THE CENTRAL BANK OF
THE REPUBLIC OF AZERBAIJAN

№3(11)
2012

MONETARY POLICY REVIEW
Q3

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Acronyms

CBA	–	The Central Bank of Azerbaijan
ILO	–	The International Labor Organization
IMF	–	The International Monetary Fund
SSC	–	The State Statistics Committee
DGCs	–	Developing countries
DDCs	–	Developed countries
OECD	–	The Organization 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	–	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 Organization

EXECUTIVE SUMMARY

Over 9 months of 2012 the Central Bank of the Republic of Azerbaijan implemented its policy in the environment of fragile growth in the global economy, high risks in the Euro zone and volatile world financial and commodity markets.

The foreign economic position of the country was favorable amid high oil prices in world markets. Increase of strategic foreign exchange reserves contributed to the economic sustainability of the country and is capable to fully neutralize global economic risks. The country economy continued to grow which primarily stemmed from the non-oil sector.

Over the reporting period of the current year the Central Bank pursued an adequate policy keeping the factors to affect macroeconomic and financial stability under control. The Central Bank targeted the optimum level of inflation, the exchange rate stability, enhanced growth and sustainability in the banking-financial sector in harmony with the prima directions of the declared monetary and financial stability.

Given high global commodity prices and deep internal demand over the reporting period the Central Bank pursued the anti-inflationary monetary policy. As a result, the exchange rate of manat – the paramount factor of the macroeconomic stability – was stable and inflation remained on a single-digit level.

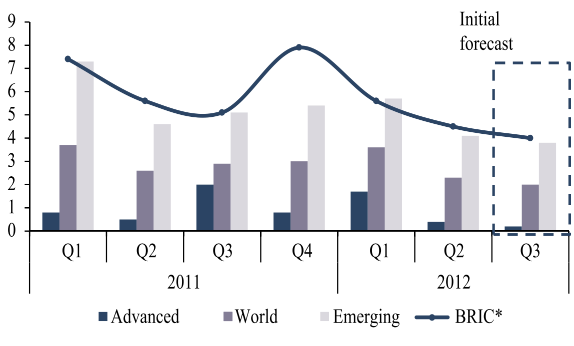
I. GLOBAL ECONOMIC PROCESSES AND THE NATIONAL ECONOMY

1.1. Trends in the world economy

Despite reviving trends in the world economy, the growth rate has slowed down recently. The dwelling sovereign debt problem in the Euro zone, particularly failure of the anti-crisis measures to yield expected results, along with the newly emerging debt crisis in the US, that is posting sound and sustainable growth, have had a negative impact on the global economic growth.

From the second quarter of 2012 onward growth rates of the world economy have slowed down. While the growth was 3.6% over the first quarter, the indicator made 2.3% having decreased by 1.3% percentage points. The public demand, the key driver of the increase in aggregate demand and thus the economic growth in the first phases of the anti-crisis period is already weakening as a result of implemented fiscal consolidation plans. On the background of elevating risks, the bank lending channel, that is the key financing source for private demand is gradually shrinking.

Chart 1. Global economic growth, annual, %



**Brazil, Russia, India, China*

Source: IMF, Barclays Capital, consensus expectations

The accommodative monetary policy remains to be the locomotive for the global economic growth. Central banks continue the policy of further liquidity injections to the economy through low interest rates. However, the accommodative monetary policy pursued by central banks of leading countries is not sufficient for banks to finance the private demand amid incremental recession risks. Downgrade of the credit rating of about half of the 300 largest European banks over the past half year has reduced capability of banks to finance the economy.

Economic growth in the Euro zone has been contracting since the beginning of 2011 and it declined 0.2% in the third quarter of the current year. Annual 0.3% growth in Germany, that is in the Euro zone, draws particular attention. The economies of Portugal (-1.2%) and Finland (-1.1%) were the most slacking, while Sweden (1.4%), and Norway (1.2%) were the most surging economies. Despite decline in intermediate consumption and investments in the Euro zone, the economic growth mainly stems from net export as Euro depreciated. The sovereign debt problem in the region remains pronounced. By the yearend the ratio of the sovereign debt to GDP is assumed to be 93.6% in the Euro zone, including 170.7% in Greece and 126.3% in Italy. In general, notwithstanding the deepened economic crisis in the Euro zone, according to the latest release by the World Economic Forum, Switzerland takes the first place on the competitiveness index, whereas Finland, Sweden, Holland and Germany are in the top 10.

The economic growth rates witnessed in the US economy since the end of 2009 are slowing down. Whereas the growth made 2% in the first quarter, it dropped to 1.3% in the second quarter. Fiscal consolidation is the key factor in decline in aggregate demand.

Box 1. Fiscal multipliers

The fiscal multiplier is the ratio of a change in output (ΔY) to an exogenous change in the fiscal deficit (ΔG). Although the fiscal multiplier is partially differently estimated depending on the time span, it is primarily determined through the following equation:

$$M_f = \frac{\Delta Y(t)}{\Delta G(t)}$$

The size of the fiscal multiplier is country, time- and circumstance-specific. According to the IMF staff calculation, the multiplier ranges around 1.5 – 1.0, in the countries with large economies, 1.0 – 0.5 for medium size economies and around 0.5 for small size open economies. Another point is that small multipliers primarily emerge from revenues and transfers, while relatively big multipliers – from investments spending.

The impact of the degree of the financial market development on the size of the fiscal multiplier is uncertain. Mostly it depends on (i) how the degree of financial development affects liquidity constraints and (ii) the government's ability to finance the fiscal deficit. Poorly developed financial markets limit the ability for investment and consumption smoothing, which increases the multiplier. On the other hand, the degree of financial market development raises the effect of transmission of budget deficit on interest rates. In countries with limited access to financial markets governments should issue bonds with high interest rates to finance the budget deficit, which naturally decreases the size of the multiplier. However, in financially repressed countries interest rates will go down due to more capabilities to diversify the debt, which raises the size of the multiplier.

The impact of the crisis on the multiplier is not ambiguous:

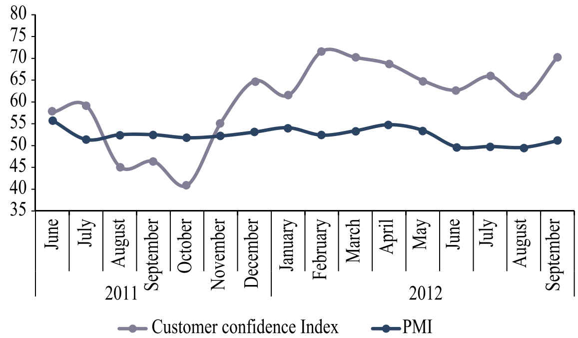
- Uncertain economic expectations reduce both propensity to consume and the size of multipliers.
- The ongoing deleveraging limits access of individuals and legal entities to lending and increases the multiplier.
- On the other hand, the extremely accommodative monetary policy and its long life expectancy raises the fiscal multiplier.

Temporary or permanent changes in the fiscal policy influence the multiplier. For instance, temporary reductions in income taxes reduce concerns about sustainability, but have less effect on consumer behavior. However, temporary reductions in taxes for goods and services (decreases in taxes on automobiles, in VAT rates, or investment) may trigger consumption. As a rule, permanent measures give a higher multiplier than temporary measures in interventions that work through income (e.g. tax cuts).

Source: Antonio Spilimbergo, Steve Symansky, and Martin Schindler «Fiscal Multipliers», IMF, May 2009

Drop in the world aggregate demand has a negative effect on increase in the US export. In parallel, uncertainties related to elections in the country stipulate cautious behavior on investments. Unemployment tends to decline, which may be considered positive.

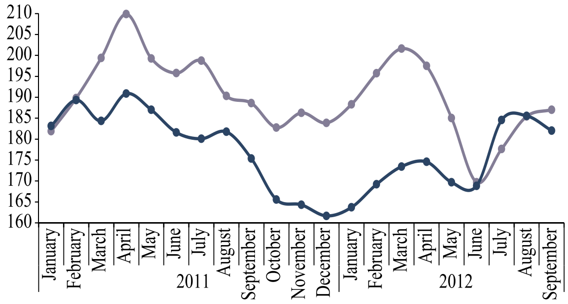
Chart 2. Confidence Indices in the USA



Source: Federal Conference Board

Over the reporting period global commodity markets were highly volatile. Compared to the prices of the beginning of the year, the commodity prices index went up 1.7%, while the food prices index went up 12.6%. High food prices sourced from the prices for grain and sugar. Price rise is primarily related to climatic conditions (drought) and high investor appetite over food.

Chart 3. Price Indices



Source: IMF

Box 2. Demand for gold in the world market

Gold is considerably accelerating to become an investment tool in the post-crisis period. In total, price change for gold have prevailed over that of the global demand change by 4.4 times as much.

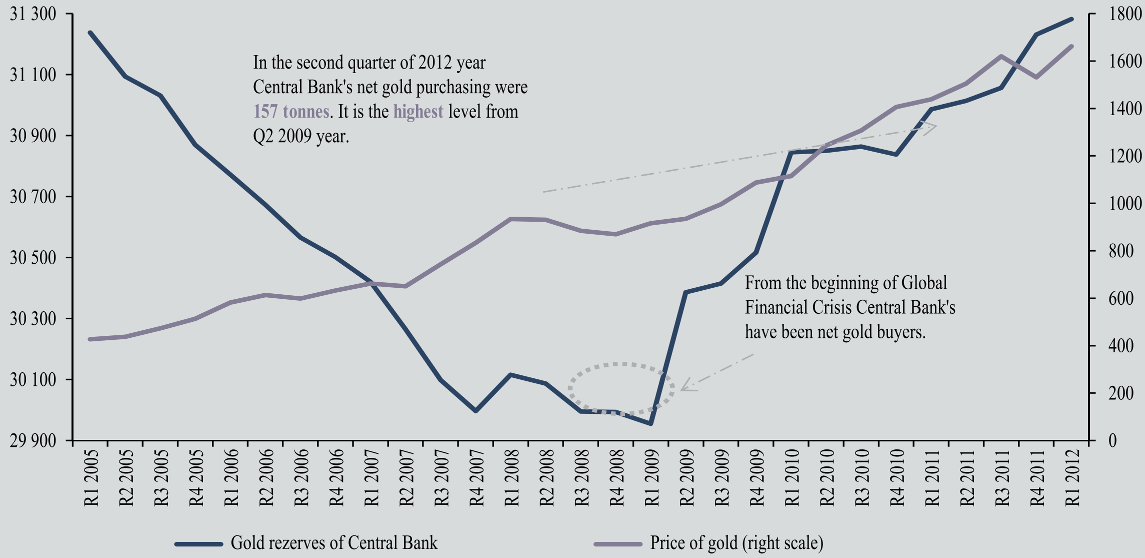
The structure of the demand for gold in the world market consists of 4 elements:

- piece of jewellery
- investment tool
- technology demand
- public sector demand (reserves)

Over the first half of 2012 demand for gold made 2090 ton. Gold was primarily purchased as an investment tool and public sector demand. Since the key principle in management of state strategic reserves is reliability rather than profitability, central banks prefer purchase of gold in existing uncertainty. Currently, gold takes about 15% of central bank reserves throughout the world.

Central banks of leading economies hold major part of their reserves in gold, which is becoming a reliable saving tool. Golden reserves of central banks in the US, Germany, and France take 70% of total reserves. Dwelling tension in global financial markets, low level of confidence, pessimistic prospects give grounds to the fact that gold will remain a sympathetic key investment tool in a medium run and prices will maintain a high level.

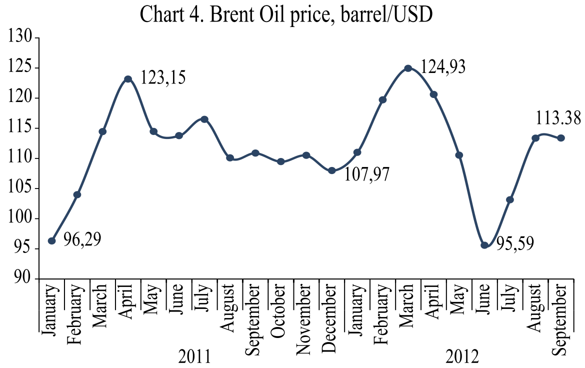
Gold rezerves and prices



Source: Central Bank of the Republic of Turkey, "Financial Stability Report November 2009", World Gold Council

While prices for Brent crude oil declined over the past quarter, price rise made 5% compared to the beginning of the year and 18% - the previous quarter. The year over year oil price nearly kept the same level (USD112.4).

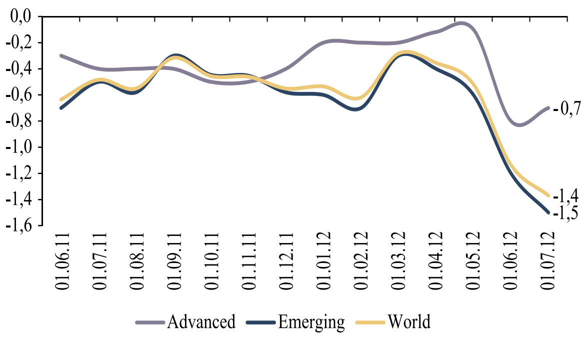
Chart 4. Brent Oil price, barrel/USD



Source: IMF

The problem of unemployment remains vital for the world economy. According to the ILO, unemployment is 7.8% in the US and 11.4% in the Euro zone. Unemployment among the youth remains high.

Chart 5. Unemployment, %



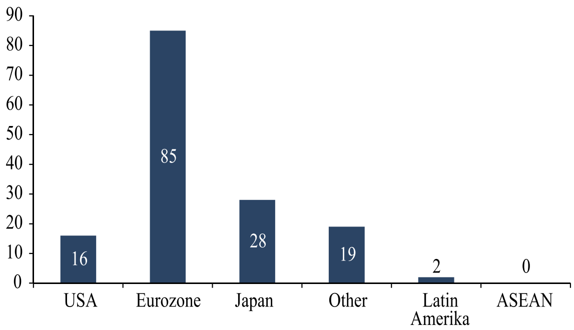
Source: International Labor Organization

Availability of serious risks over the financial stability is of the factors negatively averting global economic prospects. The LIBOR crisis that caused weak confidence in the banking sector, further deterioration of the quality of bank assets, "swollen" balance sheets of central banks of developed countries, the probability of devaluation of Euro factor in high sensitivity of the financial stability.

Overall, the world economy is currently facing 3 risk groups:

- Recession in the Euro zone
- Deep fiscal challenges in the US
- Lagging in the Chinese economy

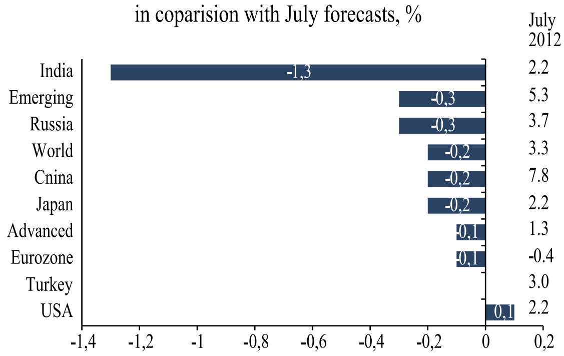
Chart 6. Resession probability of the world economy, %



Source: IMF

Worsening global financial and economic prospects forced leading financial institutions to revise growth expectations.

Chart 7. Latest corrections to 2012 economic growth projection, in coparision with July forecasts, %



Source: IMF

Thus, global economic prospects may be negatively evaluated amid elevating risks. However, ongoing, though fragile, global economic growth, rise in prices for raw materials create grounds for surplus of the balance of payments of oil exporting countries.

1.2. Macroeconomic processes in Azerbaijan

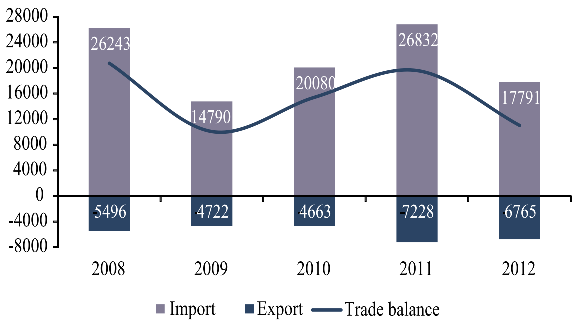
Over 9 months of 2012 the country economy continued to grow in the environment of a favorable foreign position and expanding internal demand. State support for the economic activity, ongoing structural and institutional reforms also had a positive effect on the *economic growth dynamics. Despite certain risks imported from the global environment, macroeconomic and financial stability was maintained over the period.*

1.2.1. External sector

Recent processes in the global economy resulted in decline in oil prices in world markets, however, the external position underwent positive dynamics in 9 months of 2012 at the expense of high oil prices. Average price for the Azerbaijani oil reached USD114 which had an upward effect on foreign exchange reserves of the country.

According to the SSC, the foreign trade turnover was USD 24.6 billion in 9 months of the current year, out of which USD 17.8 billion goes to the share of export and USD6.8 billion – to import. Surplus of the foreign trade balance was USD11 billion.

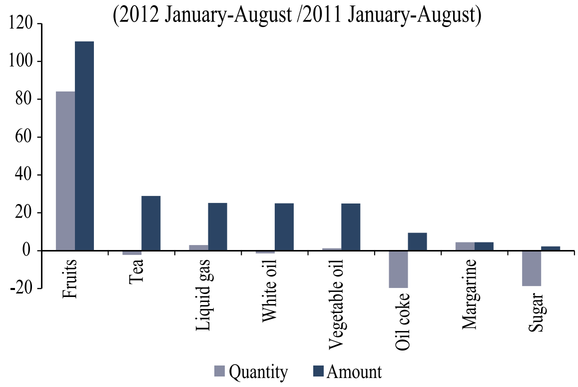
Chart 8. Foreign trade in January-September, USD million



Source: SSC and CBA

The export of fruits, liquid gas, tea, vegetables etc. followed an incremental path. While the quantity of exported goods decreased in certain sectors, an inverse process was observed in others.

Chart 9. Quantity and amount changes of primary export goods, % (2012 January-August /2011 January-August)



Source: SSC

Import of polyethylene, durables, fertilizers, automobiles etc. was high. Machines, mechanisms and vehicles made 40% of import, which declined about 13% during the period. The parallel decline in a number of food products indicates high domestic production.

Chart 10. Quantity and amount changes of primary import goods, % (2012 January-August /2011 January-August)

Source: SSC

In total, most imports increased in terms of both quantity and amount. Some products decreased in terms of quantity, however increased in terms of amount.

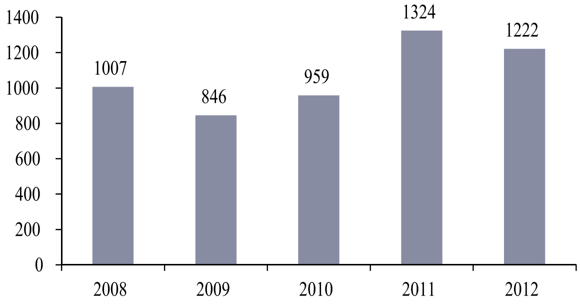
According to the SSC, prices for the Azerbaijani export commodities surge more rapidly than those of imports, which display increase in opportunities to import more commodities and services through less export, in other words, improved trade conditions.

According to the IMF expectations, the surplus of current account balance will take 21% of the GDP as of the yearend. The country is the sole leader in the CIS by this indicator and takes one of the leading places among the DGCs. The Fund expects the large scale surplus to linger in a medium run as well.

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

According to the most preliminary data, in 9 months the size of inflows was more than USD1 billion.

Chart 11. Remittances inflow in January-September, USD million

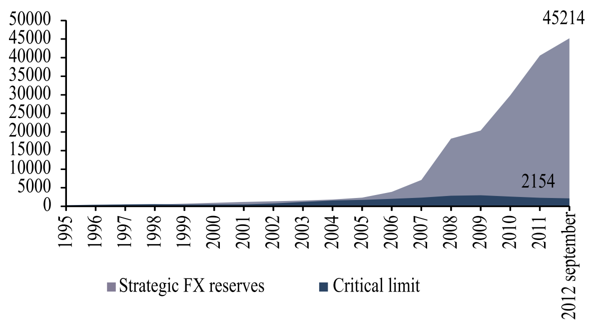


Source: CBA

According to the SSC, the size of foreign investments to the economy exceeded USD2 billion having gone up by 12% over the period.

In January – September of 2012 foreign exchange reserves of the country grew by 11% against the beginning of the year and surpassed USD45 billion which is sufficient for three-year import of goods and services.

Chart 12. Sufficiency of strategic FX reserves, USD million



Source: CBA

Meanwhile, the CBA's FX reserves increased by 10% and reached USD11.5 billion, sufficient to finance one year goods and services import.

Chart 13. Ratio of strategic FX reserves to GDP, %

Source: CBA

Currently, the FX reserves to the GDP ratio are around 70%. In general, a high growth rate of strategic FX reserves is the factor that dampens vulnerability of the country economy to possible foreign shocks or shapes a robust macroeconomic buffer.

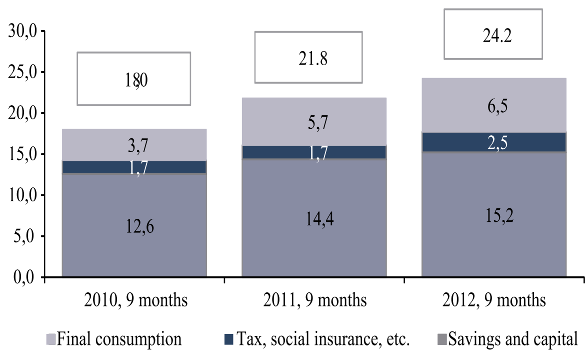
1.2.2. Aggregate demand

In 9 months of 2012 all components of the aggregate supply, including final consumption expenditures, investments and external demand positively contributed to the economic growth. During the period increase in income of the population and domestic investments to the economy revived all components of the GDP.

1.2.2.1. Final consumption expenditures. In 9 months of the current year final consumption expenditures were one of the key drivers of the economic growth.

Households' consumption. Over the period year over year per capita nominal money income of the population increased by 12% and made AZN 2644.7 or AZN 293.9 on monthly average. The households directed roughly 62.9% of the income to final consumption at purchase of commodities and services. Year over year increase in final consumption expenditures of the population was 6% in nominal terms and made AZN 15.2 billion, or equaled to 30.4% of the GDP.

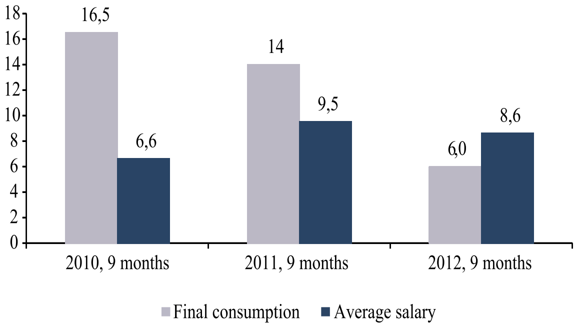
Chart 14. Money income of population, AZN billion



Source: SSC

Average monthly salary increased by 8.6% and reached AZN 387.5, which contributed to the high share of the final consumption in the GDP.

Chart 15. Changes in salary and final consumption, %

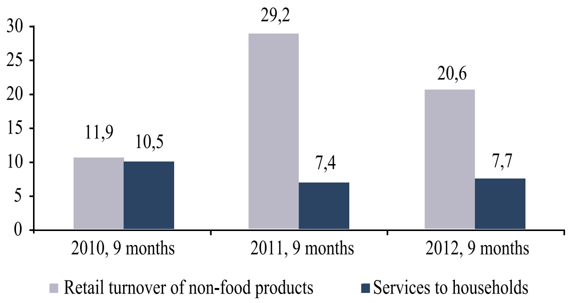


Source: SSC

Parallel step-up in loans to households also had an upward effect on demand. Thus, loans to households rose by 21.9% (by commercial banks and NBCIs) in 9 months.

The increase in retail trade turnover and off-free services contributes to aggregate demand.

Chart 16. Commodity turnover, %



Source: SSC

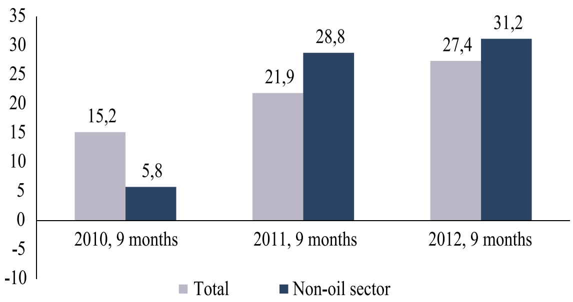
In 9 months of the current year the retail trade turnover went up by 9%, whereas retail trade turnover on non-food products increased by 20.6%. Rise in off-free services to the population made 7.7%.

The findings of the CBA's real sector monitoring suggest that, over the period the size of trade commodity stock diminished and its index dropped to 10 from 21 against the relevant period of the previous year.

Government and public organizations. During the reporting period the main share of Government consumption expenditure was spent on goods and services. In January – August salaries, pensions and allowances to the population was 22.5% of budget expenditures.

1.2.2.2 Investment expenses. In 9 months of 2012 investment to the economy from all sources rose by 27.4% and constituted AZN 9.9 billion, equal to 25% of the GDP. It included 79.4% increase in domestic and 20.6% increase in foreign investments.

Chart 17. Changes in investment, %



Source: SSC

74% of investments were channeled to the non-oil sector. In total, year over year increase in investments to the non-oil sector surpassed 31.2%. Of the non-oil sector, the growth rate of investments to agriculture, construction, communications and information technologies was particularly high.

1.2.3. Aggregate supply

In January – September of 2012 the GDP grew by 1.1% in real terms and reached AZN 40 billion in nominal terms. Growth of the non-oil sector over the reporting period constituted 10.2%. The two thirds of the additional value added was the share of production and one third – services.

Box 3. Financing mechanisms of social security

One of the indicators of inclusiveness of economic development is a high quality social security of its members. Recently methods and mechanisms of qualitative social security have been widely discussed. Five different methods of providing social security are as follows: (i) social insurance – *utilization of previously saved funds;* (ii) social assistances – *tax-financed assistance provided only to vulnerable population;* (iii) universal benefits – *equal social benefits for all;* (iv) employers liability provisions – *benefits to employees related to employment injuries, maternity, sickness etc.;* (v) savings funds – *financing through individual social savings accounts.*

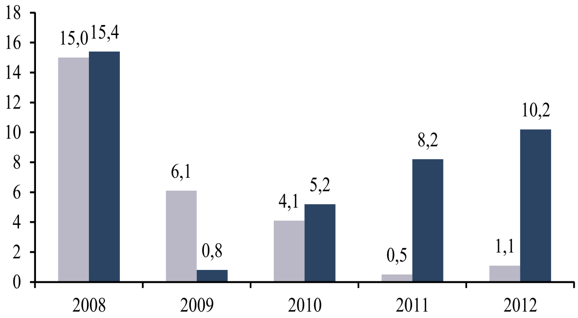
Social security funding options are also widely debated. The advantages and disadvantages of the options are summarized below.

<table>
<tr><th>Advantages</th><th>Disadvantages</th></tr>
<tr><td>Government funding provides for universal schemes that are strong in social solidarity and transfer of wealth to the lower paid workers. They can be means tested and targeted at those most in need. Payments under the schemes are the same for all eligible beneficiaries.</td><td>Government funding is subject to taxation and collection capacities and requires strong governance. Highly paid workers are often dissatisfied with their benefits when compared to their contributions (taxes). When there is a high ratio of beneficiaries to contributors (taxpayers) as is the case in developing and aging countries, the demand on the small workforce may be untenable.</td></tr>
<tr><td colspan="2">The key debate here is built upon whom – employees, employers or government through utilization of government's tax income, make more contributions to the social security system. Social security funds may function semi-independently, they should exceptionally make payments. Universal mechanisms (government) provide for equal, sometimes need-based rates for all members.</td></tr>
<tr><td>Private sector funding may be more effective at investing funds. Competition among funds maximizes efficiency. At the same time, private pension funds, that do not generate institutional challenges, may contribute to the whole economy promoting development of the financial sector.</td><td>Private sector funding may pose a greater risk of mismanagement. Competition may increase costs, it is difficult for contributors to take informed decisions. Thus, the key challenges are management risks, high costs and low transparency probabilities.</td></tr>
<tr><td colspan="2">The key debate here is who should manage saved funds – government or private sector (private pension funds).</td></tr>
</table>

Source: International Labor Organization, Social Protection for All Men and Women, 2006

Economic growth. The GDP rise stemmed from the activity in the non-oil sector. Thus, half of the GDP fell to the share of the non-oil sector, that made a 5 percentage point upward contribution to total growth.

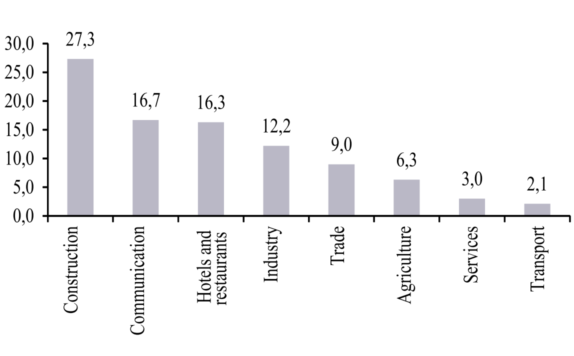
Chart 18. Economic growth in January-September, %



Source: SSC

In 9 months of the current year all segments of the non-oil sector posted growth. The highest growth rate among segments was in construction, hotels and restaurants and catering, communication and processing. Growth in the industry mainly sourced from food industry, metallurgy, machinery and chemistry. The high growth rate in agriculture owes to both crop sector and livestock.

Chart 19. Non-oil economic growth, %



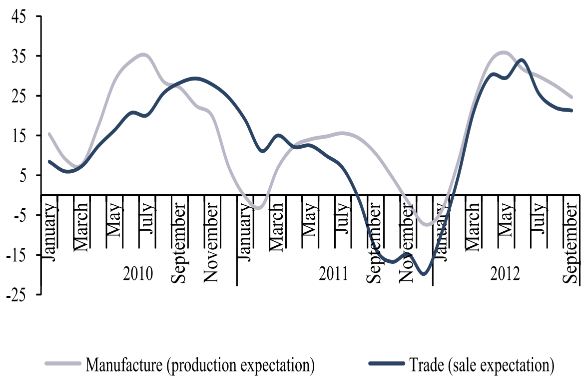
Source: SSC

While crude oil extraction went down by 7.1%, natural gas production went up by 5.3% over the reporting period. Over 674 kg gold and 378 kg silver was extracted during the period.

Economic growth expectations. According to forecasts of the Government, as well as international institutions, the economic growth is expected to endure in the country in the nearest horizon. The IMF, in its recently released economic outlook, indicates that the economic growth in Azerbaijan will continue in the current and following years. The Fund predicts 3.9% and 2.7% growth respectively for 2012 and 2013[1]. In general, the UN, the IMF, the EBRD and the WB forecasts shows on average 3.5% 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. Positive expectations were particularly observed in food, construction materials production and textile subsections, and furniture and household appliances segments of trade. Such positive expectations resulted in decrease of stocks. In general, findings of the RSM conducted by the CBA in recent months demonstrate increase in the number of enterprises with incremental production and risen turnover and sustainability of this growth.

Chart 20. Expectations



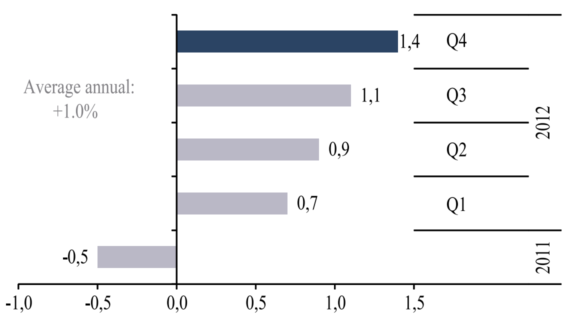
Source: CBA
Note: Moving average is used to smooth out fluctuations, as monitoring findings are likely to be exposed to seasonal changes

According to the CBA estimations, the output gap (gap between the potential and actual levels of the GDP) is expected to be positively zoned being equal to about +1% having shifted from

[1] Source: IMF, www.imf.org / World Economic Outlook, October 2012

-0.5% of 2011. High public demand will play a significant role in positive zoning of the output gap.

Chart 21. Output gap, to previous quarter, %



Source: CBA

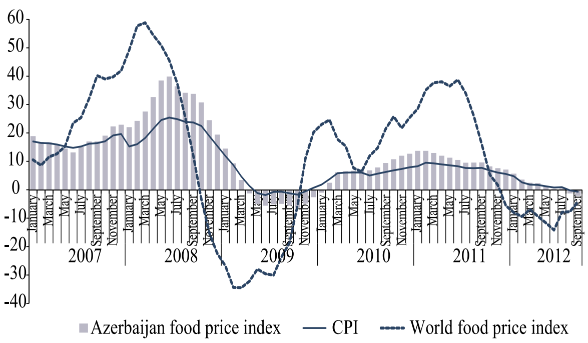
1.2.4. Macroeconomic equilibrium

Despite rising prices for food products in world commodity markets and increase of aggregate demand the country economy remained macroeconomically stable. In 9 months of 2012 prices for agricultural products went down aided by single-digit inflation.

1.2.4.1. Consumer Price Index (CPI).

In 9 months of 2012 average annual inflation made 1.5% which significantly falls below the year over year level. Thus, while food prices went up by 3.4% in 9 months of 2011, they went down by 5.5% in 2012 which eventually resulted in deflation (-2.7%) in overall prices.

Chart 22. Azerbaijan and world food CPI (year on year, %)

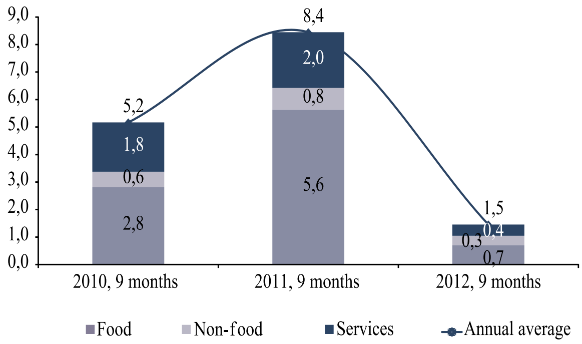


Source: CBA estimations on the basis of SSC and FAO data

The average annual inflation on non-food products rose 1.2% and relatively remained stable against the beginning of the year. Prices for services increased by 0.3% compared to the beginning of the year, average annual being 1.4%.

The decomposition analysis of inflation in 9 months of 2012 indicates that inflation was caused by price swings in food products. Thus, 0.7 percentage point of average annual inflation relates to increase in prices for food products, 0.4 percentage point – non-food products and 0.4 percentage point – services.

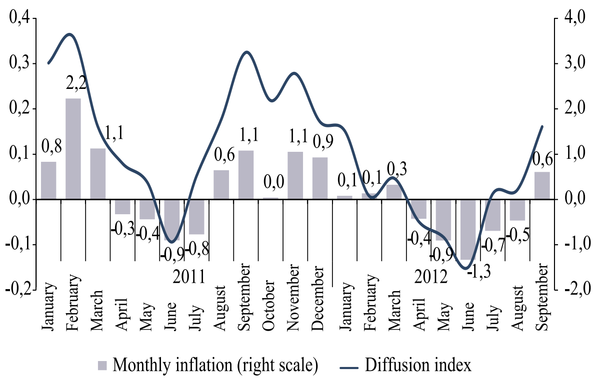
Chart 23. Annual average CPI, %



Source: CBA estimations on the basis of the SSC data

Core inflation, adjusted from swings in prices for commodities regulated by the government and seasonal factors, made 1.9%, while it was -0.3% at the beginning of the year. The *diffusion*[2] index that addresses comprehensivity in price swings displays that current price rise falls below the year over year level. In other words, the number of products with rising

Chart 24. Diffusion index



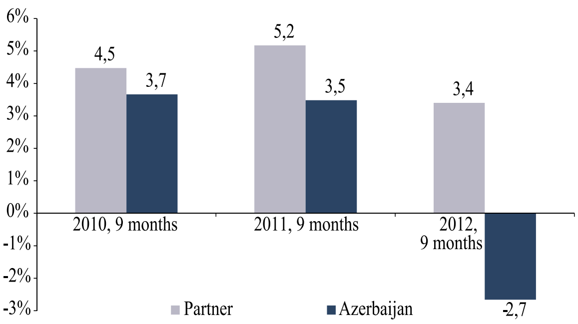
Source: SSC

[2] Diffusion index- the difference between the number of products in the consumption basket with price upswings and those with downswings to the total number of products ratio.

prices in the consumption basket prevailed, the comprehensivity of the price swing shrank.

In 9 months of 2012 inflation was 1.1% in trade partner DDCs, 3.5% in DDGs and 5.1% in oil exporting countries. In total, 3.4% inflation was witnessed in trade partners, which surpassed that of Azerbaijan by 6.1 percentage points.

Chart 25. Consumer Price Index (domestic and partners), %



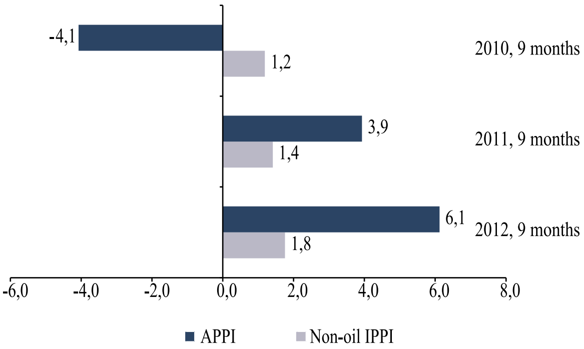
Source: SSC

1.2.4.2. Industrial Producer Price Index (IPPI). Over three quarters of 2012 the average annual IPPI went up by 6.1% which is put down to price rise in many sectors of the economy. Thus, on average annual producer prices were up by 11.7% in garments production, 6.8% in the mining industry, 5.9% in metallurgy, and 2.1% in the chemical industry. In parallel, certain sectors of the industry went into decline. Price downswing was 8.9% in production of rubber and plastic mass, 6.0% in tobacco, 5.8% in food products and 4.1% in textile industry. Prices for non-oil industry products rose by 1.2% against the beginning of the year.

1.2.4.3. Agricultural Producer Price Index (APPİ). In 9 months of 2012 the APPI on average went down 0.8%. Decline in the price dynamics primarily was 2.5% on annual plants and 4.4|% on perennials. Price upswing was 1.3% in livestock and livestock products.

1.2.4.4. Real estate prices. According to the MBA LTD Appraisal and Consulting Co, the activity observed in the real estate market in

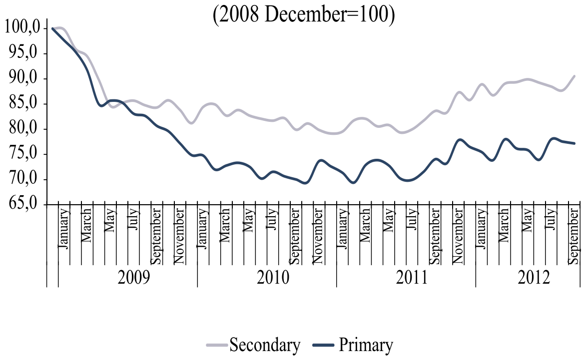
Chart 26. APPI and non-oil IPPI, % (December=100)



Source: SSC

the first half of 2012 relatively slowed down in the third quarter of 2012. In total, in 9 months of 2012 prices rose 5.5% in the secondary housing market and 0.9% in the primary market. The price upswing in the secondary market is primarily explained by shrinkage of supply in the real estate market (MBA LTD Appraisal and Consulting Co). However, the price for 1 sq.m residential area is 9.5% below in the secondary housing market and 22.8% below in the primary market against December, 2008. Over the period the rent fee went 9.6% up in residential and 4.3% down in commercial objects.

Chart 27. Price change in real estate market, %
(2008 December=100)



Source: «MBA LTD» Appraisal and Consulting Co

Ongoing mortgage lending also had an upward effect on the activity in the real estate market, particularly in the secondary market. In 9 months of 2012 banks issued AZN 45.6 million worth mortgage loans, while the scale of mortgage lending refinanced by the Azerbaijan Mortgage Fund constituted AZN 69.5 million.

Box 4. Inflation targeting regime and the financial market

Inflation targeting may be an effective policy both for DDCs and DGCs. Researches in financial institutions of the US unveiled that central banks not only achieve low inflation through inflation targeting, but also decrease volatility in financial markets. In order to measure the effect of inflation targeting on financial markets an index has been developed and performance efficiency of a central bank estimated on 10 elements. The estimation utilized 0 – 3 scoring system (bottom to top):

- *Target independence:* If a central bank independently targets inflation, it gets 3. Central banks that determine the target jointly with governments, get 2, while those that follow the target determined by governments get just 1.
- *Target range:* If the range of targets of central banks falls below 3%, it gets the highest score. If the inflation target ranges between 3 – 5%, the score is 2, and over 7% - 0.5.
- *Scale of inflation target:* Central banks, that target overall inflation get 3, those targeting the core inflation get 2.
- *Timeframe for reaching the target:* If central banks establish short-term one year targets, the score is 3. Long-term inflation targets get lower scores depending on the term.
- *Other targets:* If central banks have targets other than price stability, the score is lower.
- *Non-availability of alternative anchor:* If central banks have no additional anchors when targeting inflation, they get 3.
- Target aversion: If a central bank has no other alternative other than to meet targets in the order specified in the legislation, it gets the highest score. Exceptions reduce the score.
- *Take responsibility to meet the target:* If a central bank is kept responsible for meeting a statutory target, it gets 3.
- *Publishing of inflation forecast:* Central banks capable to publish inflation forecasts can effectively reduce volatility in financial markets and this function scores 3.
- *Tool independence:* If a central bank can independently use financial tools to meet the established target, it testifies more effective implementation of inflation targeting and gets a high score.

Central banks can get maximum 30 scores through the above evaluation method which proves that they successfully manage volatility in financial markets and are reliable financial institutions.

The research suggests that the direct inflation targeting policy protects a financial market from sudden shocks and speculative attacks.

Country	Index
Sweden	27
New Zealand	27
Korea	24.5
Great Britain	26

**Source: Applied Financial Economics, Inflation Targeting and Financial Market Volatility*

1.2.4.5. Inflation expectations. According to international financial institutions, inflation is expected to maintain a single-digit level in 2012. The IMF, in its latest release, predicts 3% average annual inflation for Azerbaijan in 2012, which falls respectively below that of the CIS and DGCs by 3.8% and 3.1%.

The regular Real Sector Monitoring by the CBA suggests no significant increases in price expectations in the economy. Over three quarters of 2012 price expectations are positively zoned in the industry, and negatively zoned in trade and construction.

1.2.4.6. Employment. As of the end of the reporting period economically active population was numbering 4639 thousand, out of which 4394.8 thousand are engaged in the economy

Box 5. Estimation of the correlation between the investment to the real estate market and prices

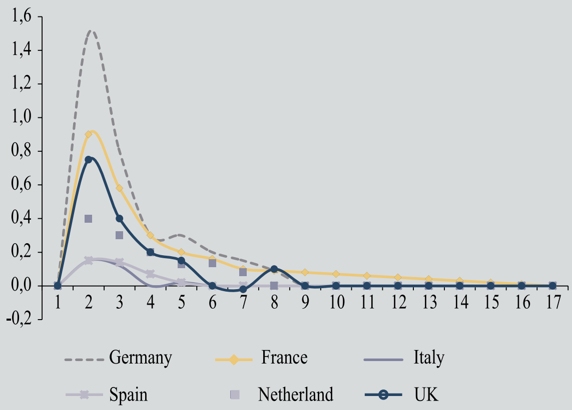
Over recent 40 years the share of investments to the real estate market in the EU countries in the GDP has ranged between 3–8%. Though small, the construction sector in European countries is labor intensive, capable to trigger cycles in the economy. From this standpoint, it is essential to measure the correlation between investments channeled to the real estate sector and prices in secondary and primary markets. In order to identify the processes in the real estate market in the EU countries and measure "*the wealth effect*" the impact of price swings to investments have been estimated through econometric methods on 6 economies (*Germany, France, Italy, Spain, Netherlands and the United Kingdom*). The estimation considered processes in the short- and long-run. The model utilized employs the GDP, long-term interest rates and land prices as the key factors of investments to the real estate market:

$$\Delta Y_{i,t} = \mu_i + \sum_{h=1}^{M} \delta_{i,h} \Delta Z_{i,t-h} + \sum_{c=1}^{C} \delta_{i,M+c} \Delta Y_{i,t-c} + \beta^{/} e_{i,t-1} + \vartheta_{i,t}$$

Y- investment, Z- set of factors affecting investmentsv

The countries included to the estimation take 80% of the EU's GDP. There is a considerable gap between the real estate prices and investment changes in each country. Thus, according to the findings of the econometric estimation, 1% upswing in real estate prices in a short-run results in 0.85% investments in Germany, and 0.20% in France and Spain. It has also been determined that investment in these countries has a multiplicative effect. Thus, a 1% increase in investments to real estate leads to respectively 0.6% and 0.7% investment growth in France and Spain over the following 4 quarters.

Affecting of 1% change in real estate prices on investments



It should also be mentioned that, dwelling price gaps in the EU countries may be explained not only by economic hindrances, but also obstacles in the construction process. Hence, according to the World Bank Doing Business report – 2011, while it takes 100 days to obtain a permit for construction in Germany, it takes on average 257 days in South European countries.

Source: "House price responsiveness of housing investments across major European economies". European Central Bank, Working Paper series, August 2012

Box 6. Monetary policy and the real estate market

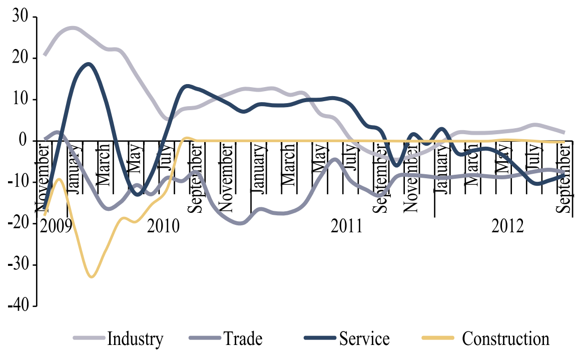
In recent years there have been debates over whether central banks should take asset prices into account in their decision-making. Thus, real estate prices have a direct or indirect impact on establishment of the monetary policy direction from a number of prospects:

- Real estate prices have a direct effect on inflation. The size of this effect depends on the share of the "*owned accommodation*" component in the CPI. The "*owned accommodation*" component incorporates interest rates on mortgage loans, the size of property taxes, repairs spending and property insurance.
- Price up- or downswings in the real estate market affects the "*real estate expenses" of household spending* in the economy. Housing expenses include rent fees, regular mortgage payments, real estate registration fee, utilities etc. Since the size of housing expenses is of vital indicators of the aggregate demand in the economy, it has a direct influence on the monetary policy effectiveness. Price changes in a market may lead to "financial-accelerator effect" (serious changes in the economy due to slight changes in the financial market in a short run) capable to trigger unavertible results. Price rise in the housing market creates new financing sources for owners. Market players may pledge the same property as collateral with new prices to obtain more borrowing, which may cause a subsequent rise in "*household spending*".
- A significant increase or decrease in house prices from historic norms may cause «bubbles», that can have an impact on the real economy. Bubbles distort decision-making and impede an optimal allocation of resources. Eventually, it results in serious losses in the economy. The most efficient way for central banks to avoid the cases of the kind is to achieve low, stable and predictable inflation.

The key to focus on establishing the monetary policy is to which extent the decisions taken cause effective changes in the housing market in harmony with the timing and circumstances and how much they support the economic growth. Moreover, new financial tools have an effect on financing terms and conditions in the housing market. Central banks should prioritize this issue when determining the monetary policy direction. Lastly, transparency in the housing market and education of market players both eliminate possible negative impacts, and enable more sound implementation of the monetary policy.

Source: Sheryl Kennedy "Real estate, Mortgage Markets and Monetary Policy" Bank of Canada, 2008

Chart 28. Price expectation indecies (3 months moving average)

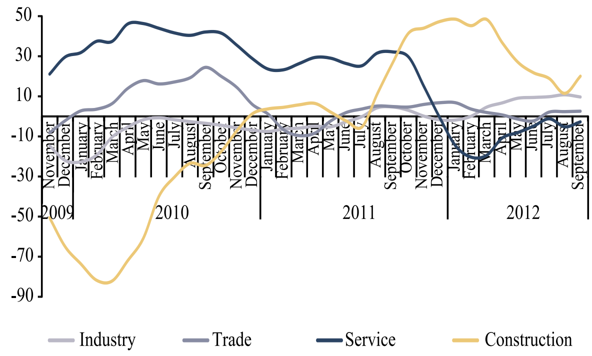


Source: CBA

and various sectors of the social area. According to the SSC, in January – August hired labor was numbering 1376.9 thousand, out of which 1339.8 thousand persons are employed with the non-oil sector and 37.1 thousand in the oil sector. In 9 months of 2012, 93.6 thousand new, including 72.7 thousand permanent jobs were created in the country.

The CBA observations within the real sector monitoring in up to 300 enterprises demonstrate increase in employment. The important increase in the number of employees was observed in trade, construction and industry and it is expected to rise in the following months. This growth is expected to continue in the following months. Thus, employment expectations index is positively zoned in industry, trade and construction and negatively zoned in services.

Chart 29. Employment expectation index (3 months moving average)



Source: CBA

II. MONETARY AND EXCHANGE RATE POLICIES

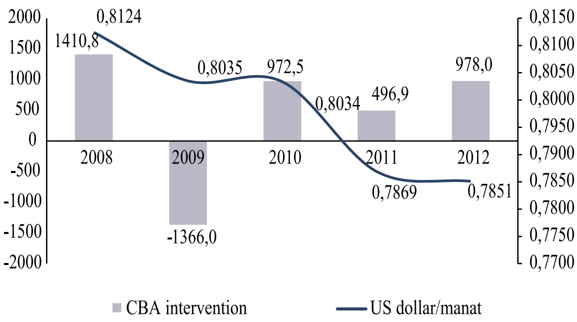
In 9 months of 2012 the Central Bank targeted a single-digit level of inflation, prevention of volatility of the exchange rate of manat, maintenance of stability in the banking – financial system and supply of money in the economy under the declared directions of the monetary policy.

2.1. FX market and the exchange rate of manat

In the current year the CBA also conducted its exchange rate policy targeting the bilateral exchange rate of USD/AZN within the corridor.

In the environment of large surplus in the balance of payments of the country, supply prevailed over demand in the FX market. However, the CBA sterilized USD978 million worth currency in 9 months in order to prevent significant strengthening of the exchange rate, and neutralize the impact on the competitiveness of the non-oil sector.

Chart 30. CBA intervention in 9 months, USD million



Source: CBA

As a result, manat strengthened against USD at a moderate rate - only 0.17%. The stable exchange rate of manat had a positive effect on the macroeconomic environment in the country and the financial sector stability.

The dynamics of the nominal bilateral

Table 1. Bilateral nominal and real exchange rate indices of manat in the first half of 2012, in %

	Against December, 2011	
	Nominal bilateral exchange rate index *	Real bilateral exchange rate index
USA	100.1	95.7
Euro zone	102.7	98.1
Great Britain	97.0	93.0
Turkey	96.6	91.0
Russia	100.2	92.7
Ukraine	101.5	99.2
Georgia	99.9	98.5
Iran	111.9	95.6
Kazakhstan	101.4	94.9
Japan	100.6	97.8
Israel	104.7	99.9
China	99.7	95.6
Belarus	99.6	83.7
S. Korea	98.0	93.7

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

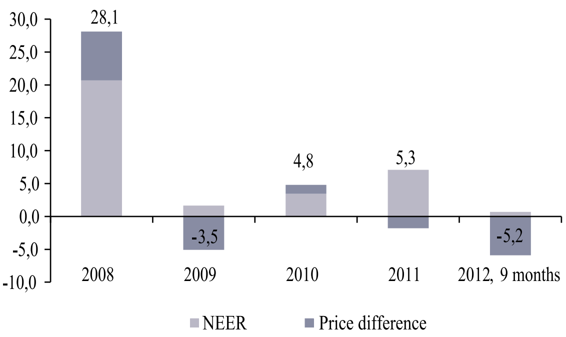
Source: CBA

exchange rate of manat changed real bilateral exchange rates. In January – September manat did not strengthen against any national currency in real terms. Manat depreciated against the currencies of Great Britain, Turkey, Georgia, China, Belarus and S.Korea both in real and nominal terms. While manat appreciated against the currencies of the USA, Euro zone, Russia, Ukraine, Iran, Kazakhstan, Japan and Israel in nominal terms, it depreciated in real terms.

In 9 months of the current year the NEER on the non-oil sector (trade turnover weighted) appreciated 0.7%. The gap between the inflation in partner countries and in Azerbaijan had a 5.9 percentage point downward effect on the REER.

As a result, the REER of manat depreciated on the non-oil sector only by 5.2% in 9 months.

Chart 31. Structure of REER, %



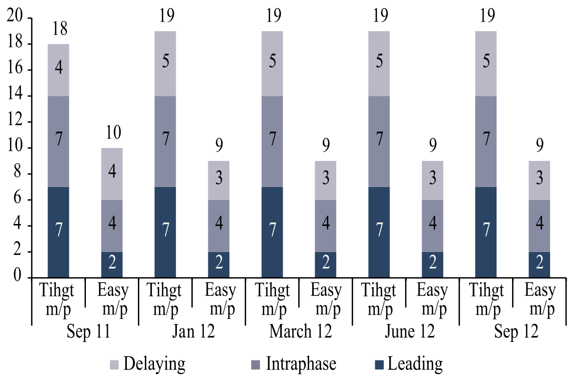
Source: CBA

Thus, the CBA maintained bilateral exchange rate stability of manat over the reporting period. The real multilateral exchange rate of manat depreciated, which stands for improved competitiveness of the non-oil sector.

2.2. Monetary policy tools

The key goal of the monetary policy in 9 months of 2012 was to ensure control over inflationary factors and their regulation in a preventive regime within the established target. The ratio of the economic cycle indices in favour of tightening and easing of the monetary policy remained unchanged during the period.

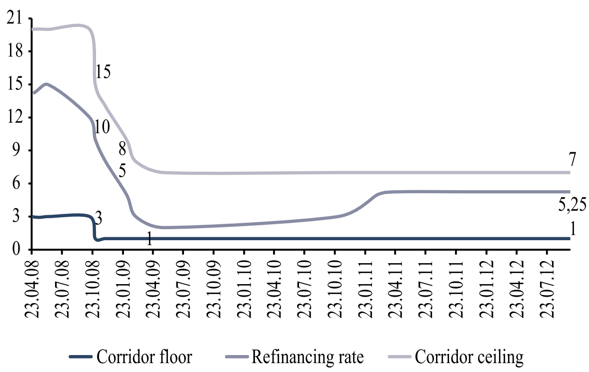
Chart 32. Cycle indicators



Source: CBA

Given worsening of optimistic predictions on the global economic growth, relatively stable oil prices in recent months and food price reduction expectations by the end of the year, no changes were made to the interest rate parameters and the refinancing rate was maintained at 5.25% over the period.

Chart 33. Parameters of interest rate corridor, %



Source: CBA

To regulate the growth rate of money supply, as well as increase the level of provisioning in the banking system, the reserve requirements on banks' internal and external liabilities in manat and precious metals were raised from 2% to 3% from the beginning of 2012.

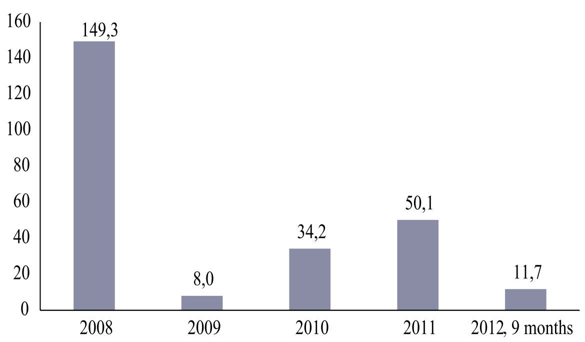
AZN1405 million worth notes were issued in 9 months of 2012 within the sterilization. Out of this AZN728 million worth notes were auctioned and placed.

Box 7. Price stability and welfare

In the aftermath of the global financial crisis central banks considerably eased the monetary policy, they have even started to widely employ unconventional tools, e.g. refinancing of banks for a longer run (3 years) by certain central banks (e.g. ECB), large size injections to markets by central banks of leading economies through purchase of assets, eased collateralization terms and conditions by central banks in lending transactions with commercial banks, etc. When refinancing rate neared zero bound in developed countries (in fact negative), it caused new debates and surveys. Currently, economists are searching an answer to the question: "What to do to have more possibilities and space for the monetary policy response?" The first suggestion is to increase the inflation target (e.g from 2% to 4%) (Blanchard, Dell Ariccia and Mauro, 2010). In this instance a central bank may obtain power to considerably affect the economy through extremely depreciating cost of money. In any case, any central bank that shifts the refinancing rate to zero from 4% during recessions would have more influence on the economic activity compared the one shifting to zero from 2%. However, researches suggest that in this instant real income of the population may decline at least by 0.3 percentage point. Doubtless, high inflation passes to the economy through many diverse channels. From this standpoint, multifactoral real influence is higher than the one estimated. It needs to be particularly researched in which direction and how the behavior of economic agents will change. Thus, it is not excepted that, if this is the case, the economic agent, i.e. producer will increase or decrease prices for goods and services more frequently, while consumers will tend to save as a result. This may negatively impact the economic activity. So, it would be more proper to employ experienced and proven unconventional tools.

Source: IMF WP 12/189, "On price stability and welfare", Jule 2012

Chart 34. CBA notes in circulation, AZN million



Source: CBA

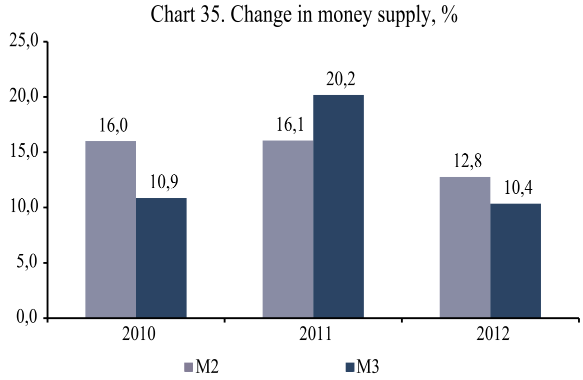
Return on notes at the last auction made 2.20%, that was 2.84% at the beginning of the year. As of 01.10.2012 the size of notes in circulation constituted AZN 11.8 million. Year over year decrease in the volume of REPO transactions was 9.3% and made AZN 6420 million.

In total, liquidity balance3 on CBA operations with commercial banks rose by AZN421 million.

2.3. Money supply

In 9 months of 2012 money supply kept pace with the demand of the economy, broad money supply in manat rose 12.8%.

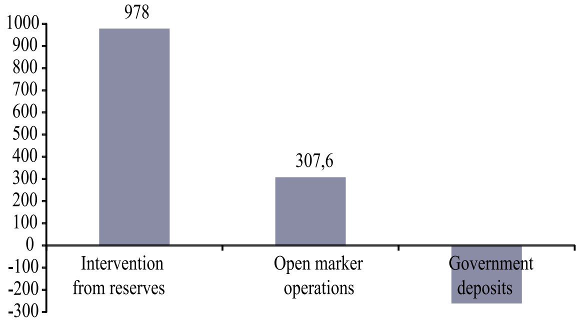
Chart 35. Change in money supply, %



Source: CBA

During the period monetary base increased 12.4%, year over year increase being 30%. The size of monetary base mainly changed against interventions from the CBA's reserves.

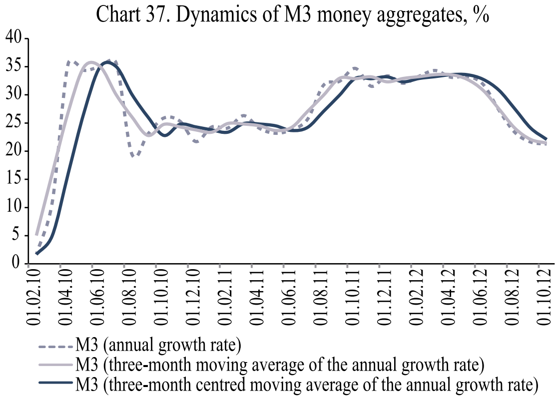
Chart 36. Change in money base, AZN million



Source: CBA

As of 01.10.2012 year over year rise in broad money supply (M3) was 21.3% and reached AZN 15343 million, broad money supply in manat increased (M2) 28.8% and made AZN 12402 million.

Chart 37. Dynamics of M3 money aggregates, %



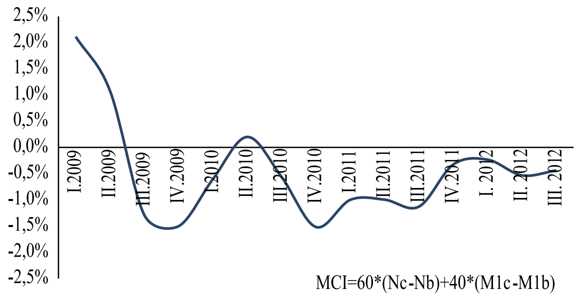
Source: CBA

Both cash and non-cash growth contributed to the rise in broad money supply.

Over the period non-cash money supply increased by 4.2% stemming from stimulation of cashless payments.

Despite relative appreciation of the NEER of manat over the period, rise in money supply had an overall easing effect on the Monetary Condition Index.

Chart 38. Monetary Condition Index



Source: CBA

2.4. Research base of the monetary policy

In the third quarter of 2012 the CBA continued to develop the macroeconomic management and the institutional base of the monetary policy. The Bank followed international debates to raise effectiveness of the monetary policy in Azerbaijan and shape the macro prudential management and researched application of best practices in light of local specifics.

The CBA Monetary Policy and Financial Stability Committee continued to function over the period. The Committee promptly traced the

Table 2. Monetary aggregates, mln. manat

	01.01.10	01.01.11	01.01.12	01.10.12
M0 (Cash)	4147.8	5455.8	7158.2	8315.4
M1 (Cash, demand savings and deposits)	5239.8	6718.9	8824.8	10053.6
M2 (Cash, demand and term savings and deposits, in manat)	6169.2	8297.5	10997.2	12402.4
M3 (Cash, demand and term savings and deposits, in manat and hard currency)	8469.2	10527.5	13903.2	15343.3

Source: CBA

macroeconomic situation, analyzed external and internal factors, reviewed the monetary policy framework and macroeconomic forecasts for the upcoming period, and took necessary monetary and financial stability policy decisions.

The monetary policy and macro prudential regulation regime were further improved in order to shape the monetary and financial stability policies. The way, the monetary and financial stability policies are realized, has been monitored aided by proper reporting.

Under the 2011-2014 strategic plan, the CBA conducted studies on a number of directions to raise the macroeconomic diagnostics and research potential.

The Bank prioritized identification of systemic risks in the banking sector in order to raise the potential of financial stability assessment. Stress-tests and financial stability indicators enabled to regularly evaluate resilience and sensitivity of the banking sector.

The Central Bank also finalized studies on development of the methodology on evaluation of the liquidity effect in the banking sector, evaluation of the asymmetry of the transmission effect of the monetary policy, estimation of the technical impact of changes in the effective exchange rate basket on the NEER and the REER, and assessment of the capital mobility.

A number of studies were conducted related to inflation, economic growth and macroeconomic equilibrium within econometric researches. Results of these researches were used in strategic and tactical decision-making on the monetary policy.

The Bank has launched specific programs implying development of intellectual resources on macroeconomic management. Special events were provided to raise financial and economic literacy of the population and economic subjects.

To provide methodological support for the banking-financial system through adequate statistics in line with best practices, guidelines on banking-financial statistics are being updated, the content and design of reporting formats, as well as monetary-financial statistics are being aligned to the IMF standards.

Statistic and prudential reports were being placed on a unified statistic platform, analytic functionality portion of reports (data selection, dynamic series, tables and graphic view etc.) was under way, data navigation in the ESAS was launched and respondent banks were appropriately trained in the framework of establishment of the Electronic Statistical database and Analytical Reporting System (ESAS) in the CBA.

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