# TABLE OF CONTENTS

Executive summary 4

I. Global economic processes and the national economy 5
   1.1. Trends in the world economy 5
   Box 1. New economic powers 6
   1.2. Macroeconomic processes in Azerbaijan 9
      1.2.1. External sector 9
      Box 2. Non-oil export of Azerbaijan 11
      1.2.2. Aggregate demand 12
      Box 3. Investment environment 14
      1.2.3. Aggregate supply 13
      Box 4. Inclusive growth 15
      1.2.4. Macroeconomic equilibrium 16
      Box 5. Inflation targeting and modeling 18

II. Monetary and exchange rate policy 21
   2.1. FX market and exchange rate of manat 21
      Box 6. Real effective exchange rate and the fiscal policy 22
   2.2. Monetary policy instruments 23
      Box 7. Effect of the Central Bank capital on the monetary policy 24
   2.3. Money supply 24
      Box 8. Financial innovations and monetary control 26
   2.4. Institutional base of the monetary policy 27

Charts and tables used 28
Acronyms

CBA – The Central Bank of Azerbaijan
ILO – The International Labor Organisation
IMF – The International Monetary Fund
SAR – The South African Republic
SSC – The State Statistics Committee
DGCs – Developing Countries
DDCs – Developed Countries
OECD – The Organisation for Economic Cooperation and Development
CPI – Consumer Price Index
APPI – Agricultural Producer Price Index
SME – Small and Medium Entrepreneurship
NEER – Nominal Effective Exchange Rate
OG – Output Gap
OPEC – The Organization of the Petroleum Exporting Countries
REER – Real Effective Exchange Rate
RSM – Real Sector Monitoring
PPI – Producer Price Index
NFES – The National Fund for Entrepreneurship Support
GDP – Gross Domestic Product
WTO – The World Trade Organisation
EXECUTIVE SUMMARY

In the first quarter of 2012 the Central Bank pursued its policy in the environment of a fragile growth in the global economy, relative slowdown in the sovereign debt problem in Eurozone, and volatility in the world financial and commodity markets.

High oil prices in the world markets favored the economic position of the country. Ongoing accumulation of strategic foreign exchange reserves further boosted economic sustainability of the country. The country economy continued to grow utterly stemming from the non-oil sector.

In the first quarter of the current year the Central Bank kept the factors influencing macroeconomic and financial stability under control and conducted an adequate policy. The Central Bank targeted an optimum level of inflation, a stable exchange rate of manat, enhancement of growth and sustainability in the banking-financial system under the declared key directions of the monetary and financial stability policies.

Given high global commodity prices and expanded internal demand during the reporting period, the Central Bank conducted an anti-inflationary monetary policy which resulted in a single-digit level of inflation, and stable exchange rate of manat – the key factor of macroeconomic stability.
I. GLOBAL ECONOMIC PROCESSES AND THE NATIONAL ECONOMY

1.1. Trends in the world economy

The first quarter of 2012 witnessed fragile economic revival in the global economy. However, risks of downturn are still in the air. The existing growth in the world economy may be primarily put down to a relatively positive background in the USA. Sustainability of the global economic growth is becoming a tough target in the environment of dwelling recession risks in Eurozone, reduced business confidence, contracted financing channels and weak export in DGCs.

The actions directed at remediation of the economy in advanced countries yielded revival in the global economy. The relative rise in the economic activity mainly benefited from expansion of internal demand in DGCs and consolidation in DDCs aided by accommodative monetary policy. However, according to estimations of international organisations, the chances of support of the above positive impact channels for the economic growth is restrictive.

Deepened economic problems in the European Union that takes 18% of the world economy, is the greatest risk factor over the sustainability of the world economy growth. According to rough estimations, the growth in the three economic powers of the Eurozone – Germany, France and Italy – is expected to respectively be 0.3%, 0.0%, -2.5% in the first quarter of 2012. The activity mainly slowed down due to pessimistic expectations with respect to economic growth and competitiveness, low external demand, an amplified sovereign debt problem in a number of countries, that are in the periphery of the crisis, particularly in Italy. Fiscal consolidation measures in the countries of risk periphery and contractions in financing channels further weakened internal demand.

Long-term large-scale injection of the European Central Bank, as well as maintenance of interest rates around zero failed to adequately impact real sector financing on the background of elevating macroeconomic risks. Another key point is that fiscal consolidation resulting in decline in aggregate demand prevailed over monetary accommodation rate supporting demand. At the same time, inflation risks emerging on the background of high oil prices

Source: IMF
Global economic processes and the national economy

Box 1. New economic powers

The economic outlook of the world has been transforming over recent 25 years. Particularly, New Economic Power Centers (NEPC) are being formed dynamically. Ultimately, these centers are expected to have a significant role and share in the world economy. Brazil, Russia, India and China are considered to be the key drivers of NEPC. G7 is predicted to preserve its role as the economic power center for a long time. However, its share in the world economy is expected to relatively decline through advancing of NEPC.

According to the WB, the share of G7 in the world economy shall fall to 43% in 2030, while that of NEPC increase to 33%. Whereas the population of G7 made 11.2% of the world population in 2008, in world markets restrict further opportunities of the ECB to accommodate the monetary policy. No wonder that according to the Eurozone countries, the scale of the anti-crisis fund of support for aggregate demand equals to EUR 802 billion.

The economic standing in the USA, that roughly takes 21% of the world economy, is relatively positively zoned. The US economy boosted by 3% in the fourth quarter of 2011. Private investment (+2.6%) and consumption (+1.5%) are the growth factors, which is the vital encouraging moment. Sustainable economic growth is positively influencing upturn of investor confidence and expansion of financing channels. The Federal Reserve System, in its latest release, positively assessed the economic standing and prospects in the USA, and highlighted the importance of high investment activity by households and private sector from the standpoint of sustainable economic growth. The Federal Reserve stress-tested 19 top banks of the USA which revealed sufficient absorbing capacity of banks against possible risks.

The activity in the Chinese economy is relatively declining in the environment of elevated risks in the world economy, particularly in Eurozone. The Chinese economy is predicted to grow by 6.8% in the first quarter of 2012 against 8.8% growth in the last quarter of 2011 (JPMorgan). The Chinese government is promoting internal demand in the environment of low external demand.

Trends in the world economy are being reflected in the dynamics of the global disbalance. Particularly, prevalence of private

Source: Federal Conference Board


Global economic processes and the national economy

demand over public demand, revived internal demand in DGCs contribute to the global balancing. The analysis of the economic structure of countries suggest that there is a huge potential to maintain the global balancing. During the reporting period, the key reason for the disbalance in DGCs – exchange rate mismatch has been relatively accommodated. Starting from the second half of 2011 foreign exchange reserves of DGCs stopped to grow. Exchange rate corridor in China moved from 0.5% to 1%.

The two months of the current year witnessed decline in the scale of the world trade, the key reasons for which are stronger protectionist trends in the world economy and the crisis in the Eurozone and ongoing weak global demand. Shrinking financial channels in the Eurozone cause challenges in external trade crediting (80% share on the world), reduce industrial production in the countries, like China, India and Brazil, and decrease foreign direct investments from the Eurozone.

Commodity prices rose during the reporting period, the key reason for which is continuous rise in oil prices. Primarily due to geopolitical factors, the oil prices increased by 15.7% over the first quarter, average price being USD 118.5.

Unemployment is still a critical problem despite fragile positive trends in the world economy. According to the ILO, the number of unemployed people in the world increased by 1 million and reached 200 million in the first quarter of 2012. The unemployed will number 204 million as of the yearend, and 209 million as of the end of 2013.

---

**Chart 3. Real Effective Exchange Rate (2000=100)**

Source: IMF

At the same time, the policy of demand stimulation resulted in low current accounts balance surplus. The export growth dropped from 18% to 9% over the quarter.

**Chart 4. Global Disbalance (share in GDP), %**

Source: IMF

Unemployment is still a critical problem despite fragile positive trends in the world economy. According to the ILO, the number of unemployed people in the world increased by 1 million and reached 200 million in the first quarter of 2012. The unemployed will number 204 million as of the yearend, and 209 million as of the end of 2013.

**Chart 5. Unemployment, %**

Source: International Labor Organisation

---

**Chart 6. World trade, % (year on year)**

Source: WTO

Commodity prices rose during the reporting period, the key reason for which is continuous rise in oil prices. Primarily due to geopolitical factors, the oil prices increased by 15.7% over the first quarter, average price being USD 118.5.

Sovereign ratings of a number of countries continued to deteriorate in the environment of
Global economic processes and the national economy

elevating global economic risks. Thus, whereas the pre-crisis rating of 68% of DDCs was AAA, currently this number is 52%. The relevant indicator of DGCs shifted from 25% to 17%. No defaults have been observed in BB+ and over ratings over the past 40 years, 14 defaults have occurred in below BB+ ratings.

One of the prima threat sources for the world economy is swollen balance sheets of central banks. The necessity for fiscal consolidation in DDCs called for monetary expansion. As a result, internal assets reached 30% of the GDP (pre-crisis -15%) and monetization of the budget deficit doubled. The central bank exposure to the government in the USA reached 12% of the GDP and that of England – 18%.

Notwithstanding the swollen balance sheets of central banks, the monetary policy accommodation, started from the mid 2011 for the sake of support for the economy, continued in the first quarter of 2012 as well. Over the past 3 months 25 countries eased their monetary policy, while 9 countries made corrections to tightening.

Given the latest trends, the IMF made an upward revision to the global economic outlook.

However, the IMF allows the potential for recession in the world economy.
According to the IMF expectations, despite fiscal and monetary measures to underpin the economic growth, there are enough risks for the growth. The prima risk is the amplification of the crisis in the Eurozone, which might result in reduction of the global growth from 3.5% to 1.5%. Moreover, 50% rise in oil prices due to geopolitical factors is capable to contract the global growth from 3.5% to 2.2%. Potential risks include excess tightening of the macroeconomic policy and latent risks (risks to emerge in the USA and Japan due to the budget deficit) as well.

Under these circumstances, the IMF developed a number of policy recommendations for DDCs and DGCs. The DDCs are recommended to balance the sustainability and growth dilemma (efficiency in expenditures, structural reforms), increase regional and global cooperation, as well as transmit the investment activity from the public to the private sector. The DGCs are recommended to more effectively manage external demand and overheating risks, and focus on human capital.

1.2. Macroeconomic processes in Azerbaijan

The country economy continued to grow in the first quarter of 2012 in the environment of favorable external position and expansion of internal demand. State support for the economic activity and ongoing structural and institutional reforms also contributed to the dynamics of the economy. The macroeconomic and financial stability was preserved during the quarter.

1.2.1. External sector

Relative improvement in global economic growth expectations, rise in commodity prices, as well as high prices for energy carriers fuelled to positive dynamics in the external position of the country in the first quarter of the current year. Average price for oil reached USD 118 and demand for non-oil products and services went up, resulting in rise in the volume of export.
According to the State Customs Committee (SCC), the foreign trade turnover over 3 months of the current year made USD 7.9 billion, of which USD 5.8 billion goes to the share of export and USD 2.1 billion – import.

In January – March 2012 export rose by 7% and import by 9% against the relevant period of the previous year and the surplus of the foreign trade balance equaled USD 3.8 billion. To compare, the surplus surpasses the previous year level by 7%.

Semi-finished products made of ferrous metals, crude oil, liquid and natural gas, aluminum, vegetables, etc. prevailed in export. The highest growth in the non-oil export was observed in unprocessed aluminum (21.4 times), metallurgy (2.8 times) and fruits and vegetables (1.4 times). While the quantity of export products declined in certain sectors, they increased in terms of amount (e.g. crude oil, fruits), and vice versa in some others (e.g. polyethylene).

Import of fertilizers, durable goods, polyethylene, vehicles, etc. was high. Machines, mechanisms and vehicles take one third of import, the scale of which declined around 3% during the period. The parallel decline in a number of food products indicates expansion of domestic production.

In total, most imported goods increased both quantitatively and in terms of amount.

According to the SSC, prices for the Azerbaijani export commodities surge more rapidly than those of imports, which display increase in opportunities to import more commodities and services through less export, in other words, improved trade conditions.

According to the IMF, the surplus of current accounts balance will constitute 22% of the GDP in Azerbaijan as of the end of the current year. The country is in a leading position in the CIS according to this indicator, and takes one of the most advanced places among DGCs. The estimations of the Fund show that the large-scale surplus will also continue in the medium run.

Besides export, dynamics of remittances and capital flows from abroad also had an upward effect on FX flows to the country.

According to the most preliminary data, in 3 months of the current year the volume of
Box 2. The non-oil export of Azerbaijan

Over the past 10 years the Azerbaijani non-oil commodities and services export rose by 9 times and made USD 4.3 billion according to the results of 2011, including 10 times increase in the non-oil commodities and 9 times increase in the non-oil services export.

The structure of commodities export comprise products of plant and animal origin, readymade products, chemical products, products of metallurgy, machines and equipment, products of textile industry, and services export include transport, tourism, communication, construction and government services. Currently, the share of services is 60% and that of commodities – 40% in the structure of the non-oil export. If to compare 2001 and 2011, over this period the growth rate of products of plant and animal origin, readymade products, products of metallurgy and chemical industry was higher in the non-oil export, while the growth of products of textile and machinery was slight. The highest growth was observed in products of plant and animal origin, which was roughly over 18 times. Products of metallurgy, readymade products and those of chemical industry grew by 17, 9, 7 times respectively. During the compared period, out of services export the highest growth was observed in tourism (30 times) and construction (16 times). Communication and transport services (5 times), government services (3 times) lagged. Whereas in total the 2009 crisis had no impact on services, it caused decline in all sectors of the commodity export, however, the following year these numbers went up and exceeded the pre-crisis level.

Source: CBA, Balance of Payments.

According to the SSC, foreign investments to the country economy increased by 19 % in the first quarter against the relevant period of the previous year.

In January – March of 2012 the strategic foreign exchange reserves of the country increased by 7% and constituted USD 43 billion – sufficient for three-year commodities and services import.

Source: CBA, Balance of Payments.

Global economic processes and the national economy
The CBA’s foreign exchange reserves increased by 3% and exceeded USD 10 billion, sufficient to finance one-year commodities and services import.

Currently, a strategic foreign exchange reserves to the GDP ratio approximates 70%. In total, high growth rate of strategic foreign exchange reserves is the factor that decreases vulnerability of the country economy to possible external shocks or the one that forms a robust macro economical foreign buffer. At the same time, growth of reserves led to further strengthening of the net investment position of the country. That is why, no wonder that, Moody’s upgraded Azerbaijan’s issuer rating in local and foreign currencies from BA1 to BAA3 and assigned a stable outlook rating. We have only 2 levels on the way to the highest a rating segment.

1.2.2. Aggregate demand

In the first quarter of 2012 all components of the aggregate demand, including final consumption expenditures, investments and external demand positively affected the economic growth. During the quarter, increase in income of the population and domestic investments, as well as favorable global environment revived all demand components of the GDP. The government was the key contributor to revival of aggregate demand.

1.2.2.1. Final consumption expenditures. During the first quarter the positive contribution of final consumption to the economic growth was high.

*Household’s consumption.* In the first quarter of the current year per capita nominal money income of the population increased by 12.3% against the relevant period of the previous year and made AZN 792.1 or AZN 264 on monthly average. The population directed roughly 66.4% of the income to final consumption on purchase of commodities and services. Final consumption expenditures of the population increased by 6.6% in nominal terms and made AZN 4.8 billion or equaled to 39% of the GDP.

Average monthly salary increased by 8.5% and made AZN 368.5 that contributed to maintenance of the high share of final consumption in the GDP.
Parallel step-up in loans to households also had an upward effect on demand. Thus, loans to households rose by 6.3% in the first quarter of 2012 (by commercial banks and NBCIs).

Demand continued to grow and contributed to the retail trade turnover and off-free services to the population.

Retail trade turnover increased by 9.3%, whereas retail trade turnover on non-food products rose by 18.6% in the first quarter. Growth in off-free services to the population constituted 9.4%.

According to the SSC, industry and trade stocks are diminishing amid economic activity. The Real Sector Monitoring conducted by the Central Bank also indicates boosting demand in the country. Thus, according to the monitoring findings, in the first quarter of the current year, actual sales in trade of durable goods (automobile, furniture etc.) and industry are up, whereas balances of commodity stocks are down against the relevant period of the previous year. The similar tendency is observed in services. Thus, average service demand index prevailed over the previous year’s level roughly 2 times as much during the first quarter.

**Government and public organisations.** Government’s consumption expenditures have been primarily shaped through spending on commodities and services from the state budget. In January – February of the reporting period salaries, pensions and allowances of the population made up 51% of the budget expenditures.

**1.2.2. Investment expenditures.** Investment to the economy from all sources in the first quarter of 2012 made AZN 2 billion having increased by 16.5%, which equals to 16.3% of the GDP. It included 72.8% increase in foreign and 27.2% increase in domestic investments.

63.8% of investments was directed to the non-oil sector. In total, investments to the non-oil sector in the first quarter surpasses the previous year level by 12.4%. In the non-oil sector, the growth rate of investments to machinery and equipment, communications and chemistry was particularly high. The share of public investments in total non-oil investments was 66%.

**1.2.3. Aggregate supply**

In January – March of 2012 the GDP growth was 0.5% in real terms and exceeded AZN 12 billion in nominal terms. During the reporting period the oil-and-gas sector posted 4.7% drop whereas the non-oil sector posted 7.7% increase. Two thirds of the value added was due to the share of production and one third to services.

**Economic growth.** The GDP growth stemmed from the activity in the non-oil sector. Thus, roughly 45% of the GDP was the share of the non-
Global economic processes and the national economy

Box 3. Investment environment

Economic growth and sustainable reduction of poverty in any country depend on the volume and productivity of investments, which, in its turn, depend on investment environment. *Investment environment* is defined as the set of factors that create potential and stimuli for companies to productively invest, create new jobs, and expand. Favorable investment environment increases income of companies (both large and small), and the society wins from low prices, new jobs and broad tax base. The environment, that creates wide opportunities and favorable conditions for profit, minimum expenses and sound competition – the vital motive for decision-making, is considered to be good for companies.

Investment environment is affected by two groups of factors:

a) an investment policy of a government;

b) other factors.

The policy to improve the investment environment, and maintain economic activity is pursued by the government. In parallel, maintenance of stable and safe investment environment, particularly protection of property rights and the tax policy also are integral parts of the investment policy of the government. Entities are not just driven by the government’s formal policy decisions, they analyze application and consequences of this policy, and sometimes strive to properly affect processes. If government improves investment environment, investment opportunities elevate, innovations are promoted and throughput goes up.

The government, as a rule, fails to intervene other factors – the geographical location, the scale of the market and consumer behavior, that affect the investment environment.

*Source: World Bank, World Development Report*

oil sector and the sector made a 4.3 percentage points contribution to the overall growth.

All segments of the non-oil sector posted growth in the first quarter of the current year. The highest growth rate goes to industry, residencing and catering, trade, communications and construction. Growth in the industry mainly sourced from the food industry, metallurgy, machinery and chemistry. The high growth observed in agriculture occurred both in crop sector and in livestock.

*Source: SSC*
Global economic processes and the national economy

During the reporting period crude oil extraction dropped by 5.7%, while natural gas production rose by 14.6%. 309 ton gold and 238 ton silver were extracted from gold and silver mines during the period.

Economic growth expectations. According to forecasts of the Government, the CBA as well as international institutions, the economic growth is expected to endure in the country in the nearest horizon. The IMF, in the recently released economic outlook, suggests that the

**Box 4. Inclusive growth**

Inclusive growth, being an economic growth strategy, provides for people’s equal benefiting from economic growth. This definition was first used early in 2000. The World Bank working papers address its exact essence as a growth strategy, difference from other growth strategies, comparison of countries to that end and so on.

The pro-poor strategy is somehow similar; however there are certain differences. The pro-poor growth strategy allows for benefiting of poor people from the economic growth, while inclusive growth includes both this aspect, and targets people’s contribution to the economic growth leaving poverty behind. Proper management, and maximization of economic opportunities with institutions, maintenance of minimum welfare and equal access to economic opportunities are accepted to ensure inclusive growth with eventual considerable alleviation of poverty. From this standpoint, the inclusive growth approach is more long-run and the focus here is productive employment, rather than direct allocation of revenues. Currently, no unified position is in place with respect to measuring the inclusive portion of the inclusive growth. However, the option provided by the Asian Development Bank deserves more attention. The approach put forward is based upon a social opportunity function. Thus, with the social opportunity function going up, growth is considered to be inclusive. The function itself depends on two factors: i) the average number of economic opportunities accessible by the population; ii) utilization segregation of economic opportunities among the population. The more population has more equal access to economic opportunities, the higher growth inclusiveness is. Some indicators of inclusiveness on Azerbaijan are as follows.

<table>
<thead>
<tr>
<th>Human development index*</th>
<th>Employment and social status</th>
<th>Health</th>
<th>Education</th>
<th>Access to utilities</th>
<th>Indicators of financial inclusiveness**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unemployment</td>
<td>Poverty</td>
<td>Budget expenses on health care/GDP, %</td>
<td>Access to education/GDP, %</td>
<td>Internet users per 100 persons</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Budget expenses on health care/GDP, %</td>
<td>Lifetime education, years</td>
<td>Access to clean water in rural areas, %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Bank account holders, %</td>
<td>Access to clean water in urban areas, %</td>
<td>Credit card holders, %</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Debit card holders, %</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>91</td>
<td>5,4</td>
<td>7,6</td>
<td>70,7</td>
<td>5,8</td>
</tr>
</tbody>
</table>

* among 187 countries

**The survey provided by the Gallup in 148 countries of the world among 150 thousand persons in 2011 at the request of the World Bank

Global economic processes and the national economy

Economic growth in Azerbaijan shall continue in the current and following years. The Fund predicts 3.1 and 1.9 percent economic growth in the country respectively for 2012 and 2013, including 5.5 – 6 percent growth in the non-oil sector in both years. In general, the UN, the IMF, the EBRD and the WB forecasts suggest average 3.5 percent economic growth in Azerbaijan.

The Real Sector Monitoring (RSM) conducted by the CBA also confirms optimistic expectations over economic activity. Thus, according to the results of the RSM, demand expectation index on production and supply expectation on services have been prone to growing since the beginning of the year. Positive expectations were particularly observed in chemical, construction materials production and textile subsections. The highest positive expectations in services belong to communication, hotel and transport subsectors. Such positive expectations resulted in decrease of stocks in industry and trade. In general, findings of the RSM conducted by the CBA demonstrate increase in the number of enterprises with incremental production and risen turnover and sustainability of this growth.

According to the CBA estimations, output gap (gap between the potential and actual levels of the GDP) shifted from -3.9% in 2010 to -0.5% in 2011. In 2012 this indicator is expected to be positively zoned being equal to +1%.

High public demand will significantly contribute to positive zoning of the output gap. Overall estimations suggest that, the public demand caused the three fourth of the non-oil economic growth in the first quarter of the current year.

1.2.4. Macroeconomic equilibrium

In the first quarter of the current year macroeconomic stability was maintained in the country economy in the environment of revival of the aggregate demand. Inflation was on a single-digit level and the level of employment further boosted.

1.2.4.1. Consumer Price Index (CPI). In the first quarter of 2012 average annual inflation was 3.1%, which significantly falls below the
Over 3 months of 2012 money supply (+0.3%), inflation in partner countries (+0.6%) and changes in nominal effective exchange rate (+0.5%) had an upward, while seasonal and other factors downward effect (-0.9%) on prices.

In the first quarter of the current year, core inflation (adjusted from changes in prices for commodities regulated by the government and seasonal factors) made 2.4%.

Inflation in trade partners surpassed that of Azerbaijan by 0.9 percentage points in the first quarter of 2012.

Source: CBA estimations on the basis of SSC

---

Global economic processes and the national economy

The lower rise in food prices in international commodity markets compared with the similar period of the previous year also influenced internal food prices. Thus, while the average annual rise in food prices was 13.4% in the first quarter of 2011, it equaled 3.9% in 2012.

The average annual inflation on non-food products was 1.3%, and 0.1% against the beginning of the year. Prices on services grew 0.1% against the year launch, average annual being 2.5%.

In the first quarter of the current year, core inflation (adjusted from changes in prices for commodities regulated by the government and seasonal factors) made 2.4%.

Inflation in trade partners surpassed that of Azerbaijan by 0.9 percentage points in the first quarter of 2012.
The inflation targeting regime applied by central banks and relevant public structures in the international practice is oriented at preserving price stability. Currently, 27 countries employ inflation targeting. Inflation targeting requires strong technical knowledge, inflation forecasting and full evaluation of transmission mechanisms. Combination of diverse models for forecasting is used within the inflation targeting: time series, structural and macroeconomic, Vector Auto Regressive (VAR) and Dynamic Stochastic General Equilibrium (DSGE) models. Some of these models necessitate a strong theoretical base, while others require qualitative informational base. These models are used for short and long runs for forecasting periods.

**Forecasting through time series**
Forecasting through time series provides for short term (6 months) period and is usually used for the CPI forecasting. This technique is based upon the database of the previous period and assessment of particular CPI components (e.g. administrative prices) through judgment.

**Forecasting through VAR**
The models of the type are used for forecasting of 6 to 12 months period. The models of the type are considered small scale econometric models and require qualitative information base. Thus, structural changes in the country economy result in decrease in the quality of forecasting through this model.

**Forecasting through DSGE**
The models of the type comprise combination of multiple models. The models of the type rest upon a microeconomic analysis and assess behavior of the agents existing in the economy (households and firms). One of the top advantages of the DSGE model is that it is forward looking, which is considered to be vital in inflation targeting. DSGE models are very complex and require specific judgment to obtain behaviors available in the database.

<table>
<thead>
<tr>
<th>Country name</th>
<th>Models used</th>
<th>Forecasts disclosed to the public</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>DSGE, small models</td>
<td>GDP, Inflation and core inflation</td>
</tr>
<tr>
<td>Brazil</td>
<td>VAR, macro models, DSGE</td>
<td>Inflation and GDP</td>
</tr>
<tr>
<td>Canada</td>
<td>DSGE and macro models</td>
<td>GDP, Inflation and core inflation</td>
</tr>
<tr>
<td>Czech Rep.</td>
<td>DSGE macro model</td>
<td>Inflation, interest and exchange rates, and GDP</td>
</tr>
<tr>
<td>Hungary</td>
<td>Time series, expert evaluation, macro and DSGE</td>
<td>CPI, core Inflation, GDP and labor market</td>
</tr>
<tr>
<td>Iceland</td>
<td>VAR, structural and macro models (DSGE model being developed)</td>
<td>Inflation</td>
</tr>
<tr>
<td>Sweden</td>
<td>Time series model, DSGE</td>
<td>GDP, CPI, core inflation and repo interest rate</td>
</tr>
<tr>
<td>Turkey</td>
<td>Monthly forecast model (DSGE model being developed)</td>
<td>Inflation, core inflation and output gap</td>
</tr>
<tr>
<td>England</td>
<td>Statistic and theoretical models, DSGE</td>
<td>Inflation and GDP</td>
</tr>
</tbody>
</table>

*Source: “State of the art of inflation targeting” Gill Hammond, February 2012. The Bank of England*
1.2.4.2. Industrial Producer Price Index (IPPI). In the first quarter of the current year the average annual IPPI went up 18.9%, while it contracted by 0.4% on the non-oil sector. Thus, on average annual producer prices were up by 21.9% in the mining industry, 13.3% in the textile industry, 15.3% in the metallurgy, 6.9% in the chemical industry. At the same time, production of food products declined by 3.9%, tobacco products -1.4%, machinery and equipment - 1.8%.

1.2.4.3. Agricultural Producer Price Index (APPI). In the first quarter of 2012 the APPI grew 1.7% on average annual and declined by 0.5% during the first quarter. The price dynamics was 0.6% on perennials, 3.2% on livestock and livestock products.

1.2.4.4. Real estate prices. According to the «MBA LTD» Appraisal and Consulting Co, in the first quarter there was a low activity on most segments of the real estate market. During the quarter, prices in the secondary market rose by 3.8%, and in the primary market – 2.0%. The key reason for price rise is shrinkage of supply in the real estate market («MBA LTD» Appraisal and Consulting Co). However, the price for 1 sq.m. residential space in the secondary market falls below the level of 2008 by 21.9% and 24.6% in the primary market.

Ongoing mortgage lending had an upward effect on the activity in the real estate market, particularly in the secondary market during the period. Over three months of 2012 banks issued USD 14.5 million worth mortgage loans.

1.2.4.5. Inflation expectations. Inflation in 2012 is expected to be on a single-digit level according to international financial institutions. The IMF in its latest report predicts 5.6% average annual inflation in Azerbaijan. The report highlights that in 2012 average annual inflation in the CIS will be 7.1%, and 6.2% in DGCs. If to compare with both country groups, the inflation forecast for Azerbaijan as of the yearend of 2012 will respectively be 1.5 or 0.6 percentage points lower. However, the IMF in its latest release recommends DGCs to manage external demand and overheating risks in combating inflation.

The findings of the RSM regularly conducted by the CBA display no significant rise in price expectations in the economy. In the first quarter of 2012 the price expectations index is negatively zoned in all segments of the real sector, except for industry.
1.2.4.6. Employment. As of the end of the reporting period economically active population was numbering 4630.5 thousand persons, out of which 4382.6 thousand persons are engaged in industry and various sectors of the social area. According to the SSC, in January – March the number of hired labor was 1362.6 thousand persons, out of which 1326.2 thousand persons are employed with the non-oil and 36.4 thousand persons – in the oil sector.

The CBA observations within the real sector monitoring in up to 300 enterprises also demonstrate increase in employment. Thus, the staff in the monitored entities went up by 4.8% in March against the relevant period of the previous year.

According to the CBA monitoring, employment expectations are positively zoned in industry, trade and construction except for services.
II. MONETARY AND EXCHANGE RATE POLICY

In the first quarter of 2012 the Central Bank targeted an acceptable level of inflation, prevention of exchange rate volatility of manat and maintenance of stability in the banking-financial system under the declared directions of the monetary policy.

2.1. Foreign exchange market and exchange rate of manat

Over the first quarter of 2012 the Central Bank continued to conduct its exchange rate policy targeting bilateral exchange rate of USD/ AZN within the corridor.

Supply in the forex market of the country broadened in the environment of a large volume surplus in the balance of payments of the country. However, to prevent significant strengthening of the exchange rate and thus neutralize negative impact on competitiveness of the non-oil sector, the Central Bank sterilized USD 233 million worth currency in the first quarter of 2012.

As a result, manat strengthened against USD at a moderate rate – only 0.04%. Stability of the national currency had a positive effect on

Table 2. Bilateral nominal and real effective exchange rate indices of manat (first quarter of 2012, %)

<table>
<thead>
<tr>
<th>Country</th>
<th>Nominal bilateral exchange rate index</th>
<th>Real bilateral exchange rate index</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>100.0</td>
<td>99.7</td>
</tr>
<tr>
<td>Eurozone</td>
<td>99.8</td>
<td>99.3</td>
</tr>
<tr>
<td>Great Britain</td>
<td>98.5</td>
<td>98.7</td>
</tr>
<tr>
<td>Turkey</td>
<td>95.5</td>
<td>94.5</td>
</tr>
<tr>
<td>Russia</td>
<td>93.2</td>
<td>92.3</td>
</tr>
<tr>
<td>Ukraine</td>
<td>100.1</td>
<td>100</td>
</tr>
<tr>
<td>Georgia</td>
<td>99.7</td>
<td>99.7</td>
</tr>
<tr>
<td>Iran</td>
<td>111.9</td>
<td>107.8</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>99.9</td>
<td>99.5</td>
</tr>
<tr>
<td>Japan</td>
<td>106.0</td>
<td>105.9</td>
</tr>
<tr>
<td>Israel</td>
<td>99.7</td>
<td>99.9</td>
</tr>
<tr>
<td>China</td>
<td>99.4</td>
<td>99.0</td>
</tr>
<tr>
<td>Belarus</td>
<td>95.8</td>
<td>91.8</td>
</tr>
<tr>
<td>South Korea</td>
<td>98</td>
<td>97.7</td>
</tr>
</tbody>
</table>

* Average monthly change in exchange rate of manat against the currency of the partner-country.

Source: CBA
macroeconomic stability and stability of the financial sector in the country.

The nominal exchange rate of manat depreciated against the currencies of major trade partners. The dynamics of the nominal bilateral exchange rate of manat had an effect on change of real bilateral exchange rates. In January – March manat depreciated both in nominal and real terms against the currencies of Eurozone, Great Britain, Turkey, Russia, Georgia, Kazakhstan, Israel, China, Belarus, and South Korea. Manat appreciated both in nominal and real terms against the currencies of Ukraine, Iran and Japan.

In the first quarter of the current year, the NEER on the non-oil sector (trade turnover weighted) depreciated 2.1%. The difference between the inflation in partner countries and the one in Azerbaijan had a 0.8 basis points downward effect on REER.

As a result, the non-oil weighted REER of manat depreciated only by 2.9% during the quarter.

Hence, the Central Bank ensured stable bilateral exchange rate policy

The IMF experts conducted a specific study to estimate the effect of government spending on the REER. To that end, economies of the countries with small open economies underwent fiscal shocks, the effects of which were estimated through economic mathematical methods. The obtained findings show that as a result of growth shocks in government spendings the REER deviation from the equilibrium level has a non-monotonic U-shaped adjustment path. Thus, depreciation (appreciation) that last for a number of years is reversed. Government spendings impact on short-term (long-term) depreciation or appreciation of the REER, the magnitude and longitude of these processes depend on the following:

- Sectoral composition of government spendings: High public investments to the trade sector result in initial depreciation in the REER, depreciation dwells in the short-run, however, eventually this tendency is replaced with long-run appreciation. High public investments to the non-trade sector result in initial appreciation of the REER, further depreciation, it later strengthens anew for long-run in accordance with the U-shaped adjustment path. In the event of tax exemptions to investments, the dynamics of the REER undergoes similar tendency, however, the appreciation period of the REER lasts longer. In all three cases rise in government spendings is financed through lump-sum taxes.

- Sectoral composition of taxes: If government spendings are financed through taxes to the trade sector, the REER depreciates both in the short- and long-run irrespective of the direction of expenditures. If government spendings are financed through taxes to the non-tradeable sector the process is reversed. In the event of tax exemptions on investments by the government, the REER will appreciate both in the short- and long-run irrespective of financing sources, however, the REER continues to appreciate for a longer period.

- Flexibility of sectoral productivity of the public capital: This is one of the vital determinants of the REER dynamics: If government spendings are financed through taxes of the tradable sector, the exchange rate strengthens (appreciates) both in the short- and long-run depending on more (less) productivity of the capital in the trade sector. If government spendings are financed through taxes of the tradable sector, the exchange rate strengthens in the short run irrespective relative sectoral productivity of the public capital. And in the long-run, if the public capital is more productive in the trade sector, short-run appreciation is longer, if more productive in the non-trade sector, short-run appreciation is eventually replaced by long-run depreciation. If the government imposes tax exemptions on investments, the REER appreciates whether sectoral capital intensive.

- Sectoral capital capacity: If the tradable sector is more capital intensive, the long-run REER appreciates. If the non-tradeable sector is more capital intensive, real depreciation occurs in the long-run. If tax exemptions are imposed on investments, the REER appreciates whether sectoral capital intensive.

Box 6. Real effective exchange rate and fiscal policy

exchange rate of manat during the reporting period. The multilateral exchange rate of manat was affected by fluctuations of the bilateral exchange rate in a number of partner countries.

2.2. Monetary policy instruments

The key goal of the monetary policy in the first quarter of 2012 was to magnify control over inflationary factors and their regulation in a preventive regime in the environment of price rise of energy carriers in the world market, increase in currency revenues of the country and expansion of growth sources of money supply. Given internal trends and external factors the Central Bank continued anti-inflationary monetary policy under its mandate in the first quarter of 2011. To regulate the growth rate of money supply the required reserve norms on banks internal and external liabilities in manat and precious metals were shifted from 2 to 3% in February, 2012. In general, the liquidity balance on transactions of the Central Bank with banks nearly remained unaltered.

AZN 465 million worth notes were issued during the first quarter of 2012 within the sterilization operations. Out of which, AZN 295 million worth notes were auctioned and placed.

Return on notes at the last auction made 1.28%, while this indicator was 2.84% at the beginning of the year. As of April 1, 2012 the
Monetary and exchange rate policy

Box 7. Effect of a central bank capital on the monetary policy

Central Banks of DGCs have been striving to manage large-scale financial inflows over the last decade which resulted in the volume and structure of their balances. Large scale currency interventions increase scope of foreign assets, later sterilizations boost internal liabilities (interest bearing), as well as amplifies currency mismatch in the balance sheet. The central banks of inflation targeting DGCs have to put up with decrease in seigniorage and huge capital losses from assets revaluation. The transformation of the kind in balances of central banks increased vulnerability of capital to internal interest rate fluctuations, which manifests itself in two ways: interest payments on internal liabilities and volatility of exchange rate. These realities make debates on influence of Central Bank Financial Strength (CBFS) on the monetary policy actual.

As mentioned above, the influence of CBFS on the monetary policy depends on the level of capital, volume of assets and currency composure (in DGCs, as a rule, foreign assets are kept in hard currency, and internal liabilities in the national currency). Therefore, formally, CBFS is defined as the ratio of capital to assets:

\[
\text{CBFS} = \frac{\text{Capital} + \text{other (net)}}{\text{Assets}}
\]

What kind of restrictions can central bank capital create for the monetary policy? First of all, Monetary Policy Restriction (MPR) is estimated through the gap between current and predicted optimum interest rates. A study was conducted through this methodology on the basis of 41 countries (both DGCs and DDCs), the monetary policy of which allows certain exchange rate flexibility. To determine the extent of deviations CBGS may have in MPR, pre-crisis (2002:1-2008:8) and post-crisis periods (2008:9-2010:4) were separately incorporated to the model.

Econometric estimations identified that poor capitalization of a central bank correlates to a negative gap between current and optimum interest rates, 1% increase in CBFS changes MPR by 0.4 percentage points. In other words, vulnerability of a central bank balance causes restrictions for the monetary policy implementation.

Exchange rate volatility has been identified to affect MPR in the countries with floating exchange rates. Decrease in interest rates to avoid strengthening of the exchange rate, negatively influences central bank capital. The exchange rate was incorporated to the model as a replacement to review reliability of findings of the model which confirmed that there is correlation between the central bank capital and the monetary policy.


volume of notes in circulation constituted AZN 94.9 million. The scale of REPO operations increased by 9.9 times during the quarter and made AZN 45 million.

2.3. Money supply

Money supply kept pace with the demand of the economy in the first quarter of 2012. At the same time, change in money supply was significantly affected by seasonal factors during this period.
Monetary base increased by 0.9% during the quarter – 33% increase if to compare with the relevant period of the previous year. The Central Bank interventions to the forex market and market operations had an upward effect on the monetary base.

Unlike the first quarter of the previous year, in the first quarter of the current year broad money supply increased by 2.4%. Broad money supply in manat (M2) reached AZN 11263.4 million as of the yearend.

Both cash and non-cash growth contributed to the rise in broad money supply. The share of cash in broad money supply was 61%.

<table>
<thead>
<tr>
<th>Table 3. Monetary aggregates, AZN million</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>M0 (Cash)</strong></td>
</tr>
<tr>
<td><strong>M1 (Cash, demand deposits and savings)</strong></td>
</tr>
<tr>
<td><strong>M2 (Cash, demand and term deposits and savings, in manat)</strong></td>
</tr>
<tr>
<td><strong>M3 (Cash, demand and term deposits and savings in manat and FX)</strong></td>
</tr>
</tbody>
</table>

In January – March broad money supply (M3) increased by 33% against the similar period of the previous year and made AZN 14320 million as of the end of the period.

Depreciation of multilateral nominal exchange rate of manat and growth of the money supply had an easing effect on the Monetary Condition Index (MCI) during the quarter.

The MCI was accommodative during the quarter as a result of Central Bank’s maintaining neutral level for monetary policy parameters and relative slowdown of inflation.
Financial innovations encompass creation of new financial instruments and services, as well as deepening and effective organisation of financial markets, which, in its turn, ensures allocation of resources through launch of more advanced markets, fosters economic growth, increases financing sources, serves for drop in operational expenses and rise in income of market agents benefiting from hi-tech. Even e-money is sufficient to realize contribution of financial innovations to the economic growth. Gradual replacement of cash with e-money increased the transmissionary effect of the monetary policy of central banks. Financial innovations result from four interrelated factors:

- Financial innovations are used to be protected from negative changes (hyperinflation, volatile exchange rate, interest rates, high budget deficit) in the economic environment.
- Hi-tech: Developing technology decreases value of services through new computers and telecommunication facilities and accelerates information flow thus stimulating creation of new financial instruments.
- Change in the legislative environment: whereas debates on the legal environment and innovations are still under way, it is clear that one causes creation of the other. However, it is still impossible to estimate this effect.
- Changes in accepted market conditions: Globalization of the economy, financial integration, search for new income ways for market agents, changes to the conditions for market entry and demand for financial instruments factor in launch of innovations.

While financial innovations help market agents revive profit and economic environment, in parallel new financial instruments affect the scale and structure of monetary aggregates, complicate debit-credit framework and cause unexpected risks in financial markets, weaken transmissionary effect of the monetary policy and make central banks face new challenges:

- targeting of money supply becomes tough, it is hard to differentiate between broad and narrow money supply;
- weakens credit channel, influences flexibility of money demand against interest rates. Increase in operations with innovative products (futures, forwards, options, derivatives etc.) decreases transparency in balance sheets and financial position of financial institutions, makes central bank’s supervision of assets-liabilities turnover hard;
- may cause volatility and financial overheating in a market, increases financial sensibility of households and corporations, may lead to asset price boom or “resource effect”;
- Because innovations enable development and further integration of financial markets, shock in one market may contaminate others.

From this standpoint, an advanced monetary policy and financial control strategy, that hosts all new challenges needs to be developed, in order to prevent all risks to occur in a preventive mode, effectively manage money supply and financial markets. To that end, in order to adjust to new conditions, traditional tools and prudential regulations need to be reviewed, researches promoted, a policy mechanism renovated, the scope of the toolkit expanded, and in general, a workable mechanism between financial innovations and monetary policy framework launched.

2.4. Institutional base of the monetary policy

The Central Bank continued a targeted performance to develop the institutional base of the macroeconomic management and monetary policy in the first quarter of 2012.

The Central Bank kept tailoring the monetary and financial policy framework to post-crisis challenges and improving international standardization. The Bank followed international discussions on increase of the monetary policy effectiveness and countercyclical macroprudential management in Azerbaijan and continued to study opportunities to apply best practices given local specifics.

The Central Bank conducted works on boost of diagnostics and research potential in a number of directions.

In order to increase the financial stability evaluation capacity risk identification was prioritized. The banking sector sustainability and sensitivity was regularly evaluated through stress-tests and financial stability indicators. The Bank analyzed the necessity for modeling of optimization of the bank capital structure and reviewed Basel III standards to model financial stability and launch a forecasting body. The optimum capital structure for the Azerbaijani banking sector was calibrated, newly proposed capital requirements compared on an international level, as well as the effect of new requirements on the credit portfolio, banks’ capital needs and profitability, interest rates and economic growth rate was estimated. The key goal of studies on estimation of effect of interest rates on economic growth was to determine the impact of interest rates on the country economy (through the savings channel).

The Bank studied evaluation of “resource effect” in Azerbaijan within econometric researches framework. In order to estimate the resource effect, variables like per capita consumption, volume of deposits, disposable income and prices for apartments in the secondary market for the years of 2007 – 2012 were processed through the Vector Error Correction Model and the Dynamic Least Squares Model. Diverse tests were applied to examine econometric adequacy of the models. The study researched the degree of effect of financial and property resources on household consumption, and allocation of short term income growth between consumption and savings.

A concept on development of intellectual resources has been prepared to support future researches. Virtual Central Bank laboratory, e-library, boost of financial awareness, launch of economic knowledge portal projects will be implemented within this concept.
Charts and tables used

Charts
Chart 1. Growth in the world economy 5
Chart 2. Confidence index in the USA 6
Chart 3. Real effective exchange rate 7
Chart 4. Global disbalance 7
Chart 5. Global unemployment 7
Chart 6. World trade 7
Chart 7. Commodity prices index 8
Chart 8. Changes to sovereign ratings 8
Chart 9. Monetary base and domestic liabilities in advanced countries 8
Chart 10. Possible recession probability in 2012 8
Chart 11. Global growth scenarios 9
Chart 12. Trade balance in January – March 10
Chart 13. Quantitative and amount changes in the main export products 10
Chart 14. Quantitative and amount changes in the main import products 10
Chart 15. Remittances inflow in January – March 11
Chart 16. Sufficiency of strategic foreign exchange reserves 11
Chart 17. Ratio of strategic foreign exchange reserves to GDP 12
Chart 18. Money income of the population 12
Chart 19. Change in wages and final consumption 12
Chart 20. Non-food product turnover and services to households 13
Chart 21. Investments 13
Chart 22. Economic growth 14
Chart 23. Non-oil sector economic growth 15
Chart 24. Crude oil and natural gas extraction 16
Chart 25. Expectations 16
Chart 26. Output gap 16
Chart 27. Azerbaijan and the world food CPI 17
Charts and tables used

Chart 28. Average annual change of CPI 17
Chart 29. Inflation 17
Chart 30. Consumer Prices Index 17
Chart 31. APPI and non-oil IPPI 19
Chart 32. Price changes in the real estate market 19
Chart 33. Price expectation index 20
Chart 34. Employment expectation index 20
Chart 35. CBA’s foreign exchange intervention 21
Chart 36. Structure of REER 23
Chart 37. Cycle indicators 23
Chart 38. Parameters of the interest rate corridor 23
Chart 39. CBA notes 23
Chart 40. Change of factors of base money 24
Chart 41. Change in money supply 25
Chart 42. Dynamics of M3 monetary aggregate 25
Chart 43. Monetary Condition Index 25

Tables
Table 1. Recent economic forecasts 9
Table 2. Bilateral nominal and real exchange rate indices 21
Table 3. Monetary aggregates 25