Republic of Armenia

2008

Monetary Policy

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#### PRINCIPLES OF MONETARY POLICY

In 2008, the Central Bank of Armenia (the "CBA") will continue the transition to a fully-fledged inflation targeting strategy. According to the Republic of Armenia Law on the Central Bank, the primary objective of the CBA is to ensure price stability: this is how the CBA contributes to an economic policy of attaining strong and sustainable growth in the long run. Given the current inflationary macro-environment in the Armenian economy and the expectations that inflationary risks will persist in the external world, a target band of  $4\% \pm 1.5\%$  inflation has been set for 2008.

The CBA's implementation of the inflation targeting strategy in 2008 will be guided by the following considerations:

- 1. The CBA's main and primary objective is to ensure price stability (the annual inflation target for 2008-2010 has been set at 4% ( $\pm 1.5\%$ ));
- 2. Headline inflation, i.e. the growth of the consumer price index, which represents the growth of prices of 470 consumer goods and of services tariffs, is set as the inflation indicator.
- 3. The inflation forecast is set as the nominal anchor.
- 4. Short-term interest rate is accepted as the operational target.
- 5. A repo (refinancing) operation, for which a rate is set on the second business day of each month for that month, is used as the main instrument of monetary policy. Monetary policy will transmit impulses to the economy not only through a change in interest rates, but also by leaving them unchanged over a certain time period.
- 6. At the beginning of each quarter, the CBA Board decides on the directions of monetary policy for the quarter ahead, relying on inflation forecasts, external world and economic development scenarios, and inflationary risks.
- 7. A 12-month period is set as the time horizon for meeting the inflation target, which means that, each quarter, the upcoming 12-month inflation is forecast, with the implementation of monetary policy aiming to eliminate the deviation between the target and forecast.
- 8. To ensure the accountability and transparency of monetary policy, the CBA publishes quarterly Inflation Reports, which provide the inflation analysis for the preceding period, the factors driving inflation, and the inflation forecasts for the following period. According to Article 6(4) of the Republic of Armenia Law on the Central Bank, the CBA shall, within the two months following each of the first and third quarters of the year, submit to the National Assembly the approved Monetary Policy Programs and Inflation Reports for the relevant quarters.
  - Quarterly Minutes on Interest Rate are released, which are effectively quarterly programs of monetary policy that include one-year forecasts of macroeconomic and monetary indicators, as well as the CBA Board's deliberations and decisions on the directions of monetary policy.

Every month, immediately after the CBA Board has set the interest rate, the CBA issues a press release, and during the next 10 days the Minutes on Interest Rate for the relevant month is published.

Minutes on Interest Rate also appear in the CBA's monthly Bulletins in the form of Monetary Overviews and Quarterly Inflation Reports (Quarterly Reviews), as comments on the inflation management policy and a reflection of potential developments of inflation expectations.

- 9. More comprehensive analyses and comments will be devoted to the following exceptions that are considered as non-monetary factors affecting inflation in international practice:
  - A considerable changes in global prices;
  - Considerable exchange rate fluctuations of national currency driven by external shocks;
  - Notable changes in agriculture, which are reflected in commodity prices;
  - Significant changes in regulated prices;
  - Natural disasters and other force-majeure situations that may trigger supplyor demand-driven price shocks.

The latter can generate mostly supply shocks, which are non-recurrent and transient, and neutralizing their impact by means of monetary policy would hamper the growth of economic activity. In countries with a short history of low inflation, such shocks usually shape inflationary expectations. Therefore, the CBA considers necessary to issue detailed comments on the inflationary impact of such factors and the CBA's stance thereon.

- 10. The CBA will continue to monitor the developments of demand for the dram and dramization, in particular, and will meet such demand with a view to the priority of its main objective.
- 11. The conditional inflation forecast will be published in 2008, as well, involving a presentation of qualitative characteristics of monetary policy implementation.<sup>1</sup>
- 12. The CBA will continue to forecast macroeconomic indicators using the Quarterly Projection Model (QPM),<sup>2</sup> which combines interest rates, inflation, and business cycles in order to opt the main directions of monetary policy necessary for achieving the inflation target.
- 13. In both the inflation model and publications, the CBA will continue to present forward-looking perspectives.

<sup>2</sup> The Model was published in the CBA Quarterly Review for Q2, 2007.

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<sup>&</sup>lt;sup>1</sup> The publication of the conditional inflation forecast involves a presentation of qualitative characteristics of monetary policy implementation, while the non-conditional inflation level forecasts reveal both qualitative and quantitative characteristics.

#### MACRO-ENVIRONMENT AND INFLATION IN 2007

#### External Environment

External environment developments have caused significant deviations in the Monetary Policy Program during the first 10 months of 2007. Subsiding inflationary pressures in the beginning of the year changed an unprecedented growth in the prices of commodities during the second half of 2007, which, coupled with a rapid increase in foodstuff prices, heavily mounted inflationary pressures on prices of imported commodities.

The beginning of the year was marked by falling prices of input commodities—a trend that emerged at yearend 2006—slackening inflationary risks expected from the external sector. This development was manifested through falling oil prices, while the US dollar exchange rate continued to depreciate against the main currencies due to the shrinking interest rate spread between the US Federal Reserve System and the European Central Bank.

The US dollar depreciation continued throughout Q2, but oil prices started to rise again on account of a fundamental supply-demand mismatch, as well as geopolitical issues. In Q2, the Armenian economy was also affected by the substantial increase in world prices of wheat. In contrast to the previous year's smooth increase, wheat price growth accelerated rapidly in Q2 due, among other reasons, to the expected lower harvest in Russia and the Ukraine, which has had serious implications for Armenia.

On the background of the global credit crunch, oil and gold prices somewhat declined in Q3, and the US dollar appreciated slightly in August; however, prices in the international commodity exchanges steeply grew in September. The wheat price increase was followed by sharp increases in prices of dairy products, especially milk, cheese, and butter, as well as of vegetable oil. Consequently, inflationary pressures rose abruptly, and the speeding up of global inflation led to higher domestic prices.

Though oil and gold prices continued leap-frogging, foodstuff (especially wheat and vegetable oil) prices somewhat stabilized around the first half of Q4. In annual terms, however, a broadly inflationary environment and expectations of high inflation in global markets still linger.

#### **Domestic Environment**

#### Aggregate Supply

January-October 2007 economic growth was 13.3% YOY, fueled primarily by construction, services, and agriculture.

Trends observed from the beginning of the year persisted in the *industry sector*, resulting in a 1.8% YOY growth of added value in this sector during January-October 2007. Excluding the diamond industry, the sector grew by 8.4%.

In the food industry, the largest component of the processing sector, real growth of output was about 8%. Here, the production of *confectionery, alcoholic beverages*<sup>3</sup>, canned products, and natural juices has grown since the beginning of the year.

<sup>&</sup>lt;sup>3</sup> During January-September 2007, relative to the same period of 2006, the cognac production volume grew by about 76.5%.

In the non-ferrous metallurgy sub-sector, production growth of *aluminum* and *ferromolybdenum* accelerated, while copper production volumes shrunk due to changed source of raw materials by a large copper-producing factory.

On the background of the continuing strong growth of construction volumes, the production of construction materials increased, especially in the *cement, plaster*, and *lime* sub-sectors.

In the energy sub-sector, the volume of *natural gas supply* continued growing rapidly owing to the expansion of gas infrastructure in the country.

In *agriculture*, added value grew by 8.9% YOY during January-October, mainly on account of an about 10.6% increase in the *plant cultivation* output. Due to favorable weather, fruit and vegetable output volumes grew mainly thanks to the rich harvest of *grapes*, *apples*, *peaches*, *tomatoes*, *cucumbers*, and *cabbage*. The *animal breeding subsector* grew by about 5% in real terms during January-October, which was driven largely by higher volumes of meat and egg production.

**Construction** volumes grew by about 19.2% YOY during January-October: the bulk of this growth was due to investments in *transport and communications*, especially the sizeable investments by operators of mobile telephone systems and the road construction financed by the Lincy Fund. Construction volumes also increased in the *energy* sector due to the more active building of small HPPs and the construction of the second part of the Armenia-Iran gas pipeline.

In 2007, housing construction volumes declined in real terms due to the completion of the main construction works at major construction sites in late 2006 (especially the Northern Avenue in Yerevan).

*In the services sector*, added value grew by about 13% YOY in real terms during January-October, which was mainly due to the considerable increase in transport and communication services and in the trade turnover (especially wholesale commerce and sale of automobiles). All types of transportation services grew, while the growth of communication services was mainly due to the increased volume of mobile telephone services.

#### **Aggregate Demand**

Strong growth of aggregate demand in 2007 was mainly due to rapid growth of domestic demand, especially private sector consumption and investments.  $^4$ 

Real growth of total private spending was 12.8%. In the structure of private spending, consumption grew by 11.3% in real terms due to an about 20% real growth of household income. During 2007, as a result of an about 19% real increase in privately-financed construction volumes, private investments grew by 17.2% in real terms.

According to estimates of the private sector consumption and investment gap, private sector spending was virtually inflation-neutral in the first half of 2007, but generated inflationary pressures in the second half, especially during Q4.

During the first nine months of 2007, the impact of fiscal policy was an expansionary 0.3%: the revenue impact was a contractionary 1.3%, while the expenditure impact was an expansionary 1.6%. The revenue impulse was more contractionary than projected, mainly on account of the tax and non-tax revenue over-collection since the beginning of the year. Expenditures were within the projection, having an expansionary impact, in line with the expectation.

During January-September 2007, foreign trade volumes grew rapidly due to favorable developments in both the external and domestic environments: commodity

<sup>&</sup>lt;sup>4</sup> Real growth of private consumption and investments are CBA estimates based on actual 2007 Q1 and Q2 data.

exports and imports grew by 21.0% and 43.4%, respectively. Exports<sup>5</sup> and imports<sup>6</sup> of goods and services grew by 15.7% and 34.7%, respectively. Export growth was driven by increased production capacity of and investments in some mining enterprises, as well as the persisting high prices of raw materials. No major change took place in the diamond industry: the decline trend continued in 2007.<sup>7</sup> As a consequence, exports of the "Precious and semi-precious stones, precious metals, and articles thereof" commodity group declined by 25.2% during the first nine months of 2007. Export growth continues to benefit from higher exports of the "Mineral products," "Base metals and articles thereof," and "Products of prepared food" commodity groups.

Import growth in 2007 was unprecedented, reflecting steady growth of demand for virtually all types of commodities (consumer goods, raw materials, and input commodities), as well as the exchange rate appreciation. Growth of imports in dollar terms was also due to higher prices of raw materials.

In spite of the 9.8% decline in imports of the "Precious and semi-precious stones, precious metals, and articles thereof" commodity group, strong growth was achieved on account of large contributors such as "Products of prepared food," "Mineral products," "Base metals and articles thereof," "Machinery and equipment," and "Ground, air, and water transport means."

#### Labor Market 8

During 2007, wages grew in virtually all the sectors of the economy (growth averaged 20.5%), while unemployment fell by 0.3 percentage points to 7.1%. Labor productivity growth accelerated. Annual growth of labor productivity was 13.3% in 2007 (compared to 12.5% in 2006).

In terms of inflation, faster growth of productivity somewhat mitigates inflationary pressures coming from the labor market; however, the labor market has continued to promote inflation, as labor productivity growth remains slower than wage growth.

Net inflows of foreign exchange transferred by individuals from abroad grew faster in 2007—a trend that materialized in July and endured thereafter. As a result, net inflows of non-commercial transfers through the banking system grew by 40.5% during the first nine months of 2007 (compared to 30.2% during the first nine months of 2006). Strong growth of the Russian economy, especially in construction and retail trade, has contributed to the sizeable inflow of transfers from Russia.

#### Main Directions of Monetary Policy; Inflation

#### Inflation

The 2007 Monetary Policy Program set a 4%  $\pm$  1.5% target for annual inflation—the main objective of the CBA. Based on recent years' trends, rapid dramization was expected to continue in 2007, with a corresponding increase in dram supply by the CBA.

<sup>&</sup>lt;sup>5</sup> According to January-September data, exports of goods (FOB) grew by 22.8%; excluding diamonds, exports grew by 37.2%. The export credit indicator was estimated on the basis of FOB export data, while service export indicators are projections.

<sup>&</sup>lt;sup>6</sup> According to January-September data, imports of goods (CIF) grew by 45.7%; excluding diamonds, imports grew by 55.1%. The import debit indicator was estimated on the basis of CIF import data, while service import indicators are projections.

A cooperation agreement has been signed with the company "ALROSA." However, there is still uncertainty about the starting date of operations.

<sup>8</sup> The 2007 labor market data is taken from CBA estimates based on January-September actual indicators.

Given these targets, the monetary environment changed in the following way during 2007: starting from the beginning of the year, both dramization and bank lending to the economy grew faster than expected. As a result, dram lending roughly doubled in the first 10 months of the year, and the ratio of dram broad money to broad money grew from 70.5% at the beginning of the year to 77.9% at the end of October.

The year 2007 posed specific challenges to inflation management in what turned out to be a predominantly inflationary global market. The increases in international prices of gasoline (earlier in the year), wheat prices (starting from June), and a number of other foodstuffs (especially animal fats and vegetable oil) (from September on), which were much higher than expected, amounted to an external shock to the domestic market, causing a substantial increase in domestic prices of the relevant commodities. Nevertheless, the CBA's tightening of monetary policy during August-October (a 0.75 percentage point increase in the repo interest rate), together with the above-usual July-August seasonal deflation of the "Fruit" and "Vegetables and Potato" commodity groups, contained YOY end-September inflation at 2.7%—close to the lower limit of the target band. However, in October, due mostly to inflation imported from the external environment, inflation reached 5.7% YOY—crossing the upper limit of the target band.

Under such circumstances, the CBA estimates annual inflation of around 7% in 2007; however, annual inflation net of the impact of the external shock (4.4 percentage points, of which 3.1 percentage points were due to bread products, and 1.3—animal fats and vegetable oil) is only about 2.6%, driven by monetary factors, which is very close to the lower limit of the target band.

#### Interest Rate

As stated in the 2007 Monetary Policy Program of the Republic of Armenia, the CBA continued the transition to a fully-fledged inflation targeting strategy—a process that was launched in 2006. In this context, the CBA, with a view to attaining its primary objective of price stability, managed short-term interest rates (the operational target) to minimize the discrepancy between the target and projected inflation in the 12-month horizon.

Starting from June 2007, when international wheat prices increased substantially, alongside a high probability that international prices of other foodstuffs (dairy products, meat products, vegetable oils, and coffee) would grow, as well as private consumption and investment growth projections and the expectations of a more expansionary fiscal impact, the CBA pursued a tightening of monetary terms: on July 4, the repo interest rate was increased by 0.25 percentage points to 4.75%. As the impact of external shocks lingered, high prices in October and November and the 12-month inflationary expectations carried substantial inflationary risks. In order to mitigate such risks and to manage inflation within the target band, the CBA Board increased the refinancing interest rate by 0.25, 0.25, and 0.5 percentage points in its sessions of October 2, November 2, and December 4, respectively, netting the interest rate at 5.75% and maintaining tight course on monetary policy.

#### **Monetary Instruments**

Starting from May 2006, the CBA has intervened in the inter-bank market every Wednesday by means of entering into repurchase transactions, thus employing its main instrument of monetary policy. Through this intervention:

- Commercial banks are able to smooth out their liquidity problems; and
- Short-term inter-bank interest rates are steered.

In 2007, the volume of transactions executed in the inter-bank repurchase market continued to grow (about 2.6-fold relative to the same period of 2006); the market repurchase interest rate stabilized around 5.75% in early December. The share of transactions between commercial banks in the total turnover grew substantially reaching about 45% (compared to only 25% in the same period of 2006).

To regulate commercial bank liquidity, the CBA issued a total of AMD 117.0 billion worth of bonds during January-November. CBA bonds of AMD 108.4 billion were allocated at an average yield of 6.08% (a 0.78 percentage point increase over the same period of 2006).

To smooth out exchange rate volatility caused by persisting capital inflows and to promote the monetary process, the CBA made net purchases of about US \$341 from commercial banks (January-November 2007).

During January-October 2007, interest rates in the primary market for government securities (treasury bills) behaved differently depending on the maturity of the bills. In October 2007, the average yield on short-term government securities was 6.5% (a 1.5 percentage point increase over the same period of 2006). The interest rate on medium-term government securities remained virtually unchanged at 6.79% (only a 0.04 percentage point increase). The yield on long-term government securities fell considerably relative to 2006 (by about 2.9 percentage points to reach 6.72%).

Analyses of the yield curves show that yields in the secondary market for government securities saw the same trends as in the primary market: the yield in the short-term segment grew sufficiently, while the yields in the medium-term and long-term segments fell. As a result of shrinking discrepancy between short-term and long-term interest rates, the yield curve flattened out at the end of October.

#### **Exchange Rate**

As an important and fact-acting channel of transmission, the nominal exchange rate influences the price behavior by means of affecting prices of imported commodities, on the one hand, and forming expectations, on the other. The nominal exchange rate also influences the amount of dram transfers, and, therefore, demand.

The AMD/USD exchange rate appreciated during January-October 2007 over both end-December 2006 and the same period of 2006. The AMD/USD exchange rate appreciated by 11.81% during January-October of 2007, while the average AMD/USD exchange rate appreciated by 22.04% over the average for the same period of 2006. The trend in 2006 had been the same, with the dram appreciating by 23.84%. This behavior of the exchange rate was mainly due to large-scale foreign exchange inflows, the rapid dramization process, and the continuous growth of income.

According to the CBA's preliminary estimates, the real exchange rate appreciated by 12.9% YOY during January-October 2007, mostly due to a 15.6 percent depreciation of the nominal effective AMD exchange rate. During the same period, average-weighted inflation in the trading partner countries was 6.0 percent (compared to 4.0 percent in Armenia).

The trading partner countries that most significantly influenced the real exchange rate were the Eurozone (-3.2 percentage points, of which -2.6 percentage points were due to a 7.8 percent appreciation of the euro), Russia (-2.8 percentage points, of which -1.7 was due to a 8.5 percent inflation), and Iran (-2.0 percentage points, all due to a 19.0 percent high inflation).<sup>9</sup>

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<sup>&</sup>lt;sup>9</sup> Trading partner countries' inflation indicators are preliminary.

During January-October, the gross volume of transactions in the inter-bank market increased by 71.42% relative to the same period of 2006. The volume of EUR/AMD transactions, too, grew (by 54.25%). The latter reflects strong growth trends in foreign trade, foreign financial inflows, and the domestic economy.

## **Monetary Policy Indicators**

As a result of the monetary policy implemented in line with the aforementioned behavior of inflation and money demand, caused by an active dramization process, the following monetary environment has been formed during the first 10 months of the year: dram broad money October YOY growth was 63.9% due to a 53.1% and 81.9% increase in cash in circulation and dram deposits, respectively.

On the background of dram appreciation, foreign currency deposits in dram terms grew slightly (by 6.3% YOY, or 23.9% in dollar terms).

During 2007, the dollarization of the economy (foreign currency deposits to broad money) continued declining (by 27.4% YOY as of end-October, which was virtually the same as the 2006 indicator).

Lending to the economy (loans and accounts receivable) grew at an unprecedented pace in 2007. Relative to 2006 annual growth of AMD 52.9 billion or 28.1%, lending volumes grew by AMD 158.5 billion or 70.4% as of end-October. Dram loans grew about 2.2-fold (by AMD 122.0 billion), while foreign currency loans grew by only 30% (or AMD 36.7 billion) in dram terms (growth in dollar terms was 51.5%). Owing to rapid growth of lending, the loans/GDP ratio grew significantly during the first nine months of 2007, from 8.5% during January-September 2006 to 11.8% during the same period of 2007.

Due to the dramization process, the dramization ratio grew faster than the monetization ratio in 2007: at end-September, the monetization ratio had grown by 35.7% YOY, while monetization had grown by 21%.

The increased level of dram-based financial intermediation is confirmed by the 11.9% YOY growth of the dram multiplier, which was mainly driven by the rapid increase in dram deposits. Due to a large-scale increase in cash in circulation and a shrinking of foreign currency deposits, the money multiplier decreased by 0.4% YOY.

#### FORECAST FOR 2008

#### **External Environment**

World economic growth is expected to remain high in 2008, in spite of a projected slowdown of growth rate. Strong world inflation reported at the end of 2007 will have implications for average inflation in 2008.

Prices of commodities are projected to stop growing at the end of the first half of 2008; in the absence of new shocks, prices will stabilize (including prices of oil products, precious metals, and dairy products). A certain decline in prices is possible (especially prices of grains, industrial metals, and vegetable oils).

The aforementioned projections are based on the assumption that, in order to keep up the growth pace, monetary regulatory bodies of developed countries will continue lowering interest rates. However, according to the CBA's projections, if inflation accelerates, the central banks of developed countries will be forced in the second half of 2008 either to raise interest rates or, at least, to adopt a more neutral monetary policy.

Such a neutral monetary policy will lay the groundwork for the stabilization of the US dollar, as the market participants will shift their attention from reducing the interest rate spread to reducing the US government deficit and current account deficits. However, the realization of this scenario is prone to major risks, the most serious of which is related to the US real estate market slump, which, in case of grave consequences for the US economy and international financial markets, will render the situation unpredictable.

Similar risks persist in relation to developments in commodity markets prices. Grain prices will mainly depend on next year's harvest expectations, which can be discussed with some degree of certainty only after March 2008. As for oil products, the supply-demand mismatch is expected to result in higher prices in the long run; however, high prices have already started to put downward pressure on demand for oil, which may lead to a certain stabilization of oil prices in 2008. Other important factors include the geopolitical situation and the USD exchange rate, both of which can significantly influence prices of speculative products such as oil and gold.

Changes in prices of industrial metals will depend primarily on world growth, especially economic growth in China and India. Any change in economic growth can affect the metals market, where materializing risks mainly point at the probability of economic growth slowing down.

Foodstuffs prices will depend on not only the price of grains, but also growing world demand, the oil plants harvest, bio-fuel production volumes, the agricultural policies of large countries, and other factors.

It can be concluded from the foregoing that external sector inflationary pressures will remain high for at least the first half of 2008, and might subside only by yearend.

#### **Domestic Environment**

## **Aggregate Supply**

Taking into consideration the developments in different sectors of the economy and Q4 expectations, strong growth is expected to persist in 2008, resulting in around 11% annual economic growth. According to sector growth estimates, there is a risk that the overall GDP will be higher than projected, mainly due to the materialization of risks in the industry and construction sectors.

*In the industry* sector, the growth of added value is expected rebound to around 6-8% due to the projected reversal of the diamond sub-sector decline trends of 2007.

Output is expected to grow in other sub-sectors of the industry, especially the *chemical industry, the metal industry, energy, the food industry,* and *production of construction materials.* In the *chemical industry sub-sector,* the output of synthetic rubber and plastic products is expected to grow on account of investments made in this sub-sector in 2007. Moreover, considerable growth is expected in the fertilizer production sub-sector.<sup>2</sup> In the *food industry sub-sector,* the outputs of confectionery products, canned products, meat products, and alcoholic and non-alcoholic beverages are expected to grow. In the *energy sub-sector,* natural gas import and distribution volumes will continue growing due to the installation of gas infrastructure in the country. Moreover, small HPPs will continue growing, together with alternative sources of energy.

*In the agriculture* sector, around 2-3% real growth of added value is projected, which will be driven by both plant cultivation and animal breeding.

In the absence of large investments in agriculture, productivity remains virtually unchanged; as a consequence, the plant cultivation output, in particular, remains highly dependent on weather conditions.<sup>11</sup>

*In the construction* sector, added value is expected to continue growing rapidly in 2008; however, the projected around 16% growth of added value in 2008 will be lower than the growth in 2007.

As in 2007, this growth will be fueled mainly by persisting investments in *transport, communications, energy, the chemical industry*, and *the metal industry*. Moreover, the housing construction decline reported in 2007 is expected to reverse in 2008. Nevertheless, the construction sector risk is associated with higher-than-projected growth on account of the potential implementation of several large-scale projects.

*In the services* sector, strong growth is expected to persist (around 13-14%), mainly on account of transport and communication services, as well as tourism-related services. Besides, trade will continue growing rapidly, including both wholesale and retail trade.

#### **Aggregate Demand**

According to the CBA's estimates, aggregate demand growth in 2008 will be driven mainly by domestic demand growth of around 12%.

In the structure of domestic demand, both private consumption and private investments will grow. Private investments are expected to continue outgrowing private consumption. In 2008, real growth of private consumption will be about 10% due to expected higher household income, including wages and remittances. Investments are projected to grow by about 18% in real terms due to both the expected growth of investments in various sectors of the economy and the rapid growth of housing construction.

According to the private sector consumption and investment gap assessment for 2008, private sector expenditures will promote inflation, mainly due to a growing positive gap of private consumption. The small positive gap of private investments will be virtually inflation-neutral, because, on the one hand, it will promote inflation (mainly through higher incomes in the construction sector) and, on the other, it will contain inflation through potential GDP growth.

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<sup>&</sup>lt;sup>2</sup> In 2008, the local output of fertilizer is expected to meet in full the demand for fertilizer in the agriculture sector.

<sup>&</sup>lt;sup>5</sup> In 2007, the agriculture sector somewhat progressed due to the development of a renewed seed base and types, the breeding of new types of cows, and the development of local high-quality fertilizer production. Besides, the implementation of agricultural land irrigation network renovation projects funded by different foreign and international organizations has started. However, in view of the medium-term nature of these activities, they will not have a significant impact on agriculture productivity in 2008.

The impact of fiscal policy on aggregate demand in 2007 will be virtually neutral, in contrast to a projected 1.0 percent expansionary impact. This is due to the over-collection of tax and non-tax revenues, leading to a more contractionary revenue impact, as well as expected savings that will moderate the expansionary impact of expenditures.

In accordance with the indicators stipulated by the Republic of Armenia Law on the 2008 State Budget and the quarterly profile of the budget based on such indicators, an expansionary impact of about 2 percent is expected in 2008, especially due to a sharp increase in social expenditures. In terms of the fiscal impulses, an expansionary impact is expected in all the quarters of 2008.

Taking into consideration the trends expected in the real and fiscal sectors, domestic inflationary pressures can be projected to increase in 2008 on account of aggregate demand developments.

External sector developments in 2008 will be shaped by persisting growth of the world economy, growing world prices of oil, expected higher prices of raw materials in Armenia's export markets, and persisting strong growth of the Armenian economy. Exports of goods and services are expected to grow by 22-25%. Exports of goods will grow on account of three main commodity groups—"Mineral Products," "Non-Precious Metals and Articles," and "Products of Prepared Food." These developments are consistent with expectations of strong growth in the food and chemical industries, as well as the base metal industry, construction materials production, and the energy industry.

Though expected to subside in 2008, import growth will remain high. Import growth will be fueled by higher disposable income in the domestic economy. Further increases in prices of raw materials will contribute to the expected growth of dollar imports. If these projections materialize, imports of goods and services will grow by 25-30% in 2008. Imports of raw materials, input commodities, and consumer goods will continue growing rapidly.

#### Labor Market

According to the CBA's estimates regarding the labor market, average wages will continue growing (by about 18%) in 2008. Parallel to economic growth, unemployment will decline by 0.2-0.3 percentage points.

In 2008, the labor market is expected to continue promoting inflation, because wage growth will continue to outpace labor productivity growth.

In view of a significant increase in 2007 in non-commercial transfers through the banking system, due to unprecedented growth of the Russian economy, especially its non-tradable sector, such transfers are expected to continue growing at high pace (27-32%). This is consistent with the expectations of persisting strong growth of the Russian economy, which is confirmed by the optimistic assessments of international organizations.

# Inflation Forecast and Monetary Policy Directions in 2008

The inflation forecast model by commodity groups shows that, if market interest rates remain unchanged, 6.6% and 5.4% YOY inflation has been forecasted for the end of the first half of 2008 and yearend 2008, respectively. The base scenario through the end

<sup>&</sup>quot;An Inflation Model for the Republic of Armenia" ("CBA Newsletter, Q1 2005").

of the first half of 2008 includes the contributions to overall inflation of higher domestic prices of grains and bread products, animal fats and vegetable oil, and the projected expiration of the gas subsidy (3.1, 1.3, and 1.2 percentage points, respectively), maintaining a rather high level of YOY inflation for the first half of 2008. However, annual inflation will tend to decline.

In general terms, the following developments are probable in 2008, which may cause actual inflation to deviate from the forecast:

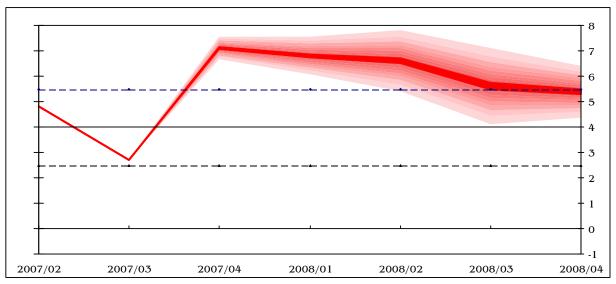
## The higher inflation risk is the following:

- International oil and food product prices (including prices of grains) growing more than expected, with the oil price increase dependent on both geopolitical and external economic developments;
- The consumption component of aggregate demand growing faster than projected and resulting in a larger positive gap of consumption; and
- Lending to the economy growing faster than projected.

## The lower inflation risk is the following:

 Lower prices of imported commodities due to appreciation of the dram exchange rate on the background of higher exports in foreign currency terms (prices of base metals growing more than projected) and capital inflows topping the expectations.

#### **Annual Price Percentage Change**



#### Annual inflation projected for Q2 2008: 6.6%

Interval	below 4%	4.5%-5.0%	5.0%-5.5%	5.5%-6.0%	6.0%-6.5%	6.5%-7.0%	7.0%-7.5%	above 7.5%
Probability	<1	3.5	7.0	17.0	24.2	27.0	20.3	<1

#### Annual inflation projected for Q4 2008: 5.4%

Interval	below 4%	4.0%-4.5%	4.5%-5.0%	5.0%-5.5%	5.5%-6.0%	6.0%-6.5%	6.5%-7.0%	above 7.0%
Probability	<1	6.3	20.6	32.0	24.0	13.0	3.5	<1

Under the hypothesis of interest rates remaining unchanged, based on projections made in Q4 2007, inflation will exceed the upper limit of the target band throughout 2008; at yearend, with a declining trajectory, inflation will return to the band, though still close to the upper limit.

Demand for money in 2008 has been estimated on the basis of the dram broad money projections, where lagged values of dram broad money and the real GDP have served as independent variables.

The CBA expects that, in 2008, given the still-accelerating growth of financial inflows, rapid dramization of the economy will continue, sustaining high annual growth of the monetary aggregates, especially its dram components. Broad money will grow by about 25% YOY in 2008, while dram broad money and dram deposits will grow by 33% and 40%, respectively, during the same period. However, their growth will slow down in each quarter of 2008 due to the CBA's raising of interest rates in 2007 and the high levels of monetary indicators at yearend 2007. In other words, while the quarterly profile of growth will be maintained, YOY growth will gradually slow down.

Following unprecedented growth in 2007, lending to the economy is expected to grow less rapidly in 2008, although lending volumes (in absolute terms) will remain high due to the banks' active engagement in mortgage and consumer loan markets. Annual growth of lending to the economy will be around 50%.

# DEVELOPMENT OF THE FINANCIAL SYSTEM 12

# Financial Market Participants in 2007

The banking system is the largest participant of the Armenian financial market, accounting for about 91% of the financial system assets of the Republic of Armenia. The banking system is followed by credit organizations, which account for 6% of the financial system assets. Recent years' growth trends of commercial banks and credit organizations were sustained during 2007.

#### Banking System in 2007

Some of the most important developments in the banking system were the dramization of assets and liabilities and the unprecedented increase in loans. During the first 10 months of 2007, dram assets and liabilities grew by 41% and 51%, respectively, while foreign currency assets and liabilities grew by 14% each. As a result, the share of dram assets in total banking system assets grew by 5 percentage points during this period to reach 62% on October 31, 2007. The share of dram liabilities grew by 7 percentage points to reach 51% of total liabilities (for the first time in history, dram liabilities exceeded foreign currency liabilities).

On October 31 2007, 21 commercial banks with a total of 319 branches operated in the Republic of Armenia. New banks were not opened during the year, but shareholders changed in two banks, resulting in the entry into the Armenian banking system of the Lebanese "Byblos" and the Russian "Troyka-Dialogue" banks. The German "ProCredit" bank, the Russian "Gasprombank," and the "Postbank" (a bank with Dutch capital) are expected to make entry into the Armenian financial market.

During the first 10 months of 2007, total banking system liabilities grew by 30.2% (AMD 122.1 billion) to reach AMD 526.4 billion at the end of October. Liability growth was mainly due to higher gross deposits and higher due to banks and other financial organizations.

Gross deposits (term and demand deposits) of individuals and legal entities grew by 21.2% (AMD 63.4 billion) on account of an AMD 64.1 billion increase in dram deposits in the banking system. Foreign currency deposits declined by AMD 0.7 billion.

Deposits of individuals grew faster than those of legal entities (31.4% or AMD 45.1 billion, compared to 11.7% or AMD 18.3 billion).

During the first 10 months of 2007, total capital of the banking system grew by 25.7% (AMD 30.9 billion) to reach AMD 151.0 billion on October 31 2007.

During the same period, eight banks replenished their statutory funds by a total of AMD 18.4 billion.

The total net profit of the banking system was AMD 19.3 billion in the first 10 months of 2007, representing a 36.6% increase relative to the same period of 2006, which was owed to a considerable increase in net interest income due to rapid growth of lending to the economy.

<sup>&</sup>lt;sup>12</sup> Banking sector deposit and loan portfolio indicators provided in this part of the Program may deviate from those in other parts of the Program, because this part contains information about both residents and non-residents, while other parts of the Program refer exclusively to residents.

During the first 10 months of 2007, total assets of the banking system grew by 29.2% (AMD 153.0 billion), 93% of which the banking system preferred to invest in loans to the economy. On October 31 2007, total assets of the banking system amounted to AMD 677.5 billion. Lending to the economy grew by 62.0%—about twice as fast as total assets. Lending to individuals grew by 67.4% (AMD 73.4 billion), while lending to legal entities grew by 56.7% (AMD 64.9 billion).

A notable development was that net foreign assets of the banking system fell sharply (by about AMD 60 billion). For the first time in recent years, net foreign assets of the banking system were negative (about AMD 50 billion), which indicates the amount of funds attracted from non-residents (mainly foreign banks) that was lent to residents (mainly in the form of lending to the domestic economy).

As in 2006, mortgage lending was the most rapidly growing item in 2007 (106% growth in the first 10 months of 2007). Lending to all the sectors of the economy grew. Parallel to a sharp increase in lending, the quality of loans improved: the share of "Standard" loans grew by 0.3 percentage points to reach 97.8%.

## Credit Organizations in 2007

Three credit organizations were licensed ("Bless" Universal Credit Organization LLC, "GFC General Financial and Credit Company" Universal Credit Organization CJSC, and "Farm Credit Armenia" Universal Credit Organization Trading Cooperative). 20 credit organizations (with a total of 39 branches) presently operate in the Republic of Armenia.

During the first 10 months of 2007, liabilities of credit organizations<sup>13</sup> grew by 135% to reach AMD 28.5 billion. This growth was mainly due to an AMD 9.6 billion increase in liabilities due to banks (mainly non-resident) and an AMD 3.7 billion increase in term debt to legal entities.

During this period, total capital of credit organizations grew by 40% to reach AMD 11.8 billion. The growth was fueled by an AMD 2.0 billion total contribution to the statutory funds of credit organizations and net profits of AMD 1.7 billion.

Total assets of credit organizations grew by 96% to reach AMD 40.3 billion (5.9% of banking system assets). Lending to individuals and legal entities, which increased by a total of AMD 18.3 billion, was the main contributor to asset growth. Lending to all the sectors of the economy grew. Like the banks, credit organizations maintained strong growth of mortgage lending (171% or AMD 2.7 billion).

#### Insurance Market in 2007

During the first 10 months of 2007, the licenses of six insurance companies ("Alliantz," "AHA Royal Insurance," and "Grand" limited liability companies, "Private Insurance" and "Mika" Closed Joint-Stock Companies, and "Fintrust" Open Joint-Stock Company) were terminated. Nine insurance companies and six insurance brokerage companies are currently licensed in the Republic of Armenia.

Insurance companies' liabilities<sup>14</sup> grew by 6% to reach AMD 2.9 billion on account of higher total insurance reserves.

<sup>&</sup>lt;sup>15</sup> The analysis of credit organizations was performed on the basis of a comparative overview of survey indicators of the 17 credit organizations that operated on December 31, 2006 and the 20 credit organizations that operated on October 31, 2007.

<sup>2007. &</sup>lt;sup>14</sup> The analysis of insurance companies is based on a comparative overview of survey indicators of the 15 insurance companies that operated on December 31, 2006 and the nine insurance companies that operated on October 31, 2007.

Insurance companies' own capital shrunk by 22% to AMD 4.7 billion due to an AMD 1.6 billion decline of the total statutory fund as a consequence of insurance companies exiting the insurance market. Retained earnings of insurance companies were AMD 724 million as of October 31, 2007.

Insurance companies' assets shrunk by 13% to AMD 7.6 billion. AMD 3.9 billion of insurance premiums were collected during the first 10 months of 2007, of which about AMD 1.6 billion was transferred to reinsurers. Insurance compensations totaled AMD 827.8 million, of which AMD 302.9 million was the share of reinsurers.

#### Securities Market in 2007

On October 31 2007, 15 companies were carrying out professional activities in the Republic of Armenia securities market. Six of them had not only brokerage licenses, but also trust management licenses. Three companies had these two types of licenses, plus a custodian license. During the year, the number of companies carrying out professional activities in the Republic of Armenia securities market decreased by five: the brokerage licenses of "Capital Invest," "Tamrazyan and Friends," "A-B Securities," "Global Bond," "Aerobroke," and "IT Broke Deal Trust" LLCs and the "Public and Corporate Securities Center" CJSC, as well as the trust management license of "A-B Securities" LLC were terminated. Brokerage/dealer and custodian licenses were granted to "ArmSwissBank" CJSC and "Prometey Bank" LLC; the latter also obtained a trust management license.

The trading volume of securities market brokers/dealers was AMD 202.5 billion in the first 10 months of 2007, of which 98% was trading in state bonds (including repo transactions).

Currently, 31 reporting issuers are operating under the CBA's supervision. Two of them are banks. Seven of the 31 issuers are rated by the CBA.

During 2007, four companies ("Shen Concern" CJSC, "ACP Armenia Copper Program," "Valetta" LLC, and "ArmRusGasProm" CJSC) placed corporate bonds. Placements totaled around AMD 2.0 billion.

The Central Depository of Armenia and the Armenian Stock Exchange (which organizes auction trading in foreign exchange and securities) are also participants of the securities market of Armenia. Transactions totaling AMD 1.3 billion were executed in the Armenian Stock Exchange during the first 10 months of 2007.

#### Other Participants of the Financial Market in 2007

During 2007, the licenses of three pawnshops were terminated, and pawnshop licenses were issued to seven companies. Presently, 62 pawnshops are active in the Republic of Armenia, which have a total outstanding loan portfolio of AMD 2.1 billion and total assets of AMD 2.5 billion.

During the year, the licenses of 22 foreign exchange offices were revoked, and foreign exchange buy and sell licenses were issued to 23 offices. Presently, 290 foreign exchange offices (including branches) have licenses to buy and sell foreign exchange in the Republic of Armenia.

Foreign currency dealer licenses have been issued to four legal entities in the Republic of Armenia. During the year, a foreign currency dealer license was issued to "Proffinance" CJSC, and the currency dealer licenses of "Aerobroke" LLC," "Gohar Hambaryan," "Private Invest" CJSC, and "Yerevan-Broker" LLC were revoked.

Six companies provided money transfer services in Armenia. During the year, the license of "Armenian Express" CJSC was revoked, and licenses were issued to four companies ("Elver" LLC, "Parvana Payment-Settlement Organization" CJSC, "Tandem Payments" LLC, and "Tel Cell" CJSC).

Three organizations carrying out processing and clearing of payment instruments and payment and settlement documents are presently active in the financial market of Armenia ("Armenian Card" CJSC, "Tel Cell" CJSC, and "Tandem Payments" CJSC; the latter two were licensed in 2007).

# Forecast of Banking System Developments in 2008

The recent years' developments of the banking system are forecasted to continue in 2008, with increases in capital, liabilities, and assets.

Considering the banking system developments in 2007 (especially the unprecedented increase in lending) and the international experience (in developing countries, when there is a sharp increase in lending volumes, the trend usually sustains for up to three-four years), the summary indicators of the banking system in 2008 have been forecasted under three scenarios—realistic, pessimistic, and optimistic.

About AMD 70 billion growth of total banking system capital is forecasted in 2008<sup>15</sup> (AMD 60 billion under the pessimistic and 75 billion under the optimistic scenarios).

Net profit of the banking system in 2008 will be 41% greater than that in 2007: net profit of about AMD 34 billion is forecasted (AMD 30 billion under the pessimistic and 37 billion under the optimistic scenario). Profits will grow primarily on account of loan portfolio interest income.

Total liabilities of the banking system are forecasted to grow by about AMD 230 billion in 2008 (AMD 150 billion under the pessimistic and 285 billion under the optimistic scenarios).

This growth will come mainly from an about AMD 100 billion forecasted increase in deposits, <sup>16</sup> which in turn will be mostly due to higher deposits of residents (an AMD 77 billion increase under the pessimistic and 120 billion increase under the optimistic scenarios), as well as an AMD 130 billion increase in non-deposit liabilities, especially higher liabilities attracted from external sources (AMD 73 billion under the pessimistic and 165 billion under the optimistic scenarios).

Total banking system assets are forecasted to grow by about AMD 300 billion in 2008 (AMD 210 billion under the pessimistic and 360 billion under the optimistic scenarios).

<sup>&</sup>lt;sup>15</sup> The projections in this section are based on:

<sup>•</sup> Strategic plans submitted by commercial banks, and their analysis and assessment by experts;

Trends reported in the banking system in recent years;

<sup>•</sup> The banking system peculiarities in 2007, and the probabilities of them persisting and new ones emerging in 2008; and

<sup>•</sup> The impact of projected real sector developments on the survey indicators of the banking system in 2008.

<sup>&</sup>lt;sup>16</sup> Deposit growth was assessed through indicators such as the growth of deposits in specific banks, household income growth, term deposit interest rate trends, the banks' demand for deposits, population sensitivity to the household deposit insurance scheme, and others.

The forecasted increase in banking system assets will be a result of expected higher liabilities and capital. About 75% of the increase in assets is expected to be channeled to loans, which will result in an about AMD 225 billion increase in the loan portfolio (AMD 155 billion under the pessimistic and 265 billion under the optimistic scenarios).

#### DEVELOPMENT OF PAYMENTS AND SETTLEMENTS

During 2008, the CBA will concentrate on the following priorities in order to ensure the development and financial stability of the payment and settlement system of the Republic of Armenia:

- 1. Design and implementation of alternative payment systems, whilst continuing to improve the existing electronic payments system;
- 2. Implementing measures to promote non-cash turnover in Armenia;
- 3. Supervising payment systems; and
- 4. Improving the legal regulation of payments and settlements, including a sublegislative framework regulating the activities of payment and settlement organizations with a view to developing the securities market.

The CBA plans to design and develop in 2008 an electronic payment system based on a new principle of settlements. Special attention will be paid to system efficiency, including the introduction of a more flexible liquidity management framework, mitigating possible risks, increasing system capacity and reliability, improving security, and complying with the international standards that apply to the design and development of such systems.

With a view to developing the banking system, improving the quality of financial and banking services, and promoting the "petty" payments market in the Republic of Armenia, measures will be implemented in 2008 to promote the use of non-cash instruments. There is a plan to promote the use and servicing of plastic cards by means of expanding the network of terminals installed in trade and service locations. Activities will be carried out to ensure the payment of salaries, pensions, social allowances, and other payments through the banking system of Armenia.

Based on the Securities Market Development Strategy, especially the framework of cooperation with the OMX, the CBA plans to regulate and implement a new model of settlements in 2008, which will support both stock exchange and over-the-counter transactions.

The CBA will continue regulating the payment and settlement sector. With a view to defining more clear and comprehensive requirements on the activities of payment and settlement organizations, amendments will be made to the Republic of Armenia Law on Payment and Settlement Systems and Organizations. The regulatory framework on electronic money emitting organizations will be developed.

The CBA has planned for 2008 a number of functions in the field of payment systems oversight. These include: developing criteria on payment systems of systemic and public importance; designing guidelines to implementation of monitoring, evaluation and analyses; and assessment of the Armenian Card payment system during the year.

