

CENTRAL BANK OF ARMENIA

THE MONETARY POLICY PROGRAM OF THE  
REPUBLIC OF ARMENIA

3' 2008

INFLATION REPORT





# *Dear Reader,*

## The

The new articles 6 and 17 of the Republic of Armenia Law on Central Bank, which have become effective since January 1, 2008, require a change in the format and structure of reports which the Central Bank presents.

Previously, the Annual Report of the Central Bank used to contain reports on inflation and financial stability, financial accounts of the Central Bank, the report on governance, and a statistical appendix.

Now, according to the new requirement, the quarterly inflation reports will be published as a separate paper and presented together with quarterly monetary policy programs in the periodical *The Republic of Armenia Monetary Policy and Inflation Report*, which will be presented to the Armenian National Assembly twice a year within two months following the first and third quarters. *The Financial Stability Report* and *The Central Bank Statistical Bulletin* will be published once a year.

This periodical presents the Republic of Armenia Monetary Policy Program and Inflation Report for Q3, 2008.

The **Monetary Policy Program** for the third quarter of 2008 (July, August and September) has the following sections:

1. **Actual indicators of Q2, 2008**, which presents the actual developments with the inflation, external sector, aggregate supply and aggregate demand as well as the monetary sector;
2. **Adjusted forecasts for Q3, Q4 of 2008 and Q1, 2009 and forecasts for Q2, 2009**, which presents the Central Bank's forecasts on the external sector, aggregate supply and aggregate demand, labor market and the monetary policy developments;
3. **Inflation forecasts**, which presents the inflation forecast for the next 12-month period based on the developments expected in different sectors of the economy;
4. **Monetary policy directions in the forecast 12-month period**, which presents the Central Bank's estimation of a) the impact of external and domestic environment on inflation; b) existing inflation risks; and c) further directions of the monetary policy.

The **Inflation Report** for the third quarter of 2008 has the following sections:

1. **Summary**, which presents in brief the inflation trends in Q3, 2008, the pace of the monetary policy and macroeconomic environment;
2. **Inflation developments**, which presents in detail actual inflation indicators by commodity and service groups, the behavior of core inflation and the course of achieving the target inflation;
3. **Inflation factors**, which presents reviews of:
  - External environment
  - Balance of payments
  - Interest rates, exchange rates and monetary developments
  - Aggregate demand and aggregate supply
  - Labor market
  - Import prices and producer prices
  - Inflation expectations.

*The Board of the Central Bank*



**The Monetary Policy  
Program of the  
Republic of Armenia**

**Q3, 2008**

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# In

June 2008, 0.5 percent deflation was recorded against past May, under which the 12-month inflation indicator reached 9.6 percent, which is in line with the indicator forecast in March of 2008<sup>1</sup>. This indicator remained unchanged compared with the 12-month inflation for March of 2008, although it rose in April by 1.1 percentage points and reached 10.7 percent, but dropped gradually in May and June, having rested at the level of 9.9 percent and 9.6 percent, respectively. However, the 12-month inflation for June was still above the upper limit of the target by nearly 4 percentage points, whereas the deflation was primarily due to a 9.8 percent decrease of prices of the commodity group "Vegetable and potato" (with -0.46 percent contribution to inflation).

In April-June of 2008, inflation has been 1.9 percent mostly determined by the rise in the same time of prices of "Bread products" by 9.1 percent; "Fats and oils" by 6.8 percent; "Petrol and diesel" by 15.5 percent as well as by the increase of tariffs of housing and public utility services by 7.7 percent (due to a 42.4 percent rise in tariffs of gas sales), with all of them having made an additional contribution of 3.1 percentage points to the quarterly inflation. The price-rise of the above commodity groups has been somewhat offset by some 26.4 percent drop in prices of "Vegetable and potato" in the same quarter (with -1.2 percentage point contribution to inflation). June saw about 10.1 percent increase of domestic prices of food products, based on the 12-month results, contributing approximately 5.5 percentage points to inflation. In the meantime, ancillary impacts of price increases on food products continued to be demonstrated on prices of non-food products and service tariffs. The 12-month inflation of non-food products was 6.0 percent (with 1.0 percent contribution to inflation) and service tariffs increased by 10.5 percent (with 3.2 percent contribution to inflation). The 12-month inflation remains high mainly due to the rise of prices of import goods, such as items "Bread products" by 36.1 percent (with 5.4 percent contribution to inflation), "Fats and oils" by 41.7 percent (with 1.7 percent contribution to inflation) and "Petrol and diesel" by 18.0 percent (with 0.49 percent contribution to inflation). The total impact of these items on inflation makes up around 7.6 percent. Medical service fees and housing and utility service fees sustain high growth rates, too, making up 17.5 percent (with 1.6 percent contribution to inflation) and 7.9 percent (with 0.6 percent contribution to inflation), respectively.

Though some 0.5 percent deflation was recorded in June against past May, core inflation however reached 6.5 percent, reflecting the inflation potential in the economy.

The Q2, 2008 inflation was attributable to the following developments occurred in external and domestic sectors:

- The developments in external sector in the second quarter of 2008 behaved diversely. Oil prices continued soaring while grain prices declined notably. Light Sweet at the New York Mercantile Exchange reached round USD 140 a barrel; gold prices at the London Metal Exchange were in the range of USD 850-950 oz. and copper prices reached USD 8400 per ton at the end of the quarter after a slump to USD 7800 at the beginning of the quarter. Grain prices at the Chicago Board of Trade amounted to USD 9.7 a bushel at the closing of the quarter following a fall to USD 8.5 at the beginning. At the end of April, prices of raw materials reported their lowest in their locations but were set to grow to some extent. They seem not only to remain at a high level but also maintain a potential for further growth.

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<sup>1</sup> See the Monetary Policy Program (Q2, 2008).

Prices of some other basic food commodities, rice and oils in particular, dropped slightly. Prices of butter stabilized. As a result, inflationary pressures on the part of food products have somewhat eased in external environment.

In international financial markets in the second quarter, the US dollar exchange rate has stabilized in the range of 1.54 – 1.58 for one Euro. This was explained by the situation that following the 25-basis point cut of interest rates by the US Federal Reserve System on April 30<sup>th</sup>, market participants anticipated no more price drops. Besides, in his statement Mr. Bernanke had highlighted their preference for a strong dollar. As a result, in the end of the first quarter of 2008, the target of interest rates of federal funds set by the Fed amounted to 2 percent whereas the European Central Bank stuck to an interest rate of 4 percent. Under this situation, the US dollar stabilized until the appearance of new stimuli about further behavior of world central banks.

*With these developments persisting in international food markets, and grain markets in particular, certain decrease of food prices in Armenia in the second half of the year is inevitable, as was previously forecast by the Central Bank of Armenia. However, risks of inflation were still persisting especially because of high oil prices, since not only oil prices had an impact on inflation directly but also affected the rise of prices of other goods through increased transportation costs.*

- The Q1 2008 trends for **Aggregate demand** were seen in the second quarter as well, with the real GDP growth indicator persisted in the range of 12 percent. The real growth in **Construction** was 17.6 percent owing to increased volumes of residential housing and construction activities in processing industry and transport and communications. The real growth of value added in **Industry** was 2.7 percent. The contribution to such growth came mostly from increased volumes of production of alcoholic beverage and natural juice as well as production of building materials and growth trends seen in the energy sector. The growth rate in **Services** was 10.7 percent due to the slowing of growth in retail and wholesale trade, although some acceleration is being observed in respect of passenger car sales<sup>2</sup>. The growth of value added in **Agriculture** was 4.6 percent owing to abundant crops of berry and fruit.

As a result, in the period January-May of 2008 the real GDP growth rate has been 9.8 percent, slightly below in relation to the projection.

- According to the Central Bank estimations of **Aggregate demand**, private spending is expected to increase in real terms by 11.4 percent, private consumption by 10.2 percent and private investment by 14.5 percent in the second quarter. Based on the evaluation of deviation of private sector expenditures from the equilibrium, the estimated growth of private consumption will be somewhat higher from its equilibrium, while private investment will be within the equilibrium. In the meantime, with regard to the impact on inflation, the fiscal policy has been 2.2 percent restrictive instead of the projected 1.9 percent expansionary, which was attributable to more-than-forecast collections of tax.

*Thus, with private consumption being slightly above the equilibrium and with fiscal policy being considerably restrictive in lieu of projected expansionary, the domestic demand has not created additional inflationary pressures.*

- As for the **Balance of payments** developments, the Q2 2008 estimations show that the volumes of export of goods and services in dollar terms have increased only by 5.7 percent<sup>3</sup>, way below the projection. This

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<sup>2</sup> In the period January-May of 2008 car sales have increased by about 30 percent compared to the same period of the previous year.

<sup>3</sup> Export of goods (FOB) in the period January-May has increased by 0.2 percent, and 4.4 percent, when diamond is excluded. The indicators of services are forecasts.

performance was determined by adverse developments in metallurgy. Exports of sub-items *diamond*, *unprocessed gold* and *items of jewelry* remain shrinking. With slow nominal growth of export of goods and services persisting, the real decline has been 4.3 percent year-on-year<sup>4</sup>. In contrast to the slow growth of export, growth rates of import persisted and even accelerated in the current quarter. In Q2 2008, the year-on-year growth of import of goods and services in dollar terms has been 43.3 percent<sup>5</sup>, topping the forecasts. Such a high increase in dollar terms is explained also by global oil prices that soared in May and kept the potential for a further rise. Volumes of import of passenger cars have increased sharply, just very much like the imports of oil products, telephone and telegraph devices, modems, unrefined aluminum and unprocessed gold. In real terms, the growth of import of goods and services in the second quarter of 2008 has been 16.9 percent.

Based on preliminary estimations, the Q2 2008 ended with 48.7 percent year-on-year increase of net inflow of **Non-commercial transfers**, which is above the projected figure (some 50.3 percent increase of net inflow has been recorded in the period January-May). The main reason why the figure deviated from the forecast was the record growth of inflow of 56.2 percent year-on-year in April. At the same time in the second quarter, outflow has reduced by 5.1 percent year-on-year (in May, outflow reduced by 16.4 percent year-on-year).

The trends for growth of **Main monetary indicators** point to the slowing of dramization in the second quarter compared to the end of the previous year. The actual 12-month results of almost all indicators have broadly been in line with March forecasts. A deviation came in relation to the currency in circulation (some 6 percentage points less growth was recorded), mainly due to a restrictive budget policy. The economy lending and dram-denominated deposits growth rates have topped the forecasts by 6 and 7 percentage points, respectively, owing to increased financial intermediation. The dram broad money has increased by 52.8 percent year-on-year as opposed to 63.9 percent year-on-year growth in December of the previous year. In this structure, dram-denominated deposits have increased by 65.3 percent, currency in circulation by 44.3 percent and monetary base by 45.1 percent. At the same time, attributable to a restrictive monetary policy implementation, the broad money has grown by 37.6 percent compared to 42.3 percent year-on-year in December of the previous year. Notwithstanding deceleration of dramization, the economy lending remains buoyant, with growth rates having reached 79 percent year-on-year during the second quarter.

## CORRECTED FORECASTS FOR Q3 2008 TO Q1 2009 AND FORECAST FOR Q2 2009

### External environment<sup>6</sup>

As it was expected, inflationary pressures from the external sector on food products have eased to some extent in the second quarter. Nevertheless, because of continued rise of oil prices, of the latent force of inflation in the domestic market and of existing rigidities set toward decrease, the domestic prices were still reluctant to trend downward. The main impact is expected to show up in the course of the third quarter when food prices would somewhat drop amid favorable developments in the domestic and external environment. There is quite a high degree of uncertainty and riskiness associated, specifically, with continued rise of oil prices, the ancillary impacts of which may play a substantial role.

<sup>4</sup> The export and import indicators in real terms are the Central Bank estimations.

<sup>5</sup> Import of goods (CIF) in the period January-May has increased by 40.8 percent, and 44.9 percent, when diamond is excluded. The indicators of services are forecasts.

<sup>6</sup> The information provided from sources such as *The Economist*, *Global Insight*, *The Financial Times*, US Department of Agriculture, *РосБизнесКонсалтинг* and others has served a ground for the forecasts of the external sector.

On the whole, a scenario of relatively ‘smooth landing’ of the US economy seems realistic, and there are expectations that it would rebound starting the second half of 2008. That would also be true for the financial markets, the securities and loan markets in particular, where the investor inflow will ease the pressure on prices of raw materials and the dollar exchange rate depreciation.

The Euro exchange rate vis-à-vis the US dollar in the forecast period will be in the current range of 1.54 - 1.58 for one Euro. The reason for such depreciation is the expectation that the Federal Reserve System would leave interest rates unchanged in the near future. In the European Union’s point of view, the expected interest rate rise, which seems to be good for Euro, will be balanced by weakening of the economic growth.

Global oil prices are expected to grow further in the upcoming time to reach as high as USD 150 a barrel, determined by both fundamental and speculative factors. Besides, domestic prices in Armenia will be affected also by the increase of prices of importable natural gas expected as soon as in the start of 2009. This will have some influence on almost all items of industrial manufacture.

As regards grains, in the event of good harvest expectations, following price drops in Q2 2008, the third quarter would be decisive in terms of world prices and marketing trends. In anticipation of some 5 percent fall of prices in the third quarter as well, risks in the long-term perspective are set toward increase, because a number of key factors such as growth of demand, limited supply, climatic changes and demand for biofuel may shape new trends for growth. The grain prices may somehow affect the prices of other food products like rice, meat, dairies, fats and oils, et al., which will depend also on how events develop in the market of these products individually.

*Overall, high inflationary pressures coming from the external sector will keep on easing to a certain extent in the third quarter too, whereas in the next quarters external developments will depend on the situation in food markets. At least for now, just how price decreases reported recently in international food markets will affect domestic food prices in July-August still leaves a room for a guess-work. New inflationary exposures and pressures are envisaged with regard to oil products and, starting 2009, to natural gas, which may draw a material impact on prices of other goods through the rise in cost price.*

#### Aggregate supply

The sectoral forecasts for Q3 and Q4 2008 have been adjusted, having nevertheless not resulted in any material change of the forecast GDP growth. In the second half of the year, the economic growth will be 10-13 percent and in the first six months of 2009 – 8-11 percent<sup>7</sup>.

Construction and services will continue largely contributing to the economic growth, as has been the case previously.

Some 16-17 percent growth of value added in **Construction** for the second half of 2008 will be determined by expected investments in transport, communications, energy, metallurgy and chemical industry. High growth rate of construction will persist in the next year as well, making up 12-14 percent in Q1 2009. The risks coming from construction are set toward increase and relate to possible implementation of some major investment projects.

In **Industry**, the forecasts for the second half of 2008 have been corrected toward decrease by nearly 2 percentage points, therefore some 4-6 percent growth of value added is expected in the third and fourth quarters. The decrease in projected indicators was attributable to technical issues which the mining industry and metallurgy had faced in the course of the first four months of the year (the solution of these issues as well as the recovery of industry were planned to push through since the second

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<sup>7</sup> The GDP distribution fan chart is presented in Appendix 2.

quarter) and to the fact that investment planned for the chemical industry were carried over to the fourth quarter. The industry will grow mostly owing to high growth rates in production of building materials (determined by a large external and domestic demand) and production of alcoholic and non-alcoholic beverage and canned food (determined by rich crops of fruit and vegetable). Over the first six months of 2009 growth rates of industry are forecast to rebound in the range of 5-7 percent. The risks coming from industry are set toward decrease and are conditional on the slowing of recovery of production volumes in mining industry and metallurgy. In addition, the risks of reducing industrial output are associated with the possible shrinkage of production volumes in metallurgy, chemical industry and production of building materials, as prices of natural gas are going to increase since January 1 2009.

In **Services**, high growth rates have also been revised toward a slight decrease determined by the slowdown of retail and wholesale trade that was observed since the start of the year. As a result, the real growth of value added in services in the second half of 2008 is expected within 10-12 percent. There are expectations of high growth rates in transport, communications and travel services as well as financial and other services. The growth rate of services in the first half of 2009 is expected to remain in the range of 11.5-13 percent. Here, risks are mainly set toward increase and are attributable to previous and planned investments into the transport and communications sub-branches and to the possible expanding of tourism.

In **Agriculture**, the forecasts have been corrected toward increase owing to expectations of abundant crops of fruit and vegetable. As a result, some 3-5 percent real growth is expected over the second six months of the year. Though risks in agriculture are of dual nature, the prediction is that the indicators would outdo the forecasts. Which is why, in forecasting the growth of agriculture, a less risky approach had been chosen.

#### Aggregate Demand

Estimations of deviation of **Private consumption and investment** from equilibriums show that in the course of the second half of 2008 the deviation of private expenditures from the equilibrium will transform into a positive value and will be at the interval of 0.2-0.3 percent, depending greatly on the growth of consumption. In the meantime, investments will be at balance and will only depart their equilibrium toward a negative value during the first two quarters of 2009. Also, the positive gap of private consumption will broaden, creating certain inflationary pressures.

By the end of the year the **Fiscal policy's** impact on aggregate demand will be less expansionary than it was forecast, making up 0.7 percent. This will mainly depend on higher performance in collection of taxes, hence a more restrictive tax impulse.

*In view of expected trends in real and fiscal sectors, one may conclude that in the forecast period the aggregate demand will be within the equilibrium and will not create ancillary inflationary pressures.*

In consideration of the low indicator of **Export of goods and services** in the second quarter, the relevant indicators for the quarters to come have been set toward decrease. This is consistent with the new forecasts for the industry. There is expectation that the indicators of export of goods and services in dollar terms in the third and fourth quarters will grow by 12.3 percent and 12.6 percent, respectively. With such growth in nominal volumes, there will be growth of real volumes as well, as some technical problems in the mining industry will be settled and growth rates in the metallurgy will be maintained. As for the 2009 developments, the growth of export will be determined by the increase in real volumes. As a result, the year-on-year growth of export of goods and services in the first and second quarters will be 9.5 percent and 10.2 percent, respectively.

As regards **Import of goods and services**, the indicators for the quarters to come have been set toward increase, due to accelerating growth rates. Soaring and persistently high oil prices played their role in corrections toward the increase of the volumes of import in dollar terms. If such trends persist, the annual growth of import of good and services will be in the range of 30-35 percent. High growth rates of import in dollar terms will be maintained over 2009 plus the expected rise in gas prices since the start of the year. This is why the indicator of import of goods and services for Q1 2009 has been set toward increase, which will be 22.1 percent year-on-year and it will make up 18.5 percent in the second quarter.

In view of the current performance, the projections on **Non-commercial transfers** have been corrected toward increase. By the end of the year, the growth rates of net inflow of non-commercial transfers will be within 30-35 percent but will slow down in the course of two quarters of 2009 to 25-30 percent.

In the outcome, the expectation is that the current account deficit of balance of payments will deteriorate to 9.0-9.5 percent in relation to the GDP.

#### **Labor market**

According to the Central Bank estimations, the average nominal wage in the second half of 2008 will grow by about 20 percent instead of 18 percent, as was outlined in the previous projection. In the third and fourth quarters the wage will grow by 19.5 percent and 20.1 percent, respectively. In Q1 2009 the average wage in nominal terms will grow by nearly 21 percent instead of 17 percent projected previously and it will grow by around 20 percent in the second quarter of 2009.

In the course of the first two quarters of 2009, the impact of labor market on inflation will be stimulatory, as it has been the case in the second six months of 2008. This is explained by the fact that the growth of productivity will be in the range of 8-10 percent and it will only partially offset the stimulating impact of wages on inflation.

#### **Money and credit**

Based on the predictions of the Central Bank, the economy will see the dramization further slowing in the 12-month period from July 2008 to June 2009, which is why the annual growth rates of monetary aggregates and the dram components in particular will slow down quarter by quarter. The year 2008 will end up reporting the following performance of annual growth of monetary indicators: dram broad money – 26.6 percent, broad money – 25.4 percent, monetary base – 13.4 percent, dram-denominated deposits – 37.8 percent and currency in circulation – 18.5 percent. The dramization of the economy at the close of December will increase by round 9 percent year-on-year while the growth of lending will make up 65.6 percent.

The year-on-year growth rates of the above indicators as of the end of June 2009 will be maintained in general: dram broad money will grow by 25.5 percent, broad money – 22.8 percent, monetary base – 13.7 percent, dram-denominated deposits – 35.1 percent, currency in circulation – 18.1 percent and the dramization of the economy – 8.4 percent. The indicator of economy lending is the only exception as it will decrease by about 19 percentage points, which is a result of calculation of the growth rate in the event the loans of the same volume grow in absolute terms (an active uptake of projects in mortgage and consumer lending markets).

This performance of the above-mentioned monetary indicators will also depend on a restrictive nature of the monetary policy. What is more, with the rates of inflation slowing further, the real level of short-term interest rates as an operational target of the Central Bank will be positive in the forecast time horizon.

## **INFLATION FORECASTS**

Based on the indicators expected in respect of individual sectors of the economy, the 12-month inflation for the upcoming period has been forecast. Given that interest rates remain unchanged, the 12-month inflation will be 5.1 percent in the second quarter of 2009 and it will reach 6.2 percent in the fourth quarter of 2008. The baseline scenario of inflation for Q3 2008 outlines a 20 percent drop in domestic prices of bread products. The first and second quarters of 2009 include 0.8 percent direct and 0.5 percent indirect contributions (due to the increase in import price of gas) and 0.6 percent contribution (due to a possible increase of electric energy tariffs) to the cumulative CPI as well as the indirect impact of the increase of oil prices by 0.3-0.4 pp. In the period under review the contribution of secondary impact of food products on inflation has been considered as well, which, however, is fading off. Overall, attributable to the impact of the above mentioned factors, the current inflation forecasts have been adjusted toward decrease compared to the previous forecasts.

Likely are the developments, which may cause inflation to deviate from the forecast toward increase, as follows:

- with global grain prices falling, domestic prices may drop less than expected due to imperfect domestic market, and global grain prices would shape higher-than-expected levels;
- with the current account deficit worsening more than expected, the dram exchange rate may result in higher prices of import goods and have an expansionary impact on inflation; and
- the aggregate demand may have even more expansionary impact on the state budget.

Likely is the below development, too, that may cause inflation to deviate from the forecast toward decrease:

- the agricultural output may be higher than expected owing to good weather conditions.

## **MONETARY POLICY DIRECTIONS IN THE FORECAST 12-MONTH PERIOD**

In view of the Q2 2008 developments and the Central Bank forecasts for the future 12-month period, the Board of the Central Bank has reviewed the forthcoming directions of the monetary policy. It acknowledged that in the end of the second quarter there had been various developments in the external environment, reflecting continued sharp rise in oil prices as well as noticeable decline in grain prices. As such, the latter development has not yet shown up on the domestic prices of bread products. At the same time, the impact of the domestic environment on inflation has been balanced.

As for the developments in the forecast period, it is expected that high inflationary pressures coming from the external sector in relation to food products will keep on loosening to some extent during the third quarter of 2008 too, whereas, over the next quarters, the external developments will depend on the situation in the food markets. Also, just how recent price decreases reported in international food markets will affect domestic food prices in July-August remains uncertain. New inflationary exposures and pressures are envisaged with regard to oil products and, starting 2009, to natural gas, which may draw a material impact on prices of other goods through the rise in cost price.

With uncertainties about how quickly and to what extent domestic prices would respond to the price changes in international markets as well as in consideration of existing inflationary risks driven by external factors, the Board of the Central Bank found it reasonable to further tighten the monetary conditions while stressing the importance of the efforts to ease inflation expectations and maintain inflation as close to the target as possible.

In view of evaluation about uncertainties in the way domestic prices (would) respond to price change in international markets as well as with different opinions about the impact of new external inflationary risks, the Board considered raising the CBA Refinancing Rate by 0.25 or 0.50 percentage points.

In the outcome, the Board decided to raise the CBA Refinancing Rate to 7.25 percent, with Lombard Facility and Deposit Facility set at 10.25 percent and 4.25 percent, respectively.

The main argument for gradual tightening of the monetary conditions is that a prevailing part of inflation currently is driven by exogenous factors whereas the inflation forecasts for the 12-month period are significantly below the actual projection and are closer to the upper border of the target. At the same time, with negative gap of the real GDP, steep interest rate increases will further deteriorate the negative gap in the near future that would entail undesirable GDP volatilities. Anyway, the Central Bank believes that even gradual interest rate increases will shape positive real interest rates in the end of 2008.

## APPENDIX

**Appendix 1. Quarter against the same quarter of the previous year**  
*(real GDP growth forecast fan chart)*

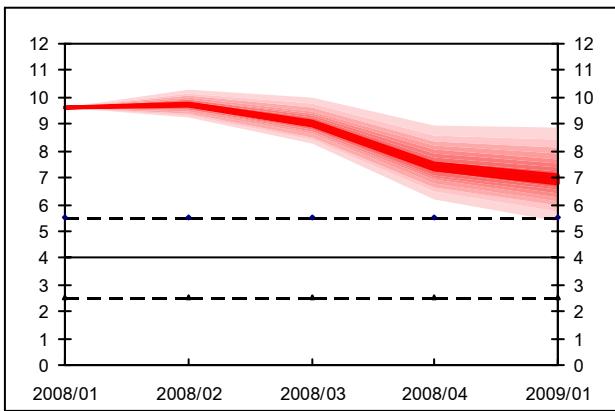


*Q3 and Q4 2008 and  
Q1 and Q2 2009  
forecasts*

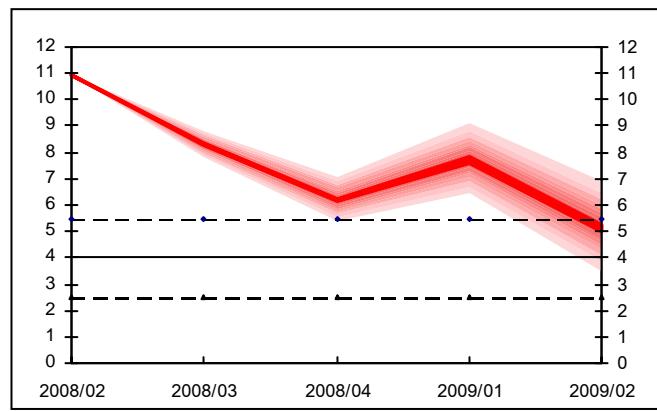
Economic growth interval	Economic growth interval probability			
	Q3 2008	Q4 2008	Q1 2009	Q2 2009
<b>6-8%</b>	0.00%	0.09%	10.58%	9.31%
<b>8-9%</b>	0.25%	2.45%	15.82%	11.51%
<b>9-10%</b>	6.79%	8.28%	19.49%	14.76%
<b>10-11%</b>	35.61%	18.14%	19.27%	16.44%
<b>11-12%</b>	40.28%	25.07%	14.59%	15.48%
<b>12-13%</b>	14.96%	22.68%	8.42%	12.16%
<b>13-14%</b>	2.03%	14.27%	3.70%	7.96%
<b>14-15%</b>	0.10%	6.34%	1.25%	4.39%
<b>15-17%</b>	0.00%	1.18%	0.19%	1.36%

## Appendix 2. Inflation forecast fan charts

**Chart 1. Forecast made in March 2008**



**Chart 2. Forecast made in June 2008**



*Inflation forecast made  
in March 2008 for Q1 2009 (6.9%)*

Inflation (%)	below 6	6.0-6.5	6.5-7.0	7.0-7.5	7.5-8.0	8.0-8.5	above 8.5
Probability	<14.1	14.8	18.7	18.2	14.7	10.1	< 5.7

*Inflation forecast made  
in June 2008 for Q2 2009 (5.1%)*

Inflation (%)	below 4	4.0-4.5	4.5-5.0	5.0-5.5	5.5-6.0	6.0-6.5	above 6.5
Probability	< 10.5	13.1	18.1	19.2	18.0	11.1	< 10

**Inflation Report**

**Q3, 2008**

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## 1. SUMMARY

The Q3 2008 saw the liquidity crisis abruptly intensifying in the global financial market. Unstable financial markets and large-scale liquidity injections had their impact on commodities markets too, where price volatility and uncertainty increased notably. The latter has been more pronounced in the global oil market. Though oil prices dropped during the quarter they have nevertheless demonstrated an extremely volatile behavior. As regards food products – grain and rice in particular – their international prices decreased to some extent determined by expectations for the rich harvest in the 2008/2009 marketing year and the slowing of the world demand.

The notable decrease of food prices in international markets recorded in the second quarter has not affected the domestic prices in the third quarter as well, whereas inflation has reduced essentially in the CIS, Baltic and some East European countries as a result of price decreases on basically food products (see Appendix 1 and 2). The August conflict in the Region and the resultant cargo transportation problems also contributed to the persistence of high prices of food in the domestic market.

In the end of the third quarter of 2008, the year-on-year<sup>1</sup> inflation was 11.3 percent against the target figure of 4±1.5 percent, mainly determined by persisting high levels of domestic prices of food. The indicator topped the annual inflation of the previous yearend by about 5 percentage points. In particular, the year-on-year growth of items "Bread", "Fats and oils" and "Petrol and diesel fuel" items at the end of September 2008 was 31.3 percent, 28.0 percent and 24.1 percent, contributing to the inflation by 4.7, 1.1 and 0.7 percentage points, respectively.

In the third quarter of 2008, prices of three main components included in consumption basket, namely prices of food products (alcoholic beverage and cigarette included), non-food products and services have grown by 12.6 percent, 8.2 percent and 10.6 percent year-on-year, respectively. Prices of non-food products and services remained at a high level because of the persistence of secondary impacts of food products. As a result, the level of core inflation remained high as well (see Section 2: *Inflation Developments*).

In line with the above mentioned developments, the Central Bank continued to tighten the monetary conditions. In the past 12 months the Central Bank has gradually raised the refinancing rate by 0.25 percentage point for a total of 3.0 percentage points. In the end of the third quarter, the refinancing rate reached 7.5 percent. At the same time, growth trends for monetary aggregates have been in the limelight.

In the third quarter of 2008, economic growth was 10.7 percent (the economic growth indicator for the period January-September has been 10.4 percent). The accelerated growth rate was mainly driven by increased volumes of production in construction, industry and services. Some slowing of the growth rate was observed in agriculture compared to the previous quarter which, however, had been determined by high growth rate recorded in the third quarter of the previous year.

In the reporting quarter, the real growth of domestic demand was 10.6 percent (14.2 percent in the previous year). The slowing of growth rates of the domestic demand was attributable mostly to the behavior of private spending. In the structure of private spending the real growth rates have somewhat decelerated on the part of consumption and investment, which is explained by the slowing of real growth rates of household incomes, i.e. wages and remittances, which is in turn determined by persisting high pace of inflation during the year. As a result, the private sector's real expenditures have had almost a nil impact on inflation.

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<sup>1</sup> Year-on-year means against the same period of the previous year.

In the third quarter, the fiscal policy's impact on the aggregate demand has been slightly expansionary than forecast, and 0.8 percent expansionary impulse was recorded instead of the forecast 1.1 percent. The deviation occurred as actual indicators were below the projected levels of incomes and expenditures. At the same time, the nominal GDP of the quarter has notably outstripped the projection (mostly due to more-than-expected growth of the GDP deflator) under which circumstance the revenue impulses were less restrictive while the expenditures impulses were less expansionary than projected.

Trends in the labor market in the third quarter repeated the previous quarters' patterns, that is the subsiding rate of unemployment and growing wages and labor productivity. Compared with the same period of the previous year, the growth rates of labor productivity have notably decelerated thus resulting in the strengthened inflation pressures to the consumer market coming from the labor market. The growth rates of nominal and real wages have slowed down to some extent.

The deficit of current account tended to grow over the third quarter of 2008, which was a result of faster growth rates of imports amidst slowing exports. The year-on-year increase of import (Debit) was 47.7 percent and year-on-year increase of export (Credit) was 1.4 percent<sup>2</sup>. Persisting high growth rates of inflow of private remittances and seasonal workers' income remains supportive to halting the current account deficit from further deteriorating. The year-on-year growth of the current account deficit in the third quarter reached USD 226.4 million while its share in GDP for the nine months made up 10.8 percent (5.7 percent in the same period of the previous year).

The Q3 2008 monetary environment<sup>3</sup> was characterized by the slowing of the dramization trends, which reflected a relatively slow growth of the dram components in monetary aggregates. The dram broad money increased by 35.4 percent year-on-year, with dram-denominated deposits grown by 45.1 percent and currency in circulation grown by 28.4 percent, in comparison with the growth in the previous quarter by 47.5 percent, 56.5 percent and 41.2 percent, respectively.

Given the relative stability of the Armenian dram against the US dollar, foreign currency deposits in dram terms have grown by 8.8 percent year-on-year (4 percent in the previous quarter). High growth rates of lending to the economy have persisted as well, constituting 65.5 percent year-on-year.

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<sup>2</sup> Based on the Republic of Armenia National Statistical Service data, in Q3, 2008 year-on-year increase of import (CIF) was 47.4 percent and year-on-year increase of export (FOB) was 2.6 percent.

<sup>3</sup> Starting the third quarter, the Inflation Report will include summary balance sheet indicators of the Central Bank, commercial banks and credit organizations. See details in the CBA Bulletin (May, 2008, pg. 106-107).

## 2. INFLATION DEVELOPMENTS

### 2.1. INFLATION BY GOODS AND SERVICES, CORE INFLATION

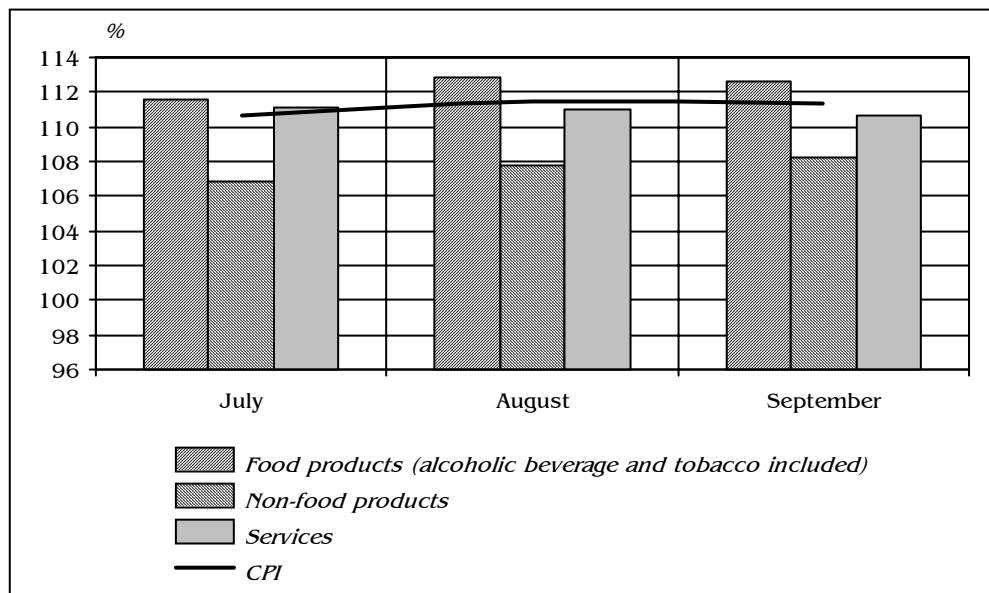
Inflation in September 2008 was 11.3 percent against previous September 2007. The rise in prices of food products (alcoholic beverage and tobacco included), non-food products and service tariffs was 12.6 percent, 8.2 percent and 10.6 percent, respectively.

The price increase in "Food products" (including alcoholic beverage and tobacco) was mainly a result of price increase in items "Bread" (31.3 percent), "Fats and oils" (28.0 percent) and "Meat products" (9.8 percent), which contributed to the rise in prices of "Food products" by 8.6, 2.1 and 1.7 percentage points, respectively. At the same time, some 10.8 percent price decrease in item "Vegetable and potato" reduced the inflation in "Food products" by -0.9 percentage point.

The rise in prices of item "Non-food products" was mainly conditioned by price increases in sub-items "Personal usage cars and petrol" (20.7 percent), "Footwear" (9.5 percent), "Garment and knitwear" (6.6 percent) and "Fuel" (20.5 percent), having contributed to the inflation of the group by 4.3, 1.1, 1.0 and 0.9 percentage points, respectively.

The inflation in the group "Services" was due to risen tariffs in "Medical services" (18.4 percent), "Household utility services" (7.8 percent), "Transport services" (10.8 percent), "Education services" (3.6 percent) and "Public catering" (11.0 percent), having contributed to the inflation of the group by 5.6, 1.9, 1.6, 0.5 and 0.5 percentage points, respectively.

*The 12-month CPI in Q3 2008 by the main items of goods and services*



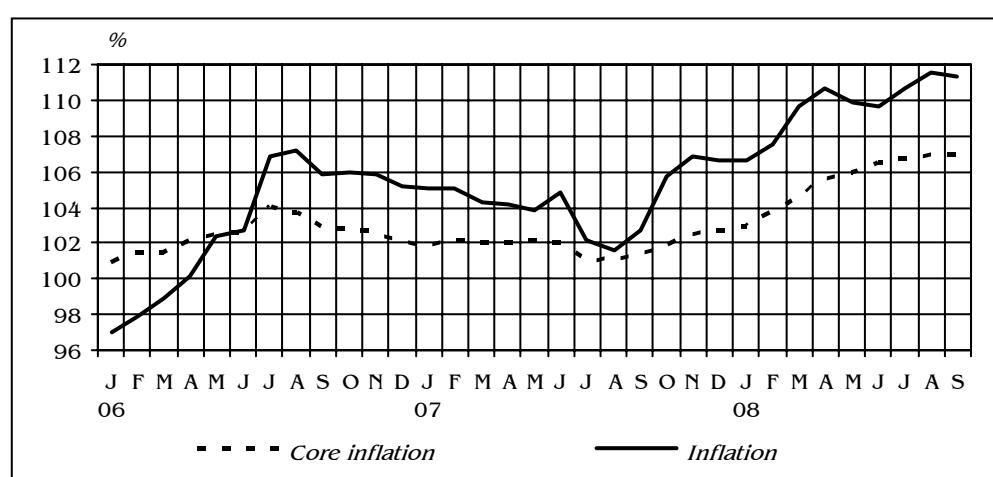
In September 2008, inflation in Armenia was 11.3 percent compared to September 2007, having increased by nearly 2 percentage points against the same indicator of the previous quarter. The inflation in food products (alcoholic beverage and tobacco excluded) was 14.1 percent, up by nearly 3 percentage points against the previous quarter. For comparison, while the price decrease of certain food products, occurred globally during the second quarter, has not yet echoed in a number of CIS, Baltic and East European countries<sup>4</sup>, in the third quarter, however, the influence was

<sup>4</sup> See details in Appendix 1: "Current Inflation Trends in Some CIS, Baltic and East European Countries".

obvious. The slowdown of the rate of inflation in nearly all these countries in the third quarter was explained by the decrease of food prices. However, in the third quarter of 2008, compared to the same quarter of the previous year, food prices have risen by 21.7 percent (23.5 percent in the previous quarter) in Russia, 18.2 percent (21 percent) in Latvia, 15.7 percent (18.9 percent) in Lithuania, 13.9 percent (18.3 percent) in Estonia, 7.2 percent (11.6 percent) in Slovenia, 8.3 percent (10.4 percent) in Czech Republic, 7.8 percent (10.5 percent) in Slovakia, 5.1 percent (7.6 percent in Poland), and a median of 6.5 percent (7.5 percent) inflation was recorded in the countries of the European Union<sup>5</sup>.

From the monetary policy point of view, the assessment of changes of core inflation is crucial, which leaves a significant impact on the implementation of the monetary policy in a sense of achieving the annual inflation target. Starting March 2008, the Central Bank has been calculating core inflation by using a new method of "exclusion and adjustment"<sup>6</sup>, the indicators of which are subject to public disclosure since April 2008.

*Inflation and core inflation,  
2006-2008  
(% to the same month of the  
previous year)*



Core inflation in September 2008, against September of the previous year, was 6.99 percent mainly driven by the price increase in items "Surgery services at hospitals" (17.3 percent), "Petrol" (23.0 percent), "Pork" (73.4 percent), "Air transport" (28.8 percent), "Medical laboratory services-x-ray" (83.8 percent), "Butter" (27.9 percent), "Middle medical staff and laboratory assistant services" (24.6 percent), macaroni (22.0 percent), and "Doctor and surgeon consulting services" (37.5 percent).

### Statistical review of inflation fluctuations

In order to review the changes in consumer price index and price indexes of individual items included in consumer basket, as well as to reveal the factors determining their fluctuation, the influence of three components (trend, seasonal and irregular components) used in statistics theory was separated and assessed for the time period from October 2005 to September 2008.

The calculations show that between October 2005 and September 2008, in comparison with the period from October 2004 to September 2007, the influence of trend component on CPI has increased by 3.1 percent while the influence of irregular component and of seasonality component has fallen by 1.7 percent and 1.4 percent, respectively.

<sup>5</sup> See Appendix 2: "Food Price Indexes in the Republic of Armenia and Other Countries"

<sup>6</sup> The advantages and disadvantages of the new methodology for calculation of core inflation are presented in detail in the CBA Review (Q1 2008).

*Share of components causing volatility in monthly price indexes (October 2005 – September 2008) (%)*

	Trend	Seasonality	Irregular component	Total
CPI	-0.3	81.1	19.2	100.0
1. Bread products	12.9	24.6	62.5	100.0
2. Meat products	6.1	40.8	53.1	100.0
3. Fish products	7.8	48.7	43.5	100.0
4. Dairy products and oils	5.7	32.7	61.6	100.0
5. Fruit and vegetable	3.8	87.2	9.0	100.0
6. Other food products	9.6	42.5	47.8	100.0
7. Non-alcoholic beverage	15.2	24.5	60.2	100.0
8. Alcoholic beverage and tobacco	30.2	15.3	54.5	100.0
9. Garment and footwear	4.2	45.6	50.3	100.0
10. Rent, electricity, and fuel	0.4	31.1	68.5	100.0
11. Home appliances	1.1	19.4	79.5	100.0
12. Health services and medication	7.2	31.2	61.6	100.0
13. Transport and communications	1.7	21.4	76.9	100.0
14. Leisure and items of art and services	1.2	90.6	8.2	100.0

The influence of the three components changed differently by different items. The seasonality component has the largest influence on the following items: "Leisure and items of art and services", "Fruit and vegetable", "Fish products", "Garment and footwear", "Other products" and "Meat products". The influence of irregular component is the largest on the following items: "Home appliances", "Transport and communications", "Rent, electricity, fuel", "Bread products", "Health services and medication" and "Dairy products and oils".

The fluctuations of consumer price indexes were reviewed also with the help of monthly price index fluctuation coefficients of each item.

*Monthly price index fluctuation coefficients in Q3 of 2006, 2007 and 2008 (%)*

	2006	2007	2008
CPI	0.5	1.9	1.4
1. Bread products	0.2	1.4	0.5
2. Meat products	0.5	1.1	1.1
3. Fish products	10.9	1.7	21.4
4. Dairy products and oils	0.0	2.2	0.1
5. Fruit and vegetable	4.1	13.4	16.0
6. Other food products	0.8	1.1	0.5
7. Non-alcoholic beverage	0.6	0.0	0.0
8. Alcoholic beverage and tobacco	0.0	0.0	0.2
9. Garment and footwear	0.8	0.2	0.5
10. Rent, electricity, and fuel	1.1	0.0	0.0
11. Home appliances	0.5	0.4	0.5
12. Health services and medication	3.0	0.3	0.6
13. Transport and communications	1.2	0.1	0.3
14. Leisure and items of art and services	2.0	2.5	1.4

The indicators in the table point to the fact that CPI fluctuations were driven mainly by high fluctuations of prices of food products, particularly "Fish products", "Fruit and vegetable" and "Meat products". Item "Rent, electricity, fuel" demonstrated volatility, too.

## 2.2. FULFILLMENT OF INFLATION TARGET

In the third quarter of 2008, some 2.5 percent deflation was recorded, under which condition the 12-month inflation reached 11.3 percent. It has exceeded both the central forecast of 5.6 percent<sup>7</sup> made in previous September for the 12-month horizon and the corrected 8.3 percent indicator made in June of this year<sup>8</sup>. However, where the first deviation was driven by the impact of inflationary pressures seen in the

<sup>7</sup> See the Monetary Policy Program (Q4 2007) (Minutes of the Central Bank Board Meeting of October 2, 2007).

<sup>8</sup> See the Monetary Policy Program (Q3 2008) (Minutes of the Central Bank Board Meeting of July 2, 2007) and Appendix 5.

external sector since the middle of the previous year, in the second case the actual indicator deviated from the corrected projection because of non-occurrence of the expected decrease of prices in item "Bread products" (with -3 percentage point contribution to inflation) and partly because of the conflict in the Region and associated temporary import bottlenecks.

The Central Bank has been consistent in presenting the likely risks that could have driven inflation to deviate from the projection along with inflation forecasts, which are subject to public disclosure since the middle of 2007<sup>9</sup>. Concurrent with the events and actual development of higher inflation in international markets, the inflation indicators forecasted for the next quarters were gradually set toward increase.

The higher-than-expected level of international prices of oil and food products (grain included) has been outlined in monetary policy programs of previous quarters as the main risk toward intensification of inflationary pressures. This risk has actually shown up in the period October-November of 2007 and February-March of 2008, having affected the level of prices in the domestic market and created significant deviations from the projection.

In view of the said deviations, as well as anticipating that the factors determining such deviations may persist, the Central Bank adjusted the forecasts in March 2008 by raising the inflation indicator to 9.0 percent from 5.6 percent forecast in September and December of 2007, and to 8.3 percent from the forecast made in June 2008, which was toned down a little in consideration of the impact of expected reduction in domestic prices of bread products. As a matter of fact, however, no price reduction occurred, and the actual inflation in the third quarter constituted -2.5 percent, entailing a level of 11.3 percent inflation year-on-year. This was a deviation from the projection by 3 percentage points just as much as the assessment of the likely impact of reduction in domestic prices of bread products.

High inflation recorded as of the end of September year-on-year was determined by 12.6 percent rise in food products. Items "Bread products", "Fats and oils" as well as service tariffs have contributed to the inflation by 8.6 percent, 2.1 percent and 10.6 percent, respectively. Increased tariffs on household, utility services and medical services remained as other contributors to the inflation.

As domestic food and fuel prices continued rising since the start of the year, their secondary impacts were more pronounced in the third quarter, and these impacts, coupled with the impact of excess aggregate demand from the past period, have resulted in a significant increase of non-food prices and service tariffs. In the outcome, though the third quarter's core inflation was 1.6 percentage points below the indicator of the previous quarter, making up 0.6 percent, in the end of September it reported a higher level of 7.0 percent<sup>10</sup> year-on-year (6.3 percent in the second quarter), which is 4.7 percentage points above the level recorded in the end of the previous year.

Responding to the mentioned developments and stressing the importance of the efforts to ease inflation expectations and to minimize divergence of inflation from the target, the Central Bank kept on tightening monetary policy conditions since the beginning of 2008. The Central Bank has gradually raised the refinancing rate by 0.25 percentage point each time since the second half of 2007 up to the end of that year (a total of 1.25 percentage points), and it has further raised the refinancing rate by a total of 1.25 percentage points from February to June of 2008 (0.25 percentage point each month) to 7.75 percent in September of 2008.

This interest rate rise has always been followed by gradual increase of interbank market interest rates. The implementation of tighter monetary conditions remained a policy throughout the first nine months of this year, reflecting the slowing of growth rates of the main monetary indicators in comparison with the same period of the previous year.

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<sup>9</sup> See monetary policy programs publishable since June of 2007.

<sup>10</sup> Core inflation has been calculated based on a new methodology developed by the Central Bank (see the CBA Review (Q1 2008)).

### 3. INFLATION FACTORS

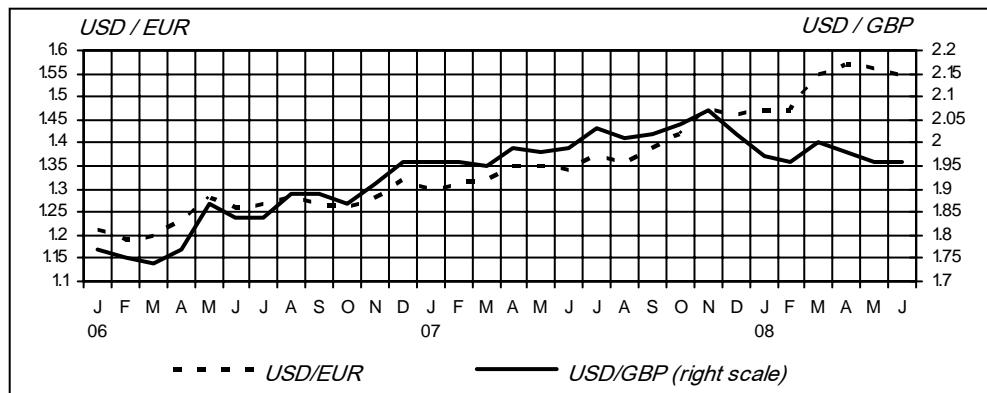
#### 3.1. EXTERNAL ENVIRONMENT

In the third quarter of 2008, the world economic growth remained slow because of the persisting global financial crisis. The crisis brought some powerful American and European banks to their knees as they got bankrupt, nationalized or merged/acquired. This situation affected not only the US economy but also started influencing the demand of other countries, weakening the pace of world economic growth. To ensure there are sufficient levels of liquidity in financial markets, the central banks of the developed world have taken on decisive actions. The US Federal Reserve System undertook to provide an unlimited amount of foreign currency swaps to leading central banks which have embarked on a concerted injection of vast dollar liquidity in to the interbank market with the purpose to meet the demand for dollar in European markets. Further, the Fed appeared with a proposal to buy securities for an amount up to USD 600 billion. In addition, the US authorities planned to create a government agency that would take on problem debt assets of financial institutions. To this end, the US Congress approved an additional USD 700 billion bail-out package.

Though European governments did not act on a single program they, however, took similar concerted actions: all leading European countries increased the amounts of guaranteed deposits and made vast injections of cash. On October 8<sup>th</sup>, in particular, the European Central Bank, the Bank of England and the Swiss National Bank injected about USD 120 billion in to the market. On the same day, the lead central banks of the world lowered as one their interest rates by 0.5 percentage point, in an attempt to stop the panic in the financial market.

In the third quarter of 2008, global oil prices performed in an extremely volatile manner. Global prices of food products, of grain and rice in particular, slightly dropped owing to expectations for abundant crops in the marketing year 2008/2009 and the slowing world demand.

*In Q3 2008 the US dollar appreciated sharply*



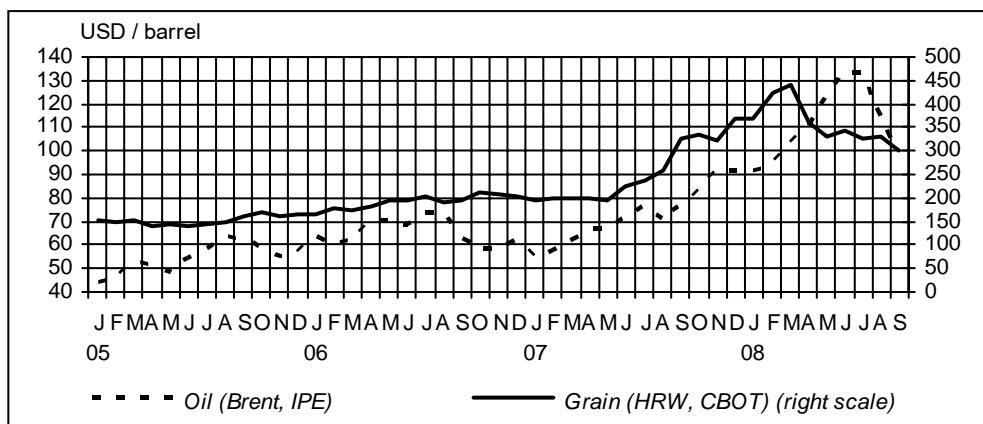
In the third quarter, the US dollar kept on gaining in value. The euro exchange rate vis-à-vis the dollar depreciated to 1.39 from the previous 1.58 US dollar for one euro, explained by expectations of market participants for the worsening of economic outlook in the Eurozone. The euro exchange rate vis-à-vis the dollar depreciated by round 9.6 percent

In the beginning of the third quarter oil prices continued climbing at a high pace. Interestingly, at the New York Mercantile Exchange oil prices reached USD 145 a barrel in early July only to plunge to nearly USD 90 a barrel in the end of the quarter. As a result, oil prices have reported 54 percent rise year-on-year in the third quarter against 78.2 percent in the previous quarter. The continuous decline of oil prices was determined by the slowdown of the world economic growth rates and the world demand.

Grain prices kept on falling over the third quarter, too, despite the recorded growth of 16.5 percent year-on-year. It is noteworthy, however,

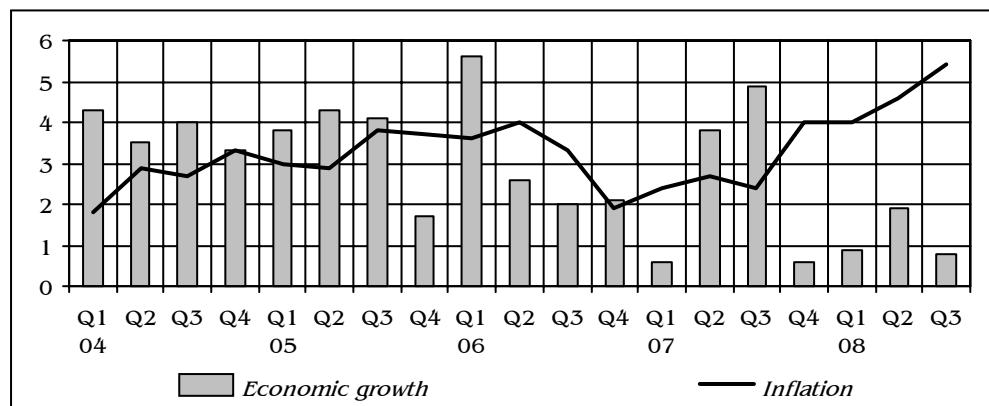
that during the third quarter grain prices started decelerating at a slower pace compared to the second quarter, which is explained by the augmenting demand to pile up stocks. Grain prices fluctuated in the main within USD 9.6-7.4 a bushel. Rice prices dropped by nearly 12.1 percent against the previous quarter. In the marketing year 2008/2009 the grain crop is expected to be around 682 million tons against 611 tons in the previous year. In the outcome, the world grain stocks will ultimately grow approximately by 24.6 million tons to amount to 145.3 million tons. 12 CIS countries anticipate crops to be increasing from 93 million tons to 115 million tons, of which from 49 to 63 million tons in Russia, from 14 to 25.5 million tons in Ukraine, although crops are expected to decrease in Kazakhstan from 17 to 14 million tons. No significant changes are expected in the rice market yet prices have gone down considerably owing to positive expectations.

*Oil prices dropped notably in Q3 2008*



In the third quarter of 2008, some 0.3 percent economic downturn<sup>11</sup> quarter-on-quarter was recorded in the **United States of America**, according to the preliminary estimates (2.8 percent in the previous quarter). The downturn, however, was slower from what markets really anticipated (the expectation was for a 0.5 percent decline). The main reason of the slowdown was the shrinkage of the real private consumer spending by -2.3 percentage points and residential housing expenditures by -0.7 percentage point. On the other hand, net export, increased government expenditures and stocks have positively contributed to the growth of GDP by 1.1, 1.2 and 0.6 percentage points, respectively.

*Economic growth seems to rebound in the USA, whereas inflation keeps on growing*



In the third quarter of 2008, net export was -4.9 percent of GDP, staying unchanged in relation to the same period of the previous year. Nevertheless, this indicator has slightly decreased in comparison with the previous quarter (5 percent of GDP) due to the continued fall in import

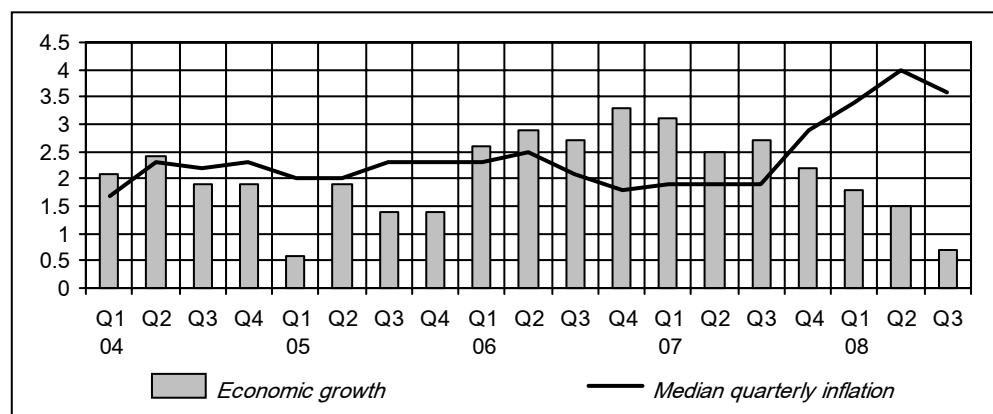
<sup>11</sup> Source: Bureau of Economic Analysis, US Department of Commerce

prices, oil prices in particular. During the quarter the dollar started appreciating, which is why the year-on-year depreciation has slowed down to 9.6 percent (13.6 percent in the previous quarter), thus having also affected the decrease of import prices in dollar terms against the previous quarter.

In the third quarter of 2008, the output growth of **Eurozone** was 0.7 percent year-on-year, according to the preliminary data from the EuroStat, but it reported some 0.2 percent decline quarter-on-quarter that have resulted in a technical recession, the first one in its kind recorded within the past ten years. Economic growth outlook in the short-term continues to remain pessimistic.

The consumer price index growth continued accelerating in the third quarter, making up 3.6 percent year-on-year in September. At the beginning of the quarter, the European Central Bank increased interest rates by 0.25 percentage point to 4.25 percent, giving preference to reducing inflation, in spite of the weakening of output growth risks<sup>12</sup>.

*In Eurozone inflation accelerated in line with the slowing of economic growth*



The spread of global financial crisis to the economy of **Russia** has revealed the vulnerability of the Russian economy to the turbulence in world markets. The crisis had since September had its dual impact on the Russian economy causing the capital to flow out the country and the RTS, a leading index, and the MICEX, a leading stock exchange in Russia, to crumble significantly in the same time. Analysts argue that the economy is facing a real crunch, as the panic with businesses is leading to an irrational decision-making (there are lots of attempts to get rid of securities no matter what the indicators of performance of the business are). The Russian Government has taken on some measures in response to the panic, by announcing, particularly, about a ruble 1.5 trillion (about USD 60 billion) bailout package to the banks. Further, the Russian Central Bank has extended uncollateralized loans to some banks for a 6-month period of maturity and lowered the reserve requirement ratio that gave banks a ruble 500 million-worth additional liquidity.

These developments of global financial crisis and interest rate rise have had their impact on future investment projects of certain companies. Nor things stand favorable in the construction branch as the financial crisis forced the construction developers to close down many projects even in their 80-85 percent completeness. Experts predict that in the near future the volumes of construction may reduce by about 30 percent.

In the third quarter of 2008, the 9.5 percent year-on-year growth pointed to the slowing of actual growth rates in construction in contrast to the second quarter when the respective indicator was 18.2 percent. No essential moves were observed in retail trade as the previous quarter's 14.4

<sup>12</sup> In October, the ECB lowered interest rates by 0.5 percentage point to 3.75 percent, as global financial crisis intensified, while inflationary pressures eased considerably.

percent year-on-year growth persisted over the third quarter as well, though the growth rates decelerated to some extent. In the third quarter industry reported 4.7 percent growth year-on-year compared to 5.5 percent recorded in the same quarter of the previous year.

In the outcome, in the third quarter of 2008 the GDP growth has been 7.2 percent year-on-year, and 7.7 percent for the period January-September.

According to the IMF analysts, by the end of the year the GDP growth will be 6.8 percent, and 3.5 percent in 2009. The economic growth indicators for this year and the years to come were lowered by 0.9 and 3.8 percentage points, respectively. The assumption is that, apart from the impact of the financial crisis, there are signs of the overheating of the Russian economy, which will be reflecting in the slowing of the economic growth rates in the upcoming years. Besides, falling oil prices will also lead to deceleration of growth rates. There is mention that the previous growth of lending that topped 50 percent has been an excessive one.

#### **Balance of payments**

Net outflow of large amounts of capital from the Russian economy over the third quarter has been a landmark event for the balance of payments. The August conflict in the region and the financial crisis in world markets altogether fuelled that outflow of capital. Notwithstanding, large surplus of the current account has more than offset the outflow, allowing the Central Bank to sustain USD 8.8 billion of international reserves<sup>15</sup>.

Such a large increase of the surplus (USD 12.1 billion) has been attributable to the increased surplus of the balance of trade. Some 50.5 percent (USD 134.7 billion) year-on-year growth of exports was recorded in the third quarter versus 42.6 percent (USD 83.3 billion) growth of imports. High growth rates of imports were attributable to persistently high demand for consumer and investment goods. International oil prices persistently high in relation to the previous quarter have also fuelled the growth of export, although they recently are demonstrating downward trends.

As regards the movement of capital, USD 17.3 billion-worth net outflow year-on-year was recorded in the third quarter. Net outflow of capital from the banking sector amounted to USD 15.9 billion and net outflow from the non-banking sector amounted to USD 0.8 billion.

Gross international reserves<sup>14</sup> of Russia have reduced from USD 595.9 billion on August 1<sup>st</sup> to USD 556.06 billion on October 1<sup>st</sup>. Reducing further, the reserves have amounted to USD 515.7 billion as of October 17<sup>th</sup>. China takes the lead, with international reserves amounting to USD 1905 billion as of the end-September, followed by Japan which holds international reserves totaling USD 997 billion. As of end-July, the international reserves of Eurozone have been USD 555 billion.

#### **Inflation persistently high in the third quarter**

With the Government and Central Bank spending efforts to ease the liquidity crisis, the rates of inflation somewhat accelerated in the third quarter to 14.9 percent year-on-year against 14.8 percent recorded in the previous quarter. Inflation in the period January-September has been 10.6 percent compared to the indicator recorded in December. Service prices have grown faster while prices industrial goods remained at a high level.

Under the above-mentioned shifts in the balance of payments the appreciation of the ruble exchange rate tended to depreciate, starting August. As a result, the ruble depreciated vis-à-vis the US dollar by 2.6 percent against the previous quarter's average indicator. The average ruble exchange rate is still at a low level, when compared to the indicator of the same quarter of the previous year, under which conditions the year-on-year appreciation of the nominal exchange rate made up 4.9 percent versus 8.6 percent year-on-year recorded in the previous quarter.

<sup>15</sup> According to the balance of payments statistics.

<sup>14</sup> Calculated at actual exchange rates.

## *Macroeconomic Situation in Neighboring Countries<sup>15</sup>*

**Turkey:** The economic growth slowed down considerably in the second quarter of 2008<sup>16</sup> as the real growth of GDP made up 1.9 percent year-on-year against 6.7 percent recorded in the previous quarter. The slowdown of the economic growth on the demand side was driven by 3.7 percent year-on-year reduction in public consumption and a modest growth of private consumption. Some 1.7 percent year-on-year decline in gross investment brought about a small economic growth. In particular, investments in public sector have reduced by 16.8 percent year-on-year while investments in private sector have grown a little, by 0.6 percent year-on-year. In the second quarter, the external demand has had some 0.4 percentage point positive contribution.

As regards the sectoral developments, agriculture reported a decline by 3.5 percent year-on-year but construction reported some 0.9 percent increase year-on-year that had been observed since the beginning of the year. Mining and processing industries reported growth, respectively by 7.7 percent and 2.5 percent year-on-year.

As a result of these developments the semiannual GDP growth has been 4.2 percent. The annual economic growth will be nearly 4 percent, according to the estimations of the Central Bank.

In the period July-August of 2008, the current account deficit has trended downward although the deterioration of the deficit is high enough in relation to the indicator recorded for the same period of the previous year. The broadening of the deficit of trade balance was offset by the increase of positive balance of services in the third quarter. The slowing of the world economic growth in August was reflected in the indicator of exports when it fell in relation to the previous quarter. Based on the January-August indicators, the current account deficit has worsened by USD 11.1 billion to USD 34.8 billion. At the same time, the growth of export has been 35.0 percent versus the 36.3 percent growth of import. The trade balance surplus has increased by 20.1 percent to USD 11.0 billion and the income balance deficit has worsened by USD 0.9 billion to USD 5.5 billion.

As regards the movement of capital, the consequences of the global financial crisis were felt in the form of outflow of portfolio investments as well as an abrupt reduction in foreign direct investment in relation to the previous month. In the period July-August, net foreign investments have amounted to USD 2.12 billion and net outflow of portfolio investments has reached USD 242.0 million, with USD 1.12 billion outflow in August alone.

In January-August net inflow of capital and financial resources has increased by 17.2 percent and amounted to USD 35.9 billion. However, net foreign direct investment has reduced by 34.4 percent and amounted to USD 9.0 billion. In the meantime, net inflow of portfolio investments has increased by 67.4 percent to reach USD 1.4 billion. Item "Other investments" has recorded USD 29.0 billion net inflow (USD 15.6 billion recorded for the same period of the previous year). Under the above flows, a balance of payments surplus<sup>17</sup> was generated that pushed the international reserves up by USD 2.6 billion (in the same period of the previous year, some USD 9.6 billion growth of international reserves was recorded).

Despite a trend of drop in prices in the third quarter, which has been mostly attributable to the falling of international prices of food and oil, they are still high. The year-on-year price growth has been 1.7 percent (10.3 percent in the previous quarter). High inflation was recorded in July when some 12.1 percent year-on-year inflation had been recorded, which was mostly fuelled by the faster growth of prices of goods. In the period August-September however inflation has been somewhat lower from market expectations. The high level of prices is mainly determined by high service tariffs. Following an interest rate rise in July, the Central Bank left it unchanged for the quarter, at 16.75 percent.

After having appreciated in July-August, the nominal exchange rate of the Turkish lira has depreciated since the beginning of September, mostly

<sup>15</sup> Review of the macroeconomic situation in neighboring countries is important in a sense that, being under the influence of similar economic turbulences, developments in these countries may indirectly influence Armenian economy. Crises of 1990s showed that indirect influence channels, including common export markets, lending organizations or countries, investors, etc, from the regional standpoint are becoming increasingly influential on economic developments of countries. Therefore countries periodically monitor macroeconomic developments not only in neighboring countries but also partner countries in the Region. Iran is not included, because of incompleteness in data and delays in data publications.

<sup>16</sup> Official data for the second quarter of 2008 have not been published.

<sup>17</sup> In July-August, the capital account has topped the current account deficit.

determined by the outflow of 'hot monies'. In September, the Turkish currency depreciated vis-à-vis the US dollar by 5.0 percent against the previous month. However, the average nominal exchanger rate of lira is low in relation to the previous quarter's average, under which condition the appreciation was 4.2 percent. In the third quarter the appreciation was 6.1 percent year-on-year (5.7 percent year-on-year in the previous quarter).

In 2008, the output growth rates of Azerbaijan still remain the highest both in the Region and among the CIS countries, and the global financial crisis seems to have had no material effect on the economic growth yet. In the period January-September, the real GDP growth has been 15.0 percent and in non oil sector – 15.4 percent. Such high growth rates recorded for the period 2004-2007 and the first nine months of 2008 have been attributable to fuel mining (oil, natural gas and other carbohydrates) as well as to the transport sector growth. The share of production and service sectors in GDP was 75.7 percent and 17.5 percent, respectively. Net indirect taxes on production and imports constituted 6.8 percent of GDP. In addition, the share of industry in GDP amounted to 63.6 percent, construction – 6.7 percent, agriculture – 5.5 percent, trade and restaurant and hotel services – 5.5 percent, transport – 4.8 percent, communications – 1.4 percent and social and other services – 5.8 percent<sup>18</sup>.

In the period January-September 2008, per capita GDP has been 3554.4 manat (USD 4302.1), which exceeded the previous year's level by 93.7 percent. In the same period of time, average monthly income of households has been 189.3 manat (USD 229.1) and average monthly wages have increased by 23.1 percent in relation to the same period of the previous year and reached 256.9 manat (USD 310.9)<sup>19</sup>.

In the period January-September 2008, compared to the same period of the previous year, inflation has been 21.5 percent year-on-year and 12.8 percent compared to the indicator recorded in December of 2007. Inflation on food products has been 30.0 percent, non-food products – 11.3 percent and services – 11.5 percent year-on-year<sup>20</sup>.

As a result of export-import transactions in the period January-September of 2008, the positive surplus of trade balance reached USD 33.74 billion. The export volumes amounted to USD 38.97 billion and the import volumes amounted to USD 5.23 billion<sup>21</sup>. The foreign trade volumes have increased 5.4-fold, compared to the same period of the previous year, with imports having grown by 33.8 percent and exports having grown by 9.0-fold. The volumes of foreign trade with the countries of European Union have increased approximately 11-fold. The EU countries accounted for 52.8 percent of the foreign trade turnover, Asian countries – 25.1 percent, the USA – 15.3 percent, the CIS countries – 6.8 percent, and etc.

The aggregate inflow of foreign investments in January-September has totaled more than 1.7 billion manat (USD 2.1 billion), of which Great Britain accounted for 46.1 percent, the USA – 20.0 percent, Japan – 10.3 percent, Turkey – 7.3 percent, Norway – 6.4 percent and etc<sup>22</sup>.

Given such volumes of foreign currency inflow, some pressures on the price level and manat exchange rate were generated. Pursuing to reduce inflation rates, the National Bank conducted a policy of slowly appreciating manat. As a result, the manat exchange rate has appreciated vis-à-vis the US dollar by 4.75 percent in the period January-September, and by 4.22 percent over the first nine months of 2008. In January-September the international reserves of the National Bank have grown by 35.4 percent (by USD 1.4 billion) and totaled USD 5.4 billion as of October 1, 2008<sup>23</sup>.

In Georgia, output growth over the first six months of 2008 has been 8.5 percent. The highest growth was recorded in financial intermediation (28.1 percent), communications (18.6 percent), energy, gas and water supply sector (15.7 percent) and public administration (15.3 percent). The largest weights in the GDP structure are shared by public administration (14.9 percent), trade (13.9 percent), agriculture (9.2 percent) and industry (7.9 percent) sectors<sup>24</sup>. In the first

<sup>18</sup> Source: Day. Az, 16 October, 2008.

<sup>19</sup> Source: Day. Az, 16 October and 17 October, 2008.

<sup>20</sup> Source: Azerbaijan Statistical Committee, [http://www.azstat.org/sdds/en/P\\_I/L\\_C\\_P.shtml](http://www.azstat.org/sdds/en/P_I/L_C_P.shtml).

<sup>21</sup> Source: Azerbaijan Statistical Committee, [http://www.azstat.org/sdds/en/F\\_T/e\\_tr01.shtml](http://www.azstat.org/sdds/en/F_T/e_tr01.shtml).

<sup>22</sup> Source: Day. Az, 21 October, 2008.

<sup>23</sup> Source: <http://www.nba.az/default.aspx?go=&id=1910&Ing=en>.

<sup>24</sup> Source:  
[http://www.statistics.ge/\\_files/english/press/GDP\\_II.docnba.az/default.aspx?go=&id=1910&Ing](http://www.statistics.ge/_files/english/press/GDP_II.docnba.az/default.aspx?go=&id=1910&Ing)

half of 2008, per capita GDP has been 2094.4 lari (USD 1425), which exceeded the previous year's level by 88.5 percent<sup>25</sup>.

In January-September of 2008, the previous year's high inflationary pressures have persisted in Georgia. Inflation was 11.3 percent year-on-year, and 5.8 percent, compared with December of the previous year. In addition, compared with December of the previous year, the price increase of food products was 5.7 percent, non food products - 4.5 percent and services - 7.4 percent.

As a result of export-import transactions in January-September of 2008, the deficit of trade balance has reached USD 3425 million. Compared with the same period of the previous year, export of goods (FOB) has increased by 43.4 percent and totaled USD 1242.5 million and import of goods (CIF) has increased by 31.8 percent and totaled USD 4667.5 million<sup>26</sup>.

In the aftermath of the August, events 38 countries of the world as well as 15 international organizations have committed to provide financial assistance to Georgia in the form of loans and grants to the sum of USD 4.55 billion for the upcoming period of 2008-2010. These resources will be used to recover the country's infrastructures, support re-integration of refugees and remedy the negative economic consequences whatsoever. International financial organizations will extend resources worth USD 2.1 billion, including the IMF (USD 750 million), the ECB (USD 875 million); the Council of Europe will together with the European Investment Bank provide resources worth approximately USD 1.1 billion; a number of governments worldwide (USA, Japan, Norway, Sweden, Germany, Latvia, Ukraine, France) will contribute a total of round USD 2.3 billion, with the USA to extend USD 1.0 billion, Japan to extend USD 200 million, and et al. According to preliminary arrangements, Georgia will receive about USD 2 billion of assistance during 2008<sup>27</sup>.

Pursuing to ease intensifying inflationary pressures, the National Bank conducted a policy of steeply appreciating lari though it has carried out net purchases of USD 167.6 million in the currency market in the period January-September of 2008<sup>28</sup>. As a result, the average exchange rate of lari has appreciated vis-à-vis the US dollar by nearly 14.7 percent in the first nine months of 2008, compared with the average indicator of the same period of the previous year and by 13.3 percent, compared with December of 2007.

### 3.2. BALANCE OF PAYMENTS<sup>29</sup>

In the third quarter of 2008, the current account deficit remained trending upward as a result of developments in world markets and in the domestic economy. Though high growth rates of transfers persisted, faster growth of the trade balance deficit determined the worsening of the current account deficit.

Further, unlike a great number of developing countries where the global financial crisis was felt in the form of considerable capital outflows or a marked slowing of capital inflow, large volumes of net influx of capital have persisted in Armenia in the course of the third quarter. The capital influx has more than offset the current account deficit, leading to the increase of gross international reserves.

The impact of developments of the global financial crisis returned in a sudden whim when oil prices started trending downward after having skyrocketed in the previous quarter. Consumer and other raw material prices also tended to decline although they are still high in relation to the same quarter of the previous year. In the exports markets, copper prices have fallen but molybdenum prices have persisted at high levels.

As a result, the dollar prices of import goods have grown by 15.5 percent year-on-year which made an additional contribution to such increase. In the third quarter the year-on-year growth rates of import amounted to 47.4 percent while those of export amounted to 1.4 percent.

<sup>25</sup> National Bank of Georgia, "Monetary and banking statistics bulletin", September 2008, Table 1.1. In Georgia, data on GDP and GDP component dynamics are published in delays as the country prepares to move to a new system of statistics.

<sup>26</sup> National Bank of Georgia, "Monetary and banking statistics bulletin", September 2008, Table 5.4.

<sup>27</sup> Source: Civil Georgia, Tbilisi, October 22, 2008.

<sup>28</sup> National Bank of Georgia, "Monetary and banking statistics bulletin", September 2008, Table 4.4.

<sup>29</sup> The Q3 2008 data are the Central Bank estimations.

These developments have resulted in a large trade balance deficit which, in turn, drove to the increase of the current account deficit.

Overall, in the supply point of view, the impact of the rest of the world on inflation in the current quarter is still expansionary, although the pressures have eased considerably. On the other hand, there has been an additional supply of goods owing to the growth of the trade balance deficit, easing the inflationary pressures.

## Current account

The third quarter of 2008 ended with the growth of the current account deficit which was a result of persisting high growth rates in import amid a slow growth of export. Considerable inflow of private remittance and seasonal income continued to counteract further deepening of the trade balance deficit. The year-on-year increase of the current account deficit amounted to USD 226.4 million, while in the first nine months its share in GDP has been 10.8 percent (5.7 percent in the same period of the previous year).

In the third quarter of 2008, the trade balance deficit grew by USD 334.1 million to USD 726.2 million. Increase of imports was 47.7 percent year-on-year and increase of exports – 1.4 percent year-on-year.

The slow growth of export was determined by the put-off of recovery in industry, coupled with the situation prevailing in the Region in August, under which conditions exports declined further. As such, in August the export volumes reduced by 40.3 percent compared to the previous month. Though part of the volumes of export for August was carried over to September, it still is at low levels.

Exports declined mostly due to decreased export volumes of two large items: "Mineral production" that reduced by 13.8 percent year-on-year (the negative contribution was 2.6 percentage points) and "Base metals and articles thereof" that reduced by 3.1 percent year-on-year (the negative contribution was 1.1 percentage points).

Unlike the decline in exports in previous quarters, item "Precious and semi-precious stones, precious metals and articles thereof" reported growth of 12.5 percent year-on-year, yet in the period January-September the export volumes of this item have been at low levels in relation to the same period of the previous year.

In the third quarter exports of item "Products of prepared food" have grown 2.1-fold. Sub-item "cognac, rum, gin, vodka, liquor" accounted for nearly 80 percent of this item.

Item "Textile articles" decreased by 6.3 percent year-on-year, while item "Machinery and equipment" increased by 21.6 percent year-on-year. The total weight of these two items in the third quarter constituted 7.0 percent. Some small items have also reported declined exports.

Opposite to declined exports, yearly growth rates of imports have accelerated considerably in the third quarter. Though the August events in the Region had their impact on imports as well, which led to the decrease of import of goods by 30.3 percent against the previous month, part of the goods less imported in August was carried over to September. In the third quarter imports have increased by 47.7 percent year-on-year<sup>30</sup> (imports totaled USD 1048 million). High growth of imports persisted due to the volumes of import of passenger cars, oil products, unprocessed gold, telephone and telegraph devices and modems that had increased since the beginning of the year.

In the third quarter of 2008, total imports increased owing to almost all items, with the exception of item "Base metals and articles thereof"<sup>31</sup> as import of the latter made up 2.8 percent year-on-year. The year-on-year growth of import volumes of items "Products of prepared food", "Mineral

<sup>30</sup> In the period January-September, the import of goods (CIF) has increased by 43.0 percent, and 46.0 percent, when diamond is excluded.

<sup>31</sup> There was decrease recorded in two small-weight items in the third quarter.

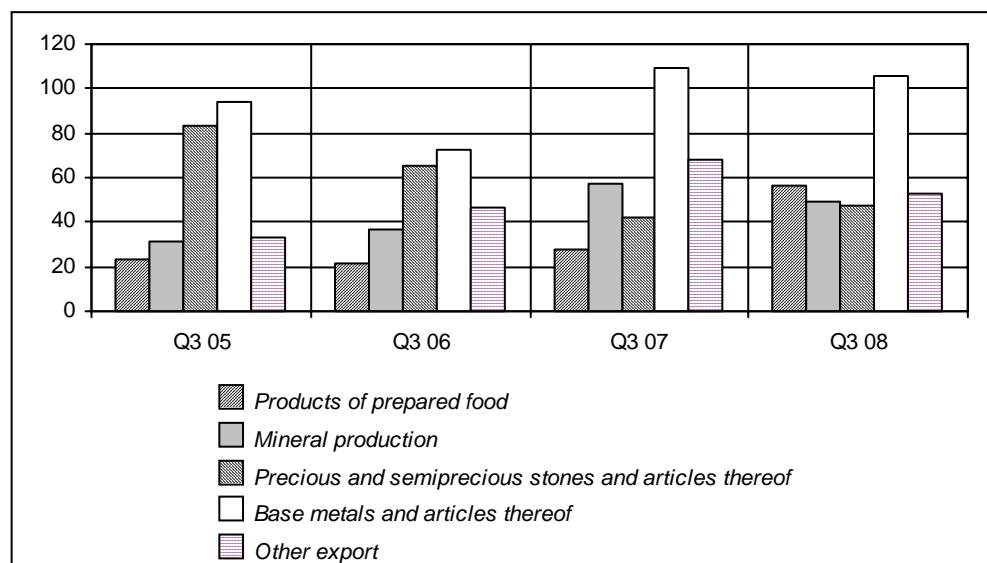
production", "Machinery and equipment" and "Ground, air and water transport means", which hold a considerable weight in imports, were 33.7 percent, 73.5 percent, 42.9 percent and 51.5 percent, respectively.<sup>32</sup>

The year-on-year growth of import volumes of item "Precious and semi-precious stones, precious metals and articles thereof" was 23.0 percent. In the current quarter, the volumes of import of diamond increased<sup>33</sup>.

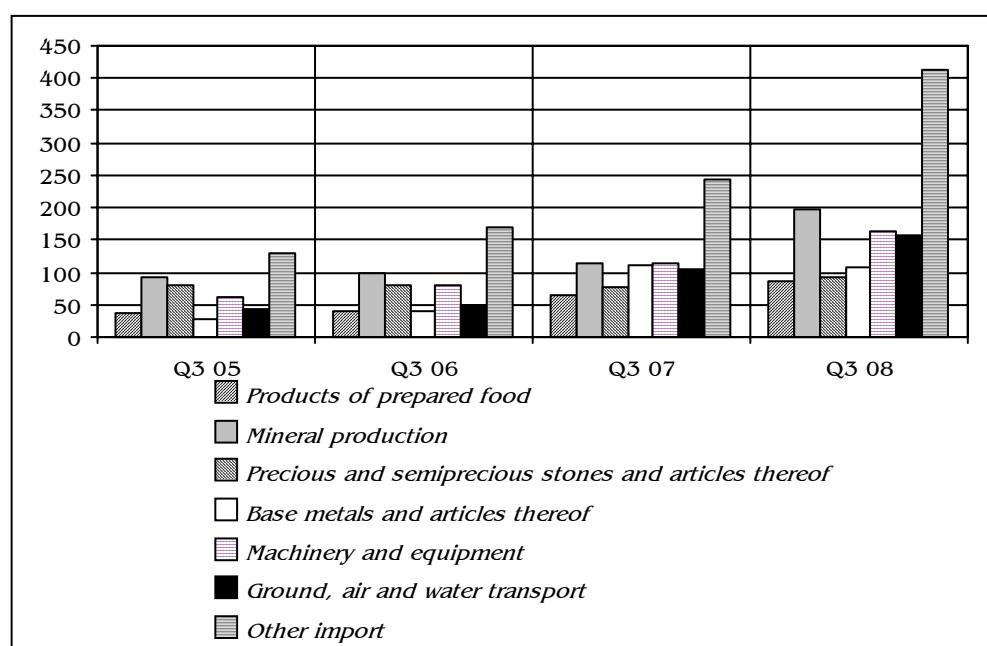
Contribution of relatively small items "Chemistry and related industry manufacture" and "Plastic and articles thereof" to the import growth were 3.0 and 2.4 percentage points, respectively.

Without account of item "Precious and semi-precious stones, precious metals and articles thereof", export volumes have increased merely 1.0 percent year-on-year, while imports have increased by 49.9 percent year-on-year. The trade balance deficit has increased by USD 321.8 million to USD 679.6 million, without taking into account the mentioned item.

*In Q3 2008 the volumes of two main export items out of four decreased (mln USD)*



*In Q3 2008 growth in almost all import items continued (mln. USD)*



<sup>32</sup> Contribution of individual items to the total import has been as follows: "Products of prepared food" – 2.6 percentage points, "Mineral production" – 10.1 percentage points, "Ground, air and water transport means" – 6.4 percentage points and "Machinery and equipment" – 6.0 percentage points.

<sup>33</sup> In the third quarter of 2008 diamond constituted 46.0 percent of total imports of the mentioned item, while in the same period of the previous year it constituted 48.2 percent.

The growth of the trade balance deficit has been conditional on increased deficit of trade balance with non-CIS countries (the deficit of trade balance with the EU countries has increased by 25.0 percent). Other countries include Iran, Turkey, China and Japan with which the trade balance deficit has deepened by 4.3 times, 2.5 times, 2.5 times and 57.3 percent, respectively.

The negative balance of services worsened in the current quarter by 70.4 percent and amounted to USD 108.4 million mostly due to high growth of import of transport services. The export of services grew primarily on account of increased export of tourism and made up 10.7 percent year-on-year against 21.6 percent year-on-year increase of import of services.

Growth rates of private remittances remained strong in the third quarter although the global financial crisis expanded into the Russian economy as well<sup>34</sup>. Net inflow of seasonal worker income increased by USD 74.6 million year-on-year, exceeding the growth of net outflow of item "Income on investment" by USD 18.1 million. As a result, net inflow of funds of item "Income" has increased by USD 56.4 million year-on-year. In the current quarter, the growth of private remittances made up 35.5 percent year-on-year.

Item	mln US dollar			
	2005/3	2006/3	2007/3	2008/3
	Actual	Actual	Actual	Estimate
Current Account Balance	- 4.1	-18.6	-103.1	- 329.5
Trade Balance	-141.1	-238.4	-392.0	- 726.2
Services (net)	-17.7	- 24.2	- 63.6	-108.4
Incomes (net)	32.2	53.0	86.4	142.8
Private remittances (net)	113.0	183.0	255.1	345.7
Public transfers (net)	9.5	8.0	11.1	16.6

## Capital and financial account

The net inflow of capital and financial account resources remain strong in the third quarter, in contrast to developing countries where the capital outflow or slow influx of financial resources were examples of demonstration of the global financial crisis. The net inflow of capital and financial resources has increased by 80 percent year-on-year or by USD 162.4 million and amounted to USD 364.8 million. The latter more than offset the current account deficit, pushing net international reserves of the Central Bank up by USD 40.8 million versus the increase of the same indicator by USD 94.1 million in the previous year.

Net financial inflow by sub-items "Foreign direct investment" and "Commercial banks" contributed to the financing of the current account.

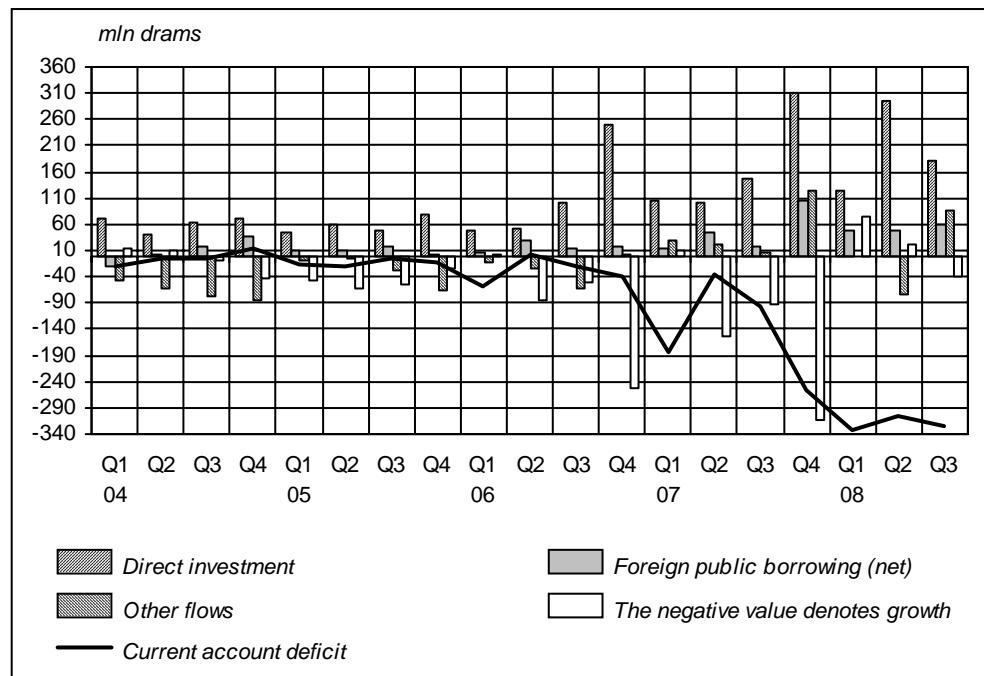
In the third quarter, the net inflow of capital transfers amounted to USD 36.8 million. Almost no resources were received from the Lincy Foundation.

Trends for continuous growth of foreign direct investment persisted, and in the third quarter the net inflow of FDI grew by 20.0 percent (net inflow of FDI amounted to USD 182.5 million).

Item "Other investment", which includes mainly commercial loans of private sector and cash in foreign currency, reported net inflow of USD 87.4 million in contrast to the net outflow of USD 8.3 million recorded in the same period of the previous year. Net foreign assets of commercial banks reduced by USD 152.8 million whereas net foreign assets of private sector increased by USD 65.4 million.

<sup>34</sup> The year-on-year growth of net non-commercial transfers amounted to 43.9 percent in the third quarter of 2008. The year-on-year growth of gross inflow of non-commercial transfers amounted to 33.8 percent, while the outbound non-commercial transfers reduced by 13.3 percent.

*In Q3 2008 large net inflow of capital and financial resources persisted*



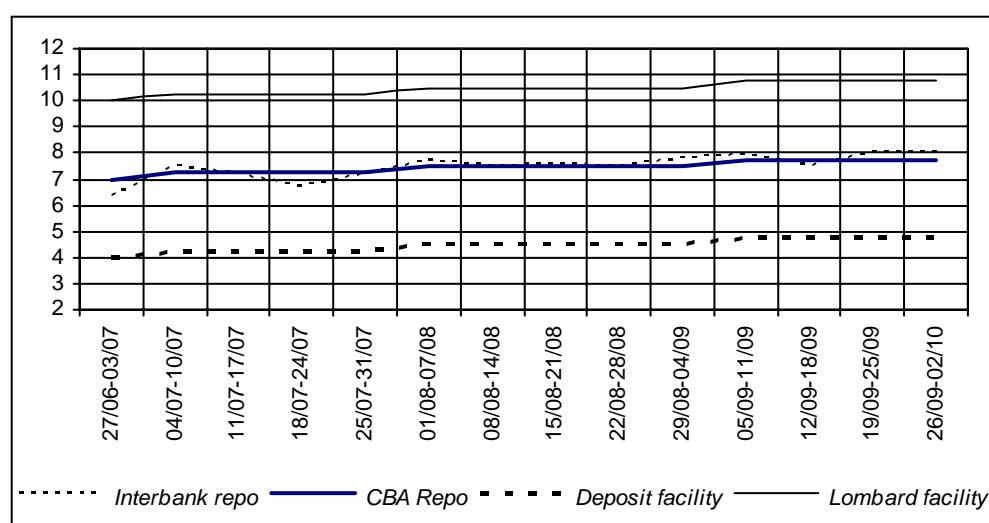
### 3.3. INTEREST RATES, EXCHANGE RATE AND MONETARY DEVELOPMENTS

#### 3.3.1. Interest rates

In the end of the third quarter 2008, inflation has been about 7 percentage points above the 12-month target forecast early in the year and reached 11.3 percent.

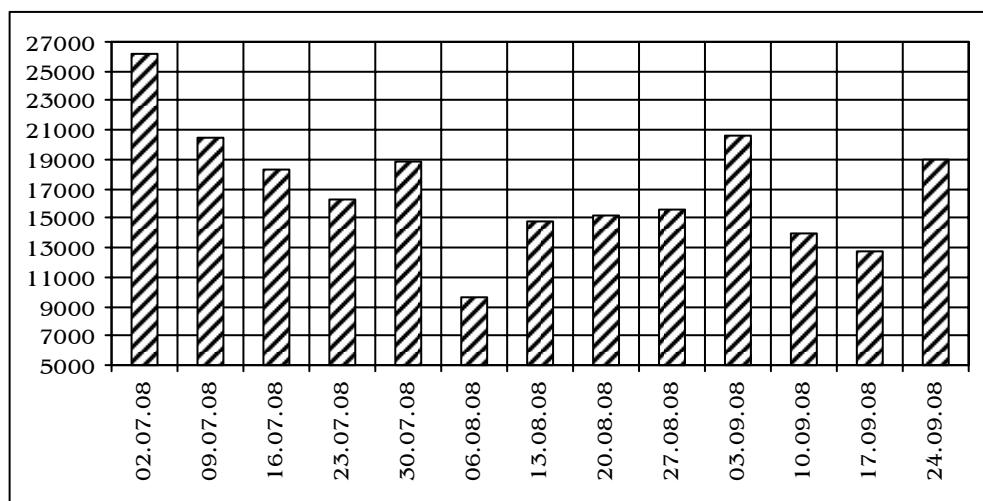
The Central Bank continued its policy of gradual tightening of monetary policy in order to moderate inflation expectations. Taking into account the above said developments, the Board of the Central Bank has raised the interest rate of repo agreement, the main instrument, by 0.25 percentage point each month during the quarter, to set it at the level of 7.75 percent in September. In addition, given the rule of even distribution of interest rates on standing facilities against the repo interest rate, the Board raised these interest rates in September, too setting them at the level of 10.75 percent for Lombard facility and 4.75 percent for Deposit facility.

*The spread between CBA Repo and market repo rates reduced*



In the third quarter of 2008, commercial banks continued raising the effectiveness of management of excess liquidity. As a result, the weekly volumes of repo operations carried out by the Central Bank totaled AMD 18.9 billion at the end of September against AMD 10.5 billion recorded in the same period of the previous year.

*CBA Repo transactions in Q3 2008 (mln AMD)*



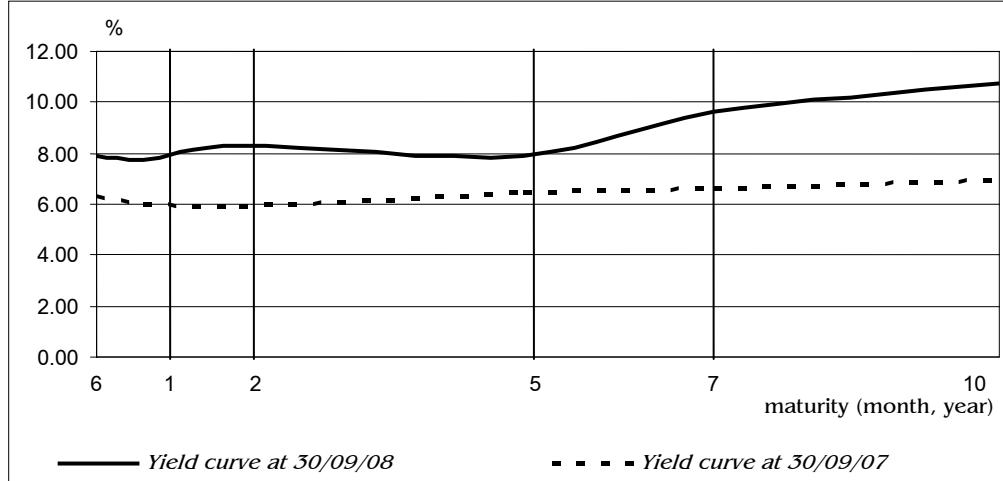
The volumes of repo operations carried out in the third quarter of 2008 totaled AMD 130.3 billion, growing by round AMD 28 billion compared to the same period of the previous year, while in September repo interest rate stabilized in the market around 7.8 percent. The share of transactions between commercial banks in total transactions was 58.3 percent.

Absorbing operations of the Central Bank have reduced in comparison with the same period of the previous year. In particular, the total volume of the Central Bank securities was AMD 4.5 billion against AMD 32.3 billion in the same period of the previous year while the average yield rose by 1.5 percentage points to 7.75 percent. The volume of securities issued by the Central Bank has considerably reduced over the third quarter as the Central Bank pursued to raise the effectiveness of liquidity management, while the Ministry of Finance pursued to enhance the coordination of domestic public debt management. However, the volume of short-term treasury bills has enlarged. The total volume of allocated treasury bills amounted to AMD 11 billion in the third quarter, up by AMD 9 billion against the same period of the previous year.

The average daily volume of deposits of commercial banks with the Central Bank increased by AMD 2.1 billion compared to the same period of the previous year and amounted to AMD 3.4 billion.

In the third quarter of 2008, interest rates in primary market of treasury bills rose, too. In September, the average yield on short term treasury bills was 8.2 percent, that of medium term was 8 percent and that of long term was 10.57 percent, having increased in comparison with the same period of the previous year by 1.8, 1.6 and 3.9 percentage points, respectively.

*Interest rates rose all along the yield curve*

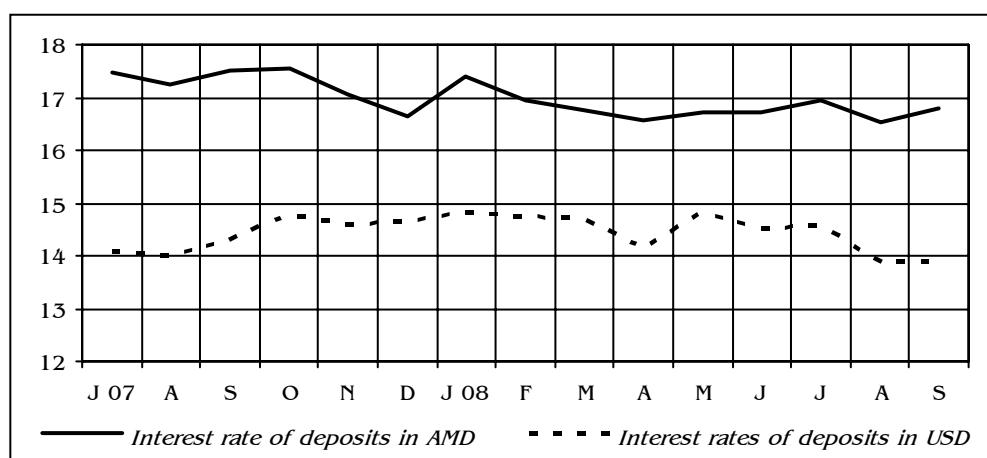


The yield curve analysis shows that in the secondary market of government securities yields increased all along the curve. The convexity of the curve changed from 0.048 to 0.146, which points to a broader spread between interest rates of long term and short term securities.

Interest rates of loans and deposits in Armenian dram and US dollar trended as follows: interest rates of dram and dollar deposits in the third quarter were 8.5 percent and 7.37 percent, respectively, up by 0.94 and 0.42 percentage point compared with the same quarter of the previous year. The spread of interest rates of dram and dollar deposits was 1.13 percentage points against 0.61 percentage point recorded in the same period of the previous year.

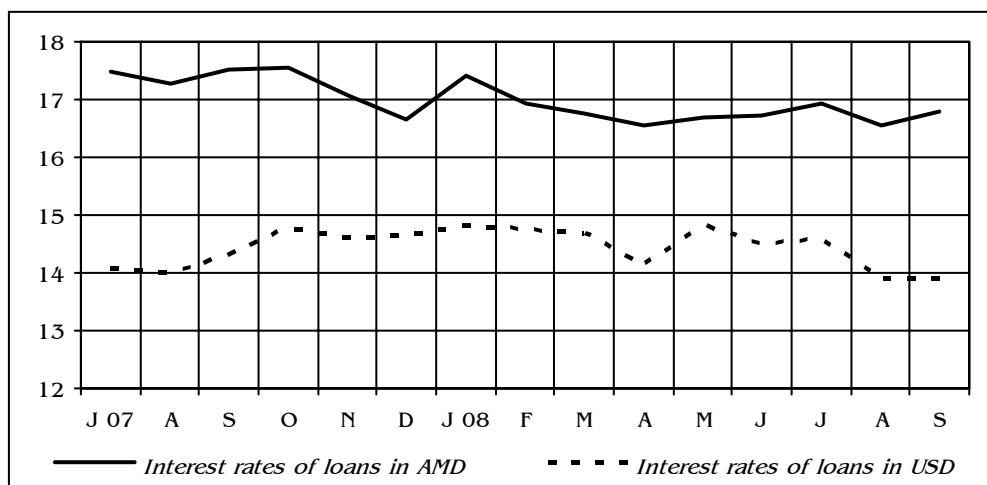
Interest rates of loans originated by commercial banks trended downward, as follows: interest rates of dram and dollar loans in the third quarter were 16.8 percent and 13.9 percent, respectively, down by 0.7 and 0.4 percentage point compared with the third quarter of the previous year. The interest rate spread of dollar and dram loans in the third quarter was 2.9 percentage points versus 3.2 percentage points recorded for the same period of the previous year.

*Interest rates of deposits in banks in AMD and USD have fallen*



The interest rate spread of loans and deposits in AMD in the third quarter was 8.3 percentage points versus 9.94 percentage points in the third quarter of 2007, down by 1.64 percentage points. The interest rate spread of loans and deposits in USD in the third quarter was 6.53 percentage points versus 7.35 percentage points in the third quarter of 2007, down by 0.82 percentage point.

*Interest rates of bank loans in AMD and USD have fallen*

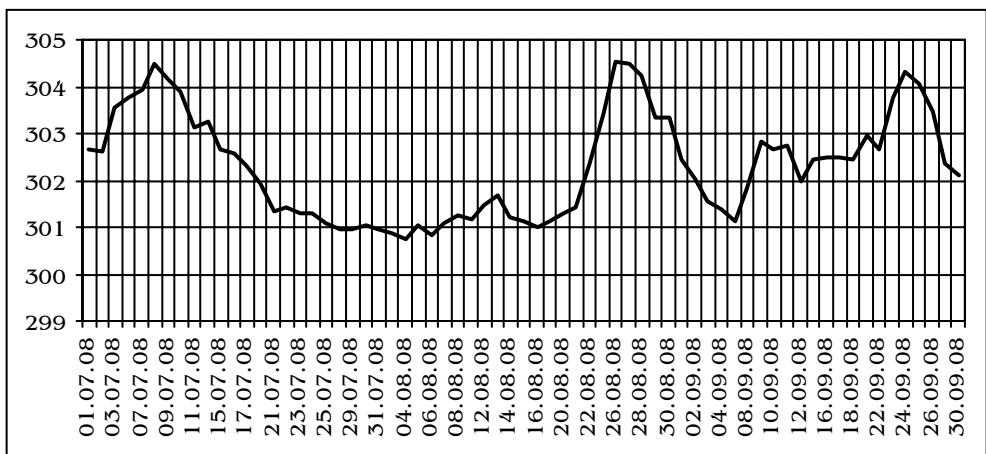


As a result, in the third quarter of 2008 interest rates of loans have fallen and interest rates of deposits have risen.

### 3.3.2. Exchange rate

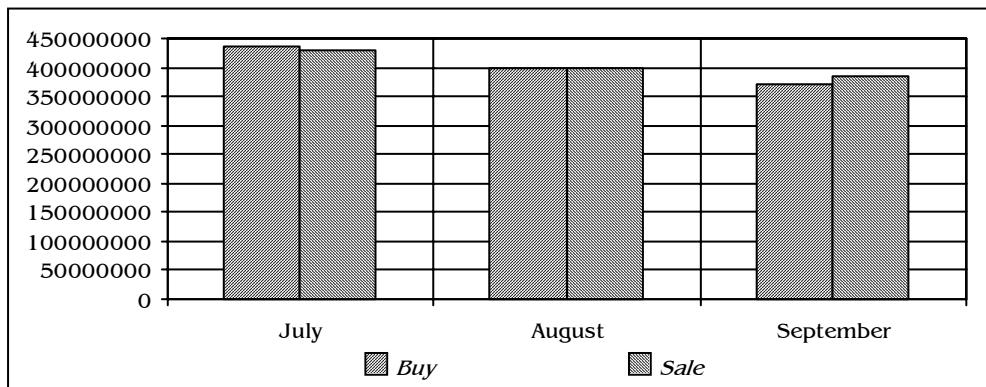
In the third quarter of 2008, the AMD/USD nominal exchange rate depreciated by 0.18 percent compared to the indicator recorded in the end of the previous quarter from 302.65 drams to 302.12 drams. The average quarterly AMD/USD exchange rate has appreciated by 11.75 percent from 337.83 drams to 302.30 drams. The average appreciation in the same period of the previous year has been 19.11 percent.

*The AMD exchange rate dynamic versus the USD*



In the third quarter, gross volume of interbank market transactions was USD 2,423 million<sup>35</sup>, up by 12.33 percent from the third quarter indicator of the previous year (USD 2,157 million), reflecting the increasing trends in foreign trade turnover, foreign financial flows and domestic economic growth.

*Volumes of operations in USD in the currency market*



The volumes of transactions in euro/dram exchange market increased as well. Aggregate volume amounted to EUR 210.5 million, up by 26.26 percent in comparison with the same period of the previous year.

To handle the dram supply and moderate volatilities in the dram exchange rate, the Central Bank purchased about USD 35 million from commercial banks in the third quarter.

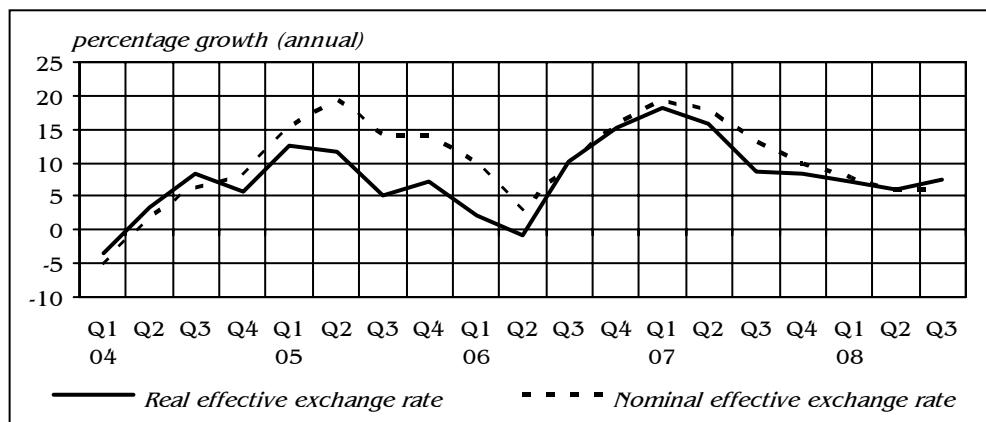
In the third quarter of 2008, the average appreciation of nominal effective exchange rate of the dram was 6.2 percent year-on-year, up by 0.3 percentage point from the previous quarter's indicator. During the third quarter, the nominal effective exchange rate appreciated by 3.8 percent. As such, the appreciation rates of the nominal effective exchange rate were recorded mainly owing to the dram's appreciation vis-à-vis the US dollar, which made up 11.8 percent year-on-year in the third quarter (it decreased by 3.4 percentage points in comparison with the previous quarter's indicator) and was only partially offset by the average weighted appreciation

<sup>35</sup> The volumes of the buying and selling operations in stock exchange in the amount of USD 194.831 million are also included. The transactions carried out in the stock exchange market increased by 18.55% compared to the same period of the previous year.

(5.1 percent) of partner countries' currency against US dollar. Among currencies of partner countries, euro had the largest contribution, making up 3.1 percent year-on-year in the third quarter.

The slowing of the nominal effective exchange rate's appreciation (although it is still high on the whole) drives the real exchange rate to perform in a similar manner. The rate of inflation continued accelerating in both Armenia and partner countries: during the quarter it averaged 11.4 percent year-on-year in Armenia and 9.1 percent year-on-year in partner countries. The average weighted inflation in partner countries was greatly affected by inflation in Russia and Iran, by 2.8 and 2.4 percentage points, respectively, although the impact of inflation in Eurozone and Ukraine (1.2 and 0.9 percentage points, respectively) was by no means weak. As a result, in the third quarter of 2008, the real exchange rate appreciation was 7.5 percent year-on-year (6.1 percent in the previous quarter).

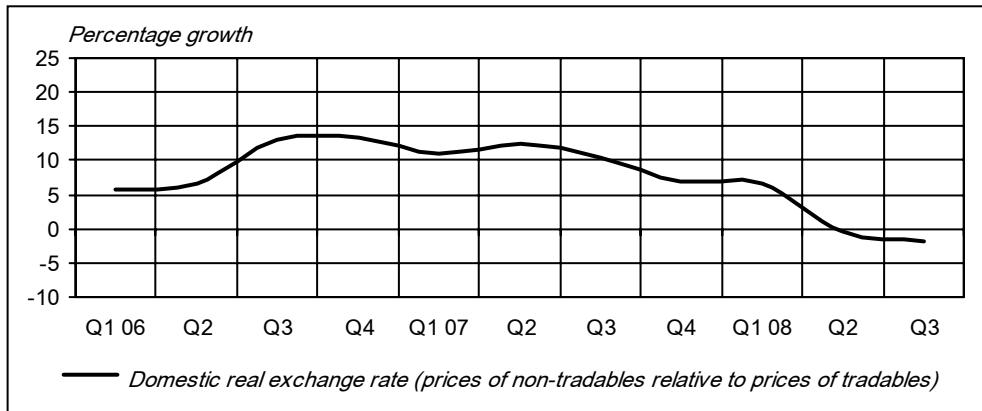
*The real and nominal effective exchange rate appreciation slowed though it is still high*



In the third quarter of 2008, the domestic real exchange rate depreciated by 1.7 percent year-on-year since prices in tradable sector have grown faster than prices in non-tradable sector.

In the third quarter, prices of non-tradable goods and services rose by 12.9 percent year-on-year in the second quarter, whereas prices of tradable goods rose by 14.8 percent versus 13.4 percent and 13.9 percent, respectively, in the previous quarter. The prices of tradable goods have not fallen notably, which is primarily attributable to a feeble response of the domestic market to international prices. The domestic real exchange rate kept on depreciating. High inflation rates in non-tradable sector persisted owing to strong growth of aggregate domestic and external income that reflects the demand for non-tradable goods.

*Trend for domestic real exchange rate depreciation continued*

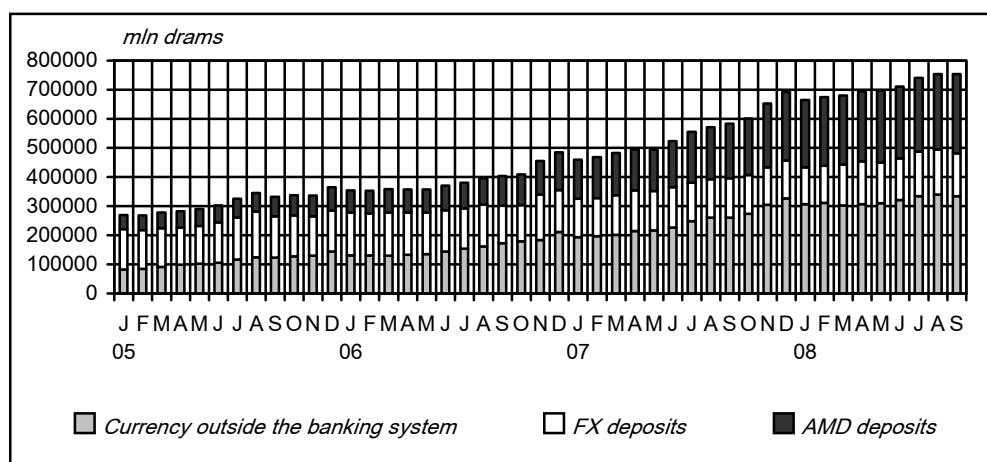


### 3.3.3. Monetary developments

In the third quarter, the monetary environment was marked by the slowing of the process of dramization, as was expected. Based on the

actual results, the growth of dram broad money was 35.4 percent year-on-year, somewhat less than expected (62.5 percent in the previous year), due to the efforts to tighten monetary conditions<sup>36</sup> as well as the slowing of the dramization in relation to the third quarter of the previous year. Dram-denominated deposits have increased by 45.1 percent year-on-year (82.2 percent in the previous year) and currency in circulation, by 28.4 percent (50.7 percent in the previous year).

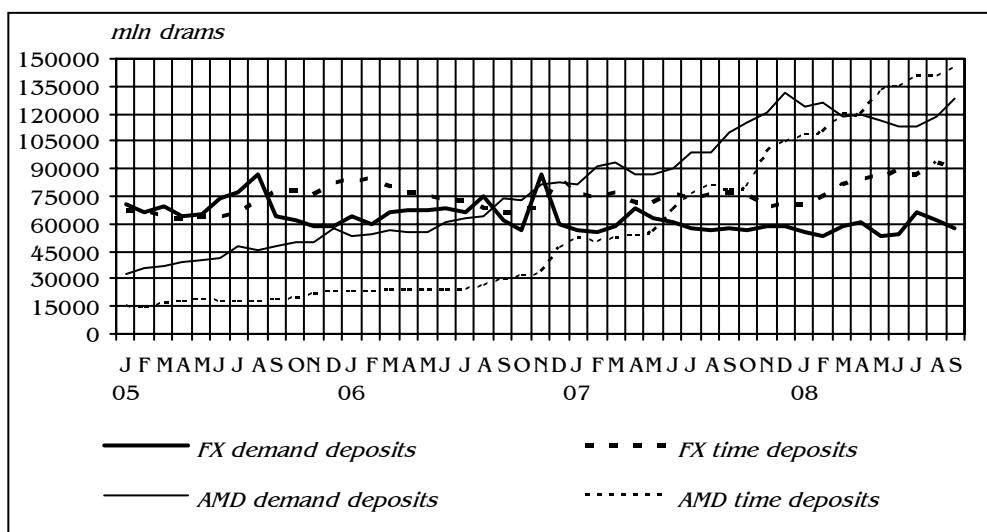
*The dramization revived as the dram components grew*



Based on the actual results of the third quarter, foreign currency deposits in dram terms have grown by 8.8 percent year-on-year, whereas the same indicator for the same quarter of the previous year had risen by 5.6 percent. The growth of this indicator in dollar terms in the third quarter was close to the growth recorded for the same quarter of 2007, making up 20.9 percent year-on-year.

Some advanced growth was recorded in the structure of time deposits in dram (by 84.6 percent) and in foreign currency (by 15.4 percent or 28.3 percent in dollar terms).

*AMD and FX deposits by maturity*



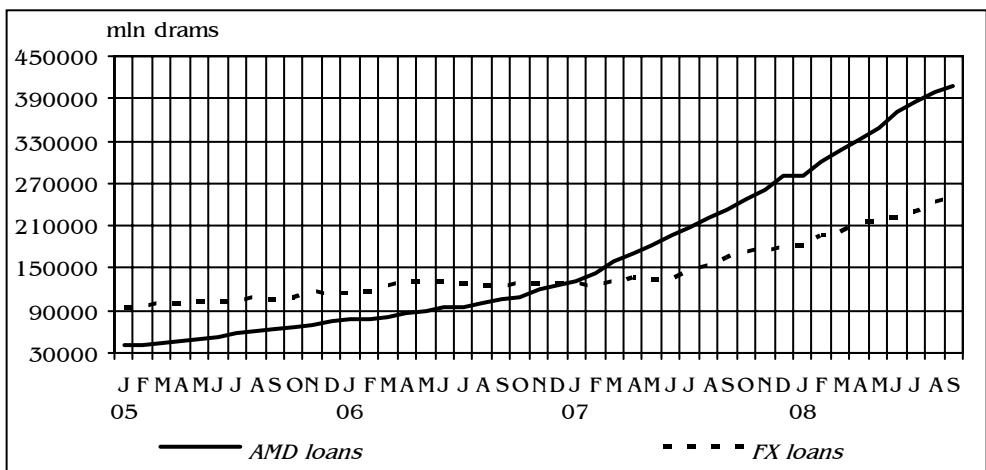
As a result of the above mentioned developments, broad money has increased by 29.2 percent year-on-year.

By supply-side factors, monetary aggregates have increased mainly owing to net domestic assets of the banking system, which exceeded the indicator of the previous year by nearly 2.2 times. Meanwhile, net foreign

<sup>36</sup> The Central Bank had tightened the monetary conditions since July of the previous year by having raised so far the Repo Rate in a total of 5 percentage points.

assets have decreased by 26 percent. For comparison, these indicators have grown last year by 79.7 percent and 28.7 percent, respectively. These trends have been determined chiefly by the NFA and NDA performance from commercial banks. As such, growth of NDA of commercial banks was supported by the increase of lending to the economy on account of external borrowings. The indicator of lending to the economy remained as strong as it was recorded in the third quarter of the previous year, growing by 65.6 percent year-on-year or AMD 264.8 billion. This indicator stands behind the previous year's same indicator but outnumbers it in absolute growth by 71.3 percent or AMD 168.1 billion in 2007). Lending in dram has increased by 74.2 percent or AMD 173.7 billion and lending in foreign currency (in dram terms) has increased by 53 percent or AMD 87.9 billion (growth in dollar terms has been 70 percent).

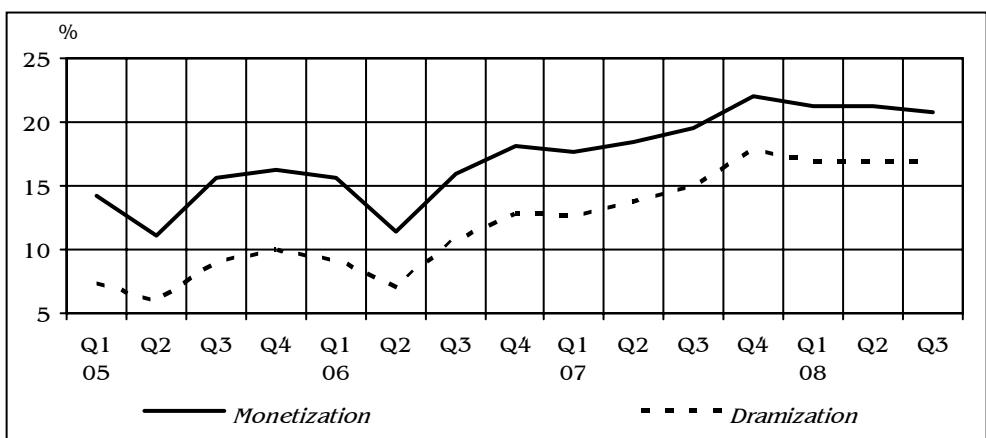
*Lending in AMD and FX has grown, however the growth rates of dram loans outgrew those of FX loans*



Unlike the same period of the previous years, the dollarization of the economy (measured as a ratio of foreign currency deposits to broad money) tended to decline in the third quarter of 2008 from 32 percent in 2006 to 23 percent in 2007 and to 20 percent in 2008.

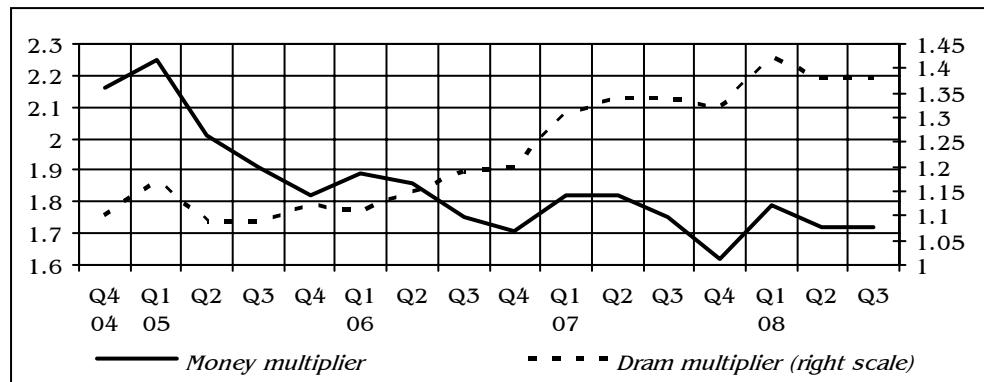
The monetization and dramatization ratios, described as indicators of financial intermediation, continued growing since the beginning of the year, respectively by 6.7 percent and 11.7 percent, annually. The higher growth of dramatization ratio is supported by the strong demand for dram.

*Dramatization and monetization ratios*



The 2.8 percent year-on-year growth of the dram multiplier at the closing of the period points to the raising of the level of financial intermediation in dram owing to the persistence of higher growth rates of dram deposits in comparison with currency in circulation. At the same time, the money multiplier has decreased by 1.8 percent year-on-year, explained by considerably lower growth of foreign currency deposits.

**Money and  
dram multipliers**

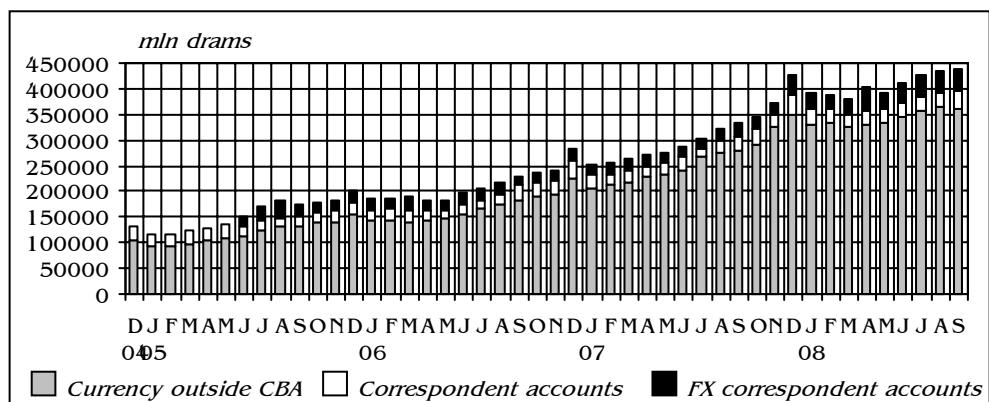


The performance of these two indicators mentioned above points to the fact that the financial intermediation, and the dram financial intermediation in particular, has considerably increased in recent years.

**Money base**

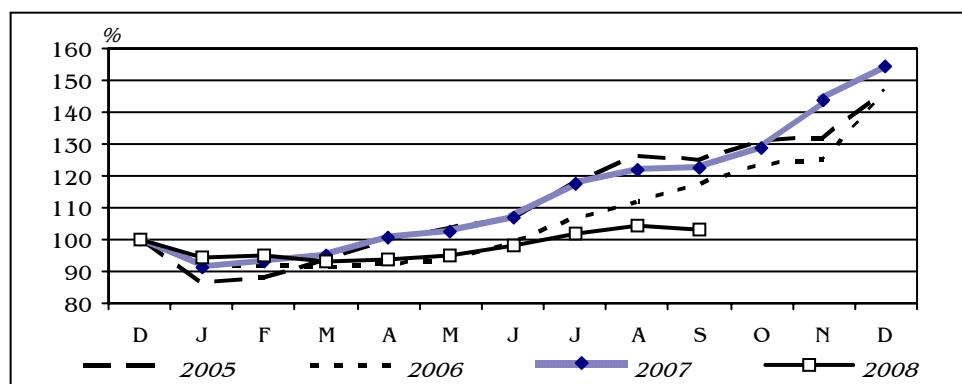
With the dramatization rates pacing downward since the beginning of the year, the Central Bank has taken action to meet the money supply consistent with the economy's demand for the dram. As a result, at the end of September, the year-on-year growth of base money was 31.6 percent which, as a rule, was largely reflected in the performance of currency outside the Central Bank (in the previous year these indicators were 44.1 percent and 52.3 percent, respectively).

*In nine months 2008, currency outside CBA has grown slower in relation to the previous period*



The considerable slowing of the process of dramatization was reflected in the performance of currency in circulation, hence, in the currency outside the Central Bank. Based on the behavior of the currency outside the Central Bank in recent years one may conclude that, from the standpoint of influence of the dramatization factor, the Q1 and Q2 2008 indicator was similar to the first-half of 2006 indicator when the dramatization tended to advance at relatively slow rates. Similarly, the third quarter repeated the seasonality typical to the third quarter of 2005 and of 2006.

*The dramatization has reflected the behavior of currency outside CBA in the last 4 years*



### **3.4. AGGREGATE DEMAND AND AGGREGATE SUPPLY**

#### **3.4.1. Aggregate demand**

##### **Domestic demand**

**Private consumption and investments<sup>57</sup>** In the third quarter of 2008, the real growth of domestic demand was 10.6 percent (14.2 percent in the previous year). The slowing of real growth rates of domestic demand was determined by decelerated real growth rates in private spending. This year, the private spending has grown in real terms by 10.7 percent (12.7 percent in the previous year).

In the structure of private spending the real growth rate of consumption has been 9.3 percent (11.4 percent in the previous year). The decline in growth rates was determined mainly by the decrease of real growth rates in household incomes, transfers and wages in particular, which has been a result of persistently high inflation growth rates during the year.

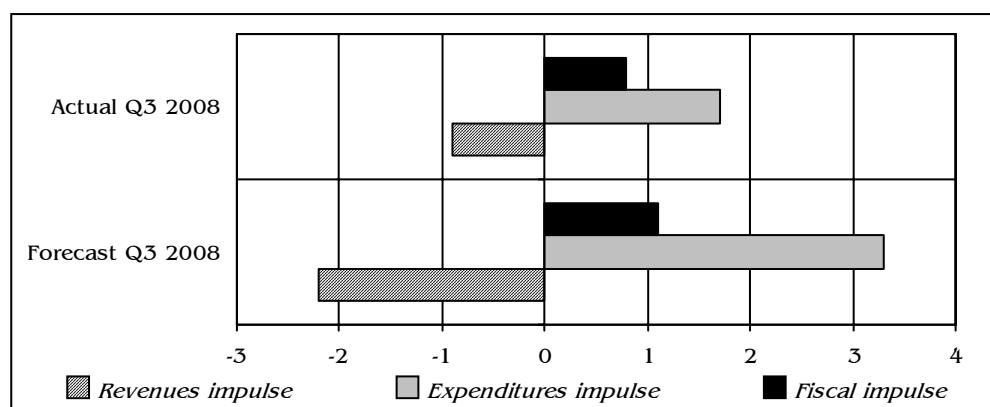
Private investments have grown in real terms by 14.4 percent against 16.4 percent recorded in the previous year. The deceleration of the growth rates was attributable to both the slowing of real growth rates of money remittances (chiefly as a result of a record high growth of the construction deflator) and risen uncertainties in the investment landscape due to the Georgia-Ossetia conflict in August.

In the third quarter, the real expenditures of private sector have had almost a neutral impact on inflation. The Central Bank calculated that the estimated level of real private expenditures had outstripped the equilibrium by 0.08 percent and, as a result, the real spending had made a mere 0.02 percentage point contribution to inflation.

**Public consumption and investments<sup>57</sup>** In the third quarter of 2008, the fiscal policy's impact on the aggregate demand has been lesser expansionary than it was forecast.

According to the calculated indicator, some 0.8 percent expansionary impulse has been generated in the third quarter instead of 1.1 percent expansionary. The deviation occurred as the indicators were at a much lower level in relation to the projected levels of revenues and expenditures. At the same time, the nominal GDP level has outgrown the projected GDP, under which circumstance the impulses calculated in relation to both revenues and expenditures have been less expansionary than forecast.

*A lesser expansionary impact of fiscal impulse in Q3 2008*



With small savings on expenditures as well as with the high level of GDP, the expenditures impulse has been 1.7 percent expansionary instead of the projected 3.3 percent expansionary, while the revenues impulse has

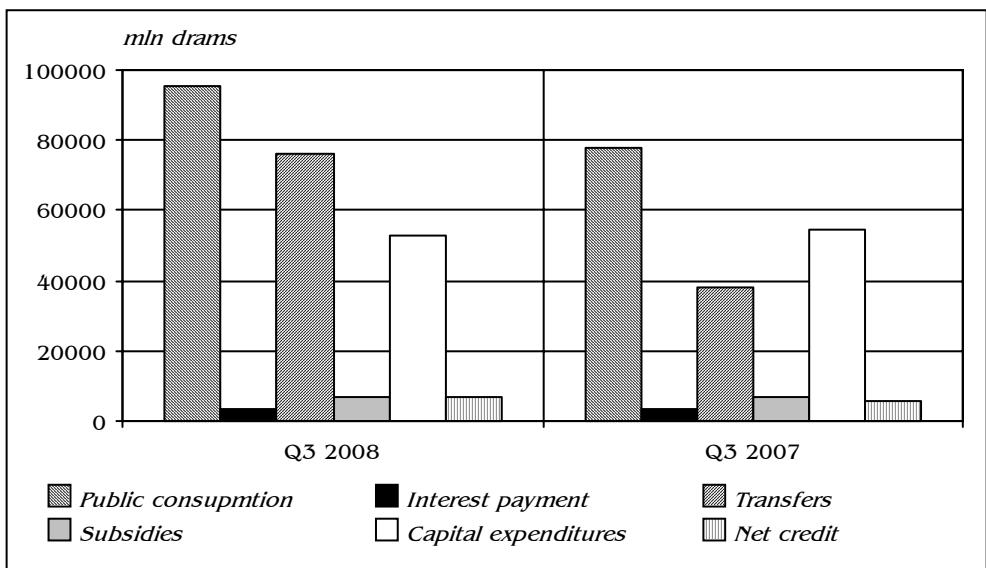
<sup>57</sup> The real growth indicators of private consumption and investments are the Central Bank estimations as the actual data are available for the second quarter of 2008.

<sup>57</sup> Preliminary actual data on consolidated budget were used in the analyses of fiscal sector for Q2 2008. Calculation of impulses was also based on the same data and done in comparison with the same period of the previous year. Quarterly program of consolidated budget is the Central Bank projection, which is based on the seasonal trends of the previous years and expert judgments of the Central Bank. The Central Bank-projected indicators of quarterly proportions of the consolidated budget 2008 differ essentially from the proportions of the approved budget.

been 0.9 percent restrictive instead of the projected 2.2 percent restrictive. The deviation in the revenues impulse occurred as some lower than forecast indicator of tax and non-tax revenues was recorded, lagging behind the projected indicator by about AMD 5 billion<sup>39</sup>.

In the third quarter of 2008, expenditures have grown by 30.0 percent year-on-year.

*In the consolidated budget expenditures, transfers have grown notably in Q3 2008*



The current expenditures have increased by 43.0 percent year-on-year and capital expenditures, by 4 percent year-on-year. Such a high growth of current expenditures was explained by a considerable increase of transfers and, particularly, pension payments as well as the expenditures defrayed from the reserve fund. Amid a projection for notable increase of pensions in 2008, transfers have twice as much exceeded the respective indicator of the previous year. As a result of considerable increase of items "Wage" and "Procurement of goods and services", the public consumption has increased by 23 percent and constituted 39.0 percent of public expenditures, some 3 percentage points below the respective indicator recorded for the same indicator of the previous year.

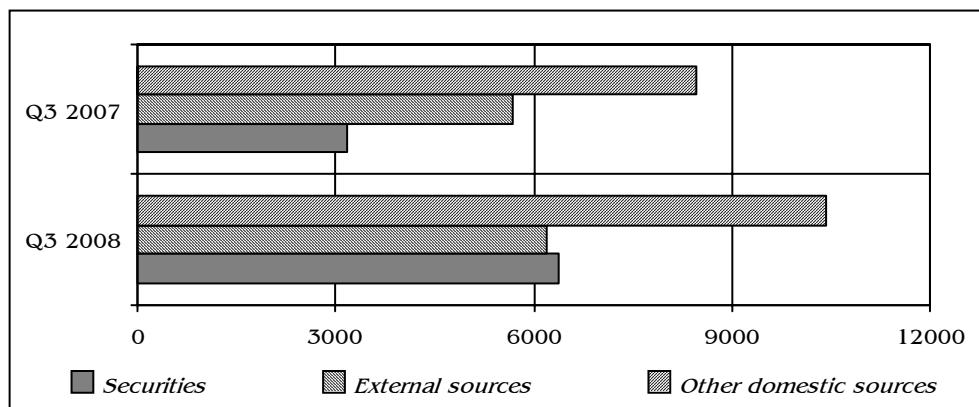
Interestingly, public capital expenditures, which had declined in the course of the first six months of the year, have slightly grown in the third quarter, and this is explained by increased expenditures executed on account of domestic financing sources.

In the third quarter of 2008, total revenues have increased by 104.9 percent year-on-year, of which tax revenues, by 32 percent and non-tax and capital revenues, by 76 percent. Increase of tax revenues was mainly due to indirect taxes. Indirect taxes have increased by 32 percent and direct taxes, by 34 percent year-on-year. In the structure of taxes the share of indirect taxes kept on growing, consistent with the trend back in the previous quarter. At the same time however, the share of direct taxes has grown, too. The share of indirect taxes in total tax revenues has increased to 61.9 percent year-on-year (compared to 61.6 percent year-on-year in the previous year) and the share of direct taxes have increased by 0.5 percentage point and amounted to 23.3 percent (in the previous year – 23.3 percent year-on-year).

In the third quarter, the budget deficit has amounted to AMD 23.0 billion, nearly 34 percent more than the indicator recorded for the same quarter of the previous year.

<sup>39</sup> The indicator denotes the forecast estimation by the Central Bank, whereas the quarterly proportions set by the Government have been over-performed in the third quarter, as it had been the case for the first half of the year, too. Under such conditions, the Government has twice revised the tax program over the quarter toward an increase.

*The deficit financing sources in 2007 and 2008 for the third quarter*



The breakdown of the deficit financing sources is as follows: external sources have financed about 30 percent of the deficit in the third quarter of 2008; temporarily free funds in the budget at the Central Bank have financed 45 percent; government securities have financed AMD 6.3 billion, which is nearly two times the respective indicator for the same quarter of the previous indicator; and about AMD 12.8 billion of temporarily free funds in the budget at the Central Bank was used to finance the deficit. In the outcome, the Q3 2008 budget deficit has constituted 1.9 percent of the GDP compared to the previous year's indicator of 1.6 percent year-on-year.

**Net foreign demand** In the third quarter of 2008, real export of goods and services has declined by 4.0 percent year-on-year in contrast to the 24.2 percent increase of real import of goods and services. Persisting high economic growth rates remain contributing to the increase of the import of almost all items. The slow growth of export was determined by the put-off of recovery in metallurgy, coupled with the situation prevailing in the Region in August, under which conditions exports declined further.

*The Q3 2008 growth of main macroeconomic indicators in real terms*

Item	Q3 2008 / Q3 2007	Q3 2007 / Q3 2006
Real GDP	10.3	15.3
Domestic demand	10.6	14.2
Consumption	9.7	12.3
Public	31.6	19.4
Private	9.3	11.4
Capital investment	12.7	19.1
Public	2.0	39.7
Private	14.4	16.4
Export <sup>40</sup>	- 4.0	11.4
Import <sup>40</sup>	24.2	29.6

### 3.4.2. Aggregate supply<sup>41</sup>

In the third quarter of 2008, the GDP has grown by 10.7 percent, under which condition the economic growth indicator in the period January-September has been 10.4 percent. The growth was fuelled mainly by high growth in construction, services and industry. The growth rate in agriculture, however, has lagged behind the respective indicator recorded in the previous quarter.

In the third quarter of 2008, **Agriculture** reported 3.1 percent year-on-year growth of value added against 12.6 percent recorded in the same quarter of the previous year, due to the decline in gross output of the sub-sector *plant cultivation*, as in Q3 2007 agriculture had produced rich crops

<sup>40</sup> This relates to the export and import of goods and services.

<sup>41</sup> In this section growth indicators are relative to the same quarter of the previous year, unless otherwise stated.

of grape, apple, tomato and cucumber. Even so, the output growth of wheat and fruit has exceeded the respective indicator of the previous year. As a result, in the period January-September the gross output of plant vegetation has increased by 4.9 percent.

Growth reported in the sub-sector *animal breeding* for the period of nine months has been round 3 percent with regard to all produce

In the third quarter of 2008 value added in **Industry** has increased by 10.6 percent (3.1 percent in the third quarter of the previous year). The January-September indicator has been 4.1 percent. This was attributable to a considerable increase in production volumes in food industry (by 6.9 percent in the period January-September), owing to the rich harvest. A notable growth was recorded in production of *brandy* (19.8 percent in January-September), *natural juice* (26 percent), *sugar* (22.3 percent) and *non-alcoholic beverage and mineral water* (around 20 percent).

Growth was strong also in *energy* (by 11.7 percent in the period January-September, mostly owing to the production of electric energy by hydropower plants) and *production of building materials* (16.2 percent, owing to the production of cement and concrete).

In **Construction** the growth of value added has been nearly 17.3 percent in the third quarter mainly owing to the increased volumes of construction financed by households (36.1 percent in the period January-September). The largest construction volumes were reported in *residential housing* (45 percent in January-September), *trade* (23.1 percent), *energy* (38.5 percent), *processing industry* (55 percent), as well as in *financial services* (98.7 percent) and *hotel and restaurant services* (150 percent).

In **services** the growth rates of value added have been around 10 percent in the third quarter, determined by increased volumes of *trade turnover* (10.1 percent in January-September, largely owing to 14.1 percent increase in wholesale trade and 16.3 percent increase in passenger car sales), *financial services* (31.7 percent in January-September), *communications* (11.3 percent) and *travel services*.

### 3.5. LABOR MARKET

Trends remained the same in the labor market in the third quarter of 2008, i.e. subsiding unemployment and increasing wages and labor productivity. However, relative to the same period of the previous year, the growth rates of labor productivity have declined notably. The growth rates of real wages have declined to some extent as well. As the growth rates of labor productivity decelerated, the consumer market started to feel certain inflationary pressures coming from the labor market.

In the third quarter of 2008, the average nominal wages have increased by 18.9 percent<sup>42</sup> and the real wages, by 17.7 percent against the previous period's increases of 20.5 percent and 23.0 percent, respectively. Based on the results of nine months, the wage increases in construction, mining industry as well as real estate transactions, lease and service provision are considerably higher than the average wage increase in the economy. Some 2 percent decline was observed in wages in the hotel and restaurant services. The wages in mining industry and financial operations are 2-3 times the average wage level in the economy but they still are some 30-40 percent lower in education, healthcare and agriculture.

In the third quarter of 2008, the average unemployment rate has dropped by 0.6 percentage point, compared to the same quarter of the previous year, to 6.3 percent. The fill-in vacant job indicator has declined by round 1.5 percentage points to 77 unemployed per vacancy.

In the third quarter of 2008, the growth of labor productivity has been considerably low, making up a mere 9.9 percent versus 14.9 percent in the previous year. The relatively lower growth of labor productivity has offset

<sup>42</sup> The third quarter average wage growth indicators are the Central Bank estimations based on the actual indicators for July and August and the estimated indicators for September.

only 20 percent of inflation pressures coming from the labor market. According to the Central Bank assessments, wage growth stimulated the 12-month inflation by 0.81 percentage point, while labor productivity growth slowed the inflation down by only 0.16 percentage point.

### **3.6. IMPORT PRICES AND PRODUCER PRICES**

#### **3.6.1. Import prices**

In the third quarter of 2008, despite the growth rates of imports in dollar prices notably decelerated in relation to the previous quarter, due to intensified global financial crisis and continued world economic downturn, they still are at a high level. Over the quarter, the prices dropped considerably after the increase of prices of intermediate goods and consumption goods earlier the quarter driven by the price-rise in intermediate goods in world markets and accelerated inflation and exchange rate appreciation.

According to the Central Bank estimates, the dollar prices increased in the third quarter of 2008 by 14.5 percent year-on-year, reducing substantially in relation to 22.8 percent recorded in the previous quarter.

Item	Q3 07	Q4 07	Q1 08	Q2 08	Q3 08
Import (total)	8.7	17.5	24.5	22.8	14.5
Import (services)	8.5	11.7	13.3	14.9	11.2
Import (goods)	8.8	19.4	28.2	25.4	15.5
Capital Goods <sup>45</sup>	0.0	0.0	0.0	0.0	0.0
Consumption Goods	8.3	11.7	13.8	14.9	11.2
Intermediate Goods	16.7	36.2	59.7	46.1	23.0
Diamond <sup>45</sup>	0.0	0.0	0.0	0.0	0.0
Oil Products	7.1	49.0	66.5	78.2	54.1
Natural Gas	0.0	0.0	0.0	0.0	0.0

The growth of dollar prices was determined mainly by the increase of prices of intermediate goods and oil products.

The 23.4 percent year-on-year growth of prices of intermediate goods has been a substantial decrease compared to the previous quarter's growth of 46.1 percent year-on-year, due to the drop in wheat prices (16.5 percent year-on-year growth against 68.5 percent growth in the previous quarter). Some decline in growth rates in prices of gold and oil products was observed. The oil prices have increased by 54.1 percent year-on-year (78.2 percent in the previous quarter) and gold prices, by 27.5 percent (34.2 percent in the previous quarter). Prices of imported sugar increased compared to the previous quarter, and the year-on-year growth has amounted to 12.4 percent.

Grain prices have decreased basically because of expectations for an unusually abundant harvest on a global scale, and, as a result, the grain supply has been replenished to some extent.

In the third quarter, the growth rates of oil prices decreased notably compared to the second quarter yet they keep on at a high level (54.1 percent year-on-year). The price of Brent has averaged around USD 145 a barrel at the beginning of the quarter but dropped to USD 91 a barrel at the end of the quarter. The main factors for the price decrease include the slowing of the world demand, the deterioration of further expectations, the closing of long speculative positions, as well as the strengthening of the US dollar which essentially affects the dollar prices of intermediate goods.

The price growth of consumption goods in the third quarter was 11.2 percent year-on-year, which made some 2.1 percentage point contribution to the total import prices. On the whole, in the third quarter, both the

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<sup>45</sup> The lack of estimates on prices of capital goods and diamond is due to their sharp volatility. Therefore a change in prices is estimated to be zero.

currency appreciation (5.9 percentage points) of exchange rates and inflation (6.6 percentage points) in partner countries had an equal influence on the import prices. As European currencies appreciated, the impact of both Eurozone and Switzerland on total import prices was 0.6 percentage point, and that of Ukraine – 0.3 percentage point.

*Import prices continued dropping over the third quarter*



In the third quarter, the average dram prices of imported goods included in the consumption basket grew by 18.9 percent year-on-year, with the nominal AMD/USD exchange rate having appreciated by 11.6 percent year-on-year. Such growth of dram prices of imported goods is explained by the fact that the domestic prices are slowly responding to the drops in international prices.

### 3.6.2. Producer prices<sup>44</sup>

In the third quarter of 2008, the GDP deflator was 113 percent, outstripping the same indicator of the previous year by nearly 10 percentage points. Such a high growth of producer prices has been determined by a notable increase of prices in construction.

In **Agriculture** prices have risen by 2.4 percent, mainly attributable to the increased retail prices of cabbage, carrot and meat.

In **Construction** the indicator of price growth remained buoyant, some 148.8 percent, because of increased prices of building materials (as well as the increase of prices in international market) and sustained wage increases owing to steadily high demand for labor force.

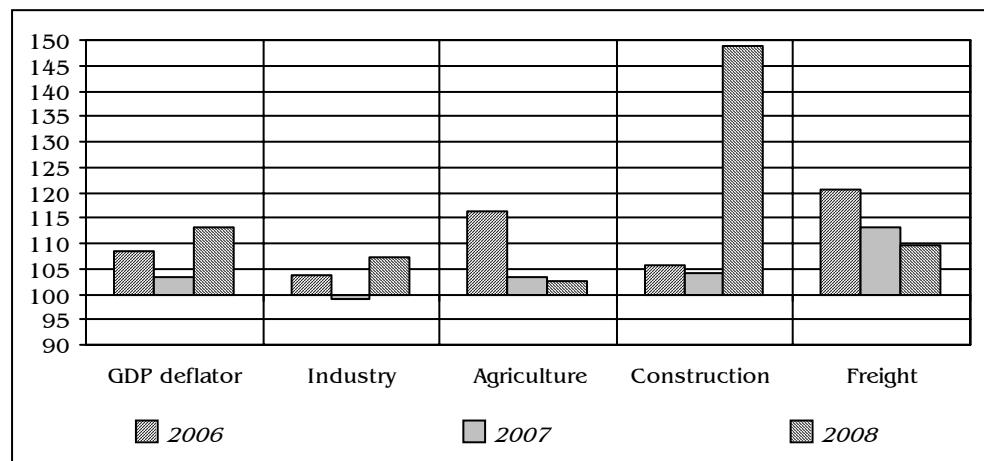
In **Industry** the producer prices started growing at some faster rates, under which condition the index made up 107.4 percent. The price increase was mainly attributable to the rise in prices in food industry<sup>45</sup>, as well as increased producer prices in chemical industry and production of building materials as a consequence of removal of gas subsidies since May 1 2008.

In the third quarter, freight costs grew at some slower pace, compared to the same indicator of the last two years, making up only 9.7 percent due to the increase of tariffs of motor car transport associated with the rise of global fuel prices.

<sup>44</sup> Price indexes and their changes presented in this section are year-on-year indicators, unless otherwise specified. The 2008 indicators are the Central Bank estimations based on the January-August data.

<sup>45</sup> A price-rise on flour and bread products was recorded due to increased prices of wheat in international markets.

*In Q3 2008 high price growth in construction has contributed to high GDP deflator indicator*



### 3.7. INFLATION EXPECTATIONS

In the third quarter of 2008, the Central Bank continued surveys on inflation expectations of financial organizations, households, non-banks of real sector and independent experts<sup>46</sup>.

According to the surveys with banks and credit organizations in the third quarter of 2008, the financial sector's expectations, roaming in the range of 5.5-8.5 percent, topped the target in the forecast 12-month horizon.

Expectations of households and non-banks of real sector for future prices are set toward inflation. This quarter, just like in the previous one, about 90 percent of them anticipate a high level of inflation until yearend and for the one-year perspective.

Though independent experts predict inflation to be outstripping the target as of the end of the third quarter, the expectations however are toward a lesser inflation level until yearend and for the one-year perspective.

On the whole, the results of surveys show no trends of subsiding inflation expectations until yearend and in the 12-month horizon. This is why further tightening of monetary conditions by the Central Bank seems advisable.

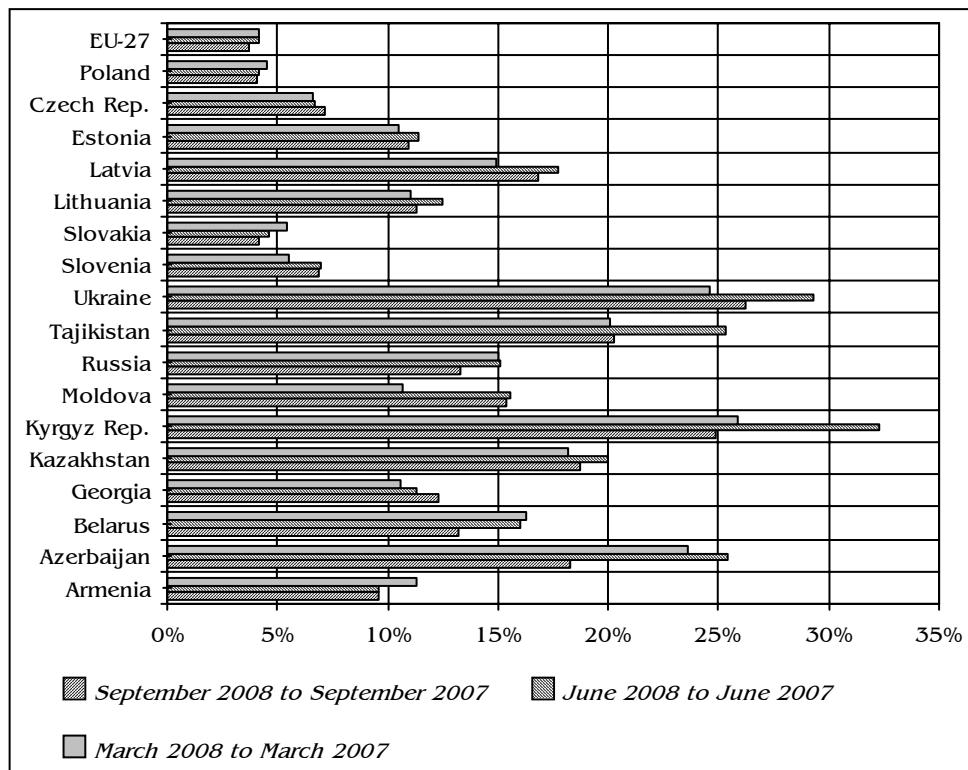
In the third quarter, expectations of both commercial banks and credit organizations for market interest rates (interest rates of government bonds in particular) in the one-year perspective are set toward the increase. As such, the increase is anticipated in respect of short, medium and long-term bonds. Expectations for the rise in long-term interests on funds attracted and allocated by the financial sector prevail in the light of relatively steady short-term interest rates.

<sup>46</sup> See website [www.esp.am](http://www.esp.am); Forecasts made for the period October 1-10, 2008.

## APPENDIX 1

### Recent Inflation trends in several CIS, Baltic and East European Countries\*

#### Inflation indicators



#### Inflation indicators \*

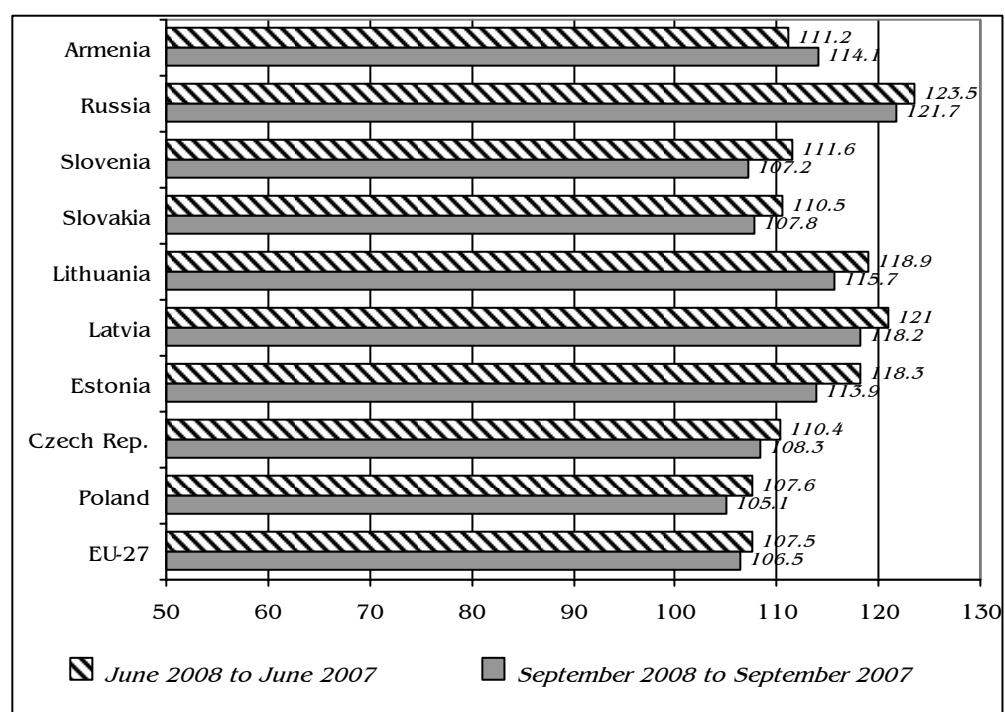
Country	March 2008 to March 2007	June 2008 to June 2007	September 2008 to September 2007
Armenia	9.6	9.6	11.3
Azerbaijan	18.3**	25.4**	23.6**
Belarus	13.2	16	16.3
Georgia	12.3	11.3	10.6**
Kazakhstan	18.7	20	18.2
Kyrgyz Rep.	24.9**	32.3**	25.9
Moldova	15.4	15.6	10.7
Russia	13.3	15.1	15
Tajikistan	20.3**	25.3**	20.1**
Ukraine	26.2	29.3	24.6
Slovenia	6.9	7	5.5
Slovakia	4.2	4.6	5.4
Lithuania	11.3	12.5	11
Latvia	16.8	17.7	14.9
Estonia	10.9	11.4	10.5
Czech Rep.	7.1	6.7	6.6
Poland	4.1	4.6	4.5
EU-27	3.7	4.2	4.2

\* Source: official websites of central banks and statistical services.

\*\* The 12-month inflation indicator has been calculated by the Central Bank, using the monthly inflation indicator of the given country.

## APPENDIX 2

*Food price index in Armenia and elsewhere\**



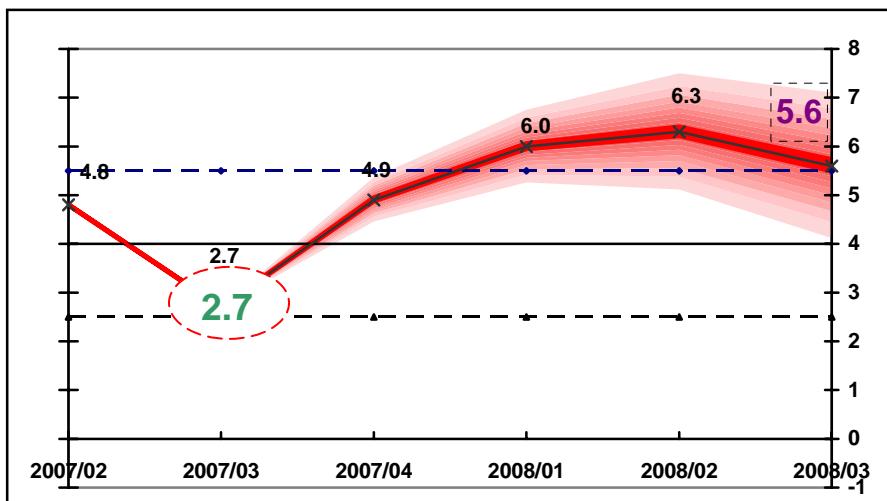
*Food price index growth*

Country	June 2008 to June 2007	September 2008 to September 2007
Armenia	11.2	14.1
Russia	23.5	21.7
Slovenia	11.6	7.2
Slovakia	10.5	7.8
Lithuania	18.9	15.7
Latvia	21	18.2
Estonia	18.3	13.9
Czech Rep.	10.4	8.3
Poland	7.6	5.1
EU-27	7.5	6.5

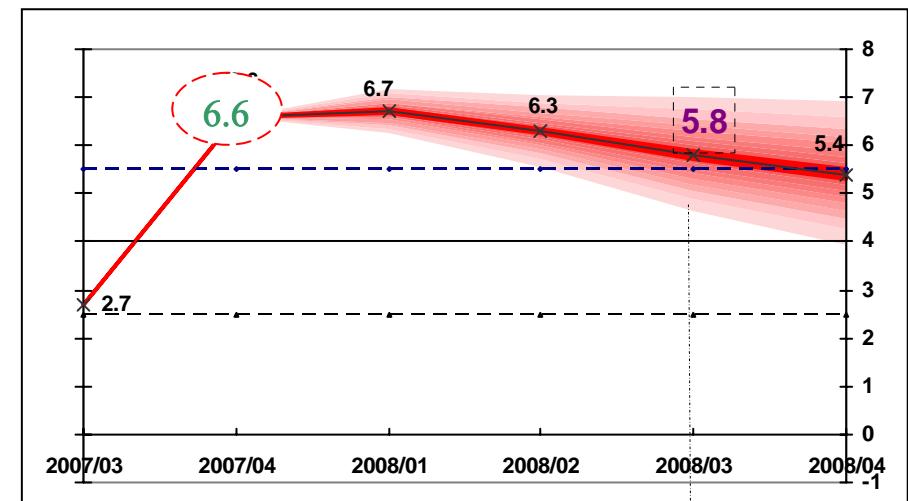
\* Source: official websites of statistical services.

### APPENDIX 3. Inflation forecasts from September 2007 to June 2008 made for Q3 2008

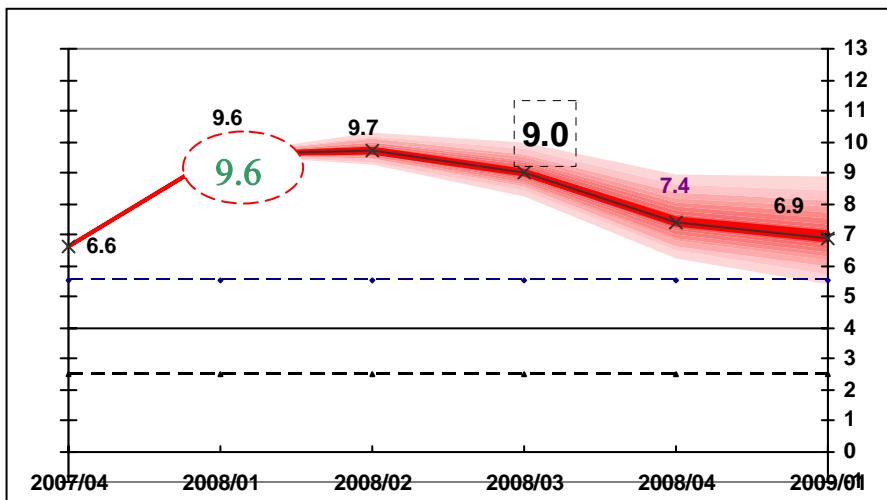
*Inflation forecast in September 2007*



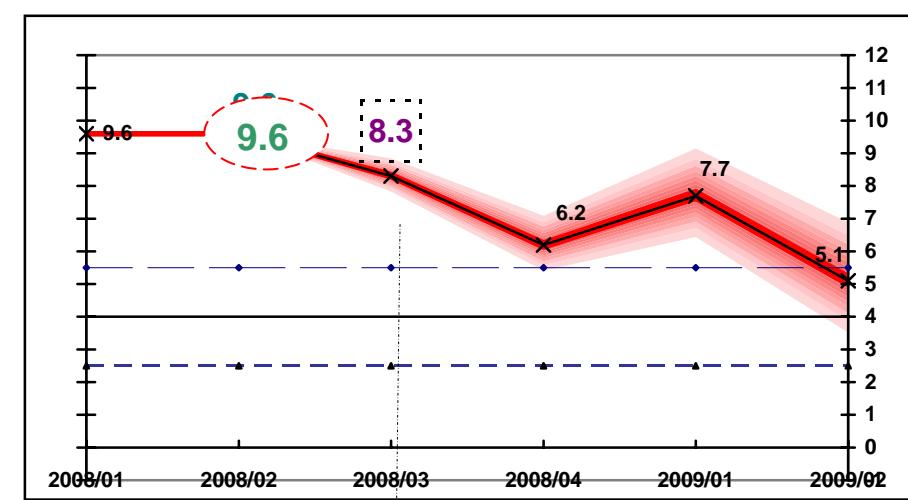
*Inflation forecast in December 2007*



*Inflation forecast in March 2008*



*Inflation forecast in June 2008*



(○) - actual inflation at the time of forecast

(□) - inflation forecast for Q2 2008