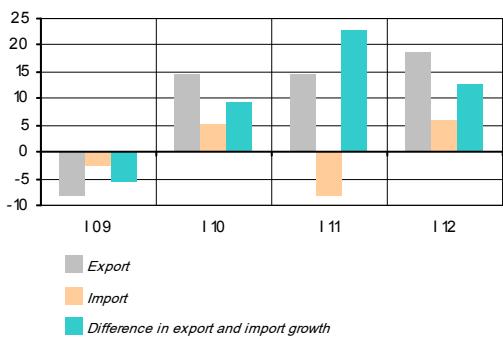
Composite economic indices<sup>13</sup> as calculated and published by the Central Bank point out to the above developments with private spending. In the first quarter of 2012 the consumer confidence index rose by 3.5 percent and the business climate index went up by 4.9 percent. However, the economic activity index fell by 1.7 percent, reflecting an extremely reluctant recovery of investments.

In the first quarter of 2012 the gap between private spending and their potential level remained negative in spite of continued shrinking, and expenditures by the private sector were estimated to have been non-inflationary.

In the first quarter of 2012 external demand further contributed to the real GDP growth positively thus pushing negative balance of real net export of goods and service to

<sup>13</sup> See <http://www.cba.am/am/SitePages/statsscci.aspx>.

**Real growth of export of goods and services outstripped real growth of import of goods and services (y-o-y %)**



narrow by 3.5 percent y-o-y<sup>14</sup>. Improvement of negative balance of net export has been attributable to the improved negative balance of export of goods. The dollar value of negative balance of net export of goods and services has reduced in comparison with the same quarter of the previous year.

In the first quarter of 2012 real growth rates of export of goods and services remained strong (18.6 percent), mainly thanks to high growth rates in industry and persistently high metals prices in international markets. The dollar value of export of goods and services has increased by 22.9 percent y-o-y<sup>15</sup>.

Real growth rates of import of goods and services continued in the first quarter of 2012, amounting to 5.9 percent y-o-y in the face of maintained domestic economic activity and growing international price of oil. The dollar value of import of goods and services has increased by 8.9 percent y-o-y<sup>16</sup>.

In the first quarter of 2012 the inflow of non-commercial remittances of individuals grew by 10.3 percent y-o-y against 13.8 percent y-o-y growth of outflow. Influenced by positive developments in the Russian economy in the first quarter of 2012, the growth of net inflow of non-commercial remittances in the first quarter was 9.3 percent y-o-y<sup>16</sup>.

### 3.2.3. Labor market<sup>17</sup>

Over 2011 the labor market developments were consistent with the growth reported in the economy, so no imbalances were observed in that market. In 2011 there was 6.1 percent growth reported for average monthly, whereas official unemployment subdued by 0.8 pp and amounted to 6.2 percent.

As estimated by the Central Bank, in the first quarter of 2012 average nominal wages grew by 5.5 percent, reflecting an increase in productivity in the private sector and moderate growth in some budget-supported organizations. The growth of nominal wages in private sector was boosted up by increased productivity reported for industry and services, an increased demand for labor as well as the inflation of the previous year.

In the first quarter of 2012 demand for labor continued increasing 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 5.8 percent.

Under wage rigidities in the economy, the growth of nominal wages in the first quarter of 2012 will be affected by the growth of wages recorded in the fourth quarter of 2011. As

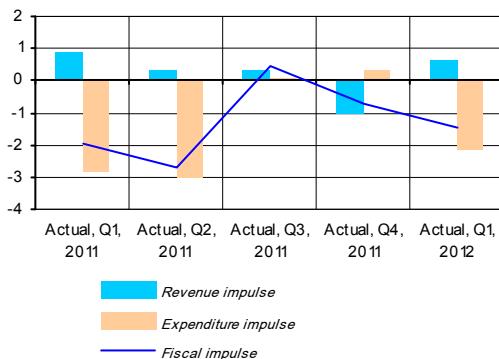
<sup>14</sup> The real export and import growth indicators are the Central Bank's estimates.

<sup>15</sup> In January-March the growth rates of export of goods (FOB) have been 32.4 percent. The first quarter 2012 indicator of export of services is a forecast.

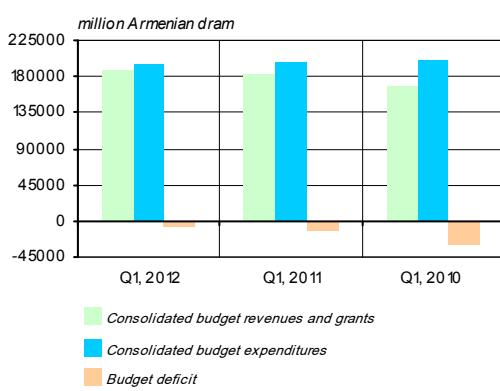
<sup>16</sup> In January-March the growth rates of import of goods (CIF) have been 9.8 percent. The first quarter 2012 indicator of import of services is a forecast.

<sup>17</sup> The labor market data for the first quarter of 2012 are the Central Bank estimates which are based on actual January and February 2012 figures and March 2012 estimations. The growth indicators represented in this sub-section are relative to the same quarter of the previous year, unless otherwise specified.

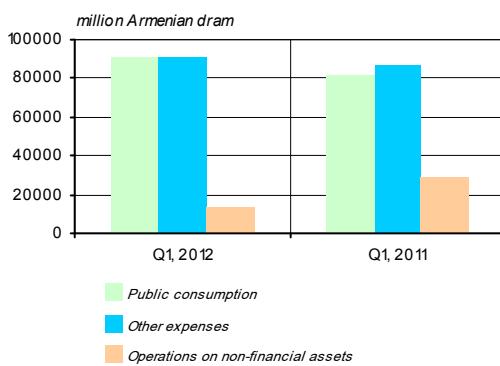
In Q1, 2012 fiscal impulse influenced in contractionary fashion



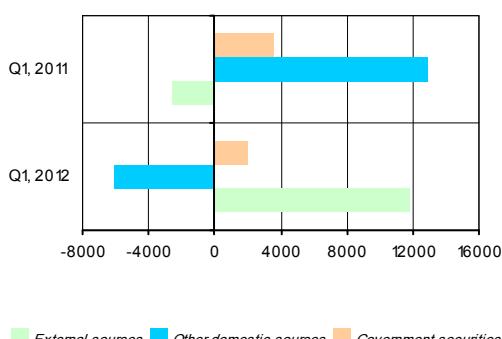
Budget indicators, first quarters 2010-2012



In Q1, 2012 budgetary spending, capital expenditures was the main decrease



In Q1, 2012 budget deficit was financed from external sources



estimated for the first quarter of 2012, the growth rate of nominal wages will be slightly above the growth rate of productivity. Under such conditions, economic agents will not be going to report any significant increases of unit labor costs.

### 3.2.4. Fiscal policy<sup>18</sup>

In the first quarter of 2012 the impact of **fiscal policy** on aggregate demand, hence prices, was 1.5 pp contractionary instead of expected expansionary, according to the fiscal impulse indicator. The deviation came in on the part of public expenditures when a contractionary impact was estimated instead of minor expansionary, urged by cutbacks on expenditures<sup>19</sup>.

It is noteworthy that high economic activity in the first quarter of 2012 positively affected collection of revenues in line with program proportions and even resulted in some over-performance of the budget.

Tax revenues and social security charges grew by 3.6 percent against the first quarter of the previous year. In the structure of tax, y-o-y growth of indirect taxes was 2.8 percent and that of direct taxes, 9.2 percent. Direct taxes posted growth on all taxes, with profit tax and income tax having grown by 9.8 percent and 13.9 percent, respectively.

In the first quarter of 2012 budget expenditures made were about 0.7 percent less in comparison with the same period of the previous year. In the meantime, current expenditures have increased by 8.1 percent y-o-y, with **public consumption** having grown by 11.6 percent. Expenditures on item *transactions with non-financial asset* have reduced by 52.7 percent, due to programs incurring shortfalls of external financing as well as some savings on expenditures under domestic sources of financing.

With revenues and expenditures figures shown above, the budget deficit in the first quarter of 2012 reached AMD 7.7 billion or 5.8 percent of annual plan.

## 3.3. Money and financial market developments

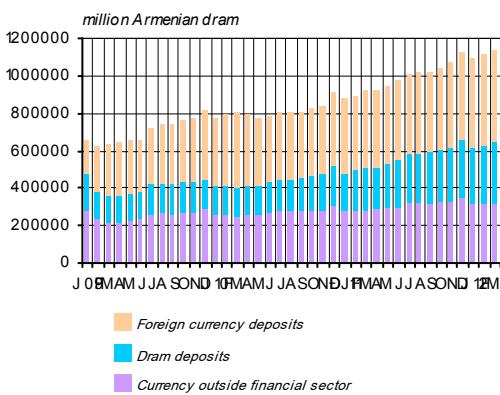
### 3.3.1. Money and credit

In the first quarter of 2012 actual monetary indicators were mainly consistent with the baseline scenario. During the quarter dram deposits grew by 6.0 percent or AMD 18.6 billion, with time deposits and demand deposits having grown by AMD 26.3 billion (18 percent) and AMD 7.7 billion (4.7 percent), respectively. In the dram deposits structure, time deposits attracted from households prevailed (19.0 percent).

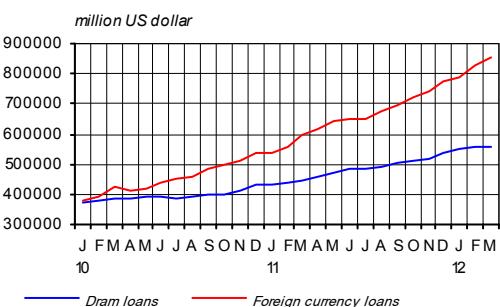
<sup>18</sup> Consolidated budget indicators which were prepared on the basis of preliminary actual data of the first quarter of 2012 (PIU funds included) were used for the review of the fiscal sector.

<sup>19</sup> The program levels of budget revenues, expenditures and deficit were compared by matching preliminary actual figures thereof with quarterly proportions (PIU funds included) set by the Government.

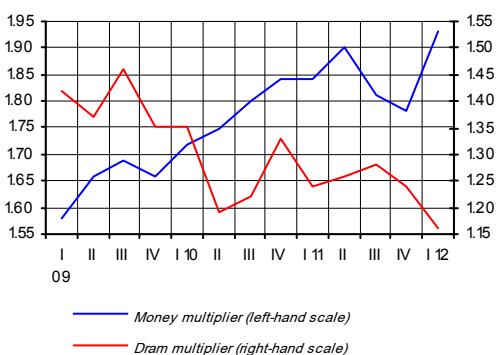
In Q1, 2012 growth rates of dram deposits again exceeded expectations



In Q1, 2012 massive growth in lending was again due totally to increased FX loans



#### Money and dram multipliers



Foreign currency deposits grew by 3.6 percent or roughly AMD 17 billion totally due to time FX deposits. Demand FX deposits decreased by AMD 1.6 billion. Furthermore, demand FX deposits of enterprises have reduced and demand FX deposits of households have grown.

Currency outside the financial sector has reduced by 8 percent or AMD 28.1 billion. As a result of such developments, broad money has grown by AMD 7.4 billion and amounted to AMD 1 trillion 134 billion, and dram broad money has reduced by AMD 9.6 billion and reached AMD 650 billion.

The first quarter of 2012 saw a robust growth in lending – more than AMD 99.0 billion or 7.5 percent. Foreign currency loans again grew faster this quarter – by 10.0 percent versus 1.2 percent growth (AMD 6.6 billion) in dram loans mostly owing to household lending.

The assessment of loan supply and demand, loan accessibility and borrower credibility indexes suggest that the demand for loans has increased chiefly driven by economic activity growth trends; the loan supply has grown as a result of increased competitiveness among banks and disbursement of new funds under various international programs; as well as relaxed terms of lending on the whole enhanced borrower accessibility to the loans. The financial sector's expectations are for further easing of lending terms.

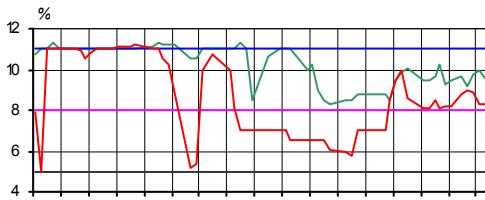
The 12-month performance of monetary indicators as of end-March 2012 was as follows: broad money and dram broad money have grown by 22.5 percent and 27.9 percent, respectively; currency outside the financial sector, by 15.5 percent; dram deposits and foreign currency deposits, by 42.9 percent and 16 percent, respectively, monetary base, by 9.4 percent and lending to the economy, by 34.5 percent. The dollarization of the economy (measured as a ratio of foreign currency deposits to broad money) reached 42.7 percent, down by 1.0 pp relative to the same period of the previous year, which was driven by faster growing rates of dram aggregates over those of money aggregates.

At the end of the quarter, indicators of financial intermediation, i.e. money multiplier and dram multiplier, reached 1.93 and 1.16, respectively. Money multiplier has risen by 4.5 percent relative to the same period of the previous year and by 8.4 percent relative to the previous quarter. Contrariwise, dram multiplier has fallen by 6.4 percent relative to both the same period of the previous year and to the previous quarter. Note that such decrease of dram multiplier was driven by the change in reserve requirement mechanism in December of 2011.

#### 3.3.2. Interest rates

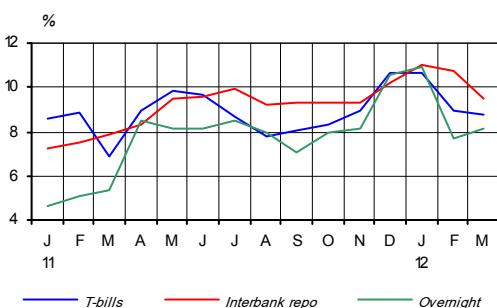
In the first quarter of 2012 the Board of the Central Bank left Refinancing Rate unchanged, at 8.0 percent; the Deposit Facility and Lombard Facility rates were left unchanged, too, 5.0 percent and 11.0 percent.

**Short-term interest rates dropped in end-quarter**

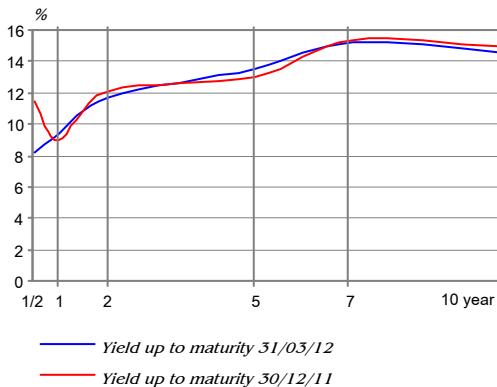


————— Interbank repo  
 ————— CBA refinancing rate  
 ————— Deposit facility  
 ————— Lombard repo  
 ————— Interbank stock exchange loan rate

**Short-term interest rates reduced in end-quarter after December and January rise**



**The secondary market saw interest rates falling in the short-term segment**



During the first quarter the Central Bank continued offering, each Wednesday, repo transactions to commercial banks. Average reported weekly volumes of repo operations performed amounted roughly to AMD 11.7 billion, with an average interest rate of 11.15 percent (AMD 13.6 billion and with an average interest rate of 9.7 percent in the previous quarter). The Central Bank further applied an instrument of long-term repo, with a total volume of nearly AMD 1.5 billion and with an average interest rate of 11.26 percent (AMD 1.5 billion and with an average interest rate of 10.35 percent in the previous quarter). In the first quarter the Central Bank entered into reverse repo transactions, with aggregate volumes of nearly AMD 12.0 billion and with an average weighted interest rate of 7.89 percent (AMD 47.0 billion and with an average interest rate of 7.98 percent in the previous quarter).

In the meantime, commercial banks used standing facilities. Lombard repo operations with a total volume of AMD 46.2 billion were concluded with the Central Bank, while aggregate volume of funds deposited with the Central Bank amounted to AMD 308.6 billion (AMD 159.1 billion and 128.5 billion, respectively, in the previous quarter).

The Deposit Auction Facility, a new instrument, was applied for the first time this quarter (in March). The volume of operations by the use of this instrument amounted to AMD 28 billion.

The interbank loan market, i.e. the Overnight Bourse, has been active. During the quarter the volume of interbank loans was nearly AMD 1214 billion compared with AMD 834 billion recorded in the previous quarter, with an average interest rate fallen by 0.3 pp to 8.61 percent.

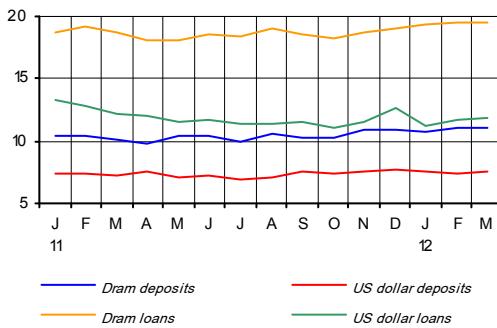
In the first quarter aggregate volume of operations performed in the interbank and intrabank repo markets amounted to AMD 254.6 billion, decreased by AMD 13.4 billion against the previous quarter. The average market repo rate rose by 0.52 pp against the previous quarter's average and amounted to 10.6 percent.

The share of operations of commercial banks in total repo operations executed reached 32 percent against 28 percent recorded in the previous quarter. Average interest rate in interbank repo market rose by 0.72 pp in relation to the previous quarter's average and amounted to 10.17 percent.

In the first quarter of 2012 total issue volume of short-term treasury bills reached AMD 9.0 billion (AMD 19.0 billion in the previous quarter). The entire issue volume has been allocated reflecting an increased demand for treasury bills. In primary market of government securities, interest rates trended first upward but then downward. In the outcome, relative to the previous quarter, average quarterly interest rate in short-term segment remained unchanged, 9.11 percent.

The yield curve analysis shows that in the secondary market of government securities yields moved considerably in the short-term segment, with an average 3.0 pp. The convexity

#### Rise in deposit and loan interest rates



of the curve has changed by 24.3 percent, from 0.27 to 0.34, pointing out to the widened spread of interest rates of long-term and short-term securities.

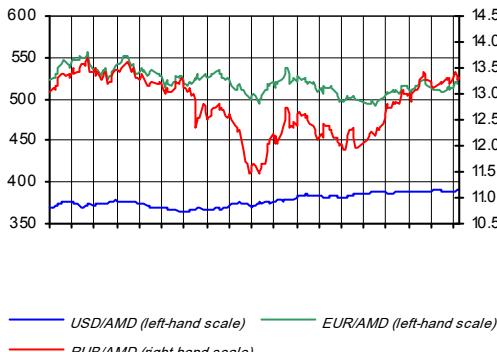
In the first quarter of 2012 interest rates of loans and deposits in Armenian dram and U.S. dollar trended as follows:

Average interest rates of dram and dollar deposits were 10.93 percent and 7.47 percent, respectively. Relative to the previous quarter, average interest rate of dram deposits has grown by 0.26 pp while interest rates of dollar deposits remained nearly unchanged. The spread of interest rates of dram and dollar deposits made up 3.46 pp (3.29 pp in the previous quarter).

Average interest rates of dram loans and dollar loans were 19.47 percent and 11.63 percent, respectively. Relative to the previous quarter, average interest rate of dram loans has increased by 0.79 pp but average interest rate of dollar loans fallen by 0.13 pp. As a result, the spread of interest rates of dram and dollar loans made up 7.8 pp compared to 7.4 pp recorded in the previous quarter.

This quarter the interest rate spread of loans and deposits in Armenian dram grew slightly to 8.5 pp but the interest rate spread of loans and deposits in U.S. dollar reduced a little to 4.2 pp.

#### Dram exchange rate versus US dollar, Euro, Russian ruble



#### 3.3.3. Exchange rate

At the end of the first quarter of 2012, relative to the end of the previous quarter, the average dram exchange rate versus the U.S. dollar depreciated by 1.25 percent and reached dram 390.60 for one dollar.

The dram exchange rate tended to depreciate versus Euro and Russian ruble, as well.

Dram exchange rate in Q1, 2012, quarter-on-quarter			
Currency pair	31.12.2011 (AMD)	31.03.2012 (AMD)	% (appreciation +, depreciation -)
USD/AMD	385.77	390.64	-1.25
EUR/AMD	498.72	521.39	-4.35
RUB/AMD	11.98	13.31	-9.99

Average dram exchange rate in Q1, 2012, year-on-year			
Currency pair	Average quarterly exchange rate, Q1, 2011	Average quarterly exchange rate, Q1, 2012	% (appreciation +, depreciation -)
USD/AMD	366.14	388.43	-5.74
EUR/AMD	500.96	509.64	-1.7
RUB/AMD	12.53	12.91	-2.94

The aggregate volume of interbank market transactions executed during the first quarter amounted to USD 2291 million,

which represents 3.67 percent increase in relation to the respective indicator of USD 2209 million recorded in the first quarter of the previous year.

The aggregate volume of Euro/Dram exchange transactions has increased as well and amounted to EUR 192 million, growing by 3.22 percent compared to the first quarter of the previous year.

To handle steep dram exchange rate fluctuations, the Central Bank sold nearly USD 37.0 million to commercial banks during the first quarter.

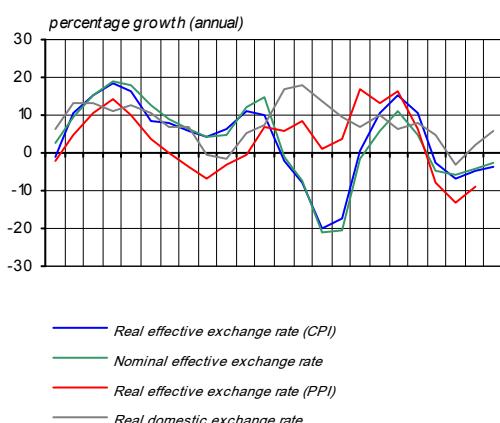
In the first quarter the nominal effective exchange rate of the dram depreciated by 1.2 percent q-o-q. This was primarily due to nearly 2 percent q-o-q depreciation of average quarterly AMD/USD exchange rate and about 0.8 percent depreciation of partner countries' currencies versus the U.S. dollar<sup>20</sup>.

The nominal effective exchange rate of the dram has depreciated by 2.8 percent against the same quarter of the previous quarter, which was driven mostly by 5.7 percent y-o-y depreciation of average AMD/USD exchange rate on the back of average 3.1 percent depreciation of partner countries' exchange rates versus the U.S. dollar.

During the quarter, the Dram's real effective exchange rate calculated by CPI (consumer price index) appreciated by 2.7 percent q-o-q amid 1.2 percent q-o-q depreciation of the Dram's nominal effective exchange rate. Furthermore, inflation in Armenia amounted to 5.1 percent q-o-q whereas it reached 1.1 percent in the partner countries.

Percentage growth, year-on-year	Q1, 2011	Q2, 2011	Q3, 2011	Q4, 2011	Q1, 2012
Real effective exchange rate (+ means appreciation)	10.3	-2.6	-6.7	-4.9	-3.5
Inflation in Armenia	11.7	9.2	5.1	4.4	3.4
Nominal exchange rate (+ means appreciation)	4.9	2.7	-0.9	-5.3	-5.7
Average weighted inflation in partner countries	5.6	6.2	5.5	4.9	4.0
Partner countries' average weighted nominal exchange rate (+ means appreciation versus the U.S. dollar)	0.2	7.3	5.1	-1.2	-3.1

In Q1, 2012 real exchange rate depreciated



*Appreciation of real exchange rate = Armenia inflation + appreciation of nominal exchange rate – partner countries' average weighted inflation – partner countries average weighted nominal exchange rate appreciation*

During the first quarter of 2012 the Dram's real effective exchange rate depreciated by an average 3.5 percent in relation to the same period of the previous year. This was attributable to the average AMD/USD exchange rate which reported more depreciation than the partner countries' currencies versus the U.S. dollar. Average weighted inflation in the partner countries was 4 percent; average quarterly inflation in Armenia amounted to 3.4 percent in relation to the same period of the previous

<sup>20</sup> The indicator denotes a weighted average of trade partner countries' currencies.

year, and such difference pushed the real exchange rate to depreciate.

### 3.4. Balance of payments

In the first quarter of 2012 current account further tended to improve which was conditioned by increased remittances of individuals and y-o-y reduction of the balance of goods deficit. Net inflow through capital and financial account has narrowed in relation to the same period of the previous year.

#### 3.4.1. Current account

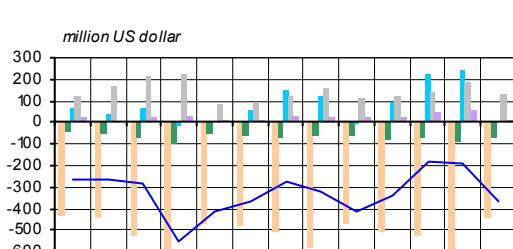
In the first quarter of 2012 current account improved by USD 42.7 million and reached USD 366.4 million on the back of developments in world and domestic economies. The improvement was driven mainly by positive developments in remittances of individuals as well as balance of goods.

In the first quarter of 2012 the trade balance deficit reduced by USD 21.7 million and amounted to USD 442.5 million. Real export kept on increasing amid sluggish external demand though, and such increment was fuelled by persisted high growth rates in domestic industry. In the first quarter the dollar value of export of goods grew by 31.4 percent y-o-y, driven by positive contributions from such items as "transport means" (18.6 pp)<sup>21</sup>, "machinery and equipment" (6.0 pp), "products of prepared food" (5.7 pp) and "precious and semiprecious stones, precious metals and articles thereof" (2.5 pp)<sup>22</sup>. The contribution of item "base-metals and articles thereof" has been negative (-3.3 pp).

In the face of persisted domestic economic activity and decelerating growth rates in dollar prices of import, the growth rates in dollar value of import of goods slowed down in the first quarter of 2012. The growth rates of dollar value of import of goods amounted to 9.7 percent y-o-y, mainly driven by 8.5 pp of positive contribution from item "mineral products". The contribution of item "base-metals and articles thereof" has been negative (-2.1 pp).

In view of geographic distribution of external trade, the deficit of balance of trade with CIS has grown by USD 9.7 million whereas the deficit of balance of trade with the European Union has reduced by USD 32.6 million. The increase of deficit of balance of trade with the group "Other countries" was mainly conditioned by a USD 18.0 million increase of deficit with China.

In the first quarter of 2012 the deficit of services balance grew by USD 5.4 million y-o-y and amounted to USD 70.4 million. The deficit of balance of travel has increased y-o-y but the deficit of balance of transport services has reduced which is



- █ Balance of trade
- █ Services (net)
- █ Revenue (net)
- █ Private transfers (net)
- █ Official transfers (net)
- Current account

<sup>21</sup> In the first quarter of 2012 export of item transport means grew by 58.2-fold y-o-y and export of item machinery and equipment, by 3.6-fold y-o-y. Such an increase of export of these items is non-recurrent.

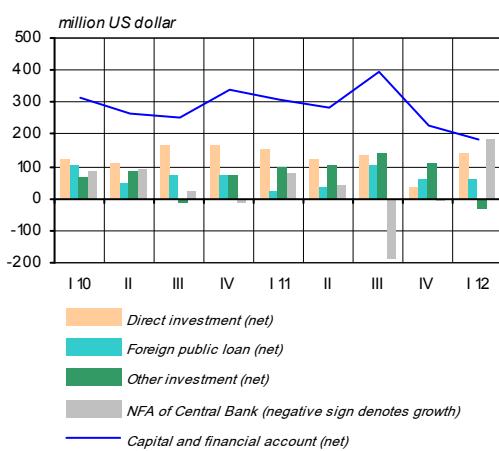
<sup>22</sup> Export and import breakdown by sector and geography is presented, respectively, in FOB and CIF prices.

attributable to the narrowed deficit of the balance of trade. In the first quarter of 2012 the y-o-y growth of export and import of services reached 5.5 percent and 6.1 percent, respectively.

The y-o-y growth rates in remittances<sup>23</sup> of individuals remained strong which is determined by positive developments in the Russian economy<sup>24</sup>. During the quarter net inflow of seasonal worker income has grown by 14.2 percent y-o-y and amounted to USD 113.8 million. This more than offset net outflow in item "income on investment". As a result, item "income" posted net inflow of USD 6.0 million. Net inflow of private transfers has increased by 18.0 percent y-o-y and reached USD 130.0 million.

### **3.4.2. Capital and financial account<sup>25</sup>**

In Q1, 2012 net inflow through item 'capital and financial account' reduced y-o-y



In the first quarter of 2012 the capital and financial account reported net inflow of USD 183.1 million (USD 305.4 million in the first quarter of the previous year). The y-o-y decrease of the inflow was conditioned by net outflow in item "other investment", against net inflow posted in the first quarter of the previous year. In the first quarter net foreign assets of the Central Bank of Armenia decreased by USD 182.9 million, mostly due to decrement of commercial banks' FX accounts with the Central Bank and as that went to the use of domestic lending.

In the first quarter the net inflow of capital transfers amounted to USD 18.0 million (USD 26.3 million in the first quarter of the previous year).

In the first quarter net inflow of foreign direct investment amounted to USD 140.3 million (USD 156.0 million in the same period of the previous year), and net inflow of public loans amounted to USD 58.2 million compared to USD 23.2 million recorded in the same period of the previous year.

Net foreign assets of private sector have increased by USD 33.4 million; net foreign assets of other private sector (banks excluded) have decreased by USD 15.1 million, whereas net foreign assets of the banking sector have grown by USD 48.5 million.

### **3.5. External environment**

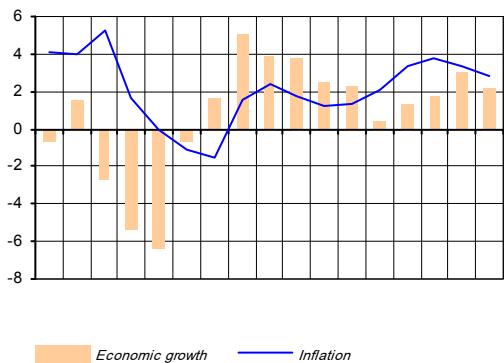
In the first quarter of 2012 the global economy saw higher-than-expected economic activity on the back of stimulating monetary policy implementation in industrialized countries. Such economic activity was however limited to the need for fiscal consolidation and stricter lending terms in financial

<sup>23</sup> Q1, 2012 saw net inflow of non-commercial transfers by individuals via the banking system grown by 9.5 percent y-o-y.

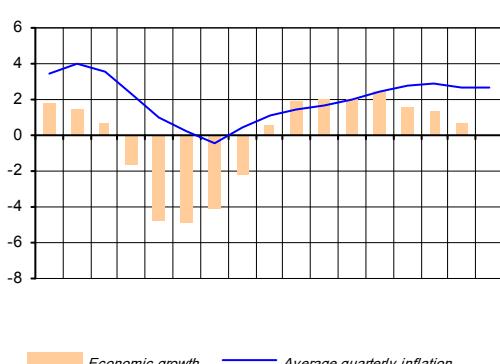
<sup>24</sup> The growth rates of output for key economic activities in the period January-March 2012 have been 5.0 percent y-o-y, according to Russia State Statistics Service estimations.

<sup>25</sup> Q1, 2012 capital and financial account figures are the Central bank estimates.

**In the U.S.A. in Q1, 2012 economic activity accelerated and inflation subdued**



**In Q1, 2012 economic growth rates in Euro-area further decelerated**



sectors of developed countries. Economic fundamentals in both developed and emerging countries portend for economic activity in the first quarter of 2012 and lesser expectations for crisis in world financial systems in a short run. Albeit positive trends for the economy, global economic risks are persisting amid geopolitical problems as well as debt problems leave some European countries still vulnerable.

In the **United States of America** in the first quarter economic growth rates further recovered. The economy however is still to enter the territory of sustainable growth while in the medium term the downside risks remain. Preliminary estimates by Economic Analyses Bureau of the U.S. Department of Commerce suggest that in the first quarter the U.S. economy posted an annualized 2.2 percent growth q-o-q compared to 3 percent growth recorded in the previous quarter. In the first quarter average quarterly inflation in the U.S. economy subdued to 2.8 percent y-o-y from 3.3 percent y-o-y recorded in the previous quarter (the y-o-y reduction is partly due to inflation's base effect recorded in the first quarter of 2011).

Despite inflationary patterns driven by the rise in international oil prices during the quarter the U.S. Federal Reserve System maintained its policy target in the range of 0 - 0.25 percent in consideration of moderate pace of economic recovery. In January of 2012 the Fed announced its decision to keep interest rates low up until late 2014.

According to the EuroStat data, industrial production has grown moderately in **Euro-area** in the period January-February of 2012, and a slight economic growth is anticipated this quarter after the decline recorded in the previous quarter.

During the quarter, consumer price index rose by an average 2.7 percent y-o-y, just as much as in the previous quarter. Increased fuel prices notably contributed to the inflation yet this was offset by falling of prices on communications services.

Though the inflation indicator is still above the target level of 2 percent, the European Central Bank left the policy rate unchanged after having it lowered by 0.5 pp in the previous quarter.

During the quarter the U.S. dollar behaved volatile versus Euro and appreciated an average by 2.8 percent to make up 1.31 for Euro (appreciation amounted to 4.2 percent y-o-y).

During the quarter the 3-month LIBOR rose to 0.51 percent on average.

Economic growth in **Russia** posted more progress on a number of indicators as international oil prices grew in the first quarter of 2012. In particular, as provided by Russia State Statistics Service estimation, the growth rates of output for key economic activities in the period January-March 2012 have been 5.0 percent y-o-y. Growth rates in industry remained strong and 4.0 percent y-o-y growth was reported in the first quarter. Construction and retail trade also posted high growth rates, amounting to 5.2 percent y-o-y and 7.5 percent y-o-y, respectively.

The IMF forecast of the Russian economic growth for 2012 made an upside revision up to 4 percent from 3.3 percent previously, amid persisting high oil prices in world markets. Meantime, the IMF warns that the downside risk to oil price remains the main factor affecting the Russian economy.

On the back of developments in world and domestic economies, current account has improved and outstripped huge net capital outflow volumes thus resulting in an increase of reserves of the Russia Central Bank. In the first quarter current account surplus has increased by USD 11.5 billion y-o-y and reached USD 42.3 billion; net outflow of capital has grown by USD 15.7 billion y-o-y and amounted to USD 31.7 billion.

In the first quarter the rate of inflation further decelerated amid trends for appreciation of the ruble and reached an average 3.9 percent y-o-y against 9.6 percent y-o-y recorded in the first quarter of the previous year. The y-o-y falling in prices of agricultural products greatly contributed to the deceleration of inflation.

In the first quarter of 2012 Central Bank of Russia decided to leave the refinancing rate unchanged, at 8.0 percent. Such was decided in consideration of estimations of inflation risks and expectations of economic growth. It was nevertheless mentioned that currently a low inflation level is temporary and that in the medium term perspective inflation risks will grow mainly deriving from uncertainties as to what extent will the rise in some administered prices and tariffs affect consumer prices starting July.

The first quarter's developments in **China** were in line with the "soft landing" scenario as envisaged by analysts – economic growth slowed down to 8.1 percent and average quarterly inflation amounted to 3.8 percent.

**In the light of the aforementioned developments** international prices of main commodities and industrial products showed inflationary patterns as they were mostly based on expectations.

Oil markets saw considerable inflationary pressures. First, early in the quarter oil prices grew moderately in the light of optimism for economic growth outlook but then oil price inflation accelerated as political problems around the Middle East escalated. However, further extraction of oil by OPEC countries mitigated inflationary pressures, making oil prices to stabilize at some high level in the end of the quarter. Brent crude averaged USD 118.0 a barrel in the first quarter of 2012, having grown by about 8.5 percent in relation to the previous quarter (the y-o-y growth reached 13 percent).

Copper price grew noticeably early in the first quarter of 2012 and it posted nearly 10.6 percent increase q-o-q, averaging USD 8327.5 per ton (y-o-y decline of 13.6 percent was recorded). The copper price increase during the quarter was attributable to optimistic expectations for demand as well as reduced copper extraction volumes in Chile.

Investment demand for gold has weakened amidst an accepted arrangement over the Greek debt and the U.S. economic revival. As a result, international gold prices remained almost unchanged, only growing by 0.5 percent to make up USD 1692 per troy oz. (the y-o-y growth was 22 percent).

Food prices demonstrated minor inflationary patterns in the first quarter of 2012 but they finally stabilized in the end of the quarter. The food price index, as released by the Food and Agricultural Organization, has increased by 3.4 percent on average relative to the previous quarter. This figure however is 5.3 percent less from the respective figure recorded in the same quarter of the previous year.

Though international wheat prices trended slightly upward in the first quarter they posted 0.3 percent q-o-q decline relative to the previous quarter, however, making up USD 7.6 a bushel (which is about 15.6 percent less than the respective figure recorded in the same quarter of the previous year). The wheat price developments were determined mainly by pessimistic expectations for weather conditions in principal wheat producer countries in Europe as well as disseminated information on export restrictions by Russia (lately, that information was refuted).

International rice price has dropped by nearly 6 percent q-o-q, reaching USD 14.6 per U.S. hundredweight (45.4 kg), very much similar to the level recorded in the same quarter of the previous year (the y-o-y decline was nearly 1 percent).

During the quarter sugar price was somehow volatile due to expectations for a new agricultural period in Brazil. Also, increased harvest in India, Europe and Thailand contributed to the stable prices in the sugar market. In the first quarter the sugar prices index, as released by the New York Board of Trade, trended stably as it fell by a mere 0.8 percent q-o-q. As a result, the sugar price amounted to 24.6 U.S. cent/Pound (the y-o-y decrease was 20 percent).

International prices of food products trended slightly upward on the back of positive signs of economic activity in a number of industrialized countries. Whereas inflationary pressures in basic commodities markets, oil markets in particular, may intensify in future due to geopolitical developments around the Middle East.