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ACRONYMS

CBA – Central Bank of Azerbaijan
CPI – Consumer Prices Indicator
DDC – Developed Countries
DGC – Developing Countries
GDP – Gross Domestic Product
ILO – International Labor Organization
IMF – International Monetary Fund
NEER – Nominal Effective Exchange Rate
OG – Output Gap
OPEC – Organization of the Petroleum Exporting Countries
PPAP – Production prices of agricultural prices
PPIIP – Production Price Index of Industrial Products
REM – Real Effective Exchange Rate
RSA – Republic of South Africa
RSM – Real Sector Monitoring
SSC – State Statistic Committee
USA – United States of America
WTO – World Trade Organization
EXECUTIVE SUMMARY

Under the conditions of gradual recovery of the global economy and price hikes in the world commodity market as well as volatility in financial markets, the Azerbaijani economy continued growing in Quarter 1 2011 with macroeconomic stability being maintained. Manat-to-USD rate remained stable under the conditions of balance of payments surplus and, the Central Bank both preserved the balance of the foreign exchange market and increased its own foreign exchange reserves through sterilization operations in the foreign exchange market. Within the reporting period the inflation remained on a single-digit level and was primarily affected by the processes in foreign markets and inflations in the trade partner countries.

Central Bank has directed its activity at maintenance of inflation on a satisfactory level, preserving the exchange rate stability of the manat and stable development and sustainability in the banking-financial sector under the declared key directions of the monetary policy. To realize these targets the Central Bank provided crucial support for maintenance of macroeconomic and financial stability through corrections to its policy. Thus, given the inflationary pressures penetrating into the internal economy with increase in the global food prices as well as expansion of aggregate demand, the Central Bank has taken a decision to adjust its monetary policy to neutrality.
I. Global economic processes and the national economy

1.1. Trends in the world economy

The world economy kept recovering in Quarter 1 of the current year. Despite slowdown in fiscal stimulation in the developed countries, probability of the second wave of the crisis has significantly diminished whereas capital flows and rapid growth caused new macroeconomic risks in developing countries. While there is improvement in financial sector in most countries, it still remains fragile against other sectors. Slowdown of the growth rate of the global trade became one of the factors impeding discharge from the crisis.

![Chart 1: Global economic growth (in relation to the previous year)](chart1.png)

Source: IMF

According to the initial information the economic growth rate in the USA relatively slowed in Quarter 1 of 2011 and became 1.8 percent and, unemployment reduced to 8.9 percent. Revival in private demand and reduction of foreign trade disbalance positively affected potential level of the GDP whereas it was negatively affected by rise of oil prices.

The earthquake in Japan resulted in the damage equal to 5 percent of GDP (about USD 300 billion) and subsequently, the economic growth is expected to decrease by 1.5 percent in 2011 (3.9 percent in 2010).

While the economic growth continued in the Eurozone the output gap and unemployment still remain high. The unemployment level declined only by 0.2 basis points within the last year and equaled to 9.9 percent in March. Overheating was observed
due to increase in internal and external demands in the Southeast Asian countries as well as the capital flows and lending growth. Thus, positive output gap and inflation pressures went up and the real estate market started to bubble. The Chinese government policy stimulating the internal consumption strengthened the role of private demand as a driving force of the economic growth. At the same time, rise of the exchange rate and removal of some import rates stimulated import. Consequently, for the first time in the last 7 years the trade balance of China witnessed deficit. In the contrast, trade deficit in the USA reduced.

Growth rate of the world trade in Quarter 1 of the current year sharply declined. The earthquake in Japan is expected to further decelerate this process; the developing countries are expected to be severely damaged. Thus, 60 percent of the Japanese import comes from developing countries most of which is raw materials. Failure of the global unemployment level to adequately respond to is still a source of concern. Presently, the number of unemployed population of the world is 205 mln. (206 mln a year ago and 175 mln in 2007). While unemployment level in developing countries is lower than that of developed countries, unemployment is primarily spread among youth in these countries.
In Quarter 1 of 2011 the global commodity prices index grew by 13.9 percent and the food prices index by 4.5 percent. However, upon 8-month durable growth the food price index slightly reduced in March. The most reduction of the food prices was observed in those of sugar (11 percent) and corn (2.6 percent).

Source: IMF

Chart 3: Car sale in the EU countries

Source: IMF

Chart 4: Dynamics of the global price indices (2005 = 100)

Source: IMF
Price hike in the world energy carriers market continued in Quarter 1 of 2011 as well. Thus, oil price rose by 15.3 percent over the Quarter. This hike was caused by the political turmoil in a number of oil exporting countries, the appeals for refusal from nuclear energy and acceleration of economic growth in the world.

Box 1. How countries respond to food inflation. Presently, rapid increase in world food prices is one of the key challenges to fight poverty. According to the estimations by the Asian Development Bank, 10 percent growth of local food prices increase the poverty by 0.2 percent in Kazakhstan, 0.7 percent in Armenia, 1.1 percent in Georgia and Turkmenistan, 1.8 percent in Kyrgyzstan and Tajikistan and 2.3 percent in Uzbekistan. Hereby the poverty level is equals to daily USD 1.25 income. According to calculations, 10 percent, 20 percent or 30 percent increase in local food prices will not affect the poverty level only in Azerbaijan among Asian countries.

To note, countries are take a number of measures to prevent food inflation and improve food provision of low-income population.

*Measures against rise in food prices*

<table>
<thead>
<tr>
<th>Countries</th>
<th>Reduction of VAT and Import duties</th>
<th>Supply growth through reserves</th>
<th>Limitation of export</th>
<th>Control over prices / subsidies for consumers</th>
<th>Social allowance</th>
<th>Food support</th>
<th>Stimulation of production</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azerbaijan</td>
<td>✓</td>
<td></td>
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<tr>
<td>Armenia</td>
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<td></td>
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<tr>
<td>Georgia</td>
<td></td>
<td></td>
<td></td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Kazakhstan</td>
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<tr>
<td>Kyrgyzstan</td>
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<td></td>
<td>✓</td>
</tr>
<tr>
<td>Tajikistan</td>
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</tr>
<tr>
<td>Turkmenistan</td>
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<td></td>
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<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Uzbekistan</td>
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<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Generally, increase in the world food prices by 30 percent caused 10-percent inflation in the developing Asian countries and it means poverty additionally of 64.4 mln people.

Source: Asian Development Bank
In total, the financial markets state relatively improved in the current year. In many developed countries the terms of SME lending have moderated. The loan growth peaked in

**Box 2. Oil factor in the world market.** Presently, oil is the commodity with the biggest trade level in the world. Thus, oil export in 2007-09 made on average USD 1.8 billion per annum and equaled to 10 percent of the world export. It shows that the world market price of oil has significant direct and indirect effect on the world economy, economic growth, inflation, foreign balance and poverty. Excluding the mentioned cyclic fluctuations it is possible to say that since 1990 the oil price has had an ongoing upward trend and the price hike primarily benefited from prevailance of the global oil supply over oil demand. Considering that presently the world energy demand is provisioned against oil for 33 percent, coal for 28 percent and natural gas for 23 percent, it is understood how sensitive oil prices are to deficit in oil supply..

According to the statistic information, in many developed countries, energy consumption either remained unchanged or very slightly increased along with the economic growth. On the contrary, in countries with low and average income, the income level growth per capita paralleled with energy consumption or, in other words, income flexibility to energy demand equaled to 1. According to the estimations by the International Monetary Fund, in a short run 1-percent global economic growth causes 0.68 percent extra demand for oil and, every 10-percent rise of oil price reduces the oil demand by 0.2 percent. Ability of manufacturers and consumers to adjust their behaviour in compliance with the fluctuating conditions stipulates diverse flexibility ratios in a long run (20 years). In this case, the ratios respectively equal to 0.29 percent and 0.7 percent. In fund experts’ opinions, in the near future, the world market price of oil will depend on the global economic growth rate, the level of oil supply, substitution degree of oil as an energy source as well as consumption level of natural gas.

*Source: IMF, WEO April, “Oil scarcity, growth, and global imbalances”*

In total, the financial markets state relatively improved in the current year. In many developed countries the terms of SME lending have moderated. The loan growth peaked in
Asian and Latin American countries. Along with the economic activity indicators over the quarter, leading global fund indices were affected by the earthquake in Japan.

Thus, as a result of investors’ cautiousness from reduction of the world economic growth due to the disaster, the Dow Jones index lost 1.5 percent, FTSEurofirst 300 index 3 percent and Nikkei 225 index 10 percent of the value and declined to the lowest level of last two years.

The global Consumers Confidence Index that has been continuously improving since the end of 2010, sharply declined in March. However, this reduction is presumably related to the political processes in the Middle East and the Act of God in Japan. All these factors forecast uncertain path for revival in upcoming months.

IMF made no significant changes to expectations on the world economy against the last report. Thus, according to the forecasts, in 2011-2012 the economic growth in the world will be about 4.5 percent. The economic growth in developing countries is reduced by 0.1 basis points against the previous forecast and remained unchanged for developing countries.
<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011 (p)</th>
<th>2012 (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economic growth against the previous year, percent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World</td>
<td>5</td>
<td>4.4</td>
<td>4.5</td>
</tr>
<tr>
<td>Developed economies</td>
<td>3</td>
<td>2.4</td>
<td>2.6</td>
</tr>
<tr>
<td>USA</td>
<td>2.8</td>
<td>2.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Eurozone</td>
<td>1.7</td>
<td>1.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Developing economies</td>
<td>7.3</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>China</td>
<td>10.3</td>
<td>9.6</td>
<td>9.5</td>
</tr>
<tr>
<td>CIS</td>
<td>4.6</td>
<td>5</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Export against the previous year, percent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developed economies</td>
<td>12</td>
<td>6.8</td>
<td>5.9</td>
</tr>
<tr>
<td>Developing economies</td>
<td>14.5</td>
<td>8.8</td>
<td>8.7</td>
</tr>
<tr>
<td><strong>Consumption prices against the previous year, percent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developed economies</td>
<td>1.6</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Developing economies</td>
<td>6.2</td>
<td>6.9</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Source: www.imf.org

In many developing economies the economic growth is over 7 percent; unemployment level being low may trigger rise in food prices and increase in other social problems. In developing countries, on the contrary, failure of cover the output gap, high level of unemployment and weak economic revival predict late settlement of problems.

Given the above, the IMF provided diverse political recommendations for various country groups. In order to accelerate the economic revival developing economies are recommended to primarily base on foreign demand and target fiscal consolidation for continuous development.
Box 3. How to fight capital flow “waves”. Capital flow “waves” cause macroeconomic and financial stability risks in economy. To remind, macroeconomic risks include “economic overheating”, strengthening of the national currency and inflation and, the financial stability risks include loan boom, “bubbles” in the value of assets and balance risks. Macroeconomic policy and prudential tools are used to fight capital flows.

Macroeconomic policy measures contain to ensure strengthening of the exchange rate up to an acceptable without allowing high value of the exchange rate, increase currency reserves, provide sterilization, change policy degree if the output gap is within limits and harden the fiscal policy.

In addition to the macroeconomic policy tools, prudential regulation and capital control tools are also accessible. Prudential measures for analytical targets are divided into the following two parts: Prudential measures related to foreign exchange are implemented according to the currency type of the transaction. These measures are applied to local financial institutions and particularly to banks. Application of limits on open currency position and loans in foreign currency, required reserve norms on liabilities in the national and foreign currencies are of such samples.

Other prudential measures are primarily aimed at elimination of systemic risk and contain limitation of growth of the loans issued by the local financial institutions. Neither the currency type nor the transaction parties are considered here. This type of measures contain LTV ratio, limitations on internal loan growth, assets qualification and reserves establishment, sectoral limits on loan concentration, dynamic loan provisioning and countercyclic capital measures.

Capital control measures envisage limits on capital transactions of residents and non-residents. Typically, tax and required reserve norms are applied to transfers of non-residents. The measures may be applied to all transactions and differentiated upon capital type or maturity (short-term debt securities, shares, direct investment; short-term, medium-term and long-term). Practical application of measures primarily depends on institutional factors. Unless the financial markets and prudential governance are developed, the capital controlling tools are more efficient and vice versa, if the financial markets are developed, prudential rules are to be applied. In any case measures are aimed acceptable level of capital flows.

Source: IMF
In order to prevent economic overheating, developing economies are recommended to consolidate their budgets, use high interest rate policy and strengthening of the exchange rate to maintain a potential level of the output gap. (e.g., strengthening control of capital flow). At the same time, it is recommended to basically direct sources of the economic growth to internal demand.

1.2. Macroeconomic processes in Azerbaijan

Over the Quarter 1 of 2011, improved international environment and restoration of foreign financing sources additionally impulsed internal economic growth. At the same time, support for the economic activity by the state and necessary structural and institutional changes positively affected the dynamics of the economy.

1.2.1. Foreign sector

With revival of the global economy and price hike of energy carriers the foreign position of the country started to strengthen.

According to the information by the State Statistic Committee (SSC), the foreign trade turnover in January and February 2011 equaled to USD 4.7 billion, out of which USD 3.4 billion falls to the share of export and USD 1.3 billion - import.
Growth for export was 5.4 percent and 89 percent for import against the relevant period of 2010 which led to 18 percent decrease in foreign trade balance profit. Thus, foreign trade balance profit equaled to USD 2.1 billion.

White sugar and fresh vegetables are of commodities rapidly growing in export.

![Chart 8: Quantitative and amount changes of primary export goods.](image)

Source: SSC

Wheat, raw sugar, cigarette, metal pipes, cements and surfactants may be shown as commodities rapidly growing in import.

![Chart 9: Quantity and amount changes of the main import goods %](image)

Source: SSC

According to the information by SSC, the export commodity prices in Azerbaijan prevail over the import commodity prices. Thus, against the relevant period of the previous
year, in January-February of 2011 the prices for export commodity rose by 15 percent and prices for import commodity by 1.2 percent.

**Box 4. Price of the Azerbaijani oil.** According to information by SOCAR, over the first three months of the current year the price for the “BTC FOB Jeyhan” Azerbaijani oil equaled to USD 106.8, including USD 117.2 in March. Reduction of investments to the energy sector due to the global crisis, unfavorable weather conditions in winter in the previous year throughout the world and current political turmoil in the Middle East, etc. triggered growth of the price for the Azerbaijani oil about thrice against 2009. The implemented simulations show that if the price for the Azerbaijani oil exceeds USD 100 in the remainder of the year, the average annual price in the current year will be the peak in the oil history of the country.

![Chart 10. Percentage changes in foreign trade in prices (against the relevant period of the previous level)]

Source: SSC

It witnesses increase in opportunities to import more commodities and services against less expenses within the mentioned period, or in other words, improvement of the trade conditions.
In addition to export, the dynamics of foreign remittances and capital flows as well had an upward effect on foreign exchange inflows to the country. In January-February 2011 the amount of remittances inflow to the country increased by 30 percent against the relevant period of the previous year.

Chart 11. Remittance inflow, in millions USD.

![Chart 11](chart11.png)

Source: CBA

According to information by the SSC, in January-March 2011, the amount of foreign investments to the country economy increased by 10.3 percent and equaled to 473 mln. manat. At the end of Quarter 1 of 2011 the foreign exchange reserves of the country increased by 47 percent against the relevant period of the previous year and exceeded USD 32.7 bln which is sufficient for 3-year import of commodities and services.

Chart 12. Sufficiency of strategic foreign exchange reserves, in million USD.

![Chart 12](chart12.png)

Source: CBA
At the end of Quarter 1 of 2011 the foreign exchange reserves of the CBA increased by 22 percent against the relevant period of the previous year and exceeded USD 6,7 bln which is sufficient for 8-month import of commodities and services.

Chart 13. Ratio of strategic foreign exchange reserves to GDP

High growth rate of the strategic foreign exchange reserves increases resistance of the country economy to the foreign crisis effects.

1.2.2. Aggregate demand

In Quarter 1 of the current year all components of the aggregate demand, including the final consumption expenses, investments and foreign demand had an upward effect on the economic growth. Within the period, growth of the income of the population and primarily investments to the economy through internal investments as well as, gradually bettering global environment and prevailance of the export prices over the import ones caused revival in the GDP demand components.

1.2.2.1 Final consumption expenditures. In Quarter 1 of 2011 final consumption expenditures became one of the key factors of the economic growth.

Household consumption. The nominal money income of the population increased by 15.3 percent against the relevant period of 2010 and reached 721.5 manat per capita or 240.5 manat per month on average. About 70 percent of the income of the population being directed at the final consumption was spent on purchase of commodities and services. Final consumption expenditures of the population increased in nominal expression by 17.9
percent against the relevant period of the previous year and equaled to 4.5 bln. manat or 43.3 percent of GDP.

![Chart 14. Income of the population, billion manat](image)

Source: SSC

Average monthly salary in the country increased by 11.7 percent and reached 339.6 manat which contributed to high share of consumption in the GDP structure.

![Chart 15. Average monthly salary and change in final consumption, in percent](image)

Source: SSC

Salary income of hired labor equaled to 7.2 percent of the total income of the population.
At the same time, growth in household loans also had an upward effect on the demand. Thus, in Quarter 1, 2011 the household loans increased by 14.9 percent.

Chart 16. Changes in the household loans, against the relevant period of the previous year, in percent

Source: CBA

Continuing growth in demand is also observed in growth in the paid services for the population and retail commodity turnover.

Chart 17. Change in the commodity turnover, against the relevant period of the previous year, in percent

Source: SSC

In Quarter 1 the retail commodity turnover increased by 9.2 percent, including 25 percent for retail non-food commodity turnover. Growth in the paid services rendered to population equaled to 10.2 percent.
**Governmental and social institutions.** The governmental consumption expenditures are primarily established against direct expenses from the state budget to commodity and services. In January-February of the reporting period, 45.2 percent of the budget expenditures consisted of salaries of the population, pensions and allowances half of which was directed at social protection and maintenance of the population.

1.2.2.2 Investment expenses. In Quarter 1, 2011 investment to economy from all sources increased by 2.5 percent and reached 1.8 billion manat which equals to 17 percent of the GDP, including 73.3 percent of the funds directed at Tier I capital consisted of the funds from internal and 26.7 percent from external sources.

![Chart 18. Investments, million manat](chart)

Source: SSC

66.1 percent of the investments directed at Tier I Capital falls to the share of the non-oil sector. In total, investments to the non-oil sector exceed the level of the previous year by 5.1 percent. Of non-oil sector, investments to construction, machinery and equipment production, chemistry and agriculture increased in a particularly high rate.
Bank loans were key in promoting investments in the non-oil sector along with the state investments. Thus, investment loans of banks increased by 99 percent against the relevant period of the previous year.

The surveys of the Central Bank also display high growth of the investment activity.

**Box 5. Surveys of the Central Bank on investment activity.** Since 2008 the Central Bank has been implementing quarterly surveys regarding the investment activity among the enterprises within the framework of the Real Sector Monitoring (RSM). About 300 non-oil sector industry enterprises (non-agricultural enterprises) participate in these surveys. According to the final results of the quarterly survey implemented among enterprises, the number of those asserting that the investments “have grown” increased and the number of those insisting that the investments “none” reduced.

<table>
<thead>
<tr>
<th>Investment activity within the last 12 months:</th>
<th>IV-2010</th>
<th>VII-2010</th>
<th>X-2010</th>
<th>I-2011</th>
<th>IV-2011</th>
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<tr>
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<td>48</td>
<td>59</td>
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<td>40</td>
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<tr>
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<td>Unchanged</td>
<td>24</td>
<td>18</td>
<td>25</td>
<td>28</td>
<td>30</td>
</tr>
</tbody>
</table>

Final survey revealed 25 of every 100 enterprises covered by the real sector monitoring increased their investments and the investment activity remained unchanged in 30.

At the same time, along with these inquiries the quarterly inquiries connected to burdening the production powers and annual inquiries regarding profitability in enterprises are also implemented.

*Source: CBA*
1.2.3. Aggregate supply

In Quarter 1, 2011 GDP increased in real expression by 1.6 percent and nominally exceeded 10 billion manats. Both the real growth rate and the GDP deflator (11 percent in the reporting period) had an upward effect on the nominal GDP. 2-percent reduction was observed in the oil-gas sector within the reporting period and growth in non-oil sector equaled to 5.6 percent. 64 percent of the value added falls to the share of product manufacturing and 36 percent falls to the share of services.

*Economic growth in Quarter 1.* GDP growth was primarily affected by the activity in the non-oil sector. Thus, about 45 percent of the GDP falls to the share of the non-oil sector which contributed 2.4 basis points to overall growth.

![Chart 20. Economic growth, in percent](chart.png)

Source: SSC

Quarter 1 witnessed growth in all non-oil sectors except for construction sector. The highest growth rate was observed in communication, hotel and restaurant and transportation. Industrial growth primarily sourced from food, metallurgy, machinery, and chemical industry. The high growth observed in agriculture, contrary to the previous year, occurred both in plant-growing and cattle-breeding.
Within the reporting period the raw oil production decreased by 1.8 percent and natural gas production by 3 percent. Within the past months of the year about half ton gold was produced and sent for processing.

**Economic growth expectations.** According to the forecasts of the Government, the Central Bank and the international institutions, economic growth is expected to continue in the near term. The IMF in its released states that economic growth of Azerbaijan will endure in current and next years. The Fund forecasts respectively 2.8 and 2.5 percent
economic growth on the country for 2011 and 2012\(^1\), including 6 percent growth for the GDP on the non-oil sector.

The Real Sector Monitoring conducted by the CBA also displays optimistic expectations on economic activity. Thus, according to the RSM findings, sales expectations index on production and trade has been following an upward trend. The positive expectations were primarily observed in chemical, production of construction materials and weaving subsections of the industry and furniture and home appliances sale in trade.

Parallel trends are also observed in the service sector. The highest positive expectations in the service sector go to the communication and hotel subsectors. Such positive expectations were also observed in decline in non-realized excess commodity reserve in industry and trade.

In total, the findings of RSM by the CBA demonstrate sustainable increase in a number of enterprises with incremental production and risen turnover within the period.

According to surveys conducted by the Central Bank, the output gap (OG – the difference between potential and actual levels of the GDP) reduced from -5.2 percent in 2009 to -4 percent in 2010.

\(^1\)Source: IMF, [www.imf.org](http://www.imf.org) / World Economic Outlook
In 2011 this process is expected to accelerate and the output gap is forecast to reach -1 percent.

1.2.4. Macroeconomic equilibrium

Macroeconomic stability was maintained in the country amid strengthening of inflation trends in the world economy, and revival of the seasonal factors and aggregate demand. According to the analyses, inflation rise has primarily benefited from supply shock of foodstuff.

1.2.4.1. Consumer prices Index (CPI): In March of the current year the inflation equaled to 4.2 percent against the year start and 9.3 percent against the relevant period of the previous year which was affected by the price hike in the international commodity markets and primarily food prices as well as seasonal factors.

7.3 basis points of the average annual inflation was related to rise of the food prices, 0.8 basis points to nonfood commodities and 1 basis point to services. The average annual inflation on foodstuff equaled to 13.4 percent.
Average annual inflation on nonfood products equaled to 2.8 percent and decreased by 0.2 percent against the start of the year. The service prices rose by 4.3 percent against the start of the year and, average annual was 3.2 percent.

**Box 6. Model of estimation of pass-through of the exchange rate of the manat to inflation**

Pass-through of changes in exchange rate of the manat to internal prices is evaluated by the “impulse-response” function using the VAR model. Each macroeconomic variable is logarithmically inserted to the VAR model. The specification of the VAR model and the sequence of pass-through of the rate shock is chosen as below.

\[ \text{NEER} \rightarrow \text{M1} \rightarrow \text{CPI} \]  

According to this transmission channel, the left-side variable (NEER) is more exogenous and the left-side one (CPI) is the most endogenous. Through the achieved “impulse-response” function exchange rate pass through is calculated as below:

\[ RPT_{t,i+j} = \frac{\sum_{j=1}^{T} \Delta CPI_{t,i+j}}{\sum_{j=1}^{T} \Delta NEER_{t,i+j}} \]  

**Hereby:** \( RPT \) – rate pass through; \( \sum_{j=1}^{T} \Delta CPI_{t,i+j} \) - accumulated variable happening in price within j month after the shock, \( \sum_{j=1}^{T} \Delta NEER_{t,i+j} \) - expresses the rate variation accumulated upon the same period.

The model results are adequate on all statistic indicators and tests. Thus, the exchange rate pass-through reaches its peak in the second quarter of the year (91 percent). High and brief occurrence of pass through of the exchange rate reflects a significant role of the exchange rate in the transmission mechanism. According to variation allocation, initially the price index itself and later other factors, primarily, the money supply have a great significance in explanation of the price index change. Starting from Quarter 4 of the year the share of the variables in CPI volatility gets stable. Thus, 26 percent of CPI is explained by NEER, 41 percent by M1 and 33 percent by CPI itself.

**Source:** CBA

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2 The impulse-response function is deemed as the function expressing the variation level of other equation variables as a result of residual changes in any equation of the VAR model

3 Vector Auto Regression models

4 Contribution of each variable into variation of another variable in VAR model.
Hence, decomposition analysis of inflation shows that in Quarter 1 of the current year the prices primarily rose against the food price dynamics. Rise in food prices primarily sourced from seasonal factors and price hike of sugar and crops in the world market.

Within the period the seasonal factors, change of nominal effective exchange rate and inflation in the trade partner countries had an upward effect, and change of money had a downward effect on the prices.

Source: Calculations by CBA basing upon the SSC information

Within the period the average annual and the base inflation\(^5\) against the relevant period of the previous year (March / March) was 6.2 percent. Since the beginning of the year some consumer prices (basic) has risen by 1.1 percent.

Source: SSC

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\(^5\) Base inflation is an inflation regulated by state and free of change of commodity prices and seasonal factors.
Low level of base inflation once more displays that seasonal factors and inflation import have a high share in rise of consumer prices.

1.2.4.2. Industrial production price index (IPPI): Average annual industrial production rise index increased by 0.8 percent. Increase in IPPI is primarily due to significant increase of oil price in world markets.

![Chart 28. IPPI and APPI, average annual](image)

Source: SSC

Rate of IPPI varied throughout industry. For instance, on average annual, production prices increased by 21.5 percent for food industry, 16.2 percent for chemical industry and by 13.5 percent for metallurgy industry and decreased by 7.5 percent for production of paper and cardboard.

1.2.4.3. Agricultural production price index (APPI): APPI increased on average annual by 13.8 percent. Price dynamics equaled to 20 percent on parennial herbs, and 11.9 percent on live cattle and animal products.

1.2.4.4. Real Estate Prices: According to "MBA LTD" Estimation and Consulting Company, in Quarter 1 of the current year no significant change was observed in dynamics of prices for property on segments of the real estate market (primary and secondary housing markets, land market, cottages, non-residential object) and rent fees. Price hike in primary and secondary markets accordingly was 0.4 percent and 3.7 percent. Residential rent fees went down by 1.3 percent, and rent fee for commercial objects decreased by 1 percent.
Mortgage lending still on the stage had an upward effect on activity in the real estate market, particularly in the secondary one. In Quarter 1, 2011 credit institutions issued mortgage loans to about 500 people in amount of 18 million manat.

1.2.4.5. Inflation expectations. According to the forecasts by the international financial institutions, inflation is expected to be single-digit in 2011. For instance, according to the latest report by the Asian Development Bank, in 2011 the average annual inflation is forecast to equal to 7.5 percent.

According to the findings of the Real Sector Monitoring conducted by the CBA, the price rise expectations in the economy enjoyed no significant growth.
Price index forecast on trade is in negative zone. Industrial and service expectations are in a positive zone. Construction sector index is close to neutral.

1.2.4.6. Employment. As of the end of the reporting period the number of the economically active population in the country equaled to 4589.8 thousand people, including 4332.6 thousand engaged in various sectors of economy and social life. The number of hired labor is being increased in recent months.

The observations provided by the CBA in up to 300 enterprises within the framework of the real sector monitoring also demonstrate employment growth. Thus, the number of employees among the monitored enterprises increased by 2 percent within the period.

![Chart 31. Employment expectation index (3-month slippery average)](chart.jpg)

Source: CBA

According to the monitoring conducted by the CBA, the employment expectations in the construction and service sectors are in a positive zone. While employment expectation index on the industry is in a negative zone, it had an upward trend within the period.

II. Monetary and exchange rate policies

*In Quarter 1 of 2011 the Central Bank directed its activity at maintenance of inflation on a single-digit level, prevention of undesirable exchange rate fluctuations of the manat and preserving stability in the banking-financial system.*

2.1. Foreign exchange market and exchange rate of manat

In Quarter 1, 2011 the Central Bank implemented its exchange rate policy within the framework of a new operational mechanism under the conditions of supply channels expansion in the foreign exchange market.
Thus, from the start of the current year the Central Bank commenced implementing its exchange rate policy within the the corridor through targeting the bilateral exchange rate of USD / manat. The decision on transition to the new operational framework was taken based upon the diagnosis of the exchange rate policy tactics implemented in Azerbaijan in last years.

The analyses conducted showed that present targeting of the bilateral exchange rate of USD / manat within the corridor in Azerbaijan is more purposeful than targeting of the bi-currency basket of various currencies. Along with being communicationally favorable, this mechanism also improves the opportunities of the Central Bank to pass to the floating exchange rate in the long run.

In Quarter 1 the foreign exchange market nearly functioned in the self-regulatory mode and the amount of the sterilization operations implemented by the Central Bank in the foreign exchange market equaled to USD 156 mln.

**Box 7. The strategy of transition to the flexible exchange rate**

According to the results of the researches by Rupa Duttagupta, Gilda Fernandez and Cem Karacadag (2004), the strategy of gradual transition to the flexible exchange rate may be implemented in three stages specified below:

- **Applicable mode → Limited flexibility of the exchange rate.** In this case one of the exchange rates - Band, Basket or Crawl type may be selected. In order to provide limited flexibility of the exchange rate it is necessary to i) provide operational independence of the Central Bank, ii) establish fiscal discipline, iii) provide transparency and accountability of the monetary policy and iv) establish informational systems to handle exchange rate risks.

- **Limited flexibility of the exchange rate → Significant flexibility of the exchange rate.** This stage envisages realization of transition from the band mode to the floating regulated mode and creation of more favorable condition to enable the exchange rate to float in a larger range. For this purpose it is necessary to eliminate existing diverse regulations in the foreign exchange market, launch prudential supervision based upon risk management, and promote application of various financial tools as key reforming directions.

**Significant flexibility of the exchange rate → Floating mode.** When passing to the floating mode the Central Bank should remove the targets connected to the exchange rate and establish the order of intervene to the foreign exchange market.

In Quarter 1 of 2011 the exchange rate of the strengthened against the USD only by 0.65 percent. Stability of the exchange rate of the national currency within the period positively affected the stability of the macroeconomic and financial sectors in the country.

While within the quarter the nominal exchange rate of manat became cheaper against the currencies of several trade partner countries, it strengthened against the currencies of other countries. The dynamics of the nominal bilateral exchange rate of the manat also affected change of the real bilateral exchange rates. In January-March the manat became nominally and really cheaper than that of several countries (Euro zone, Russia, Georgia). Whereas the manat became nominally cheaper against the currencies of Great Britain, Kazakhstan, Japan, Israel, China and South Korea, it went up from real standpoint.
Table 2. Bilateral nominal and real exchange rate indicators of manat against the currencies of trade partners, in 2010

<table>
<thead>
<tr>
<th></th>
<th>Against December 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nominal bilateral exchange rate index*</td>
</tr>
<tr>
<td>USA</td>
<td>100.7</td>
</tr>
<tr>
<td>Euro zone</td>
<td>95.2</td>
</tr>
<tr>
<td>Great Britain</td>
<td>97.3</td>
</tr>
<tr>
<td>Turkey</td>
<td>105.0</td>
</tr>
<tr>
<td>Russia</td>
<td>93.1</td>
</tr>
<tr>
<td>Ukraine</td>
<td>100.5</td>
</tr>
<tr>
<td>Georgia</td>
<td>97.7</td>
</tr>
<tr>
<td>Iran</td>
<td>100.0</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>99.6</td>
</tr>
<tr>
<td>Japan</td>
<td>99.0</td>
</tr>
<tr>
<td>Israel</td>
<td>99.7</td>
</tr>
<tr>
<td>China</td>
<td>99.5</td>
</tr>
<tr>
<td>Belarus</td>
<td>101.1</td>
</tr>
<tr>
<td>South Korea</td>
<td>98.6</td>
</tr>
</tbody>
</table>

* average annual change of the exchange rate of the manat against the currencies of the partner countries.

Source: CBA

Within the reporting period the nominal effective exchange rate on the non-oil sector (on general trade turnover) became cheaper by 2.2 percent. Difference between the inflation in the partner countries and Azerbaijan had a 1.5 percent upward effect on the real effective exchange rate.
Real effective exchange rate of the manat in the non-oil sector went down by 0.8 percent within the period.

REER preciated by 1 percent vis-a-vis the near foreign countries, with a bulk – over 80 percent of non-oil export.
Thus, within Quarter 1 the foreign exchange market operated in the self-regulating mode, no sharp fluctuations of the bilateral exchange rate was observed, and the multilateral exchange rate changed to the favor of bettering the international competitiveness of the country.

2.2. Monetary policy tools

Expectations related to rise of food prices in the world market, expansion of the money supply growth sources due to increase in the currency income of the country and acceleration of growth in the non-oil sector made strengthening of control over inflatory factors and their regulation in a preventive mode actual anew. In Quarter 1 of 2011 the decisions taken on monetary policy tools were namely directed at price stability in the country.

The CBA, when taking a decision regarding parameters of monetary policy tools, considered analysis of up to 30 cycle indicators. These include leading, coincidence and lagging cycle indicators. Close to the end of Quarter 1 of the current year, the number of indicators for correction of the monetary policy among the permanently analysed cyclic indicators kept prevailing.
In the view of the process in question, as well as revival of aggregate demand, inflation factors, and forecast of the balance of payments, the Central Bank took a decision on moving the refinancing rate up from 3 percent to 5 percent from March 1. At the same time, the goal of this decision is to improve opportunities of the Central Bank to sterilize excess money supply ensuring relevant condition in the financial markets.

In order to regulate the growth rate of the monetary aggregates a decision was taken to increase required reserve norms on internal and external liabilities of banks from 0.5 percent to 2 percent.

In compliance with the established monetary policy direction notes amounting to AZN307 mln were issued in Quarter 1, 2011 within the framework of activation of the sterilization operations. Of them notes in the amount of AZN209 mln were put up for auction and all of them were placed. Average return on notes in the last auction was 1.21 percent. This figure was 2.20 percent at the beginning of the year.
The amount of the notes in turnover increased by 70 mln. manats (including repo operations) or by 2.8 times against the beginning of the year and equaled to 110 mln. at the year end, including repo operations totalling to 40 mln. manats.

2.3. Monetary supply

In Quarter 1 of 2011 the 2010 money supply kept pace with the demand of the economy and at the same time, was affected by seasonal factors.

According to estimations, seasonally adjusted money base increased by 6 percent against the beginning of the year.
In Quarter 1 broad money supply (M3) increased by 2.3 percent and reached 10757.4 mln manat. Broad money supply in manat (M2) decreased by 2.2 percent and as of 01.01.2011 was 8115.5 mln. manat.
Against the relevant period of the previous year these indicators respectively increased by 24 and 31.3 percent.

**Table 3. Monetary aggregates, million manat**

<table>
<thead>
<tr>
<th></th>
<th>01.01.11</th>
<th>01.03.11</th>
<th>01.04.11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M0</strong> (Cash funds)</td>
<td>5455.8</td>
<td>5363.1</td>
<td>5427.1</td>
</tr>
<tr>
<td><strong>M1</strong> (Cash, demand deposits and savings)</td>
<td>6718.9</td>
<td>6555.5</td>
<td>6608.5</td>
</tr>
<tr>
<td><strong>M2</strong> (Cash, demand and term deposits and savings, in manat)</td>
<td>8297.5</td>
<td>7907.7</td>
<td>8115.5</td>
</tr>
<tr>
<td><strong>M3</strong> (Cash, demand and term deposits and savings in manat and hard currency)</td>
<td>10527.5</td>
<td>10272.6</td>
<td>10757.4</td>
</tr>
</tbody>
</table>

Source: CBA

While the money supply within the past period slightly reduced, multilateral exchange rate of the manat becoming cheaper, the Monetary Condition Index overall started losening.

In Quarter 1 of the current year the nominal interest rates on loans and savings in manat did not have any significant change.
In the last 1 year the real interest rates on loans in manat decreased by 1.1 percent and by 3.8 percent on deposits in manat.

2.4. Institutional base of the monetary policy

In Quarter 1 of 2011 the Central Bank continued its purposeful activity on development of macroeconomic management and institutional base of the monetary policy. The Monetary Policy and Financial Stability Committee (MPFSC) of the Central Bank kept functioning in Quarter 1 of 2011, macroeconomic situation was operatively observed and the foreign and internal factors were analysed and adequate political decisions were taken. These decisions primarily covered the parameters of exchange rate and monetary policy tools. In Quarter 1 of 2011 the Central Bank continued adjusting the monetary policy mechanism to the post-crisis challenges and improving international standardization. To establish countercyclic macroprudential management in Azerbaijan the issues on integration of monetary and financial stability policies were reviewed. The initial draft of the monetary and financial stability strategy of the Central Bank has been developed to that end which also addresses instrumental base of the monetary and financial stability policies for the new period.
Measures were also taken to develop the normative-legal basis of the monetary policy tools. Draft new Regulations on Required Reserve norms were developed and placed on the website to get feedback of the banking society.

In Quarter 1 of 2011 as well the Central Bank was engaged in development of research base that provides effectiveness of the monetary and financial stability policies.

Thus, Azerbaijan has commenced to estimate asymmetry of pass-through capacity of the exchange rate to inflation and periodic stability and the critic level of the inflation by Azerbaijan.

In order to improve the potential to evaluate and manage financial stability, identification and management of risks became one of the top priorities. Moreover, a Dynamic Stochastic General Equilibrium Model was established to analyze and forecast macroeconomic indicators, the evaluation of which is under way. At the same time, a number of institutional factors affecting the macroeconomic policy also were studied.

In 2011 the Central Bank focused on further improvement of provision of statistic information and and its adjustment to international standards. There commenced the project on launch of the multifunctional and prompt Electronic Statistic Database and Analytical Reporting System (ESDARS) that will host a unified statistic database to be created at the Central Bank.

**Box 8. New design of the post-crisis monetary policy**

Targeting stable inflation is a prerequisite, but not sufficient. In most pre-crisis countries base inflation was stable enough. However, the crisis surfaced deep recession and sharp in total output. The reason was that with loan boom or high growth not based upon the fundamentals in the asset prices in the economy, even if the base inflation is stable, explosion of these “bubbles” may cause significant economic recession and volatility. Just one policy tool does not allow preventive response to “bubbles”. Pre-crisis policy decisionmakers were skeptic to change interest rates in response to asset prices deviated from fundamentals, which presumably lead to excess volatility and endanger violation of macrofinancial balance. For this reason, the crisis witnessed that new targets of the monetary policy cannot be achieved solely via interest rates and the interest rate is a “blind” tool.

The crisis proved that the prudential policy is not macroeconomically neutral and made use of macroprudential tools to preventively react to “bubbles” actual. Thus, high minimum capital requirement, establishment of capital buffer higher than the minimum in the expansion phase of the economy, and transparent guarantee policy are required in all periods of the business cycle.

Source: “Rethinking Macroeconomic Policy”, Prepared by Olivier Blanchard, Giovanni Dell’Ariccia, and Paolo Mauro February 12, 2010. IMF
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