CENTRAL BANK OF ARMENIA

# The Monetary Policy Program of the Republic of Armenia

4' 2008

# Inflation Report

YEREVAN
2009

## *Dear Reader,*

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 Q4, 2008.

The ***Monetary Policy Program*** for the fourth quarter of 2008 (October, November and December) has the following sections:

1. **Actual indicators of Q3, 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 Q4 of 2008 and Q2, 2009 and forecasts for Q3, 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 fourth quarter of 2008 has the following sections:

1. **Summary**, which presents in brief the inflation trends in Q4, 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

Q4, 2008

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**THE Q3 2008 ACTUAL INDICATORS AND DEVELOPMENTS**

In September 2008, 0.5 percent inflation was recorded against the past August, under which the 12-month inflation indicator fell by 0.2 pp to 11.3 percent. Inflation recorded in September has been a result of price increases in the items "Vegetable and potato", "Meat products", "Fish products" as well as risen fees of educational services. This has been somewhat offset by decreases in fruit and petrol prices. The high 12-month inflation in September has been determined by 12.6 percent increase in food prices (with the items "Bread products" and "Fats and oils" having remained as the main contributors to the inflation by 8.6 and 2.1 pp, respectively) and by 10.6 percent increase in service tariffs (rising housing, public utility and medical service fees remained as the contributors to such price increase).

The September trends of core inflation point out that although it has increased by 0.48 pp against the previous month, it remained unchanged for the 12-month period, keeping on above the previous end-year's level by 4.7 pp, and it reached 7.0 percent.

There have been developments in external and domestic environments that determined Q3, 2008 inflation, as follows:

***External environment***

The third quarter of 2008 saw liquidity crisis sharply deteriorating in global financial markets. As a result, Fannie Mae and Freddie Mac, two US mortgage powerhouses were nationalized, followed by the bankruptcy of Lehman Brothers and the sale of Merill Lynch to Bank of America Corporation. Further, AIG, an insurance giant, received a bail-out package of USD 85 billion to prevent from going bankrupt. Goldman Sachs and Morgan Stanley, two other investment houses, turned to the Government for a request to be restructured as universal banking institutions. In the outcome, specialized independent investment banks no longer exist in the USA as a matter of fact. Ordinary banks suffered great losses, too: Washington Mutual, a large savings bank, was purchased by J. P. Morgan Chase for USD 1.9 billion while Wachovia, which was specialized in originating mortgage loans by changeable interest rates, was acquired by Wells Fargo bank.

The process of loss revelations by financial institutions, government interventions, acquisitions and mergers expanded out of the USA. In Great Britain, HBOS, a large mortgage bank, could not withstand the crisis and, hence, was acquired by Lloyds TSB which paid GBP 12.2 billion. Bradford & Bingley, another large lender, was nationalized as Banco Santander of Spain acquired its assets paying about GBP 20 billion. Fortis of Belgium, a large financial and insurance house, survived as governments of Benelux gave the institution a required bail-out package of EUR 11.2 billion (against 49 percent of shares). Governments of Belgium and France extended EUR 6.4 billion to Dexia banking company. Hypo Real Estate, a German bank, escaped from the collapse as it received credit guarantees to the sum of EUR 35 billion issued by the German Government and banking consortium. In Australia, Macquarie and Babcock and Brown, the country's two major banks, faced big problems as they were forced to sell their assets. Ultimately, Bank of East Asia in Hong Kong fell as a victim to the crisis, and the necessary amounts were provided to bail the bank out.

All this brought about distrust among participants in the interbank market, pushing interest rates of interbank loans notably up. Mounting losses in the financial market and the new wave of bank acquisitions prompted the Federal Reserve System and European governments to take decisive actions. The Fed provided USD 620 billion to leading central banks, broadening the volumes of foreign currency swap transactions with the European Central Bank and the Swiss National Bank, while opening new positions with Bank of Japan, Bank of England and Bank of Canada. After this, all these institutions embarked on a concerted injection of vast dollar liquidity in to the interbank market with the goal to meet the demand for dollar in European markets. The Fed appeared with a proposal to buy securities for an amount up to USD 600 billion. Also, the US authorities planned to create a government agency that would take on problem debt assets of financial institutions. To this end, Mr. Paulson, the US Secretary of Treasury, turned to the US Congress with a request to approve an additional financing of USD 700 billion. The issue invited many talks and discussions, and, finally, the Congress approved the USD 700 billion bail-out package, as a result.

Though European governments did not act on a single program they, however, took similar actions: all leading European countries increased the amounts of guaranteed deposits and made vast injections. On October 8th, in particular, the ECB, the Bank of England and the Swiss National Bank injected about USD 120 billion in to the market.

These measures nevertheless were not so much instrumental to stock exchanges which kept on crumbling. The Dow Jones Index, the main US business activity indicator, was 8579.13 at the closing of trade session on October 9th, whereas in the beginning of the third quarter it was 11350.01. On September 29th, it dropped 777.68 notches (-6.98 percent) which was the largest daily decline. Other international stock exchanges saw similar developments in the course of the financial crisis. In an attempt to stabilize the markets, many governments temporarily disallowed short sale transactions by financial institutions.

Financial instability affected Russia, too, causing the Russian stock exchange to slump as investors got feverish to get rid of financial assets. In summer, the downturn of the Russian stock exchange was 30 percent and it considerably accelerated in September. On September 16th the RTS index fell by more than 11 percent after which stock exchanges closed down until September 19th. Trades at the stock exchange rebounded but had to be closed repeatedly due to substantial falls. The Russian Government and Central Bank furnished market participants with large-scale liquidity to recover confidence in the baking system and to stabilize financial markets.

Instability of financial markets and large-scale liquidity injection drew their impact on the commodities markets, too. Part of money available from the sale of financial assets was poured into commodity markets, bringing about even more volatilities and uncertainties: at the end of the quarter gold price, which had dropped during the period, again rose in comparison with the beginning of the quarter (gold price of USD 910 per ounce went down to USD 746 but regained to a level close to USD 900). At the London Commodity Exchange, Brent plunged from USD 144.38 a barrel in early July to USD 97.44 in September and further moved down to USD 80 at the beginning of October, yet showing high volatility.

Showing certain volatility during the quarter, grain and rice prices nonetheless have not changed much, since demand persisted owing to a number of countries' plans to replenish the stocks. Some price increases were seen in the butter market but prices decreased in sunflower oil market.

In global financial markets in the third quarter, the US dollar appreciated, from 1.58 for one euro at the beginning of the quarter to 1.35 in October. On October 8th, leading central banks of the world initiated a concerted cut of interest rates by 0.5 pp in order to take one step further to halt the panic in the financial market. Even after this action, however, the 3-month Libor remained high, topping the 4 percent level, whereas it was 2.8 percent at the beginning of the quarter.

The new phase of turmoil in financial markets brought big uncertainties in to the financial and commodities markets, creating high volatilities and new risks along with fears of further downturn of world economy.

Declining commodity prices, food prices in particular, which is observed in global markets since the second quarter, has not yet echoed properly the domestic market segments in Armenia. This is explained by slow response of prices in certain market segments, on the one hand, and the August conflict in the region and freight-related problems, on the other.

### *Aggregate Supply*

Economic growth in Q3, 2008 has been 10.5 percent year-on-year[1]. The growth of value added in ***Agriculture*** has been 6.9 percent[2]. This growth was largely determined by increases recorded in plant vegetation owing, particularly, to rich produce of fruit and vegetable thanks to good weather in spring and summer periods.

The growth of value added in ***Industry*** has been 5.2 percent owing to increases in production volumes in energy, mining and food industry. Unlike the first half of the year, the growth rate has accelerated in metal ore mining, production of electric energy and food products. Production of canned foods and natural juice has reported notable increases thanks to rich crop of fruit in the reporting period. In addition, production of alcoholic beverages, and brandy in particular, remained growing at a faster pace.

The growth of value added in ***Construction*** has been 17.2 percent. As was the case in the first half of the year, construction volumes have expanded mostly determined by the notable increase of volumes of construction in residential housing, processing industry as well as hotel and restaurant services.

The growth rate in ***Services*** has been 10.7 percent. This was recorded due to robust growth in wholesale trade, communications, financial and information technologies and the tourism-related services.

### *Aggregate demand*

According to the CBA estimations, private spending in real terms in Q3, 2008 has amounted to 10.7 percent year-on-year, with private consumption having grown by 9.3 percent and private investments having grown by 14.4 percent in real terms. Under these conditions, real private expenditures have topped the equilibrium merely by 0.08 percent, and contribution of private spending to inflation has been just 0.02 pp, as a result.

The current account sub-items have demonstrated the following developments: Based on the Q3, 2008 estimations ***export*** of goods and services has reduced by 0.1 percent year-on-year[3], of which export of goods has reduced by 5.5 percent year-on-year. The situation in the Region in August was added to the delays in the recovery of metallurgy, which pushed exports to narrow further. The cumulative reduction of export in the period January-August has occurred mainly due to decreased volumes of export of copper, ferromolybdenum, diamond, unprocessed gold and items of jewelry. With nominal volumes of export of goods and serviced declining, the reduction in real terms has been 8.2 percent year-on-year.

High growth rates of ***import*** have persisted in the third quarter, too. The growth of import of goods and services in Q3, 2008 will be 34.0 percent year-on-year[4]. Growth of import persisted due to increased volumes of import of passenger cars, oil products, unprocessed gold as well as telephone and telegraph equipment and modems observed since the beginning of the year. In the meantime, the declining trend of diamond imports persisted. The real growth of import of goods and services in the current quarter has been 16.8 percent year-on-year.

Net inflow of non-commercial transfers has grown by 40.6 percent year-on-year. In spite of persisted year-on-year growth of net inflow, the growth rates of net inflow, nevertheless, decelerated in August. This is explained by the fact that the growth of transfers coming from Russia has slowed down because of the situation in the Region, when a notable

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*[1] Considerable slowing of the growth rate was seen in the cumulative GDP indicator. Particularly, the real GDP growth in January-August has been 10.3 percent whereas in January-July it has been 10.6 percent. The slowing was largely attributable to negative impacts from the conflict in the Region in August, associated, particularly, with cargo transportation problems.*

*[2] The GDP sector developments are represented by showing the growth in the quarter against the same quarter of the previous year.*

*[3] Export of goods (FOB) in the period January-August has reduced by 4.8 percent, and 4.0 percent, when diamond is excluded. The indicators of services are forecasts.*

*[4] Import of goods (CIF) in the period January-August has increased by 36.0 percent, and 38.8 percent, when diamond is excluded. The indicators of services are forecasts.*

outflow of capital from Russia took place in August. In addition, global financial crisis triggered a large-scale outflow of capital in September. The impact of the crisis on growth rates of inflow of non-commercial transfers will be observed in September as well.

Amid the above-mentioned developments, in August[5] the year-on-year growth rate steeply plunged in construction sector[6] in Russia (in August of 2008 the year-on-year growth of construction was 6.4 percent in comparison with 14.5 percent recorded for the same period in the previous year), while growth remained strong in trade sector. The volumes of transfers coming from the USA have decreased throughout the year.

In Q3, 2008 the impact of the fiscal sector[7] on the aggregate demand has been 0.2 percent expansionary instead of expected 1.1 percent expansionary.

So, with private spending slightly above the equilibrium and with fiscal policy notably less expansionary, the developments in domestic demand have contributed just 0.08 pp to inflation over the quarter.

Given the slowing of the dramization since the start of the year and high inflation recorded in the first six months, the CBA kept on tightening the monetary conditions by raising the Repo Rate by 0.75 pp in the second quarter (0.25 pp each quarter). Under such conditions, almost all monetary indicators have reported considerable slowing of the 12-month growth rates during the third quarter.

Dram broad money has grown by 35.1 percent year-on-year compared with 63.9 percent year-on-year in December of the previous year; of which dram deposits have grown by 44 percent, currency in circulation – by 28.7 percent and monetary base – by 31.6 percent. Meantime, broad money has grown by 30.1 percent compared with 42.3 percent year-on-year in December of the previous year; of which foreign currency deposits in dollar terms have grown by 25.9 percent and in foreign currency deposits in dram terms have grown by 13.8 percent.

Despite the above developments, lending to economy remains robust, as it made up 66.3 percent year-on-year in the third quarter. As such, in the structure of total loans, higher growth rates of the lending in dram persisted.

Based on the data of the last month of the third quarter, the volume of daily interbank repo market turnover has averaged AMD 867 million, with an average monthly interest rate of 7.26 percent, some 50 basis points below the CBA Refinancing Rate.

As of September, funds in monthly correspondent accounts of commercial banks have averaged AMD 32.5 billion against calculated reserve requirement of AMD 23.9 billion. The monthly excess liquidity of commercial banks has averaged AMD 8.6 billion.

## THE FORECASTS FOR UPCOMING 12-MONTH PERIOD (Q4, 2008 TO Q3, 2009)

### External environment[8]

***Baseline scenario***

The following assumptions underlie the forecasts about the external sector under the baseline scenario:

- World economic growth will slow down due to the Q3, 2008 global financial crisis, and it will begin recovering only from the end of 2009;
- Losses of global economy due to financial crisis will be in the range of USD 1.5-2 trillion (USD 1.3-1.4 trillion, according to the IMF estimations), and no new financial shocks will occur in the forecast period;

*[5] The September data are lacking.*
*[6] Considerable part of migrants in Russia is employed in construction and trade sectors.*
*[7] The preliminary actual consolidated budget figures of the third quarter have been calculated based on the preliminary actual indicators for July and August as well as based on the preliminary program for September provided from the Ministry of Finance of Armenia.*
*[8] 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.*

- With slowing world economic growth rates and given that no new financial shocks will occur in the near future, global inflation rate will reduce slowly which, however, will be concurrent with high uncertainties and volatilities in commodities markets.

This scenario assumes the following price indicators: over one year the euro/US dollar exchange rate is expected to fluctuate within 1.35-1.5, mostly determined by volatile prices of raw materials and economic developments in the USA and Europe.

It is expected that no trends of price increases or decreases would take place in commodities markets, while uncertainties and volatilities would not allow any material drops in prices just because world demand might have reduced. Specifically, in the future period, global oil prices will fluctuate in the range of USD 80-110 a barrel; gold prices in the range of USD 800-950 oz. and copper prices in the range of 6000-7000 per ton.

In the near future, no essential change in grain prices is anticipated because the growth of supply will be offset by the growth of demand as stock will be replenished. New price trends in this market will be shaped in the next spring in expectation of new crops.

Grain prices may somewhat affect prices of other food products, such as rice, meat, dairies, fats and oils, etc.

Starting April 1, 2009, prices of imported natural gas will increase by 40 percent, based on the agreement reached between Gazprom and ArmRussGazProm. This will affect the tariffs on electric energy and the prices of other goods toward increase.

***Alternative scenario***

The assumptions under this scenario are that the losses caused by the global financial crisis will be even larger as new financial shocks could occur to drive world economic growth to significant recession. In spite of considerably decline in world demand, the commodities markets will see new inflationary pressures driven by highly volatile prices and uncertainties, movement of investment from financial markets to commodities markets as well as because of the intention of central banks to inject extra liquidity to remedy the situation.

Under this scenario, the euro/US dollar exchange rate is expected to depreciate to 1.6 dollar over one year, while oil and gold prices may rise sharply, respectively, to USD 155 a barrel and more than USD 1000 oz.

The estimation of inflationary pressures in external environment is provided in section Inflation forecasts, although one should also bear in mind that uncertainties of the impact of developments in global arena on the domestic market is very high, which is determined by price rigidity and imperfect goods markets.

Aggregate supply

***Baseline scenario***

Economic growth in the fourth quarter is expected to be 10-11 percent and over the first three quarters of 2009 – 8-11 percent.

Like in previous years, the services and construction sectors will remain the largest contribution to the economic growth.

The growth of value added in industry in the fourth quarter is expected in the range of 3-5 percent. The growth will be fuelled mainly from the increases in production of energy, mining industry, alcohol and non-alcohol beverage, canned food and building materials. Over the first three quarters of 2009 the industry growth rates are expected to recover within 4-6 percent owing to likely increases in production of electric energy[9], building materials, food industry and mining industry as well as thanks to some recovery of growth rates in metallurgy and chemical industry.

*[9] Likely increase by around AMD 25.5 billion of the volumes of production of electric energy during 2009 is connected with the possibility of exporting it to Turkey.*

Risks stemming from the industry sector are set mainly toward decrease as they are determined by decelerated recovery of growth rates in production volumes of metallurgy as well as reduced production volumes of canned food and natural juice (due to adverse weather conditions). Besides, risks of subsiding industrial output are associated with possible reduction in production volumes of metallurgy, chemical industry and building materials since the first half of 2009 will see gas prices increasing. There are risks associated with reducing total industrial output, determined by the slowdown of growth rates of world demand.

Some 16-18 percent growth in expected in construction in the fourth quarter of 2008 thanks to high growth rates of construction activities in residential housing, processing industry and services.

Expected growth rates of construction over the first three quarters of 2009 would reach 12-13 percent as they would be fostered by possible investments in transport, communications, energy, metallurgy and chemical industry. Growth is expected also in respect of residential housing that will be financed from both household and corporate resources.

Risks stemming from the construction sector are set mainly toward decrease associated with possible slowing of capital influx due to liquidity crisis in world markets as well as determined by postponement of some investment projects.

The real growth of value added in services in the fourth quarter of 2008 will reach 11-12 percent and it is expected to be in the range of 9-12 percent over the first three quarters of 2009. High growth is anticipated in transport, communications, travel-related services, financial services and others. Here, associated risks are set mainly toward decrease since growth of real household income is expected to decline due, particularly, to the slowing real growth rates of money remittances.

The real growth in agriculture in the fourth quarter is expected in the range of 6-8 percent. As for the first three quarters of 2009, given that plant vegetation, which makes half of the agricultural sector, is conditional on climate, the least risky option has been outlined and, therefore, the real growth in agriculture over the mentioned period is projected to be 3 percent.

Nevertheless, existing risks are set toward increase, due to an increase in headcount in animal breeding and some expansion of arable land.

***Alternative scenario***

Under this scenario, all sectors of GDP, except for agriculture, will echo the developments of world economy. Developments in agriculture in the near time horizon will depend exclusively on weather conditions. It is supposed that the GDP growth rate over the first three quarters of 2009 would fluctuate within 6-9 percent[10] instead of 8-11 percent outlined in the baseline scenario. Construction, in which growth rates will be in the range of 8-10 percent instead of the projected 12-13 percent under the baseline scenario in the event risks of considerable decline in external financing emerge and financing of some construction projects is put off, remains most vulnerable to the developments in world economy.

In services, growth rates will be in the range of 7-9 percent instead of 9-12 percent projected under the baseline scenario. The slowdown is associated with risks of considerable decline in growth rates of real household incomes, i.e. wage and money remittance as well as with possible rescheduling of some investment projects that would have driven further growth of transport and communications.

Industry may see some decline mostly due to noticeable decrease in both external and domestic demand. Some slowing of growth rates will be observed in food industry and in production of building materials. Growth

*[10] The GDP distribution fan chart under the alternative scenario is presented in Appendix 1.*

rates in chemical industry and metallurgy, as was outlined in the baseline scenario, will be put off. As a result, the industry growth rates will be in the range of 3-4 percent instead of 4-6 percent forecasted according to the baseline scenario.

## Aggregate demand

**Private sector spending**

***Baseline scenario***

According to adjusted estimations of private consumption and private investments, the real growth of private consumption in Q4, 2008 and in Q1, Q2, and Q3, 2009 will average within 8.0-9.5 percent, and private investments in real terms will increase by 12.5-14 percent.

Based on the CBA estimations, the private expenditures gap in the fourth quarter will still be a little positive as private spending will be slightly above the consumption equilibrium. In the first quarter of 2009, however, private spending will be -0.2 percent below the equilibrium, conditional on both private consumption and private investments. In fact, while tiny inflationary pressures from private expenditures are expected in the fourth quarter of 2008, the private spending however will create deflationary pressures over the first three quarters of 2009, by contributing an average of –0.03-0.06 pp to inflation.

***Alternative scenario***

According to this scenario, the growth rates in real expenditures of private sector are expected to slow down notably, which will be reflected in both private consumption and private investments growth rates. What is more, the growth rates in private investments will decelerate even sharper as they are mainly attributable to the risks of arrival of external financial resources.

Under the alternative scenario it is expected that the real growth of private consumption over the first three quarters of 2009 would average within 6.7-7.5 percent instead of 8.5-9.5 forecasted under the baseline scenario. The slowing of growth rates will be determined by reduction in financial resources from the external environment, such as real transfers, notable deceleration of growth rates in real wages in domestic economy and declining growth rates in consumer loans.

The real growth of private investments is forecast an average quarterly of 8-8.5 percent against 13-14 percent forecast under the baseline scenario. Slow growth rates in private investments are determined by shortages of external financial resources, particularly the supply of capital transfers, foreign loans, as well as by high risks that some foreign investment projects may be put off.

To sum up, according to the baseline scenario, a negative deviation of private sector spending from the equilibrium may worsen in 2009, under which conditions deflationary pressures would be greater against the baseline scenario.

## Consolidated budget

In the fourth quarter the fiscal impulse will have 1.5 percent impact expansionary instead of the projected 2.9 percent expansionary. The impulse will be 1.9 percent expansionary on the part of expenditures but it will be 0.4 percent restrictive on the part of revenues. So, in view of the developments in the fiscal sector over the nine months of the year, the 2008 fiscal policy's impact on the aggregate demand will be almost neutral.

In the first quarter of 2009, the fiscal impulse will have 1.3 percent impact expansionary but in the third quarter it will have almost neutral impact.

To sum up, given the above two scenarios of private spending and the forecasts of developments for the fourth quarter of 2008, the domestic demand will have a neutral impact on inflation. It, however, will shape a certain deflationary environment over the first nine months of 2009 as private spending may be below the equilibrium and fiscal impulses may have restrictive patterns.

Current account

***Baseline scenario***

Under the baseline scenario, with world demand growth rates slowing down and sectors of the domestic economy developing accordingly, the growth rates in export in Q4, 2008 will reach 7-10 percent year-on-year. Also, given that 1.5 billion kilowatt of electric energy is expected to export to Turkey in 2009 as well as production of building materials increases, the mining industry expects growth, and growth rates in metallurgy and chemical industry rebound, the growth of export over the first three quarters will reach 15-20 percent.

The potential of high growth rates in import of goods and services will pass on to the next year. As a result, import of goods and services in Q4, 2008 is expected to grow by 25-30 percent year-on-year and over the first three quarters of 2009 – by 22-27 percent.

Non-commercial transfers largely depend on the developments in Russian economy. According to recent estimates by the IMF, the economic growth for the period 2008-2009 has been adjusted toward decrease since the downturn of financial markets in Russia will lead to some slowing of the GDP growth rates. However, experts at the IMF reckon that the Russian economy has good chances to avoid steep and lasting declines in growth. Current developments were reflected in the Q3 performance of transfers. Taking these developments into account, the year-on-year growth of net non-commercial transfers will be 25-30 percent in the fourth quarter of 2008 and 20-25 percent over the first three quarters of 2009.

If the above-said developments persist, the current account to GDP ratio will make up 10-11 percent for 2008 and 11-12 percent for 2009.

***Alternative scenario***

The difference from the baseline scenario lies in persistence and deterioration of current adverse developments. This, coupled with a sharp decline in growth rates in external demand, will reflect quite a slow, 5-8 percent, growth of exports during 2009. Because of likely holdups or delays in implementation of investment projects in light of adverse economic developments in global arena the slowdown of the GDP growth rates will be mirrored in the growth rates in domestic demand and hence the growth rates in imports, which will be in the range of 12–17 percent.

The main guess on the part of transfers is that the global financial crisis will draw some larger impact on the Russian economy and, supposedly, actions of economic policy, which should be designed to ease global economic influences, would not produce the desired results or would just have a short-term effect. If events develop this way, the growth of net non-commercial transfers will make up 10-15 percent.

As a result, the current account to GDP ratio will amount to 12-13 percent for 2009.

Labor market

***Baseline scenario***

The CBA estimates that the growth of average nominal wage in the fourth quarter of 2008 and average growth in the first six months of 2009 will be in the range of 18-19 percent. The level of unemployment will average around 6.1-6.2 percent.

Based on preliminary estimations of the CBA, the growth of average nominal wage in the third quarter of 2009 will be around 18.6 percent while the level of unemployment – 6.0 percent.

In the fourth quarter of 2008 and the first three quarters of 2009, the impact of labor market on inflation will be stimulating as the growth of productivity will be in the range of 8.5-9.5 and will only partly counteract the stimulating impact of wage growth on inflation.

***Alternative scenario***

This scenario suggests that the labor market developments over the first three quarters of 2009 would be such that labor productivity growth would notably slow down, wage growth rates would decelerate and the level of unemployment might somewhat increase.

The labor productivity growth rate will be 7.5-8.0 percent instead of 8.5-9.9 percent projected under the baseline scenario, mainly due to risks that growth in principal branches of the GDP would slow down. Quarterly growth of average nominal wage will be within 15-16 percent instead of forecast 18-19 percent under the baseline scenario, conditional on both slowing productivity growth rates and risks of reducing demand in the economy.

Money and credit

***Baseline scenario***

Considering that the Central Bank has tightened the monetary conditions since July of the previous year by raising Repo Rate by 3 pp, and that the growth rates of dramization of the economy will remain slow, the year 2008 will end up with the annual growth of monetary indicators as follows: broad money and dram broad money – 21-24 percent and monetary base – 9-11 percent. In the meantime, the growth rates of dram deposits and currency in circulation will slow down notably to 32-34 percent and 12-14 percent, respectively. Contrary to this, foreign currency deposits will keep on growing to make up 23-25 percent growth in dollar terms at the end of the year (the annual growth in the previous year was 8.6 percent). Unlike other indicators, the growth rates in economy lending are expected to remain high, to make up nearly 60 percent at the end of December. Though this indicator will be some 16-18 pp below the previous year's indicator, however it will in absolute terms exceed that level by approximately AMD 72.0 billion (in 2008 the growth will amount nearly to AMD 260.0 billion). The slowing of economy lending is explained by the fact that the CBA is conducting restrictive monetary policy and that global markets continue incurring liquidity crisis.

During one year the projected levels of the above-mentioned indicators seem to have persisted: as of end-September of 2009, dram broad money will increase by 22-24 percent, broad money by 21-23 percent, monetary base by 13-15 percent, dram deposits by 30-32 percent, and currency in circulation by 17-19 percent. The growth rates in economy lending are expected to slow down in September of 2009, to 40-42 percent year-on-year.

***Alternative scenario***

In the monetary sector volumes of lending will shrink, entailing year-on-year 33-35 percent or about AMD 200.0 billion growth as of the end-September of 2009. This will in turn affect the other monetary indicators, decelerating their growth rates by 2-4 pp. Broad money will increase by 18-20 percent year-on-year, dram broad money by 19-21 percent, monetary base by 11-13 percent, currency in circulation by 13-15 percent, and dram deposits by 26-28 percent.

INFLATION FORECASTS

***Baseline scenario***

According to the baseline scenario, given the market interest rates remain unchanged and based on the results of the model of inflation by commodity groups, the central forecast of the 12-month inflation is 3.5 percent for Q3, 2009 and 5.8 percent for Q4, 2008 (see Appendix 2).

The main assumptions in the baseline scenario are that:

- owing to prior developments in world food markets, domestic prices of item 'Bread products' will fall by 20 percent by the yearend, reducing headline inflation by some 3 pp;
- rising gas and electric energy tariffs from April 1, 2009 and the resultant increase in cost prices of other goods will make around 1.3 percent contribution to the cumulative CPI (the contribution has been considered in the Q2 and Q3, 2009 forecasts);
- likely increase of service tariffs has been considered in the Q1 and Q2, 2009 forecasts, which will make 1.4 percent contribution to inflation in the event of possible rise in medical and educational service fees and possible drop in tariffs on communication services; and
- contribution of ancillary impact of food products to inflation, which is gradually fading away, has been taken into consideration for the entire forecast period.

***Alternative scenario***

Based on the assumptions outlined in the baseline scenario and the results of the model of inflation by commodity groups, the following forecasts of inflation have been made: the central forecast of the 12-month inflation is 5.0 percent for Q3, 2009, against 3.5 percent outlined in the baseline scenario, and 5.9 percent for Q4, 2008 against 5.8 percent as envisaged by the baseline scenario (see Appendix 2).

***Likely risks of the baseline and alternative scenarios***

- Domestic prices of the item "Bread products" may respond to previous developments in world food markets to a smaller extent than forecast;
- The world demand for food and raw materials would decline as economic growth slows down globally, under which conditions global oil and grain prices may come in at lesser levels than forecast. On the other hand, with financial markets showing volatility and central banks increasingly injecting liquidity, market participants seem likely to turn to raw materials and commodities markets by channeling their resources to such markets. As a result, volatility of international prices of oil and grain would increase while domestic prices would come in at some higher levels;
- Depending on climatic conditions, the agricultural production may report either more or less output;
- The real growth rate of aggregate demand may be much slower than forecast as influx of capital to Armenia seems to shrink due to slowing growth rates of capital transfers and possible put-off of investment projects. Under such circumstances a deflationary environment would emerge. On the other hand, the above-mentioned factors may exert substantial pressures causing the dram exchange rate to depreciate. If this happens, not only will price increase on imported goods offset the domestic price deflation but it will contribute to shaping some higher headline inflationary environment.

THE MONETARY POLICY DIRECTIONS FOR THE FORECAST 12-MONTH PERIOD

In view of the Q3, 2008 developments and the Central Bank forecasts for the future 12-month period, the Board of CBA reviewed the directions of the monetary policy.

Inflation coming from the external environment continued to ease in the third quarter of 2008 while the domestic demand developments had not created extra inflationary pressures. What is more, there are signs that domestic prices of fuel and some food products are dropping. This decrease, though slow and timid, is creating ground for making adjustment to such prices in the near future. In turn, the slump in world demand caused by turmoil in global financial markets is creating ground that inflationary pressures from external sector would loosen. A prudent fiscal policy amid these developments would be a right option to curb soaring excess domestic demand that would, in turn, ease domestic inflationary pressures.

In the meantime, prices in international commodities markets are likely to demonstrate increased volatility as financial crisis continues. This may come out as a serious factor to work against easing of global inflation.

The results obtained through the forecast of inflation by individual types of goods and the quarterly projection model of the CBA based on both baseline and alternative scenarios point out that the inflation behavior and interest rate response may be different in each case of the scenarios. Albeit either scenario forecast that inflation will enter the target band as soon as in the first quarter of 2009 (due to some 20 percent drop in domestic prices of the item "Bread products" driven by previous developments in world food markets), the alternative scenario however is predicting that it will be in the upper border of the band all the time.

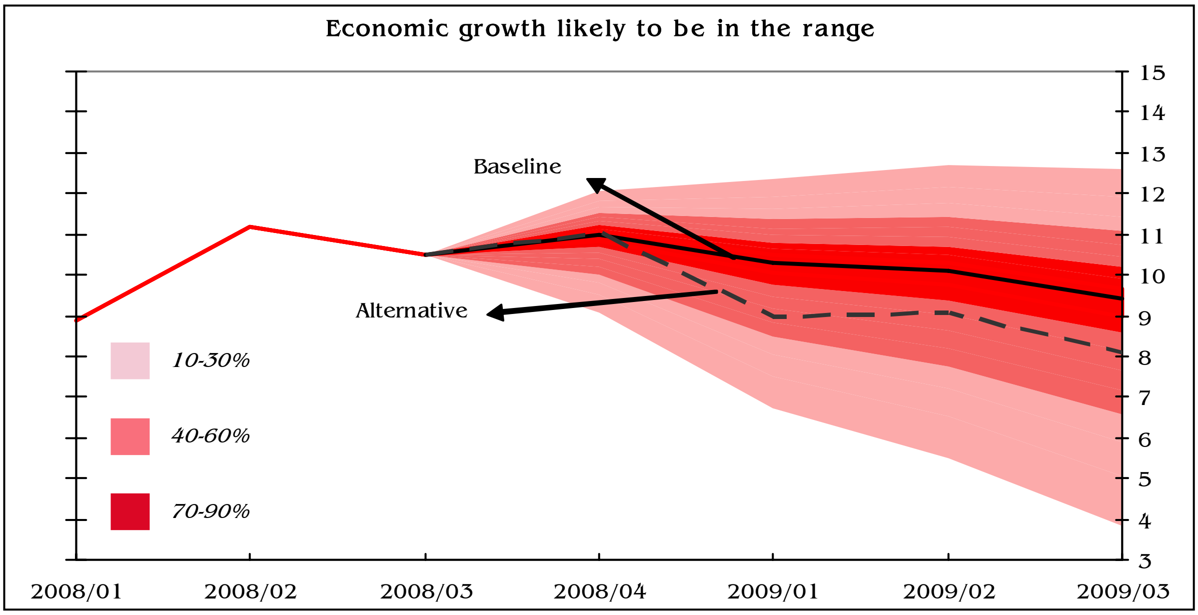
In case economic developments go in line with the baseline scenario, the CBA will be resilient in keeping inflation within the target, event if this requires a policy of interest rate cuts. In doing so, the CBA may choose to stimulate domestic demand since a forecast low inflationary environment seems likely to further push the GDP down from its equilibrium. In case of the alternative scenario though, maintaining inflation in the target is possible, if interest rates are increased or left unchanged. Where interest rates remain unchanged, pressures on depreciation of the dram exchange rate may have a stimulatory effect on headline inflation through increased prices of imported goods. On the other hand, however, they would stimulate the real GDP growth. A more flexible monetary policy, which presumes keeping inflation within the target for as longer period of time as possible, is effective since accomplishment of the policy target is becoming possible under conditions of much higher economic growth.

The above-noted 20 percent drop in domestic prices of the item "Bread products" is essential to the behavior of inflation addressed in both scenarios, otherwise the level of inflation projected for the entire period under review would be way above the target, which would ban the CBA to be more flexible in fulfilling its primary objective in general and stimulate the domestic demand in particular.

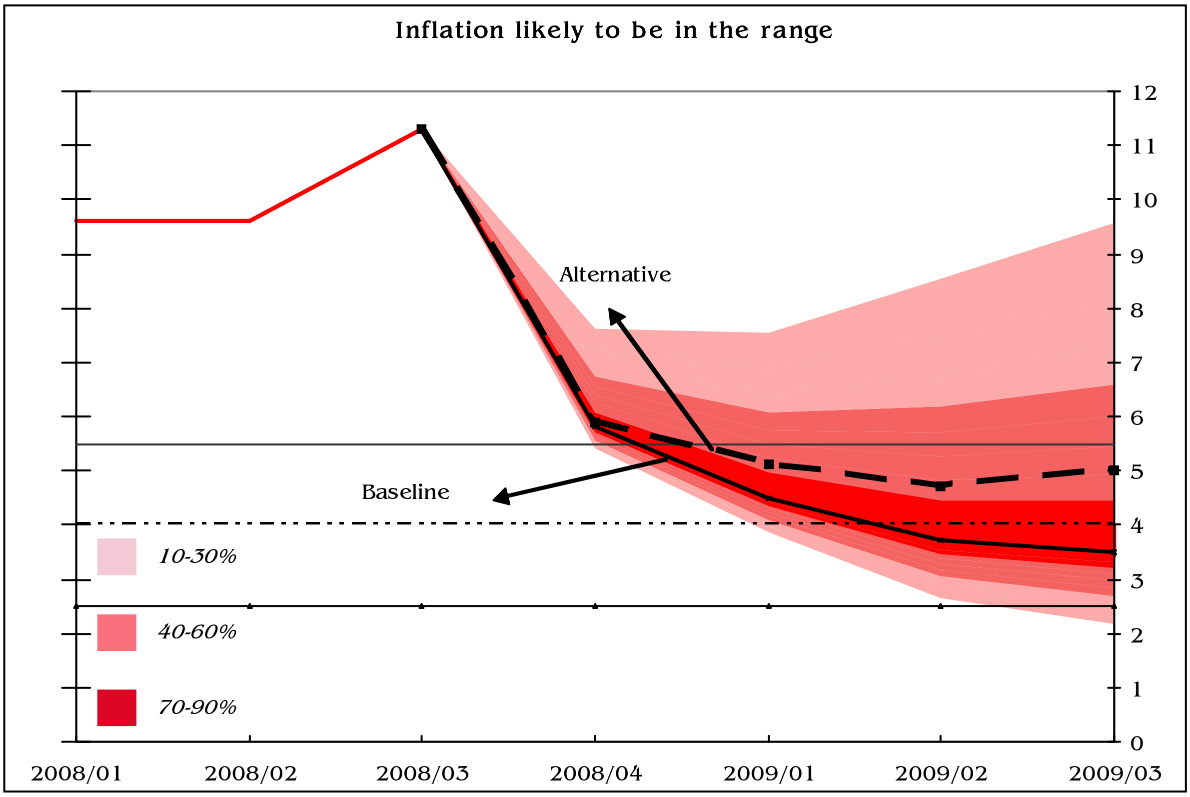
In the outcome, the Board considered not to change the CBA Refinancing Rate, leaving it at 7.75 percent. Lombard and Deposit Facilities were set at 10.75 percent and 4.75 percent, respectively.

## APPENDIX

**Appendix 1. Quarter to the same quarter of the previous year**
*(Real GDP Growth Forecast Distribution Fan Chart under baseline scenario and alternative scenario)*




**Appendix 2. Inflation Forecast Distribution Fan Chart under baseline scenario and alternative scenario**



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# 1. SUMMARY

In Q4 2008 the world crisis intensified, having affected the economies of developing countries. With the world demand reducing persistently, the trends of easing inflationary pressures since the second half of the year were followed by a deflationary environment shaped in the fourth quarter, which was reflected in international raw material and food markets. It is noteworthy that these developments found reflection in Armenia's domestic markets only in the yearend, mostly in the form of reduced prices of fuel and bread products. Whereas in many developing and developed countries, the deceleration of inflation rate has been obvious already since the third quarter (see Appendix 1, 2).

The world economic crisis has affected also the real sector of the economy in the form of reduced world demand and sharply slackened growth rates of inflow of private remittances. The impact was seen first of all in industry and construction branches which reported real decreases in the fourth quarter. As a result, 0.2 percent decrease of real GDP was recorded in Q4 2008, whereas the January-December economic growth indicator made up 6.8 percent.

In Q4 2008, the real growth of domestic demand was 2.6 percent (14.2 percent in the previous year for the period under review) and 8.1 percent based on the annual results (14.0 percent in the previous year). The slowing of growth rates of the domestic demand was attributable to considerable growth rates of public expenditures and more moderate reduction in growth rates of private spending. In the structure of private spending the deceleration was seen mainly in the fourth quarter, explained by the slowdown of growth rates of household income due to the world financial and economic downturn. As a result, real private sector expenditures have drawn some 0.6 percentage point restrictive impact on inflation during the fourth quarter.

In Q4 2008, the fiscal policy's impact on the aggregate demand has been 2.0 percent restrictive instead of the projected 1.5 percent expansionary. The deviation occurred with regard to expenditures since instead of 1.9 percent expansionary impulse some 0.7 percent restrictive impulse came in due to savings generated on expenditures. During the quarter the nominal GDP was considerably behind the projected figure under which circumstance there emerged a greater restrictive impulse on revenues than it was forecasted. To sum up, the fiscal policy has had a neutral impact, instead of expansionary, on the aggregate demand over the year. The impulse has been restrictive on revenues and expansionary on expenditures.

In Q4 2008, and throughout the year, growth rates of wages have slowed down to some extent. As well as growth rates of labor productivity have reduced much faster leading to a unit labor costs growth. Under such conditions certain inflationary pressures from the labor market were observed in the consumer market.

In Q4 2008, the consequences of the world economic crisis were evident in the behavior of current account when 27.7 percent year-on-year reduction of export was recorded whereas import increased by 18.5 percent year-on-year. Another adverse development was that growth rates of the inflow of private remittances and income of seasonal workforce decreased sharply against high growths recorded in previous quarters. The year-on-year growth of the current account deficit in the fourth quarter made up USD 327.1 million, with its share constituting 12.6 percent in the GDP versus 6.4 percent in the previous year, based on annual results.

The Q4 2008 monetary environment[1] was characterized by the slowing of the dramization trends, as was expected, which reflected reductions in the dram components in monetary aggregates. The dram

[1] *Starting the third quarter of 2008, the CBA Review covers summary balance sheet indicators of the Central Bank, commercial banks and credit organizations. See details in the CBA Bulletin (May, 2008, pg. 106-107).*

broad money decreased by 4.2 percent year-on-year, with dram-denominated deposits reduced by 5.9 percent and currency in circulation, by 3 percent, in comparison with the growth in the previous quarter by 64.9 percent, 82.4 percent and 54.1 percent, respectively.

With increasing dollarization of the economy during the quarter foreign currency-denominated deposits in dram terms have increased by 30.5 percent year-on-year whereas the figure for the same quarter in the previous year was decreased by 9.3 percent.

High growth rates of lending to the economy persisted in the fourth quarter as well, constituting 48.7 percent year-on-year. The dram loans grew by 48.6 percent and foreign currency loans in dram terms, by 48.8 percent (the growth in dollar terms has been 47.6 percent).

The above developments determined the fulfillment of the inflation target for the fourth quarter. At the beginning of the quarter, notwithstanding a deflationary environment in global food and non-food markets, the price adjustments in domestic markets have been very sluggish, and the likelihood of price volatility was still high in international markets. In this period of time, the CBA had to sick to a high refinancing rate. Starting the second half of November one could see domestic prices dropping considerably and, coupled with this, economic growth rates decelerated due to the reduction in world demand. Under these conditions, the CBA announced that it changes the direction of monetary policy to adopt a policy of gradual easing of monetary conditions, underlining the importance of ensuring both price stability and financial stability.

Based on the yearly results, the tightening of monetary conditions from the second half of 2007 through the third quarter of 2008, coupled with the impact of the deflationary environment from the external sector in the fourth quarter, has enabled the CBA to ensure the target 4±1.5 percent of inflation. In the period October-December 2008, a mere 0.9 percent inflation has been recorded whereas the 12-month inflation figure, which dropped by 6.1 percentage points against September, had reached 5.2 percent.

# 2. INFLATION DEVELOPMENTS

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

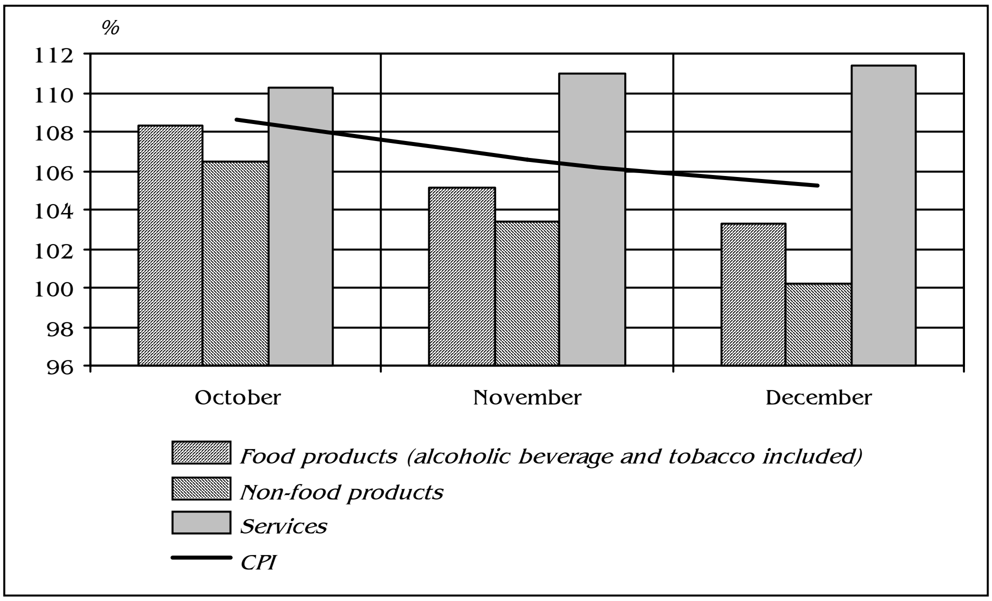
In December 2008 inflation was 5.2 percent against December 2007 (the indicator of the previous year was 6.6 percent). The change in prices of food products (alcoholic beverage and tobacco included), non-food products and service tariffs was 3.3 percent, 0.2 percent and 11.4 percent, respectively (9.7 percent, 2.5 percent and 3.2 percent in the previous year), having contributed to inflation by 1.79, 0.03 and 3.41 percentage points, respectively.

The 3.3 percent price increase in "Food products" (including alcoholic beverage and tobacco) was mainly a result of price increase in items "Bread" (7.9 percent), "Meat products" (9.1 percent), "Fats and oils" (11.5 percent), "Coffee, tea, cocoa" (21.1 percent), "Dairy products" (3.2 percent), which contributed to the rise in prices of "Food products" by 2.2, 1.6, 0.9, 0.5 and 0.2 percentage points, respectively. At the same time price drops were recorded in item "Vegetable and potato" (-11.9 percent), "Fruit" (-9.8 percent), "Fish" (-27.3 percent) and "Egg" (-5.4 percent), having moderated the food price increase by -1.0, -0.5, -0.3 and -0.2 percentage points, respectively.

The 0.2 percent rise in prices of item "Non-food products" was mainly conditioned by price increases in sub-items "Footwear" (9.2 percent), "Garment and knitwear" (5.1 percent), "Detergents" (5.7 percent), "Beauty items" (4.4 percent), "Fuel" (6.5 percent), "Personal usage cars and petrol" (-13.1 percent), "Items of culture" (-8.9 percent) and "Household electric appliances" (-4.0 percent), having contributed to the inflation of the item by 1.0, 0.8, 0.5, 0.3, 0.3, -2.7, -0.6 and -0.1 percentage points, respectively.

The 11.4 percent inflation in the item "Services" was due to risen tariffs in "Medical services" (24.0 percent), "Household utility services" (7.8 percent), "Education services" (4.4 percent), "Transport services" (3.9 percent), "Public catering" (10.0 percent) and "Legal and banking services" (14.6 percent), having contributed to the inflation of the item by 7.3, 1.9, 0.7, 0.6, 0.5 and 0.2 percentage points, respectively.

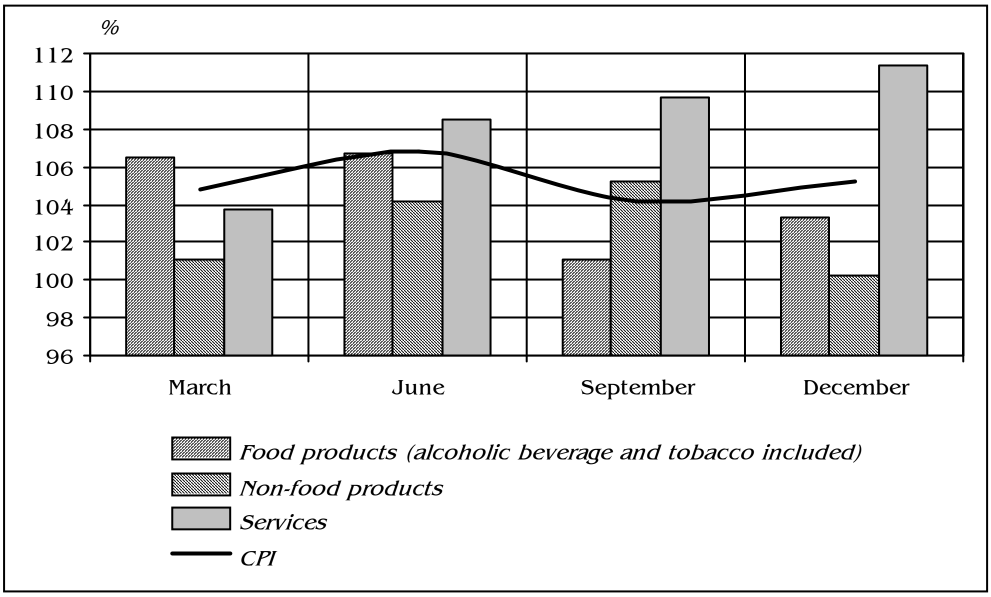
*The 12-month CPI in Q4 2008 by the main items of goods and services*



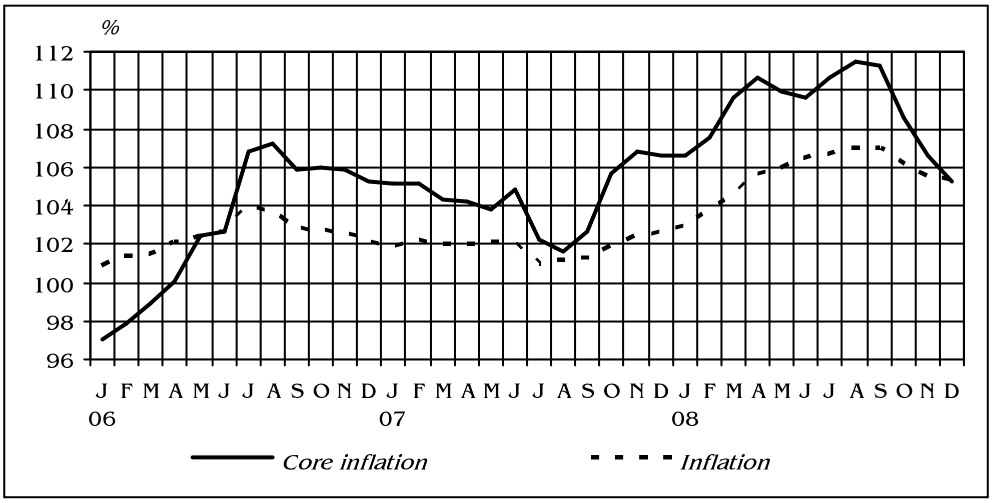

The Q4 2008 inflation was 0.9 percent against the end of the previous quarter, which was mainly a result of 2.2 percent increase in food prices (alcoholic beverage and tobacco excluded) and 1.5 percent rise in service tariffs. In the meantime, non-food prices have mitigated inflation, recording some 4.7 percent deflation against the previous quarter.

In Q4 2008, inflation was 6.8 percent compared to the same quarter of the previous year and in the period January-December 2008 it has been 9.0 percent compared to the same period of the previous year.

***CPI changes by the main goods and services (to December 2007)***




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




In December 2008 against December of the previous year, core inflation was 5.37 percent mainly driven by the price increase in items "Surgery services at hospitals" (27.4 percent), "Pork" (83.3 percent), "Medical laboratory services–x-ray" (79.9 percent), "Middle medical staff and laboratory assistant services" (30.6 percent), "Butter" (22.5 percent) and "Doctor and surgeon consulting services" (37.0 percent), having contributed to the core inflation by 1.5, 0.8, 0.4, 0.3, 0.3 and 0.2 percentage points, respectively.

***Statistical review of inflation fluctuations***

*In order to review the changes in Consumer Price Index and in price indexes of individual items included in consumer basket, as well as to discover 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 January 2005 to December 2008.*

***Share of components causing fluctuations in monthly price indexes***

| | Trend | Seasonality | Irregular component | Total |
|---|---|---|---|---|
| *(January 2005 – December 2008, %)* | | | | |
| CPI | 0.1 | 75.8 | 24.1 | 100.0 |
| 1. Bread products | 0.3 | 24.2 | 75.5 | 100.0 |
| 2. Meat products | 0.2 | 62.0 | 37.8 | 100.0 |
| 3. Fish products | 2.0 | 55.7 | 42.3 | 100.0 |
| 4. Dairy products and oils | 3.6 | 32.9 | 63.5 | 100.0 |
| 5. Fruit and vegetable | 4.5 | 88.9 | 6.6 | 100.0 |
| 6. Other food products | 2.3 | 47.6 | 50.2 | 100.0 |
| 7. Non-alcoholic beverage | 10.1 | 23.3 | 66.7 | 100.0 |
| 8. Alcoholic beverage and tobacco | 30.2 | 15.3 | 54.5 | 100.0 |
| 9. Garment and footwear | 5.2 | 53.3 | 41.5 | 100.0 |
| 10. Rent, electricity, and fuel | 3.7 | 32.3 | 64.1 | 100.0 |
| 11. Home appliances | 0.3 | 16.2 | 83.5 | 100.0 |
| 12. Health services and medication | 2.3 | 35.9 | 61.8 | 100.0 |
| 13. Transport and communications | 0.2 | 26.3 | 73.4 | 100.0 |
| 14. Leisure and items of cultural products and services | 0.8 | 91.0 | 8.2 | 100.0 |
| 15. Other goods and services | 18.0 | 21.8 | 60.2 | 100.0 |

*The calculations show that between January 2005 and December 2008, in comparison with the period from January 2004 to December 2007*, the influence of irregular component on CPI has increased (9.7 percentage points) while the influence of trend component and of seasonality component has decreased (-4.8 percentage points and -4.9 percentage points, respectively).*

*The influence of the three components has changed differently. The influence of trend component in the period from January 2005 to December 2008, compared to the period from January 2004 to December 2007, has increased in the following items: "Alcoholic beverage and tobacco" (29.9 pp), "Other goods and services" (15.8 pp), "Meat products" (5.7 pp), "Fruit and vegetable" (4.4 pp), and has decreased in the following items: "Meat products and fish" (24.7 pp), "Non-alcoholic beverage" (23.9 pp), "Garment and footwear" (13.1 pp), "Dairies and oils" (6.7 pp).*

***Monthly price index fluctuation coefficients, 2005 – 2008, (%)***

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|---|
| CPI | 1.6 | 2.4 | 1.2 | 1.8 | 1.2 |
| 1. Bread products | 0.8 | 0.4 | 0.2 | 3.1 | 3.1 |
| 2. Meat products | 1.4 | 1.5 | 0.8 | 0.7 | 0.7 |
| 3. Fish products | 23.2 | 16.1 | 14.8 | 7.0 | 13.8 |
| 4. Dairy products and oils | 1.9 | 0.7 | 0.3 | 3.3 | 1.2 |
| 5. Fruit and vegetable | 11.1 | 17.6 | 14.8 | 15.6 | 14.1 |
| 6. Other food products | 1.5 | 2.2 | 0.7 | 1.3 | 0.9 |
| 7. Non-alcoholic beverage | 0.7 | 0.5 | 0.3 | 0.8 | 1.8 |
| 8. Alcoholic beverage and tobacco | 0.3 | 0.1 | 0.0 | 0.1 | 0.2 |
| 9. Garment and footwear | 0.3 | 0.5 | 0.4 | 0.8 | 0.4 |
| 10. Rent, electricity, and fuel | 0.7 | 0.5 | 0.7 | 0.5 | 2.2 |
| 11. Home appliances | 0.1 | 0.2 | 0.3 | 0.3 | 0.5 |
| 12. Health services and medication | 0.4 | 0.3 | 1.6 | 0.7 | 2.0 |
| 13. Transport and communications | 1.0 | 2.3 | 1.7 | 1.0 | 1.2 |
| 14. Leisure and items of cultural products and services | 0.3 | 1.0 | 1.0 | 1.3 | 0.7 |
| 15. Other goods and services | 0.2 | 0.2 | 0.2 | 0.3 | 1.2 |

*The influence of seasonality component has increased in the following items: "Transport and communications" (21.4 pp), "Garment and footwear" (15.6 pp), "Healthcare services and medicament" (7.7 pp), "Non-alcoholic beverage" (5.5 pp), and has decreased in the following items: "Other products" (12.6 pp), "House rent, electric energy, fuel" (9.4 pp), "Alcoholic beverage and tobacco" (8.7 pp), "Other goods and services" (7.8 pp), "Household appliances" (7.6 pp).*

*The influence of irregular component has increased in the following items: "Meat products and fish" (23.1 pp), "Non-alcoholic beverage" (18.4 pp), "Other products" (10.3 pp), "Bread and bread products" (9.7 pp), "Household appliances" (7.7 pp), "House rent, electric energy, fuel" (7.5 pp), and has decreased in the following items: "Transport and communications" (21.7 pp), "Alcoholic beverage and tobacco" (21.2 pp), "Meat products" (9.5 pp), "Other goods and services" (7.9 pp), "Healthcare services and medicament" (7.5 pp).*

*The Consumer Price Index fluctuation has been reviewed also by using monthly price index fluctuation coefficients in respect of each item of goods.*

*As shown in the tables, the CPI volatility has reduced in relation to 2007 driven mainly by shrunk fluctuations of prices in items "Dairies and oils, "Fruit and vegetable", "Leisure and items of art and services" and "Garment and footwear". The volatility has increased mainly in items "House rent, electric energy, fuel", "Healthcare services and medicament", "Non-alcoholic beverage" and "Other goods and services".*

** Data are shown in the CBA Annual Report 2007.*

## 2.2. FULFILLMENT OF INFLATION TARGET

In Q4 2008, inflation was 0.9 percent (the lowest indicator in relation to the fourth quarter of all years in a low inflation phase), whereas the 12-month inflation reached 5.2 percent in the yearend, in the target 4 +/- 1.5 percent range. It almost coincided with both the projection of 5.4 percent[1] made last year on the 12-month horizon and an indicator of 5.8 percent[2] adjusted in September this year. However, where inflation expectations were prevailing (and even persisting in the coming six months) as a risk of possible deviation from the inflation forecast made a year ago, and inflation indicators projected in the next two quarters for the fourth quarter of 2008 were therefore higher (7.4 percent and 6.2 percent, respectively), inflation pressures of both external and domestic environment were eased, and the expected yearend inflation indicator was set toward decrease to a projection of 5.8 percent (see Appendix 3).

The first and second quarters of 2008 ended with 9.6 percent year-on-year inflation, with 3 percentage point deviation from the projection in relation to the first quarter and generally in line with the projection in relation to the second quarter. However, as of end of June, the 12-month inflation remained high mainly driven by increases in prices of items "Bread products" (36.1 percent, and 5.4 percentage point contribution to inflation); "Fats and oils" (41.7 percent, and 1.7 percentage point contribution to inflation); and "Petrol and diesel" (18.0 percent, and 0.5 percentage point contribution to inflation). Healthcare service tariffs maintained high growth rates, too (17.5 percent, and 1.6 percentage contribution to inflation).

Though the external inflationary pressures somewhat eased in the third quarter, the above said inflation factors persisted in that period of time, mostly attributable to a sluggish response of domestic prices due to imperfect markets. Moreover, since August new inflation risks were added

*[1] See the Monetary Policy Program (Q1 2008)(Minutes of the Central Bank Board Meeting of December 29, 2007).*
*[2] See the Monetary Policy Program (Q3 2008) (Minutes of the Central Bank Board Meeting of July 2, 2007).*

associated with the impediment of import of goods to Armenia because of the conflict in the Region. As a result, at the end of September the year-on-year inflation was 11.3 percent. This was mostly determined by 12.6 percent increase of food products fuelled by item "Bread products" (4.7 percentage points), item "Fats and oils" (1.1 percentage points), and by 10.6 percent rise in service tariffs fuelled, again, by increased tariffs on housing, utility and healthcare services.

In response to such developments of inflation and stressing the importance of easing the inflation expectations and reducing the deviations from the target, the CBA, starting from 2008, continued tightening the monetary conditions. In the period from February to September 2008, the CBA has increased the refinancing rate by 2 percentage points (0.25 pp each month) to 7.75 percent in September.

In the fourth quarter, the situation was significantly different, determined by a deflationary environment under slowing world economic growth rates due to the global economic crisis. The deflationary environment, which is further intensifying, started to reflect the domestic food and non-food markets, resulting to considerable slowing of growth rates of headline inflation. In the fourth quarter it reflected the reduction in prices of item "Bread products" (7.7 percent, and -1.1 percentage point contribution to inflation) and petrol and diesel prices (29.2 percent, and -0.8 percentage point contribution to inflation). As a result, the fourth quarter's inflation made up just 0.9 percent while the 12-month inflation has reduced by 6.1 percent against the previous quarter and made up 5.2 percent.

The existing deflationary environment enabled the CBA to ease the monetary conditions, aiming to moderate the volatility of gross domestic product and promote the persistence of economic growth rates. In consideration of this, the CBA lowered the refinancing rate by 0.5 percentage point to 7.75 in December, after having left it unchanged in the period October-November.

This interest rate rise has always been followed by gradual increase of interbank market interest rates. Decelerated dramization of the economy and tighter monetary conditions exercised by the CBA earlier the year caused changes in the behavior of the main monetary indicators in anticipation of slowing growth rates (see subsection 3.3.3 of Monetary Developments hereunder).

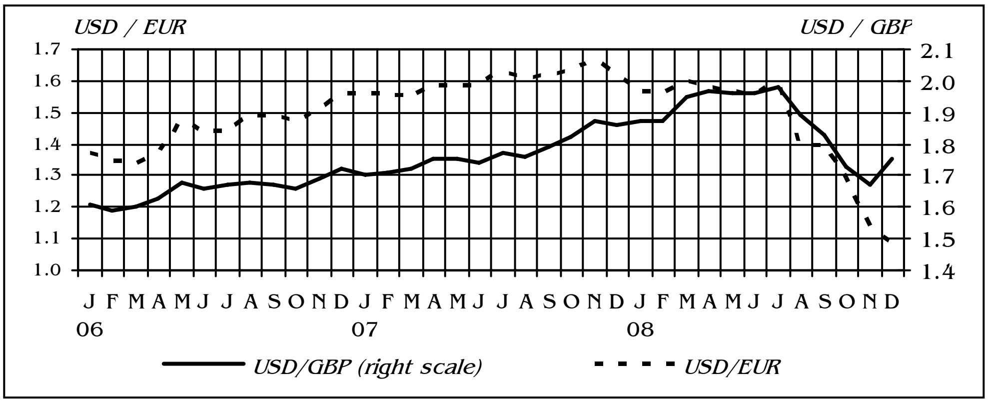
# 3. INFLATION FACTORS

**3.1. EXTERNAL ENVIRONMENT**

In the fourth quarter of 2008, the world economic growth rate reduced sharply. The world economic output in 2008 was merely 3.4 percent (5.2 percent in the previous year), according to the IMF estimations. Throughout the quarter the situation in the financial sector has been nervous enough that determined downturn in the real sector, as well. In the beginning of the quarter the US government and governments of European countries took on certain actions to inject liquidity in to the financial system and regain confidence in it. In particular, on 8th of October, the US Federal Reserve System, the European Central Bank and some leading European banks took a concerted action to lower interest rate by 0.5 pp. Many developed countries kept on lowering interest rates in the whole duration of the quarter. In the fourth quarter, the main macroeconomic indicators of all developed countries came down to their lowest recorded for the last couple of years. This urged the governments of both developed and developing countries to launch various economy-stimulating programs that implies making investment in equities of different institutions, to give various tax privileges, to improve infrastructures which, unfortunately, have not produced results yet.

In the meantime in the fourth quarter, the US dollar continued appreciating while global oil prices have reduced notably. Global prices of food products, grain and rice in particular, also reduced due to worsening of economic crisis and slowing world demand.

*In Q4 2008 the US dollar kept on appreciating*

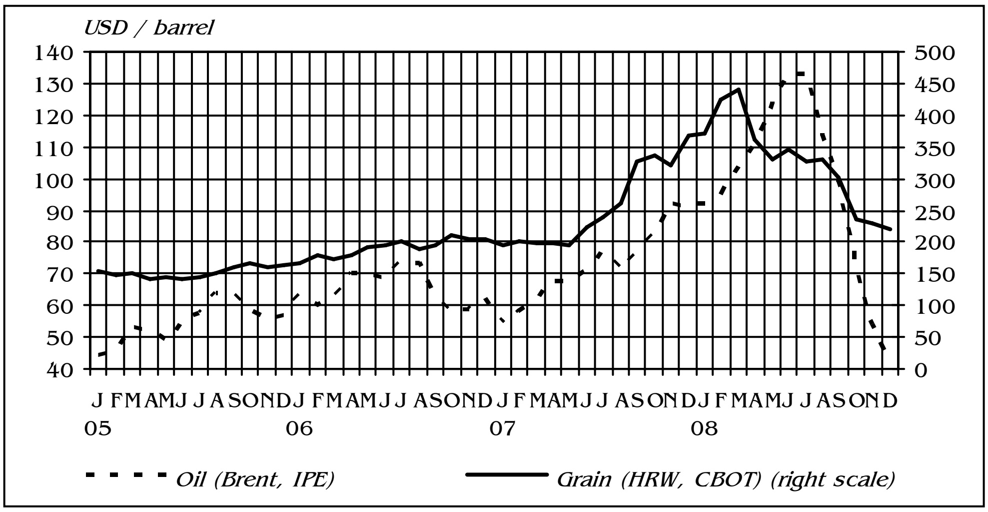



During the fourth quarter the Euro exchange rate vis-à-vis the dollar depreciated to 1.3 from the previous 1.4 US dollar for one Euro, explained by expectations of market participants for the worsening of economic outlook in the Eurozone. The Euro exchange rate vis-à-vis the British Pound Sterling depreciated too, by round 16 percent year-on-year, whereas based on yearly results, Euro appreciated vis-à-vis the US dollar by 7.3 percent but depreciated vis-à-vis the British Pound by 14 percent.

In the beginning of the fourth quarter oil prices continued falling at a high pace. The decision to reduce oil extraction by further 2.2 million barrels a day, which was made in a regular OPEC meeting on the 17th of December, did not prevent oil prices from dropping. The price of Brent on the London Commodity Exchange recorded at USD 95 a barrel in the beginning of the quarter has reduced substantially, hitting a mark of USD 40 a barrel in the end of the quarter. In the outcome, in the fourth quarter oil prices have dropped by 37 percent year-on-year against 54 percent increase in the previous quarter. Continued drop in oil prices was attributable to the worsening global economic crisis and reduced demand for oil.

Grain prices have fallen by an average of 33.2 percent year-on-year. During the quarter the grain price of USD 7.34 a bushel dropped to USD 5.4 a bushel, however the prices in this market somewhat increased up to USD 6.6 a bushel in the end of the quarter. In 2008, compared to the previous year, the grain prices have increased by 28 percent. In the 2008/2009 marketing year some 684 tons of crops of grain are expected against 610 million tons in the previous year. As a result, the world stocks of grain will at last augment by approximately 28 million tons to amount to 147.4 million tons. Impressive increases are expected in 12 CIS countries from 93 million tons to 114.7 million tons, of which from 49 million to 63 million in Russia, from 14 million to 25.5 million in Ukraine. The prices of rice also kept on falling by about 16.6 percent against the previous quarter.

***Oil prices dropped notably in Q4 2008***

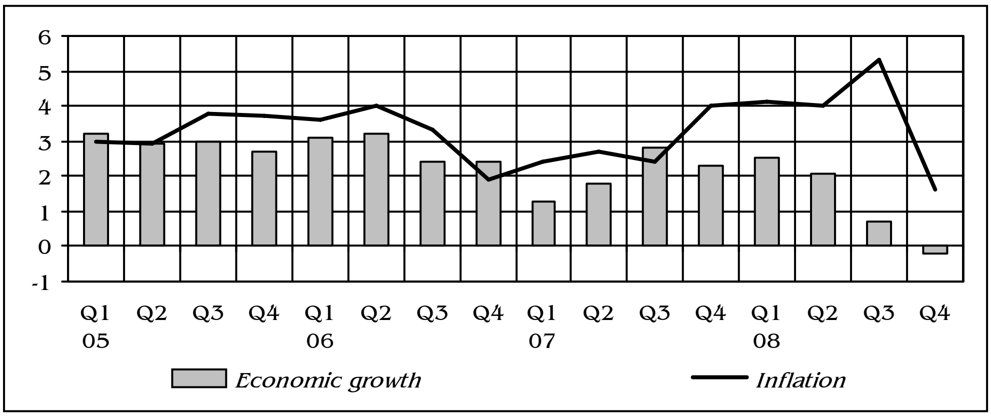



Below is a review of economic developments in the USA, Eurozone, Russia, which are the main partners to Armenia, and of the countries neighboring Armenia.

In the fourth quarter of 2008, some 3.8 percent economic downturn[1] quarter-on-quarter was recorded in the **United States of America**, according to the preliminary estimates (0.5 percent in the previous quarter). The downturn, however, was slower from market expectations (the expectation was for 5 percent). The main reason of the slowdown was the reduction of the real private consumer spending that led to the shrinkage of GDP by 2.47 percentage points. On the other hand, increased government expenditures and net exports have positively contributed to the growth of GDP by 0.38 and 0.09 percentage points, respectively.

In the fourth quarter of 2008, the deficit of net export was 3.7 percent of GDP (5 percent in the same period of the previous year). However, this indicator has slightly decreased in comparison with the previous quarter (4.9 percent of GDP) due to the shrinkage of imports in number and value. The dollar's appreciation during the quarter (10.2 percent year-on-year against Euro) also contributed to the decline in import prices in dollar terms.

***In Q4, 2008 in USA the slowing of inflation was in line with economic downturn***

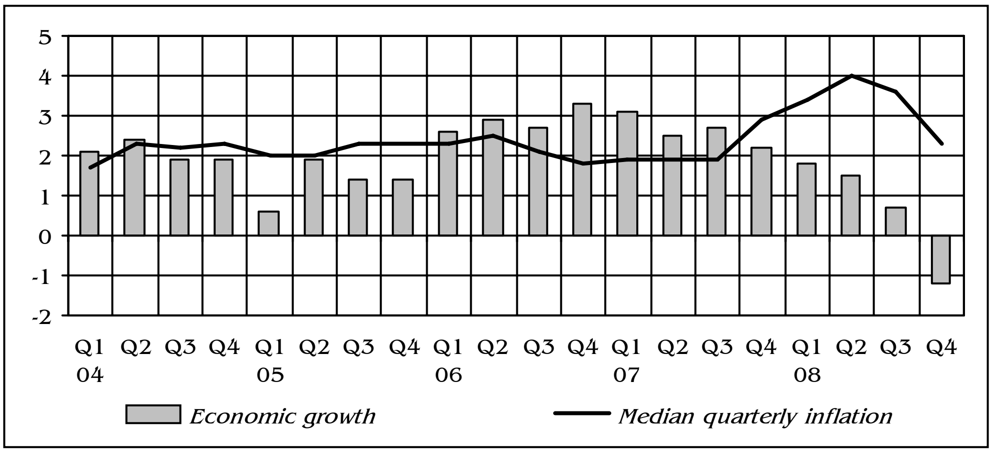



[1] *Source: Bureau of Economic Analysis, US Department of Commerce.*

In the fourth quarter of 2008, the US inflation reduced substantially to 1.6 percent year-on-year (5.3 percent in the previous month), which was driven by continued decrease of prices of commodities and fuel throughout the quarter. Given the economic slowdown and sharp deceleration of inflation rate in Q4 2008, the Federal Reserve System lowered the interest rates on federal funds time after time by 0.5, 0.5 and 0.75 percentage points, respectively, setting a target range of 0-0.25 percent for interest rates.

In the fourth quarter of 2008, economic slowdown in **Eurozone** has been 1.2 percent year-on-year, and 1.5 percent quarter-on-quarter, according to the preliminary data from the EuroStat. This points to the worsened economic situation and deepening recession in Eurozone. Meanwhile the trade balance deficit has reached EUR 2 billion instead of the previous year's excess of nearly 0.9 billion in the fourth quarter. Based on yearly results, the deficit in 2008 reached EUR 32.1 billion (an excess of EUR 15.8 billion was reported in 2007).

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




The consumer price index growth in the fourth quarter continued loosening; in December it made up 1.6 percent year-on-year. During the quarter the European Central Bank has lowered interest rates by 0.5 and 0.75 percentage points, respectively, setting on a 2.5 percent level.

In the fourth quarter of 2008, the economy of **Russia** has already entered a preliminary phase of recession. Where the Q3 2008 indicator of economic growth was still strong, the situation changed rapidly afterwards. According to preliminary estimations from the Federal Statistics Service of Russia some 1.1 percent real GDP growth was recorded in the fourth quarter (6.2 percent in the third quarter). Shrinkage of supply was reported in industry (6.1 percent year-on-year). Growth rates steeply decelerated in non-tradable sectors against robust growths reported in preceding quarters.

The recent months' economic growth indicators according to sectors have completely changed predictions made by different international institutions in relation to Russia's economic growth outlooks. In particular, the IMF estimates that Russia will see 0.7 percent economic slowdown in 2009.

In the period under review, the current account surplus has reduced by USD 15.8 billion to USD 8.1 billion. As for the capital and financial account, there has been an unprecedented record of net outflow of USD 129.7 billion. The steep deterioration of the capital account was determined by an abrupt change in behavior of the private sector as people started to amass funds in foreign currency. These flows of balance of payments have resulted in reduction of reserves of the Central Bank of Russia by USD 131 billion.

In the fourth quarter of 2008, given huge outflow of capital and with the ruble exchange rate incurring depreciation pressures, the Russian Central Bank gradually switched on to a more flexible exchange rate policy by repeatedly broadening the dual currency basket and deciding on a policy for step by step depreciation. In Q4 2008 the year-on-year depreciation of ruble's nominal exchange rate versus the US dollar was 10.6 percent, and it was 12.4 percent against the previous quarter.

With the Government and Central Bank trying to overcome the liquidity crisis and under the conditions of exchange rate depreciation, the inflation rates in the fourth quarter reached 13.7 percent year-on-year. Though slowed down a little against the preceding quarter, inflation is still high. Based on yearly results, the inflation indicator in 2008 has been 13.3 percent. Pursuing to curb the rates of inflation and halt the 'escape' from the ruble, the Central Bank of Russia has twice raised interest rates, to 13 percent.

***Macroeconomic Situation in Neighboring Countries*** [2]

***Turkey:*** *Further developments in the global financial and economic crisis have brought in sharp reduction in economic growth rates in the third quarter of 2008[3]: a mere 0.5 percent growth year-on-year was recorded against 2.3 percent recorded in the previous quarter. Such reduction of the economic growth rates was determined by shrinkage in domestic demand, with its 0.1 percentage point adverse impact on economic growth. On the other hand, external demand has made 1.5 percentage point positive contribution to the economic growth. Slow economic growth was mainly a result of shrinkage in processing industry, construction and wholesale and retail trade by 1.1 percent, 4.3 percent and 1.8 percent, respectively.*

*In the period October-November, the current account deficit has decreased by 47 percent and reached USD 3.1 billion. The decline in domestic demand and the slump in oil prices in October-November have led to 15.3 percent reduction in imports versus 9.5 percent reduction in exports. Net outflow of capital in October-November made up USD 8.2 billion, driven by net outflow of portfolio investments and other investments. With such a balance of payments deficit, official reserves in the fourth quarter have decreased by USD 1.85 billion.*

*Sharp drop in prices of raw materials had its own impact on the deceleration in consumer price growth rates – the recorded inflation was 10.9 percent year-on-year (11.7 percent in the previous quarter).*

*In consideration of sharp declines in aggregate demand and falls in prices of raw materials, the Central Bank of Turkey embarked on a policy of abrupt lowering of interest rates. In the months of November and December the Central Bank has lowered interest rates by 50 and 125 basis points, respectively, setting on a 15 percent level.*

*In 2008, the real GDP growth in* ***Azerbaijan*** *was 10.8 percent; it was 15.4 percent in a non-oil sector. Production accounted for 70.8 percent of GDP; services accounted for 22.1 percent of GDP. The breakdown of the contributions is as follows: industry – 57.4 percent, construction – 7.6 percent, agriculture – 5.8 percent, trade and restaurant and hotel services – 6.0 percent, transport – 5.1 percent, communications – 1.9 percent and social and other services – 9.1 percent[4]. Net indirect taxes on production and imports constituted 7.1 percent of GDP.*

*In 2008, the median inflation was 20.8 percent, and it was 16.2 percent in relation to December of 2007. The median inflation on food products was 28.6*

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*[2] 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.*

*[3] Official data for the fourth quarter of 2008 are not available.*

*[4] Source: Day.Az, 19 January, 2009.*

*percent, non-food products – 11.5 percent, services – 11.4 percent[5]. The inflation target for 2009 was set to be 16 percent[6].*

*As a result of export-import transactions in the course of 2008 the country saw a positive surplus of trade balance of USD 40.6 billion. The foreign trade volumes have increased 4.7-fold, compared to the previous year. In 2008, foreign investments in Azerbaijan amounted to USD 2.7 bullion. As a result, the manat exchange rate has appreciated vis-à-vis the US dollar by 5.5 percent during 2008, with the average exchange rate having appreciated by 4.4 percent year-on-year.*

*In consideration to ensure financial stability of the banking sector amid global financial crisis, the National Bank of Azerbaijan lowered on December 1st of 2008 the refinancing rate by 2 percent, setting on an 8 percent level. Along with this, the ratio of reserve requirement in national currency and foreign currency was reduced by 3 percent to set up on a 6 percent level.*

*Foreign exchange reserves of the National Bank have increased during the year by 52.8 percent and amounted to USD 6.1 billion in the end of 2008[7].*

*In* **Georgia**, *output growth in the period January-September of 2008 has been 4.0 percent, with the third quarter, however, having reported 3.9 percent economic slowdown due to the August military events in 2008[8]. In the period January-September, the highest growth has been recorded in public administration (14.7 percent), trade sector (13.9 percent), agriculture (9.5 percent) and industry (11.1 percent)[9].*

*Inflation in Georgia in 2008 was 10.0 percent year-on-year, and 5.5 percent, compared to December of the previous year. In addition, compared to December of the previous year, the price increase of food products was 4.8 percent, non- food products – 4.8 percent and services – 7.7 percent. The inflation target for 2009 was set to be 9 percent.*

*As a result of export-import transactions during 2008, the deficit of trade balance has reached USD 4.6 billion. Compared to the same period of the previous year, export of goods (FOB) has increased by 21.5 percent and reached USD 1.5 billion and import of goods (CIF) has increased by 16.2 percent and reached USD 6.1 billion[10].*

*Gross inflow of foreign investments in the period January-September has totaled USD 1.1 billion. In the same time, gross inflow of portfolio investments has increased nearly 22-fold to amount to USD 0.7 billion[11].*

*In the period January-December, inbound remittances have reached USD 1.0 billion, up by 15.7 percent[12] from the previous year's level.*

*In 2008, the median exchange rate of lari has appreciated vis-à-vis the US dollar by nearly 12.1 percent, compared to the average indicator of the same period of the previous year, but it depreciated by 4.5 percent[13] compared to December of 2007.*

*With global financial crisis persisting, and pursuing to ensure financial stability of the banking sector, the National Bank of Georgia cut the refinancing rate first time in November and the second time on December 1st of 2008 by 1 percentage point, to 8 percent.*

*Foreign exchange reserves of the National Bank of Georgia have grown during the year nearly by 8.7 percent and amounted to USD 1.5 billion[14] in the end of 2008.*

## 3.2. BALANCE OF PAYMENTS[15]

In the fourth quarter of 2008, global financial and economic crisis has already materialized its first adverse effect on Armenia's balance of payments developments. In the period under review almost all items of the current account have reported significant changes. Thus, a sharp decline in prices in international markets of raw materials, i.e. steeply deteriorated

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[5] *Source: Azerbaijan Statistical Committee, http://www.azstat.org/sdds/en/P_I/I_C_P.shtml.*
[6] *Source: http://en.apa.az/news.php?id=95481.*
[7] *Source: http://www.nba.az/default.aspx?go=&id=1910&lng=en.*
[8] *National Bank of Georgia, "Monetary and banking statistics bulletin", 2008, Table 1.1. In Georgia, data on GDP and GDP component dynamics will be published in March 30 2009 as the country prepares to move to a new system of statistics.*
[9] *Source: http://www.statistics.ge/_files/english/nad/GDP%20at%20current%20prices.xls.*
[10] *National Bank of Georgia, "Monetary and banking statistics bulletin", 2008, Table 5.4.*
[11] *National Bank of Georgia, "Monetary and banking statistics bulletin", 2008, Table 5.3.*
[12] *National Bank of Georgia, "Monetary and banking statistics bulletin", 2008, Table 5.9.*
[13] *National Bank of Georgia, "Monetary and banking statistics bulletin", 2008, Table 4.7.*
[14] *National Bank of Georgia, "Monetary and banking statistics bulletin", 2008, Table 5.1.*
[15] *The Q4 2008 data are the CBA estimations.*

terms of trade in the wake of deflationary environment in world markets, has resulted in export decline and slowing of import growth rates. In times of crisis in the Russian economy[16] the growth rates of remittances have shrunk significantly. Under the conditions of developments in external environment and the domestic economy worsening of current account deficit maintained. Faster growing current account deficit in relation to the inflow of capital have resulted in the reduction of gross international reserves.

In the fourth quarter of 2008, the exacerbation of the global financial crisis caused hasty changes in commodities markets. Oil prices reported unusually low levels as well as prices of consumer goods and other intermediates have also reduced considerably. In export markets, the copper and molybdenum prices are at such low levels that domestic producers faced the risk of stoppage of production. Under these conditions the export volumes have declined sharply.

In the outcome of such developments the dollar prices of import goods have fallen by 8.8 percent year-on-year, reflected in a steep slowing of the growth rates of imports in dollar terms although high growth of real volumes was still maintained. In the fourth quarter the year-on-year growth of imports was 19.6 percent whereas export volumes shrank by 27.7 percent year-on-year. These developments have resulted in a large trade balance deficit which, in turn, drove to the increase of the current account deficit.

During 2008 as a result, the current account deficit has increased by USD 911.4 million and amounted USD 1500.7 million, with its share constituting 12.6 percent of GDP. Exports in 2008 have reduced by 6.6 percent versus 34.7 percent increase in imports. Private remittances have increased during the year by 20.4 percent.

During 2008, the capital and financial funds inflow has increased by USD 155.7 million and amounted to USD 1299 million. With such flows, the balance of payments in 2008 reported deficit that had resulted in a decrease of net foreign assets[17] of the CBA by USD 211.5 million.

Under continued world economic growth slowdown, the inflationary pressures coming from the external sector have turned to deflationary environment in the fourth quarter.

**Current account**

In the fourth quarter of 2008, the consequences of world economic crisis were well pronounced in the behavior of the current account: export reported decreases, with the growth rates of imports having reduced either. The adverse developments of the world economic crisis have also caused considerable decline in growth rates of inflow of private remittances and seasonal worker income, in contrast to the high growth recorded in preceding quarters. The year-on-year growth of the current account deficit in the fourth quarter made up USD 327.1 million. Based on yearly results, the latter's share in GDP constituted 12.6 percent compared to 6.4 percent in the previous year.

The fourth quarter ended with the trade balance deficit having grown by USD 273.4 million to USD 856.1 million. Increase of imports was 19.6 percent year-on-year while decrease of exports[18] was 27.7 percent year-on-year.

The decrease of exports was due to persisting adverse developments in global financial crisis under which conditions the prices of raw materials

*[16] As reported by economic development vice-minister of Russian Federation, Russia has already entered a phase of economic recession. The IMF forecasts 0.7 percent economic downturn; some analysts predict an even greater recession – as much as 2 percent shrinkage of GDP in 2009.*
*[17] Calculated using program exchange rates.*
*[18] In the period January-December, the export of goods (FOB) has decreased by 7.2 percent, and 6.9 percent, when diamond is excluded.*

started to slump since October. This has led to a substantial reduction in exports of ore and mineral and metallurgy output.

Except for certain items that hold a small share, all other items have reported decreased exports. As such, except for item "Products of prepared food", there has been a considerable reduction of export of the main items.

In Q4 2008, the reduction in export of "Mineral production" was 18.5 percent year-on-year (with a negative contribution making up 2.8 percentage points) and export of "Base metals and articles thereof" decreased by 46.5 percent year-on-year (with a negative contribution making up 14.4 percentage points).

Unlike the growth in exports in the previous quarter, item "Precious and semi-precious stones, precious metals and articles thereof" reported in the fourth quarter a decrease of 24.2 percent year-on-year.

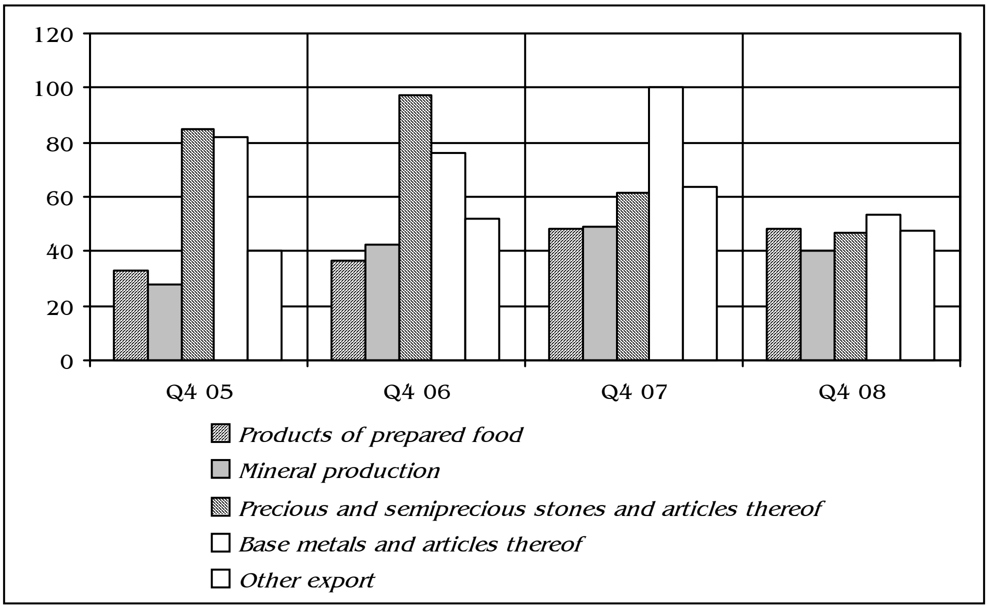
In the fourth quarter, exports of item "Products of prepared food" have remained unchanged (with alcoholic beverage as the main sub-item).

Exports of "Textile articles" have increased by 18.4 percent year-on-year whereas exports of item "Machinery and equipment" decreased by 30.9 percent year-on-year. The total weight of these two items in total exports in the fourth quarter constituted 6.8 percent.

The price decline on a global scale has reflected rapid deceleration of growth rates of imports in dollar terms, albeit high growth rates of real volumes persisted. Although the two main import items[19] have decreased, the growth of import of the rest of items has maintained, with slowing of growth rates, however.

In particular, there has been decreases in import of item "Base metals and articles thereof" and item "Precious and semi-precious stones, precious metals and articles thereof"[20], respectively by 10.2 percent and 19.1 percent year-on-year. The year-on-year growth of import of the rest of items[21] that hold large shares ("Products of prepared food", "Mineral production" and "Machinery and equipment") in the fourth quarter has been 29.4 percent, 18.6 percent and 27.8 percent, respectively.

***In Q4 2008 the volumes of three main export items out of four decreased (mln USD)***




The year-on-year growth of import of "Transport means" was 4.3 percent.

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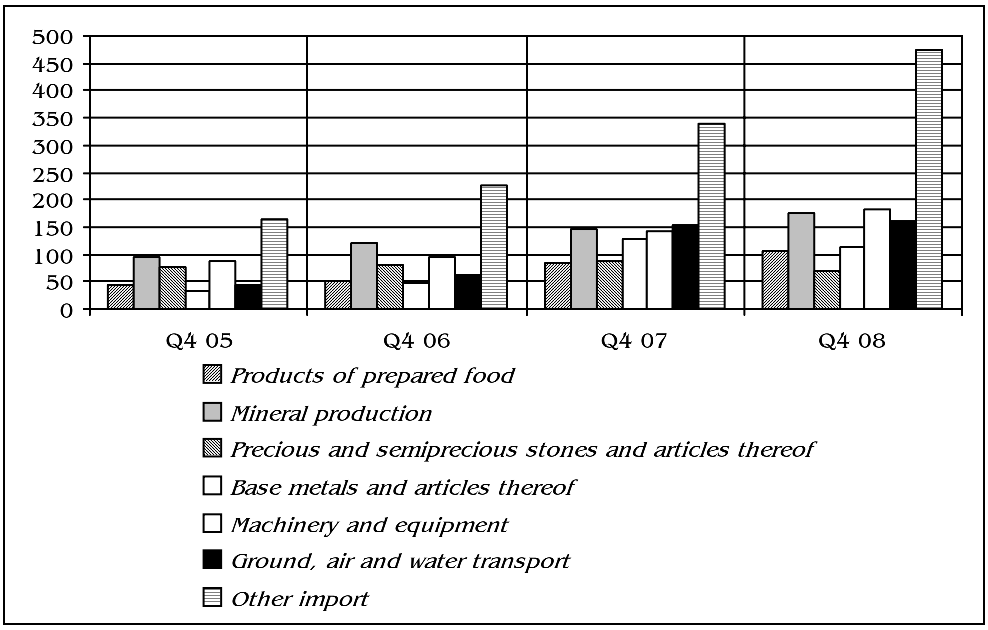
[19] *Two more items that hold small shares reported decreases in imports in the fourth quarter.*
[20] *The import of diamond have reduced (these had reported growth in the previous quarter). The share of diamond in the entire item in Q4 2008 made up round 47.5 percent (47.7 percent in the same period of the previous year).*
[21] *The contribution of individual items to the total import growth has been as follows: "Products of prepared food" – 2.2 percentage points, "Mineral production" – 2.5 percentage points, "Transport means " – 0.6 percentage points and "Machinery and equipment" – 3.7 percentage points.*

The year-on-year growth of import of relatively small-weight items "Goods of chemical production" and "Plastic and articles thereof" has been 34.0 and 19.4 percentage points, respectively.

Without account of item "Precious and semi-precious stones, precious metals and articles thereof", export has decreased by 27.5 percent year-on-year, while import has increased by 22.2 percent year-on-year. The trade balance deficit has increased by USD 275.4 million to USD 831.7 million, without taking into account the mentioned item.

***In Q4, 2008 the volumes of two main import items decreased (mln. USD)***




No material changes occurred in terms of geography of foreign trade. An absolute growth of the trade balance deficit has been conditional on increased deficit of trade balance with the European Union and with other non CIS countries. Thus, the deficit of trade balance with the EU countries has increased by USD 56.5 million (24.8 percent). Other countries include Turkey, China and Japan with which the trade balance deficit has deepened, respectively, by USD 35.3 million (72.5 percent), USD 57.5 million (89.7 percent) and USD 11.7 million (36.3 percent). The deficit of trade balance with Iran has remained unchanged.

In the fourth quarter the negative balance of services worsened by 44.7 percent and amounted to USD 85.4 million mostly due to high growth of import of transport services. The export of services increased by 1.4 percent against 12.7 percent year-on-year increase of import of services.

The developments in Russian economy are important with regard to private remittances[22]. The deteriorated crisis in world financial markets was well pronounced in the course of the fourth quarter when the Russian economy started to see signs of a recession phase. In times of such developments, a substantial slowdown of growth rates of the inflow of private remittances and seasonal worker income was recorded. The net inflow of seasonal worker income in the fourth quarter has amounted to USD 209.1 million (with 10.4 percent year-on-year growth), which exceeded the volumes of net outflow of USD 137.7 million in the item "Income on investment". As a result, net inflow of funds of item "Income" reported a positive balance amounting to USD 71.4 million (USD 97.3 million in the same quarter of the previous year). In the fourth quarter, the growth rates of private remittances reduced notably and made up 8.1 percent year-on-year.

[22] *In the fourth quarter of 2008 the year-on-year growth of net non-commercial transfers made up merely 3.6 percent. The year-on-year growth of inbound non-commercial transfers made up 2.8 percent, while the outbound non-commercial transfers reduced by 1.4 percent year-on-year.*

*mln US dollar*

| Item | 2005/4 | 2006/4 | 2007/4 | 2008/4 |
|---|---|---|---|---|
| | Actual | Actual | Actual | Estimate |
| Current Account Balance | -13.6 | -39.3 | -241.5 | -568.7 |
| Trade Balance | -192.3 | -282.2 | -582.7 | -856.1 |
| Services (net) | -28.0 | -37.1 | -59.0 | -85.4 |
| Incomes (net) | 20.0 | 33.5 | 97.3 | 71.4 |
| Private remittances (net) | 157.6 | 209.1 | 270.8 | 292.8 |
| Public transfers (net) | 29.0 | 37.4 | 32.1 | 8.8 |

**Capital and financial account**

The deteriorated crisis in world financial markets caused changes especially in the behavior of private sector. This was reflected in a notable capital outflow by the private sector (not banks) during the fourth quarter of 2008. In the outcome, though the growth of inflow of capital on the other items persisted, the current account deficit has, however, outstripped net inflow of capital and financial resources. This has resulted in a reduction of net foreign assets of the CBA by USD 156.2 million, in contrast to an increase of USD 312.3 million in the same quarter of the previous year.

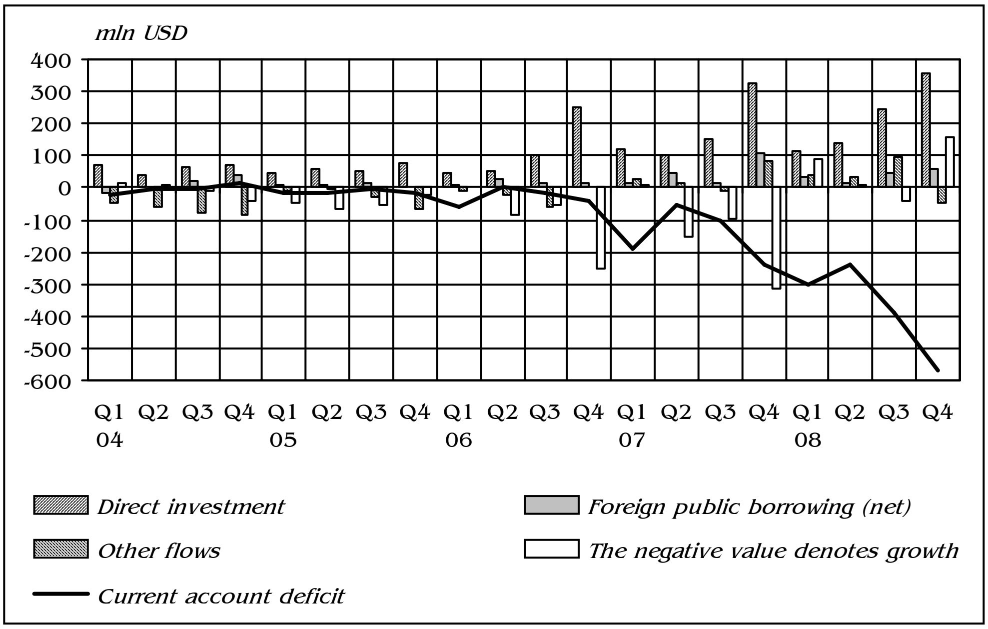
Foreign direct investments as well as net inflow of funds of the commercial banks played a great role for the financing of the current account.

In the fourth quarter, net inflow of capital transfers amounted to USD 39.6 million (USD 44.2 million in the same quarter of the previous year).

Trends for the growth of foreign direct investment persisted, although their growth rates somewhat decelerated. In Q4 2008 net inflow of FDI grew by 9.8 percent (net inflow of FDI amounted to USD 358.7 million).

Item "Other investment"[23] reported net outflow of USD 46.9 million as opposed to the previous quarter's net inflow (in the same period of previous year net inflow amounted to USD 83.2 million). Net foreign assets of commercial banks reduced by USD 47.3 million whereas other private sector reported an impressive growth of net foreign assets by USD 94.2 million.

***In Q4, 2008 the current account deficit exceeded capital and financial resources***



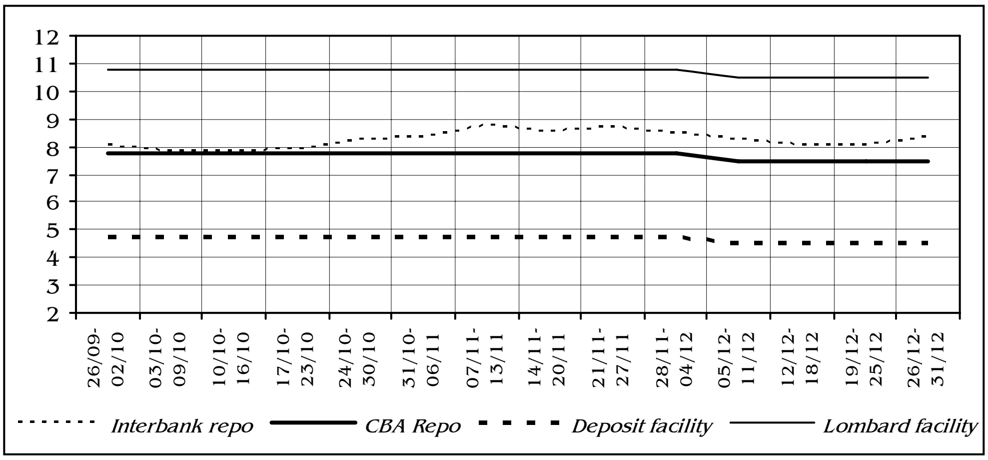

[23] *Net foreign assets of the banking system and other private sector.*

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

### 3.3.1. Interest rates

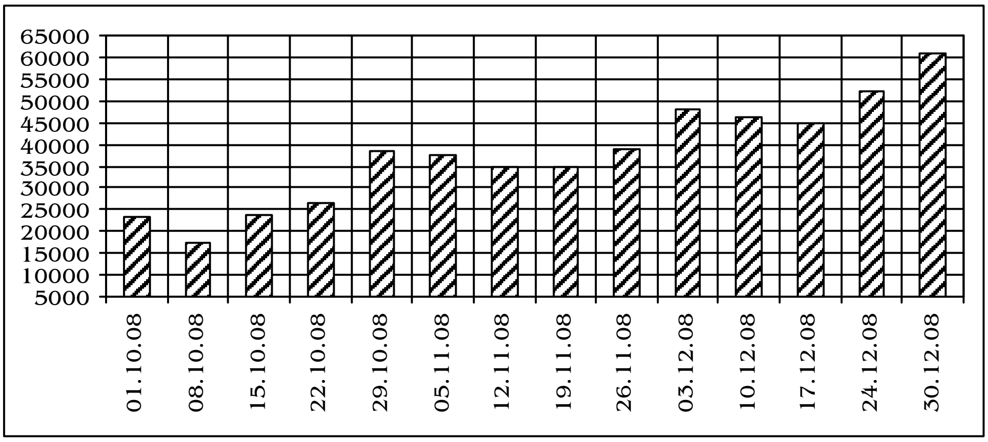
In 2008, the CBA continued transition to fully-fledged inflation targeting policy. In pursuit of the primary objective of price stability, the CBA tackled the management of short-term interest rates in order to fill in the gap between the targeted and projected inflation in the 12-month horizon. Inflation developments in the course of the first three quarters of 2008 were quite adverse as, particularly, price increases on food products and fuel in international markets with their secondary impacts pushed the domestic inflationary pressures to intensify. Taking into account the above said developments, the CBA embarked on implementing a restrictive monetary policy by lifting up the interest rate of repo agreements by 0.25 percentage point each month since February, to set it at the level of 7.75 percent in September. Then, in consideration of the impact of a deflationary environment on domestic prices due to the slowdown of the world economic growth, the CBA revised the policy direction for October, November and December by leaving the repo rate unchanged in October and November and by lowering it by 0.5 percentage point in December, setting at the level of 7.25 percent. In addition, given the rule of even distribution of interest rates on standing facilities against the repo interest rate, the CBA had further raised these rates by 2.0 percentage points from January to October 2008, left them unchanged in October and November but lowered them in December by 0.5 percentage point, setting them at 4.25 percent for Deposit facility and 10.25 percent for Lombard facility.

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




In the fourth quarter of 2008, the CBA continued offering commercial banks to conclude repo agreements each Wednesday thus enabling commercial banks to tackle liquidity issues. In Q4 2008, the weekly volumes of repo operations carried out by the CBA has averaged AMD 33.728 billion (AMD 8.858 billion in the same period of the previous year) and the annual average weekly volume has amounted to AMD 20.730 billion (AMD 5.301 billion in the previous year).

*CBA Repo transactions in Q4 2008 (mln AMD)*



In 2008, the average daily volume of commercial bank depositing with the CBA amounted to AMD 3.408 billion, almost unchanged in relation to the previous year (AMD 3.280 billion).

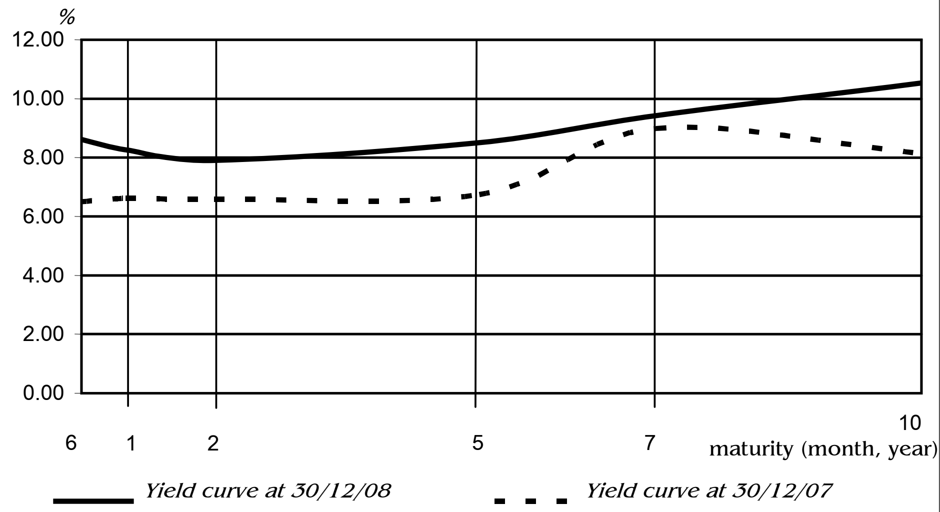
The volumes of repo operations carried out in the fourth quarter of 2008 totaled AMD 93.2 billion. Total repo market turnover in 2008 increased by AMD 48.4 percent against the previous year and reached AMD 449.8 billion. In December repo interest rate was 8.25 percent (6.31 percent in 2007). The share of transactions between commercial banks in total transactions was round 48 percent compared to the previous year's 45 percent.

As a result of increased effectiveness in managing liquidity by the CBA and in coordinating the domestic public debt management by the Armenian Ministry of Finance the CBA withheld to issue securities this quarter. In the same time, the volume of issuance of short-term treasury bills has increased. The total volume of treasury bills allocated in Q4 2008 amounted to AMD 18.5 billion and AMD 31.1 billion based on the yearly results, which is a 5-fold increase in comparison with the previous year.

During 2008, interest rates in primary market of treasury bills rose. In the fourth quarter, the average yield on short term treasury bills was 9.07 percent and that of medium term was 9.58 percent, an increase in comparison with the same period of the previous year by 2.54 and 2.06 percentage points, respectively.

The yield curve analysis shows that in the secondary market of government securities yields increased all along the curve yet notable changes were observed in respect of short- and long-term securities. The prevailing part of the change (94.7 percent) in the position is attributable to a parallel move of the curve, which made up 1.61 percentage point, owing to the yield curve. The convexity of the curve changed merely by 0.5 percent. Residual factors in the change of the curve constituted 4.8 percent.

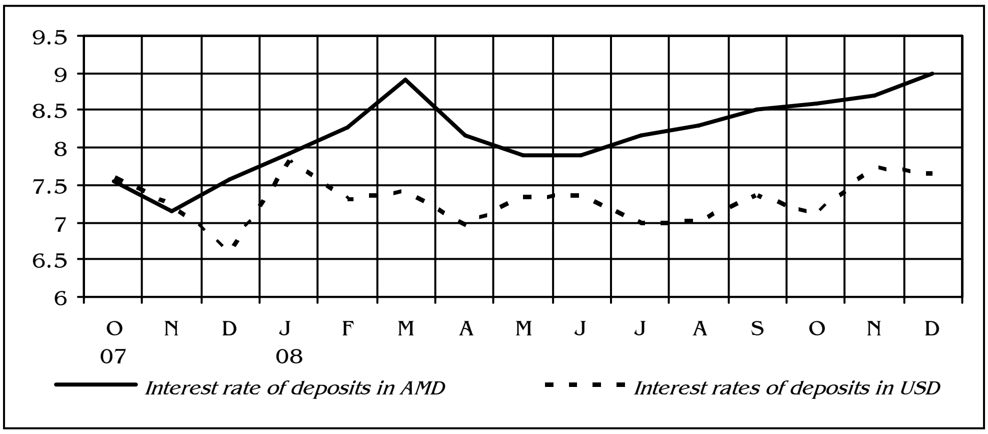
***The spread between short and long term interest rates remained unchanged***




Interest rates of loans and deposits in Armenian dram and US dollar trended as follows: interest rates of dram and dollar deposits in December of 2008 were 8.98 percent and 7.66 percent, respectively, up by 1.4 and 0.99 percentage point compared to the previous December. The spread of interest rates of dram and dollar deposits was 1.32 percentage points against 0.99 percentage point in the same period of the previous year.

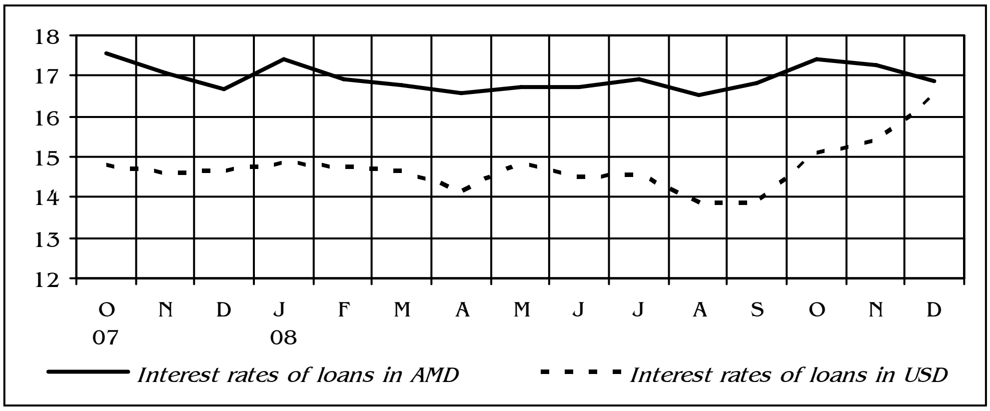
Interest rates of commercial bank loans trended upward, as follows: interest rates of dram and dollar loans in December of 2008 were 16.86 percent and 16.5 percent, respectively, up by 0.21 and 1.85 percentage point compared to the previous December. The interest rate spread of dram and dollar loans in December of 2008 was 0.36 percentage point versus 2.0 percentage points recorded for the same period of the previous year.

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




The interest rate spread of loans and deposits in Armenian dram in December of 2008 was 7.88 percentage points versus 9.07 percentage points in December of 2007, down by 1.19 percentage points. The interest rate spread of loans and deposits in US dollar was 8.84 percentage points versus 8.06 percentage points in December of 2007, up by 0.78 percentage point.

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




In the fourth quarter of 2008 too interest rates tended to rise. In particular, interest rates of deposits in Armenian dram increased by 0.48 percentage point and interest rates of deposits in US dollar, by 0.29 percentage point. Interest rates of loans in dram remained almost unchanged (a mere 0.05 percentage point rise) and interest rates of loans in dollar increased by 2.61 percentage points.

### 3.3.2. Exchange rate

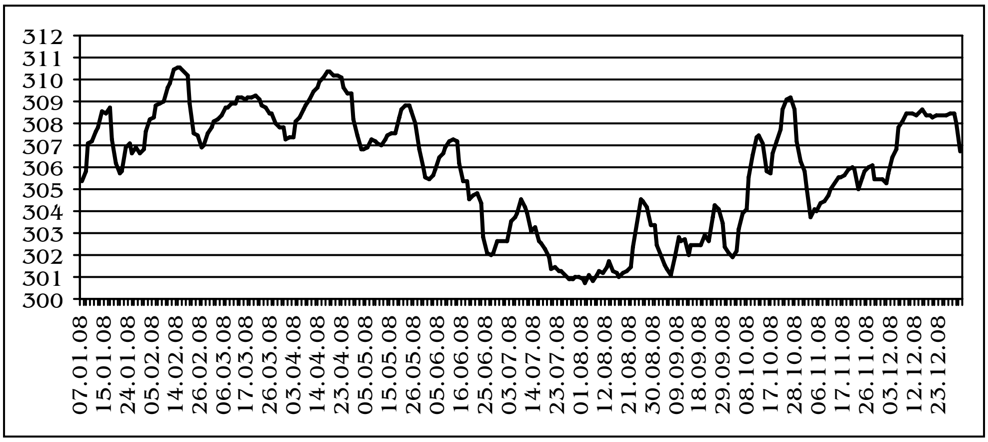
In the fourth quarter of 2008, the average market AMD/USD exchange rate depreciated by 1.5 percent compared to the indicator recorded in the end of the previous quarter from 302.12 drams to 306.73 drams. The average quarterly AMD/USD exchange rate has appreciated by 3.48 percent from 317.08 drams to 306.41 drams. The average appreciation in the same period of the previous year has been 17.96 percent.

In the yearend 2008 the dram's exchange rate reported 0.82 percent depreciation.

During the quarter, gross volume of interbank market transactions was USD 2,749 million, up by 1.7 percent from the fourth quarter indicator of the previous year (USD 2,703 million) and the annual growth was 15.63 percent – USD 8,720 million against USD 7,541 million.

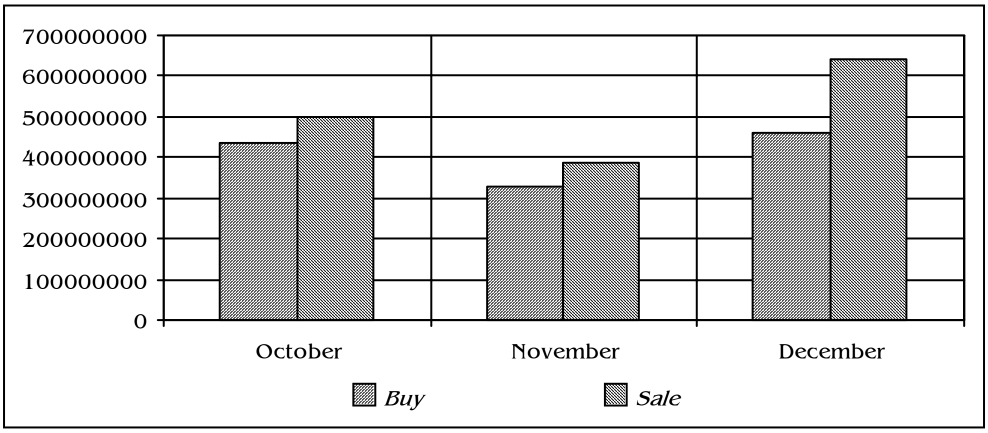
The volumes of transactions in euro/dram exchange market increased as well. Aggregate volume amounted to EUR 246.04 million, up by 15.22 percent in comparison with the fourth quarter of the previous year. During 2008 the volumes of transactions have increased by 41.80 percent to EUR 774.07 million.

*The AMD exchange rate dynamic versus the USD*




To handle the dram supply and moderate volatilities in the dram's exchange rate, the CBA purchased USD 12.635 million from and sold USD 303.57 million to commercial banks during the fourth quarter. The annual reported buy and sale volumes were USD 74.571 million and USD 442.60 million, respectively.

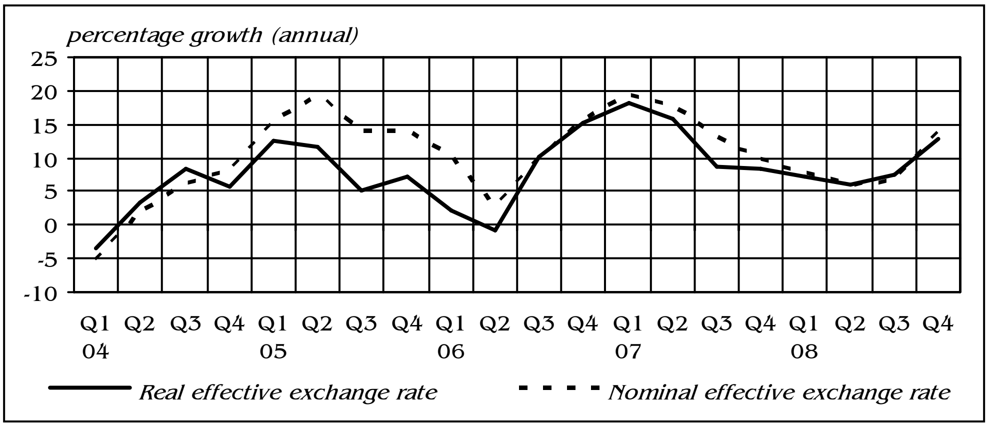
*Volumes of operations in USD in the currency market*




In the fourth quarter of 2008, the average appreciation of nominal effective exchange rate of the dram was 13.7 percent year-on-year, up by 7.2 percentage points from the previous quarter's indicator. During the fourth quarter, the nominal effective exchange rate appreciated by 8.6 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 10.3 percent year-on-year in the fourth quarter (4.7 percent appreciation in the previous quarter). Of partner countries' exchange rates, the euro's contribution was the largest – 3.2 percentage points year-on-year. It only partially was offset by the appreciation of the dram vis-à-vis the US dollar, which was 3.3 percent in the fourth quarter, having decreased by 8.5 percentage points against the same indicator of the previous quarter.

The slowing of the nominal effective exchange rate's appreciation drives the real exchange rate to perform similarly. The rate of inflation notably slackened in both Armenia and partner countries: during the quarter it averaged 7.0 percent year-on-year in Armenia and 7.4 percent year-on-year in partner countries. The average weighted inflation in partner countries was greatly affected by inflation in Russia and Iran, by 2.6 and 2.0 percentage points, respectively, although the impact of inflation in Eurozone and Ukraine (0.7 and 0.8 percentage points, respectively) was by no means weak. As a result in the fourth quarter of 2008, the real exchange rate appreciation was 12.7 percent year-on-year (7.6 percent in the previous quarter), while appreciation in 2008 was 8.4 percent compared to the previous year.

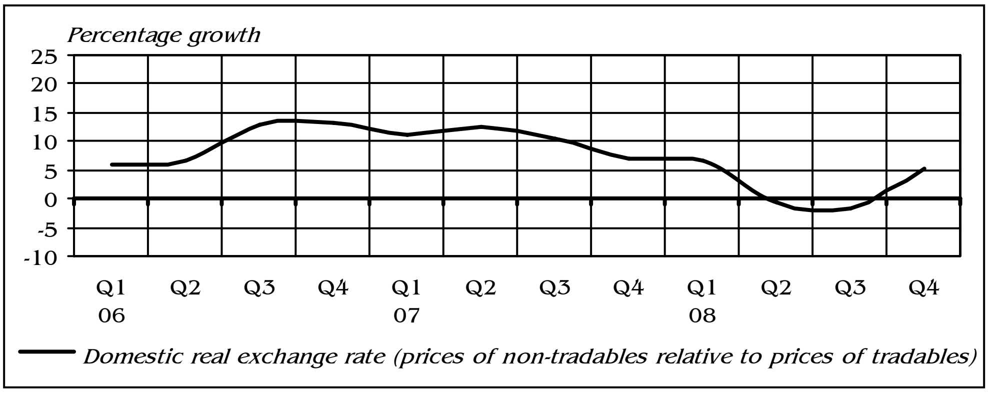
*The real and nominal effective exchange rate appreciation accelerated*




In the fourth quarter of 2008, the domestic real exchange rate appreciated by 5.2 percent year-on-year; in 2008 it appreciated by 2.5 percent against the previous year, since prices in tradable sector have grown faster than prices in non-tradable sector.

In Q4 2008, prices of non-tradable goods and services rose by 13.1 percent year-on-year, whereas prices of tradable goods rose by 7.6 percent versus 12.9 percent and 14.8 percent, respectively, against the previous quarter. The prices of tradable goods somewhat reduced in the fourth quarter in response to the notable fall in international prices. Persisting price increases in non-tradable sector lies in the inertia of the domestic economy that is still responding to former high growth rates of aggregate domestic and external income, which first of all reflects the demand for non-tradable goods.

*Trend for domestic real exchange rate has accelerated*




### 3.3.3. Monetary developments[24]

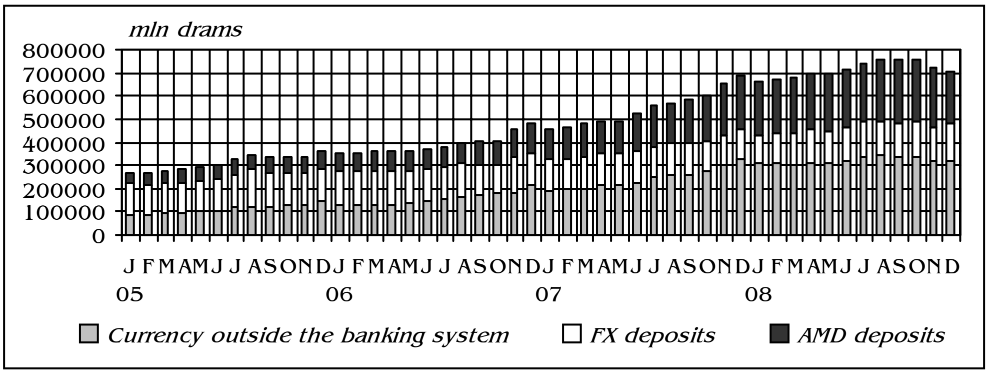
In the fourth quarter of 2008 too, the monetary environment was marked by the slowing of the dramization, as it was expected, reflecting the decreases in dram components of monetary aggregates. Based on the actual figures, dram broad money decreased by 4.2 percent year-on-year, due to the reduction in dram deposits and currency in circulation by 5.9 percent and 3 percent, respectively. For comparison, in the previous year the indicators named above reported year-on-year increases by 64.9 percent, 82.4 percent and 54.1 percent, respectively.

The dollarization of the economy continued rising, and the 30.5 percent year-on-year growth of foreign currency deposits in dram terms points to this. Whereas in the fourth quarter of 2007 the same indicator had

[24] *Starting the third quarter of 2008, the CBA Review covers summary balance sheet indicators of the Central Bank, commercial banks and credit organizations. See details in the CBA Bulletin (May, 2008, pg. 106-107).*

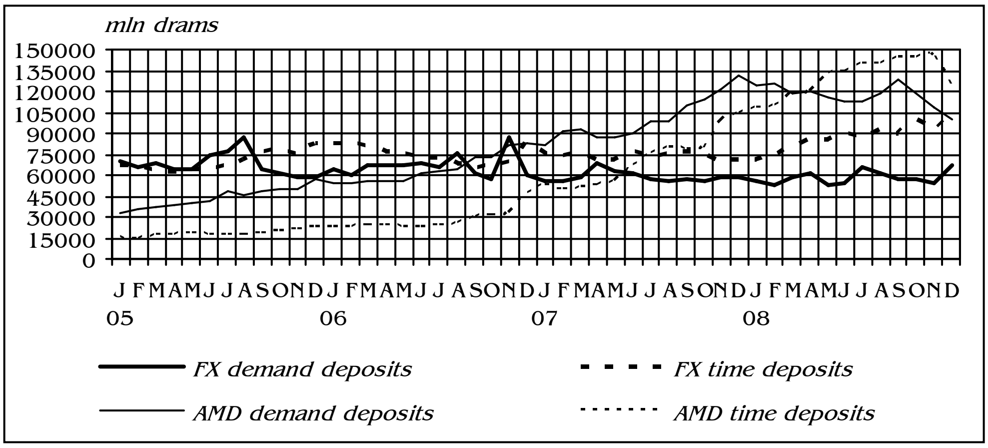
decreased by 9.3 percent. It is worth mentioning that the growth of this indicator in dollar terms in Q4 2008 was also higher from the previous year's indicator, making up 29.4 percent against 8.45 percent year-on-year.

***The dramization slowed as the dram components reduced***



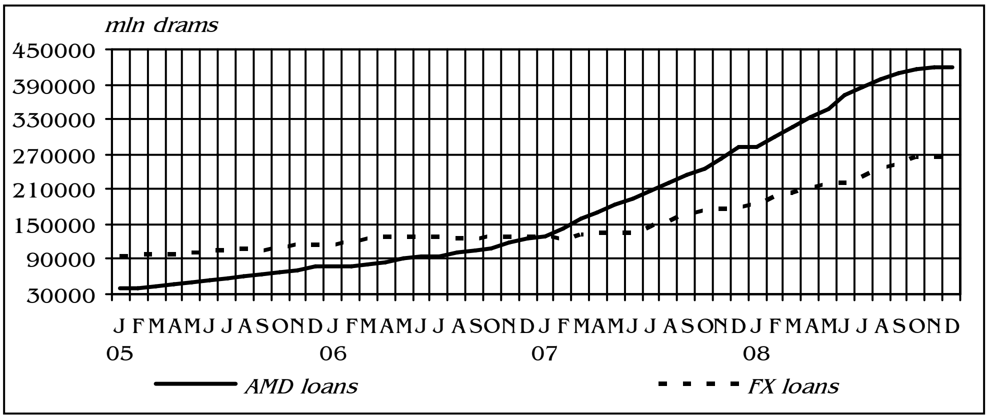

Some advanced growth was recorded in the structure of time deposits in dram (by 16.9 percent) and in foreign currency (by 44.1 percent or 42.9 percent in dollar terms). Demand deposits in dram have decreased by 24.1 percent while demand deposits in foreign currency have increased by 14 percent (13.1 percent in dollar terms).

***AMD and FX deposits by maturity***




As a result of the above mentioned developments, broad money has increased merely by 2.3 percent year-on-year.

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



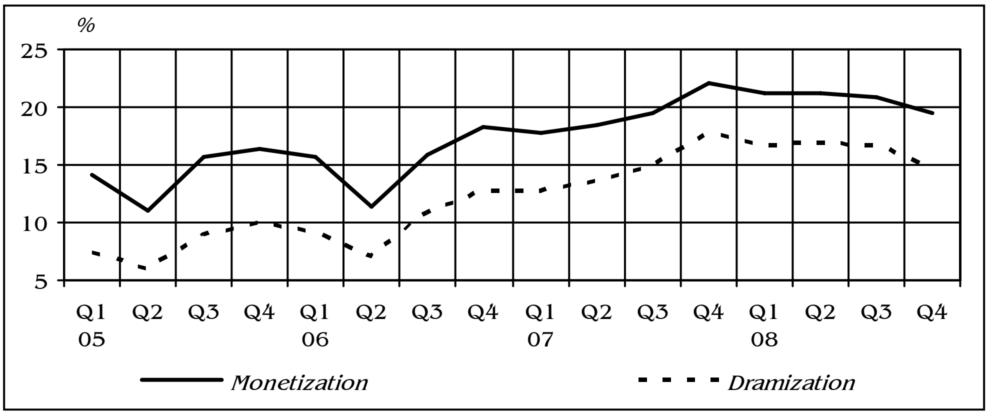

By supply-side factors, monetary aggregates have increased owing to net domestic assets of the banking system, which posted some 47.5 percent growth in relation to the same period of the previous year, while net foreign assets have reduced in this period of time by 42.3 percent. For comparison, these indicators have grown last year by 65.1 percent and

31.9 percent, respectively. These trends have been determined mainly by the NFA and NDA performance of commercial banks and credit organizations. As such, growth of NDA of commercial banks and credit organizations was supported by the increase of lending to the economy on account of external borrowings. The growth indicator of the lending to the economy remained as strong as it was started to be from the third quarter of the previous year, growing by 48.7 percent year-on-year or AMD 226.9 billion. This indicator, however, stands behind the previous year's indicator but exceeds it in absolute growth (81.2 percent or AMD 208.0 billion in 2007). Lending in dram has increased by 48.6 percent or AMD 136.8 billion and lending in foreign currency (in dram terms) has increased by 48.8 percent or AMD 87.9 billion (growth in dollar terms has been 47.6 percent).

In the fourth quarter of 2008, unlike the same period of the previous years, the dollarization of the economy (measured as a ratio of foreign currency deposits to broad money) increased, reaching 24 percent (it was 19 percent in 2007).

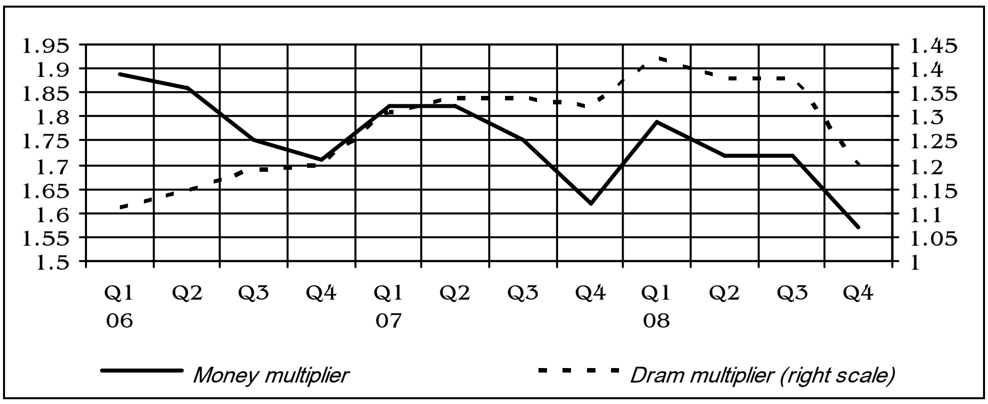
The monetization and dramization ratios, described as indicators of financial intermediation, remained trending downward, by 11.8 percent and 17.4 percent, respectively. The dramization ratio has decreased further due to relatively a smaller demand for the dram. And, based on the yearend 2008 results, the monetization level of 19.4 percent is considerably lower from the same figure in other transition countries. Whereas, the monetization, measured through the effective broad money[25], was high enough – round 45.6 percent[26].

***The dramization in 2008 has slowed down***




Some 9.1 percent year-on-year decrease of the dram multiplier at the closing of the period points to the decline of the level of financial intermediation in dram owing to persistently faster reduction rate in dram deposits in relation to the currency in circulation. In the same time, the money multiplier has decreased at a lesser speed, by 2.9 percent annually, owing to relatively a higher growth of foreign currency deposits.

***Money and dram multipliers***

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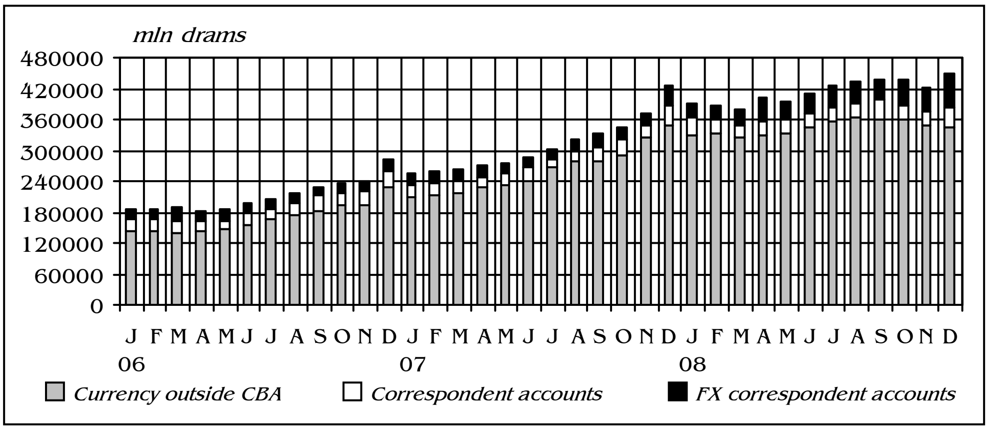
*[25] The effective broad money, in addition to broad money components, includes also the currency in circulation.*
*[26] The cash foreign currency in December of 2008 amounted to a value equivalent to AMD 957.8 billion.*

Financial intermediation is also measured as a loans to GDP ratio which tended to increase in recent years from 8.2 percent in 2005 to 8.6 percent and 13 percent in the years 2006 and 2007, respectively. In 2008 it reached 16.9 percent.

**Money base**

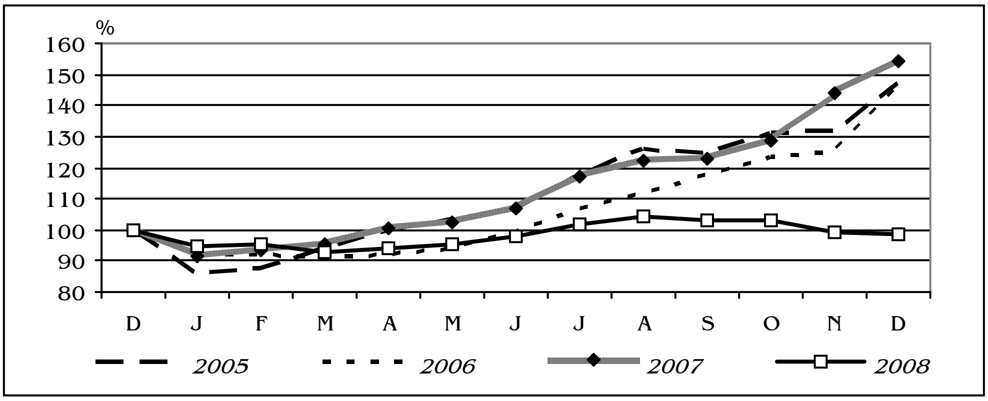
With the dramization rates pacing downward since the beginning of the year, the CBA has taken on to meet the money supply consistent with the economy's demand for the dram. As a result, at the end of December, the year-on-year growth of base money was 5.3 percent which, unlike the previous years when it reflected the performance of currency outside the CBA, was largely reflected in the performance of correspondent accounts with the CBA, 37.7 percent (in the previous year these indicators were 50.9 percent and 38.1 percent, respectively).

***In 2008, currency outside CBA has decreased in relation to the previous year***




The considerable slowing of the process of dramization was reflected in the performance of currency in circulation, hence, in the currency outside the CBA. Based on the behavior of the currency outside the CBA in recent years one may conclude that, from the standpoint of influence of the dramization factor, the Q1 and Q2 2008 indicator was similar to the first-half of 2006 indicator when the dramization tended to advance at relatively slow rates, and in the second half of the year it tended to decline.

***The year 2008 saw currency outside CBA slowed notably in relation to recent years***




During the year base money has been added totally owing to AMD 85.8 billion increase in NDA of the CBA, which was coupled with AMD 63.2 billion reduction in NFA of the CBA. In the first case, the growth was mainly a result of AMD 56 billion increase of net liabilities of commercial banks to the CBA, AMD 11.1 billion decrease of other assets net and AMD 47.5 billion reduction in volume of the CBA securities. The main reason for the decrease of the second indictor were net foreign currency sales operations in the foreign exchange market.

3.4. AGGREGATE DEMAND AND AGGREGATE SUPPLY

3.4.1. Aggregate demand

**Domestic demand**

***Private consumption and investments***[27]***.*** In the fourth quarter of 2008 and throughout 2008, the economic growth has been driven by the growth of domestic demand, which in turn is a result of increased private spending.

In the fourth quarter of 2008, the real growth of domestic demand was 2.6 percent (14.2 percent in the previous year), whereas the annual real growth, 8.1 percent (14.0 percent in the previous year). The slowing of real growth rates of domestic demand was determined by notable deceleration in growth rates of public expenditures but somewhat restrained deceleration in growth rates of private spending. As such, deceleration in private spending was recorded mainly during the fourth quarter due to the slowing of growth rates in household income as a consequence of world financial and economic crisis.

During Q4 2008 private spending has increased by 4.1 percent, and round 9 percent annually (compared to respectively 12.9 percent and 13.1 percent in the previous year). In the structure of private spending, both the growth rate of consumption and investments have slowed down.

In the fourth quarter of 2008, the growth of private consumption has been 4.6 percent against 12.2 percent in the previous year, and 6.7 percent annually versus 12.2 percent recorded 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.

During the year, with an exception of the fourth quarter, private investments have grown by round 15 percent, just 1 percentage point below the previous year's indicator, mostly due to the slowing of construction financed from the resources provided by organizations[28]. In the fourth quarter, however, private investment has increased by only 3 percent (14.7 percent in the previous year). Such slow growth was attributable to less-than-expected growth rates in capital and current transfers due to the world financial and economic crisis and risen uncertainties in private sector.

In the fourth quarter, the private sector expenditures have had a restrictive impact on inflation. According to the CBA estimations the estimated actual level of real private expenditures was below the equilibrium by 2 percent resulting to around -0.6 percentage point contribution to inflation.

***Public consumption and investments***[29]***.*** In the fourth quarter of 2008, the fiscal policy's impact on the aggregate demand has been restrictive by 2 percent according to the impulses calculated, whereas the forecast has been 1.5 percent expansionary.

According to the calculated indicator, some 1.3 percent restrictive impulse was recorded in the fourth quarter of 2008 instead of 0.4 percent restrictive. The deviation occurred as the actual indicators of public revenue and of GDP were much lower than forecast level. Particularly, tax and non-tax revenues have been collected less than projected[30] (about AMD 17 billion worth resources under-collected): tax revenues were under-collected

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*[27] The real growth indicators of private consumption and investments are the CBA estimations as the actual data are available for the third quarter of 2008.*

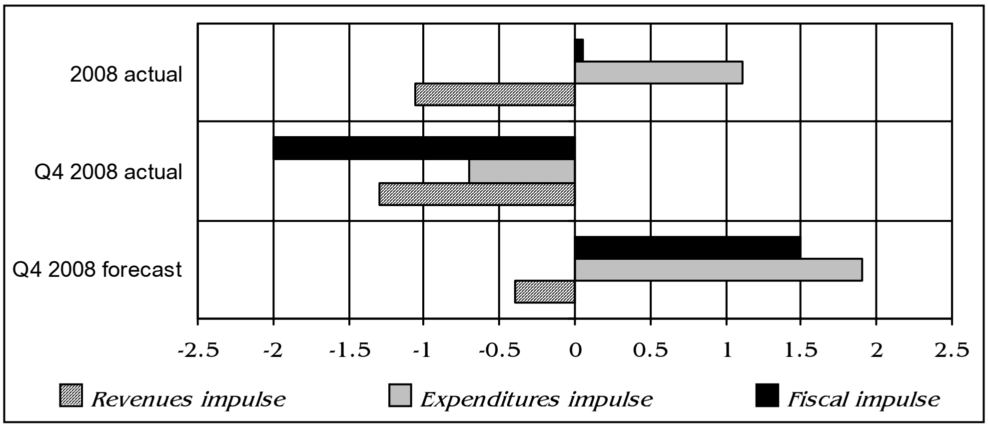
*[28] Construction financed by organizations in 2007 grew by about 30 percent, while in 2008 it decreased by 30 percent.*

*[29] Preliminary actual data on consolidated budget were used in the analyses of fiscal sector for Q4 2008. This was prepared using the principle of 1986 classification of the public sector statistics comparable with previous years. Calculation of impulses was also based on the fourth quarter preliminary consolidated budget indicators 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.*

*[30] The projected amount of AMD 638 billion of tax revenue of the 2008 state budget represents the indicators of tax revenue altered based on the Government of Armenia resolutions in 2008, and it differs from the amount of tax revenue (AMD 595 billion) specified in the Republic of Armenia Law on the Budget 2008. Note, that based on the yearly results, the tax revenues of the state budget have exceeded the specified amount in the Law on the 2008 budget by nearly AMD 24.0 billion.*

by AMD 19.0 billion, while non-tax and capital revenues were over-collected by nearly AMD 2.0 billion. During the fourth quarter the recorded GDP indicator lagged behind the forecasted level, resulting in a less-than-forecast level of annual GDP. As a result tax revenue to GDP ratio was recorded at 17 percent, which exceeded the same indicator in the previous year by 1 percentage point.

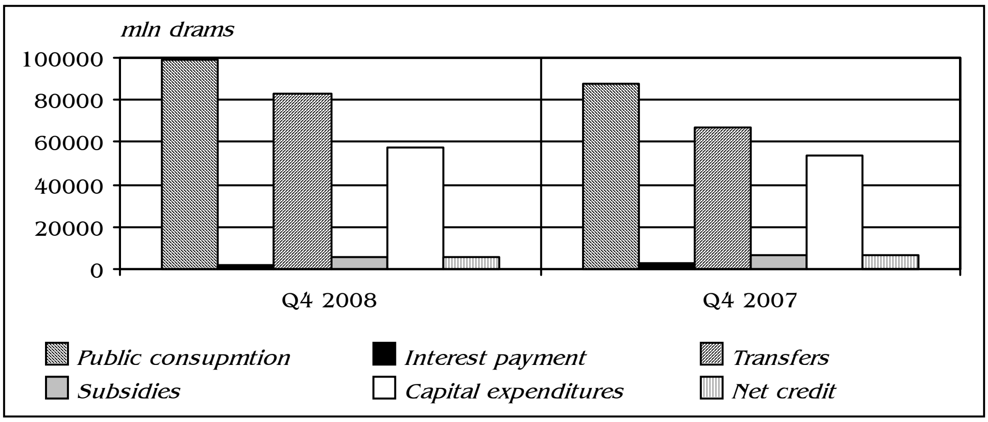
***InQ4, 2008 the fiscal impulse was restrictive***




In the fourth quarter of 2008, the public expenditures impulse has been 0.7 percent restrictive instead of the projected 1.9 percent expansionary. This was driven by about AMD 31.0 billion savings generated on the projected expenditures indicator, seen nearly in all quarters of the year. Under such conditions, budget expenditures constituted 97 percent of the annual projection.

In the fourth quarter of 2008, expenditures increased by 13.4 percent year-on-year.

***In the consolidated budget expenditures, transfers have grown notably in Q4 2008***




Current public expenditures have increased by 16.1 percent year-on-year and capital expenditures, by 8.1 percent year-on-year. In the structure of current expenditures, the highest growth was reported with regard to transfers due to an increase of pension payments envisaged by the law o the state budget. Based on the yearly results, the growth of transfers has been 57.0 percent year-on-year. In Q4 2008, public consumption has increased by 12.6 percent year-on-year and constituted nearly 40 percent of public expenditures.

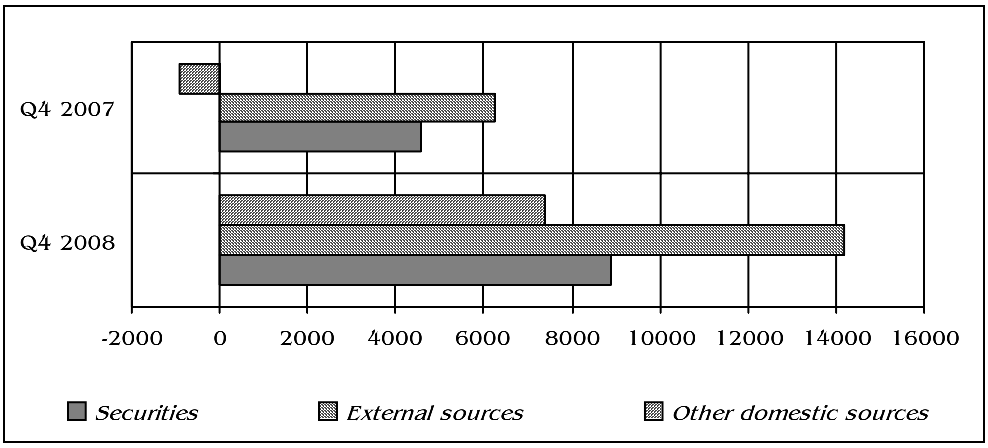
A large share of capital expenditures executed on account of domestic financing sources persisted in the fourth quarter. Domestic sources and external sources accounted for, accordingly, 77.0 percent and 23.0 percent of the financing of capital expenditures.

In the fourth quarter of 2008, revenues have grown by 9.4 percent year-on-year, with tax revenue increased by 7.1 percent and non-tax and capital revenues increased by 40 percent. During the quarter indirect taxes have increased by 5.2 percent year-on-year while direct taxes, by 3 percent.

The yearly growth of indirect taxes has been 28 percent while direct taxes, by 14.2 percent. The share of indirect taxes in total taxes has increased by 2.3 percentage points to reach 54.5 percent of tax revenues, whereas the share of direct taxes has reduced by 1.5 percent to make up 20.4 percent of total taxes.

In the fourth quarter of 2008, the budget deficit has amounted AMD 30.4 billion (51 percent of the year's deficit).

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




In the fourth quarter of 2008, domestic sources and external sources accounted for, accordingly, 53.0 percent and 47.0 percent of the deficit financing. The breakdown of the domestic sources of deficit financing is as follows: government securities have financed AMD 8.8 billion; privatization proceeds have financed AMD 13.3 billion, while government resources available in the banking system have grown by AMD 5.9 billion.

Based on the yearly results, the budget deficit has amounted to AMD 59.8 billion or 1.6 percent of GDP. Domestic resources and external resources have financed, respectively, 26 percent and 74 percent of the deficit. Net financing from government securities has amounted to AMD 25.3 billion, as was projected in the Law on the Budget, 2008. As regards the deficit financing to the expense of temporarily free funds in the state budget at the CBA, there has been AMD 6.7 billion accumulated against AMD 10.3 billion worth expenditures planned for the year.

***Net foreign demand*** In the fourth quarter of 2008, real export of goods and services has declined by 5.8 percent year-on-year in contrast to 28.0 percent increase of real import of goods and services. The decline in export was due to the developments in world financial crisis which pushed metal prices sharply down in world markets. This, in turn, has resulted in a considerable decline in export of mineral and metallurgy production. 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 Q4 2008 growth of main macroeconomic indicators in real terms***

| Item | Q4 2008 / Q4 2007 | 2008/ 2007 |
|---|---|---|
| Real GDP | -0.2 | 6.8 |
| Domestic demand | 2.6 | 8.1 |
| Consumption | 2.0 | 6.7 |
| Public | 14.2 | 6.8 |
| Private | 4.6 | 6.7 |
| Capital investment | 4.1 | 11.8 |
| Public | 13.7 | -9.6 |
| Private | 3.0 | 14.8 |
| Export [31] | -5.8 | -5.7 |
| Import | 28.0 | 16.8 |

[31] *This relates to the export and import of goods and services.*

### 3.4.2. Aggregate supply [32]

In the fourth quarter of 2008, the world economic crisis has had a material impact on the developments in the Armenian economy in the form of declined world demand and reduced private remittances. These factors were more pronounced in the industry and construction branches where a real decline was recorded during the quarter. As a result in the fourth quarter, there has been 0.2 percent economic slowdown, with the January-December economic growth indicator having reduced to 6.8 percent.

In the fourth quarter of 2008, ***Agriculture*** reported 3.6 percent year-on-year decline in value added, with the January-December increase of value added having made up a mere 1.3 percent against 10.2 percent recorded in 2007. The decline recorded during the quarter has been due to reduced crops of some cultivated plants and berries, such as grape (15.1 percent decline in January-December), gourds (11.7 percent decline), grains and legumes (8.2 percent decline) and greengrocery (2.4 percent decline). Nevertheless, there has been rich crop of fruit and berries (22.1 percent in January-December) and potato (11.1 percent). As a result, gross output of plant vegetation has increased by 0.2 percent in January-December.

Steady growth trends in animal breeding persisted and, as a result, growth reported in this sub-sector for the period of January-December has been round 3.5 percent with regard to all produce.

Adverse world economic developments affected, first of all, metallurgy and chemical industry branches in ***Industry.*** In metallurgy in particular, real output has decreased by 9.6 percent in the period of January-December of 2008, due to a sharp decline in world base metal prices seen from the end of September of 2008. During the quarter, there was a considerable decline in production volumes of aluminum foil (25.4 percent), ferromolybdenum (11.6 percent) and steel alloys (11. percent). The chemical industry has also reported a decline of 14.8 percent due to the construction of production volumes of synthetic rubber (68 percent decline in the fourth quarter) and a temporary halt of the production at a large chemical plant.

In food industry, high growth rates persisted, making up 7.1 percent in January-December 2008. Particularly, in the fourth quarter of 2008 meat and dairy production has grown by 25.4 percent and 14.1 percent, respectively. Further, production volumes of wine, ethylic spirit, macaroni and canned food have increased substantially by 381 percent, 108.3 percent, 21.4 percent and 19.3 percent, respectively.

Growth rates have somewhat slowed in energy (an 8 percent growth in January-December mainly owing to the production of electric energy by hydropower plants) and production of building materials (6.1 percent, owing to the production of concrete, tufa and non-mineral building materials). As a result, the value added in industry in the fourth quarter of 2008 has declined by 1.9 percent, with the January-December growth having made up 2.4 percent.

***Construction*** has also been affected notably by the adverse developments in world economy, reflected in both added uncertainties and a slowed growth rate of private remittances. The value added has declined by 11.3 percent in the fourth quarter, with the January-December growth having made up 7.2 percent. The decline in construction volumes has been attributable mostly to reduced volumes of construction financed by organizations (some 28.1 percent decrease in January-December). Declined volumes of construction were recorded in transport (44 percent in January-December), trade (18 percent) and energy (26 percent), whereas high growth rates in construction volumes in residential housing persisted (23.8 percent in January-December). Construction volumes have increased also in public administration (12.8 percent in January-December), financial services (22.4 percent) and hotel and restaurant services (44.3 percent).

In ***Services***, the growth rates of value added have slowed down to 8.1 percent, and to 9 percent in the period January-December of 2008. The

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[32] *In this section growth indicators are relative to the same quarter of the previous year, unless otherwise stated.*

slowdown was determined by reduced growth rate of retail trade turnover (in January-December it has grown by 4.4 percent) due to the slowing of the growth rate of household income (first of all private remittances).

High growth of services provided persisted, having made up 13.8 percent in January-December. In particular, high growth has been recorded in financial services (23.5 percent in January-December), communications (14.9 percent), transport (8.9 percent), hotel and restaurant services (12.7 percent), education (7.3 percent) and social services (27.1 percent).

## 3.5. LABOR MARKET [33]

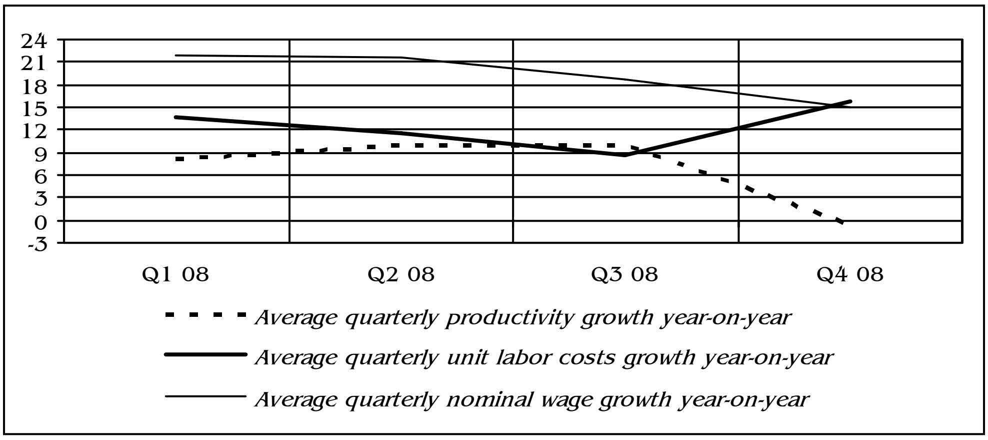
In the fourth quarter of 2008 as well as throughout the year, the growth rates of real wages have declined to some extent, with labor productivity having reported faster decline, and thus led to increased unit labor costs. As the growth rates of labor productivity decelerated, the consumer market started to feel certain inflationary pressures coming from the labor market.

In the fourth quarter of 2008, the average nominal wages have increased by 15.1 percent year-on-year (against a 22.6 percent increase in the Q4 207), and by 19.1 in January-December 2008 (against the previous year's 20.9 percent). 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. Relatively slower wage increases (up to 10 percent) have been recorded in agriculture, electric energy, gas, water production and the hotel and restaurant services. As a result of such developments, the wage levels in different sectors of the economy have become more pronounced.

In the fourth quarter of 2008, the average unemployment rate has been 6.3 percent, having dropped by 0.3 percentage point, compared to the same quarter of the previous year, and by 0.7 percentage point, based on yearly results. The number of the officially unemployed has reduced by round 9.5 percent based on yearly results, whereas the number of people engaged in the economy has increased b 1.7 percent. As a result, the number of economically active population has increased by round 0.9 percent.

During the fourth quarter the growth of labor productivity has dropped by nearly 0.7 percent (in the fourth quarter of 2007 it reported 13.7 percent year-on-year growth). Based on yearly results, the growth of labor productivity has been 6.1 percent against 13.3 percent recorded in the previous year.

*Growth of productivity slowed faster than that of the wage, resulting in increased unit labor costs*




In the fourth quarter of 2008, the labor productivity has slowed down faster than that of the wages, having resulted in certain increase of unit

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[33] *Wage indicators are the Central Bank estimations based on the actual indicators for January-November. Average quarterly unemployment and labor productivity indicators are the Central Bank calculations based on the actual January-December figures.*

labor costs. Under such conditions, there have been certain inflationary pressures in the consumer market coming from the labor market. In particular, wage increase has made 0.4 percentage contribution to inflation while productivity increase, by 0.01 percentage point. As a result, net impact of labor market on the 12-month inflation has been 0.41 percentage point stimulating.

## 3.6. IMPORT PRICES AND PRODUCER PRICES

### 3.6.1. Import prices

In the fourth quarter of 2008, imports in dollar prices have notably reduced in relation to the previous quarter, due to intensified global economic crisis and continued decline in world demand. Prices of both intermediate goods and consumption goods kept on reducing in the whole duration of the fourth quarter.

According to the Central Bank estimates, in the fourth quarter of 2008 the dollar prices of import have fallen by 7.6 percent year-on-year, a substantial reduction in contrast to 14.5 percent increase recorded in the previous quarter.

| Item | Q4 07 | Q1 08 | Q2 08 | Q3 08 | Q4 08 |
|---|---|---|---|---|---|
| Import (total) | 17.5 | 24.5 | 22.8 | 14.5 | -7.6 |
| Import (services) | 11.7 | 13.3 | 14.9 | 11.0 | -4.1 |
| Import (goods) | 19.4 | 28.2 | 25.4 | 15.6 | -8.8 |
| Capital Goods [34] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Consumption Goods | 11.7 | 13.8 | 14.9 | 11.0 | -4.1 |
| Intermediate Goods | 36.2 | 59.7 | 46.1 | 23.2 | -13.7 |
| Diamond [34] | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Oil Products | 49.0 | 66.5 | 78.2 | 54.1 | -37.0 |
| Natural Gas | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

The change in dollar prices was determined mainly by a notable decrease of prices of intermediate goods and oil products in the whole duration of the quarter.

In the meantime, compared to the previous year, dollar prices of import have risen approximately by 13 percent, due to a considerable increase of intermediate goods' (by 25.3 percent) and oil products' prices (by 34.3 percent) in the first six months of the year.

Some 13.7 percent year-on-year decrease of prices of intermediate goods (against 23.2 percent year-on-year growth in the previous quarter) was determined by grain prices that reported year-on-year 33.2 percent decrease against 15.6 percent increase in the previous quarter. The impact of prices of intermediate goods on total prices has been 3.7 percent.

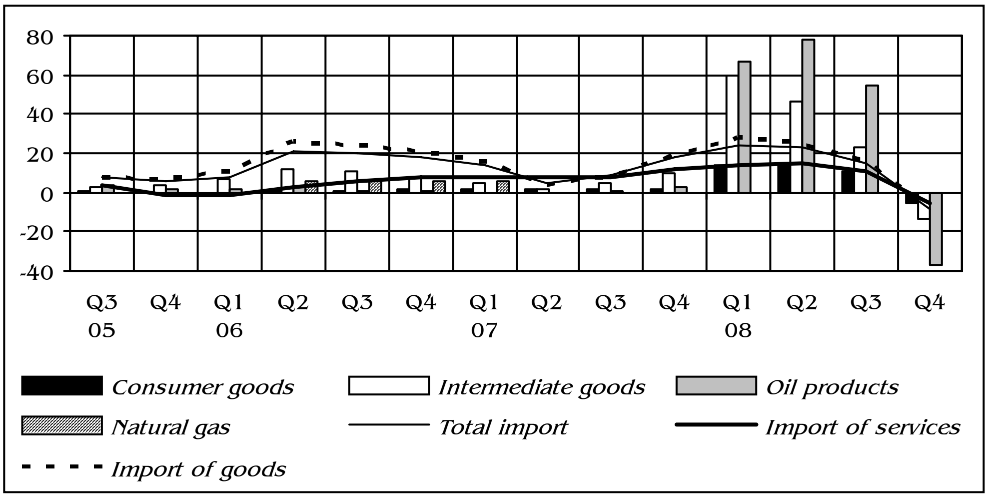
There has been a substantial decline in growth rates of dollar prices of oil products, too. The reported decline has been 37 percent year-on-year compared to the previous quarter's growth of 54 percent, having affected the total import prices by -2.4 percentage points. In the beginning of the fourth quarter, the average price of Brent was USD 90 a barrel, having plunged to USD 40 at the end of the quarter. The main factors causing price decreases include the slowing of the world demand and further pessimistic expectations, as well as the impact of strengthening US dollar that essentially affects dollar prices of intermediate goods.

The price decrease of consumption goods in the fourth has been 5.6 percent year-on-year, which made some 1.1 percentage point contribution to the total import prices. On the whole, in the fourth quarter, the impact of exchange rate depreciation in partner countries has been more remarkable

[34] *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.*

(8.7 percentage points) than that of the inflation (4.7 percentage points). As European currencies depreciated, the impact of Eurozone on total import prices has been -0.3 percentage point, that of Switzerland – 0.1 percentage point and that of England – 0.5 percentage point.

*Import prices continued dropping over the fourth quarter*




In the fourth quarter of 2008, the dram prices of imported goods included in the consumer basket have increased by 6.6 percent year-on-year, with the nominal AMD/USD exchange rate having appreciated by 3.3 percent year-on-year. Such growth of dram prices of imported goods is explained by a slow response of domestic prices to international prices.

### 3.6.2. Producer prices [35]

In the fourth quarter of 2008, the GDP deflator made up 103.3 percent, with the January-December indicator having reached 106.8 percent, outstripping the same indicator of the previous year by nearly 3 percentage points. Such a high growth of producer prices has been determined by a notable increase of prices in construction.

In the fourth quarter of 2008, prices in ***Agriculture*** have risen by 6.7 percent, mainly attributable to reduced crop in plant vegetation (as wholesale prices of grain, cabbage, haricot, grape and pear increased). Prices of pork and mutton increased as well.

The highest growth of prices was recorded in ***Construction***, with the Q4 price index having reached 132.8 percent, because of an inelastic nature of prices of building materials. In other words, these were maintained at the previous quarter's level though overall construction volumes have contracted and the international prices of building materials have dropped.

In ***Industry*** the producer prices have dropped by 9 percent determined by decreased producer prices in metallurgy due to a sharp decline in prices of non-ferrous metals in international markets (in Q4 2008 international copper prices have dropped by about 45.6 percent). In the meantime, producer prices in production of building materials have risen to some extent (the price index has been 120.5 percent in January-December compared to recorded 119.9 percent for the period January-September). However, the growth rates of prices in other sub-branches of industry decelerated.

In the fourth quarter, ***carriage*** costs have increased by 8.5 percent. Main increases have been attributable to railway carriage costs (as a result of new tariffs set by the trust railway operator) and auto carriage costs (due to increased fuel prices).

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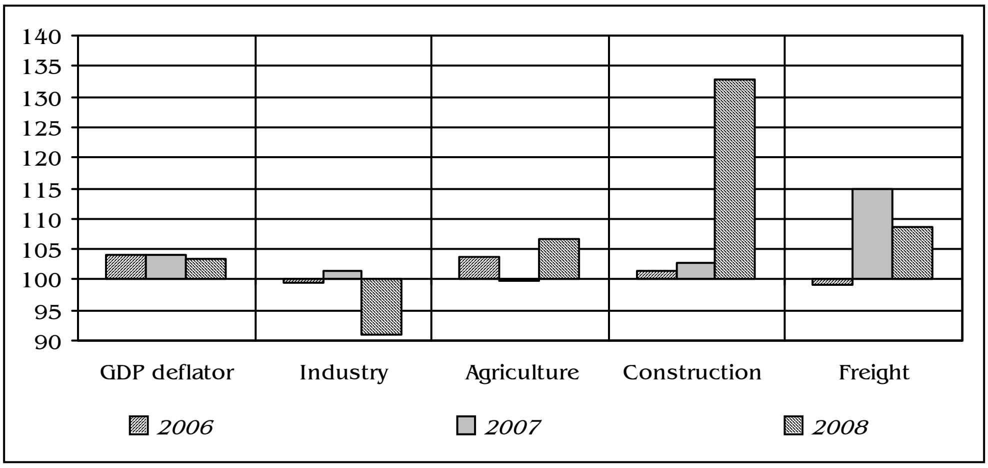
*[35] Price indexes and their changes presented in this section are year-on-year indicators, unless otherwise specified.*

*In Q4, 2008 the highest price growth was recorded in construction, and the lowest, in industry*




**3.7. INFLATION EXPECTATIONS**

In the fourth quarter of 2008, the Central Bank conducted its surveys on inflation expectations of financial organizations, households, and non-financial organizations of real sector.

According to the surveys with banks and credit organizations in the fourth quarter of 2008, the financial sector's expectation of high inflation, roaming in the range of 5.5-8.5 percent, has changed to some extent. and are evenly distributed between the mentioned range and 2.5-5.5 percent range. This is nearer to both the inflation target in the 12-month horizon and the Central Bank projection.

Expectations of households and non-financial organizations of real sector have changed, too. While the proportion in the third quarter was approximately 60 percent to 34 percent for expecting, respectively, high inflation versus a stable inflation, it has changed in the fourth quarter in an opposite direction.

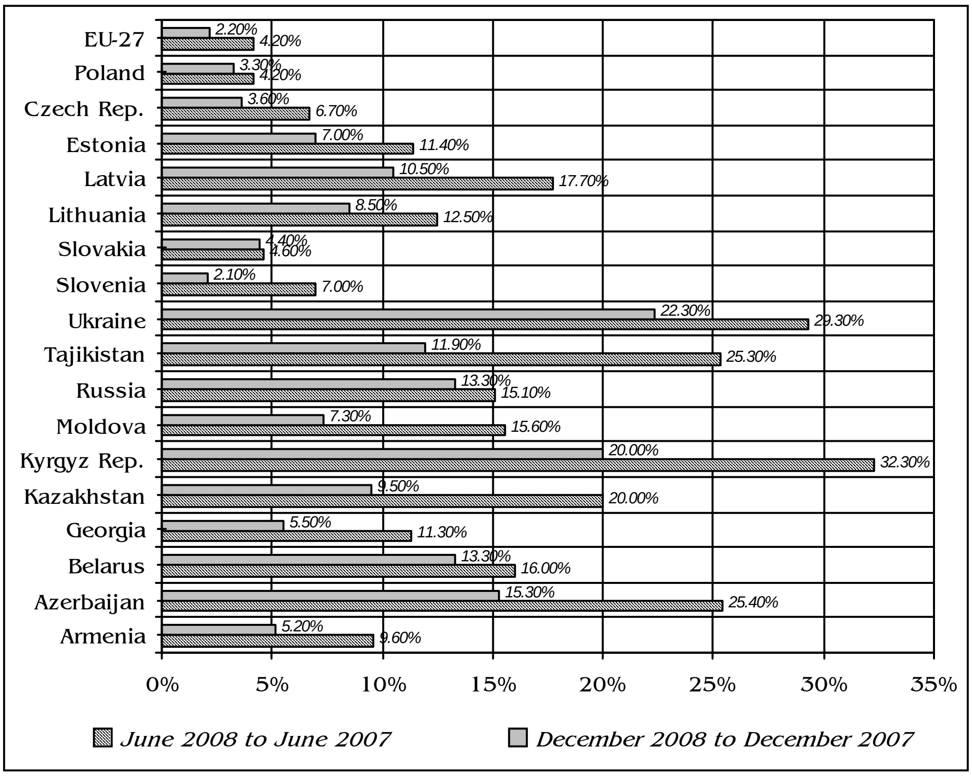
On the whole, the results of surveys show that the expectations of high inflation have downsized, and the Central Bank, in consideration of ensuring the 2009 inflation target, had started, from December of 2008, to ease the monetary conditions by lowering the refinancing rate by 0.75 percentage point for the period December 2008 to January 2009.

According to the results of survey, expectations of both commercial banks and credit organizations for market interest rates for a one-year horizon toward the increase persisted. Interest rates are expected to grow in respect of short, medium and long-term bonds and in respect of funds attracted and allocated by the financial sector.

## APPENDIX 1

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

**Inflation indicators**



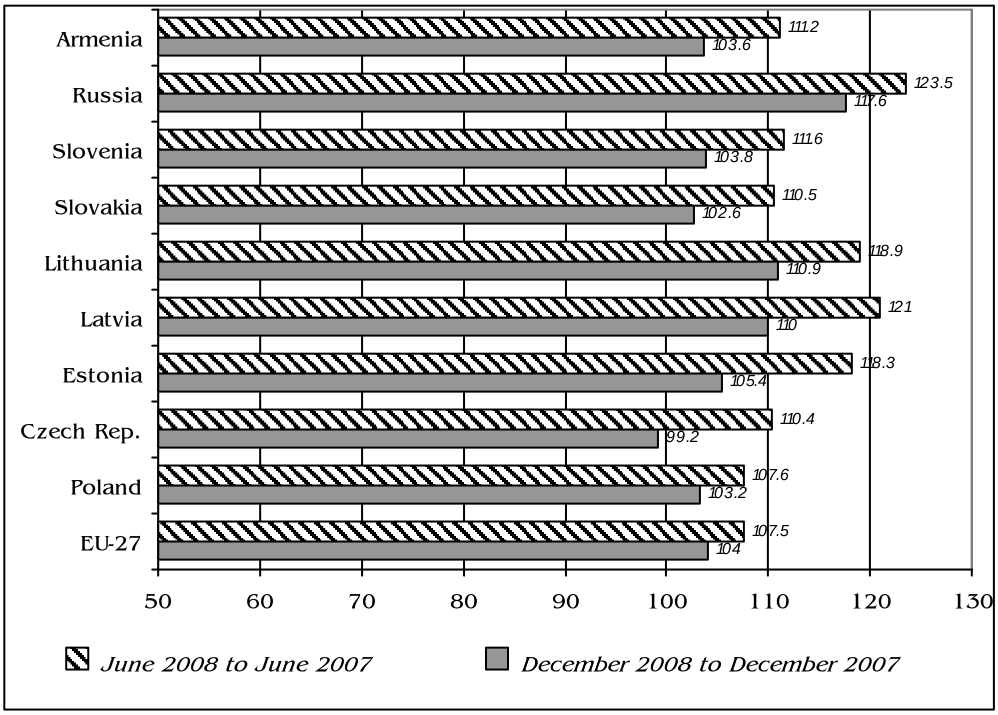

**Inflation indicators**

| Country | June 2008 to June 2007 | December 2008 to December 2007 |
|---|---|---|
| Armenia | 9.6 | 5.2 |
| Azerbaijan | 25.4** | 15.3** |
| Belarus | 16 | 13.3 |
| Georgia | 11.3 | 5.5 |
| Kazakhstan | 20 | 9.5 |
| Kyrgyz Rep. | 32.3** | 20 |
| Moldova | 15.6 | 7.3 |
| Russia | 15.1 | 13.3 |
| Tajikistan | 25.3** | 11.9** |
| Ukraine | 29.3 | 22.3 |
| Slovenia | 7 | 2.1 |
| Slovakia | 4.6 | 4.4 |
| Lithuania | 12.5 | 8.5 |
| Latvia | 17.7 | 10.5 |
| Estonia | 11.4 | 7 |
| Czech Rep. | 6.7 | 3.6 |
| Poland | 4.6 | 3.3 |
| EU-27 | 4.2 | 2.2 |

** 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*

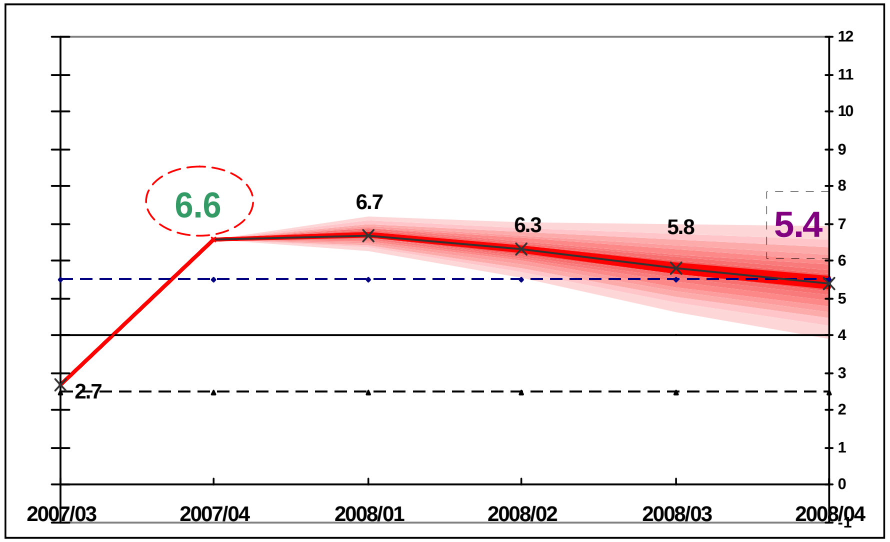



*Food price index growth*

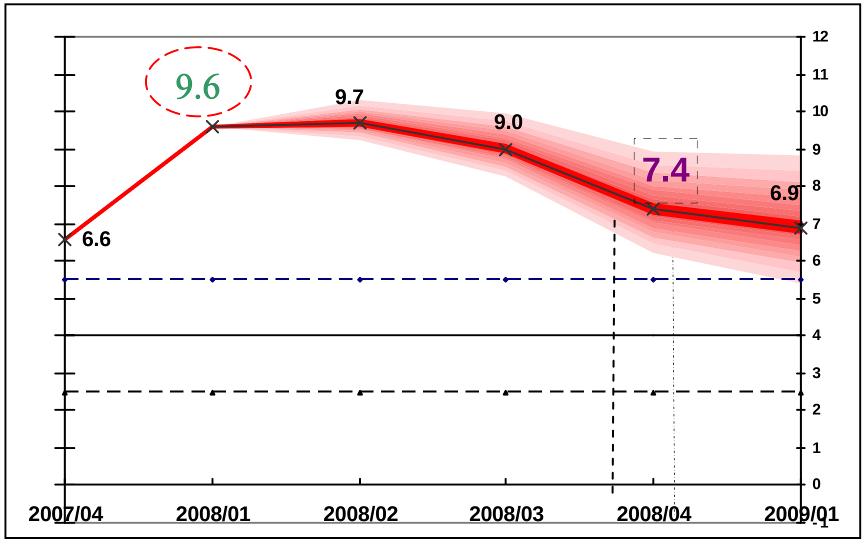
| Country | June 2008 to June 2007 | December 2008 to December 2007 |
|---|---|---|
| Armenia | 11.2 | 3.6 |
| Russia | 23.5 | 17.6 |
| Slovenia | 11.6 | 3.8 |
| Slovakia | 10.5 | 2.6 |
| Lithuania | 18.9 | 10.9 |
| Latvia | 21 | 10 |
| Estonia | 18.3 | 5.4 |
| Czech Rep. | 10.4 | -0.8 |
| Poland | 7.6 | 3.2 |
| EU-27 | 7.5 | 4 |

**APPENDIX 3.** Inflation forecasts from December 2007 to September 2008 made for Q4 2008

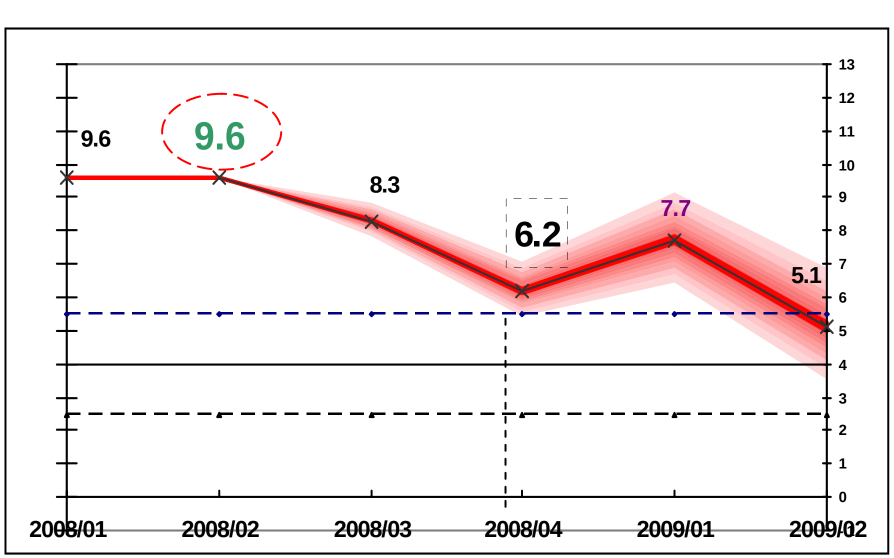
*Inflation forecast in December 2007*



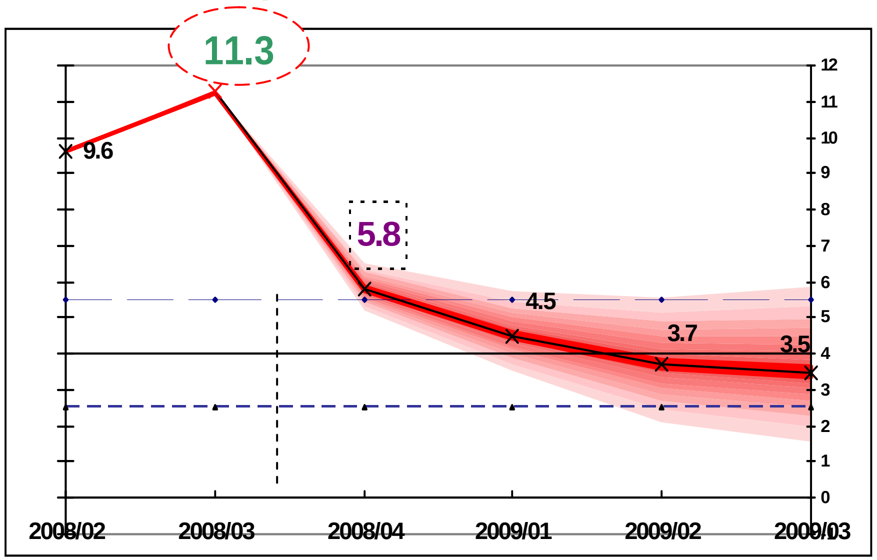

*Inflation forecast in March 2008*




*Inflation forecast in June 2008*




*Inflation forecast in September 2008*



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