THE CENTRAL BANK OF
THE REPUBLIC OF AZERBAIJAN

№1(13)
2013

FINANCIAL STABILITY REVIEW

Q1

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OF THE REPUBLIC OF AZERBAIJAN

The key goal of the review is to address financial stability analyses and expectations of the Central Bank of the Republic of Azerbaijan (CBA). Another goal of the present review is to regularly deliver possible impact of the financial stability decisions taken by the CBA on the banking system to the public. The review is quarterly disclosed to the public four times a year.

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Acronyms

CBA	–	The Central Bank of Azerbaijan
AMF	–	The Azerbaijan Mortgage Fund under the Central Bank of the Republic of Azerbaijan
AZIPS	–	The Real Time Gross Settlement System
IMF	–	The International Monetary Fund
SSC	–	The State Statistics Committee of the Republic of Azerbaijan
HHI	–	Herfindahl-Hirschman Index
BCSS	–	The Retail Payment System
DGCs	–	Developing Countries
DDCs	–	Developed Countries
MF	–	The Ministry of Finance of the Republic of Azerbaijan
REER	–	Real Effective Exchange Rate
ROA	–	Return on Assets
ROE	–	Return on Equity
GDP	–	Gross Domestic Product

INTRODUCTION

In Q1 of the current year the world economy continued to grow. Financial stability and economic aid programs in major countries yielded greater positive expectations in the financial system and the real sector. Better economic determinants gradually subdue systemic risks. However, global economic growth processes flow unevenly. Positive dynamics is accompanied with quite fragile financial stability in most countries, and the threat of high macroeconomic risks in medium and long run is still vital.

Over the period the country economy kept growing amid global economic uncertainty, and macroeconomic and financial stablity was maintained. The CBA targeted low inflation, a stable exchange rate of manat, more robust growth and stablity in the banking – financial sector.

As a result of the implemented policy, the Azerbaijani banking system preserved financial stability and growth processes deepened. Capital and liquidity positions of the banking sector remained favorable, the resource base of which expanded through sustainable sources. Banks are more capable to identify and manage risks. Banks' contribution to the non-oil economy amplified and their regional coverage expanded.

I. OVERVIEW OF THE BANKING SECTOR PERFORMANCE

1.1. Recent trends on the global financial stability

Unconventional policy initiatives of central banks also fuelled financial system stabilization in Q1, 2013. However, still fragile and uneven recovery of the world economy, implied medium- and long-run reforms in the financial system, unemployment and other reasons factor in a vulnerable financial system. On such a background public authorities and international organizations are challenged to rebalance global demand, support economic growth and create jobs and increase financial system sustainability.

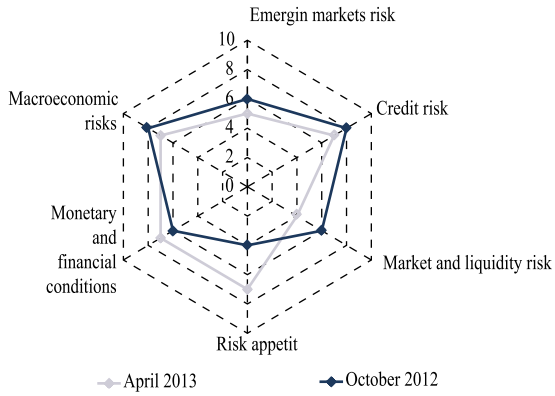
The IMF in its recent release[1] highlights acceleration of positive trends in the global financial stability dynamics (Chart 1.1.). According to the report, coordinated national and global policy initiatives eased the monetary and financial condition, subdued risks, and triggered high risk appetite and asset prices. Global financial conditions and considerable perfection of the market conjuncture supported economic activity. Global macroeconomic risks abated. The real estate market activated, deleveraging of households continued, consumption revived and banks increased crediting.

Risks related to developing (emerging) markets also subdued: growth is stable, terms of external financing are better. However, short-run prospects in the Euro zone are still uncertain.

Lower financial stresses yielded eased market and liquidity risks. Financial markets are less volatile, access to finance through banks and capital markets of the corporate sector broadened.

The adaptive policy of central banks, that support credit and aggregate demand, eased monetary and financial conditions. Dwelling low-interest-rate policy expectaions increased investors' risk appetite.

Chart 1.1. Global financial stability map



Source: IMF , Global Financial Stability Report, October 2012

However, according to the IMF, new risks are likely to emerge in a medium- and long-run amid still lingering old threats. The key risk sources in the near horizon are processes in the Euro area, particularly political uncertainty in Italy, fragility of the financial system (especially in the Euro zone periphery), fragmentation among the Euro area countries and the US fiscal policy.

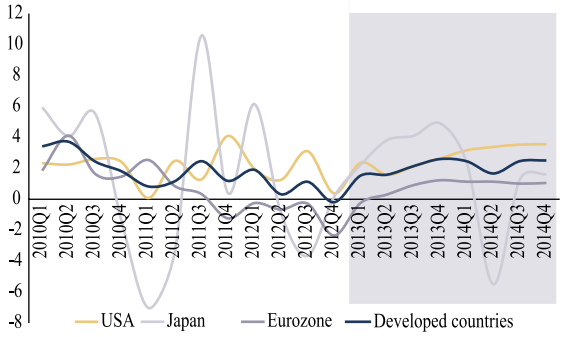
The uncertain economic policy, fiscal consolidation and partial recovery of lending channels, as well as dwelling global demand-supply imbalances condition weak global economic growth.

The IMF expects global growth in the current year not to surpass that of 2012 (Chart 1.2.). The latest outlook of the Fund on growth rate of the economy is revised downward compared to January (except for Japan). Global economic growth is expected to be 3.3% over the year,

[1] International Monetary Fund, 2013, Global Financial Stability Report: Old Risks, New Challenges (Washington, April).

which falls below the previous year forecast by 0.2 p.p. Economic growth in DDCs is likely to be 1,2%. However, the Euro zone economy is expected to decline 0.3%. GDP in DGCs is likely to grow 5.3% over the year.

Chart 1.2. GDP growth rate, %



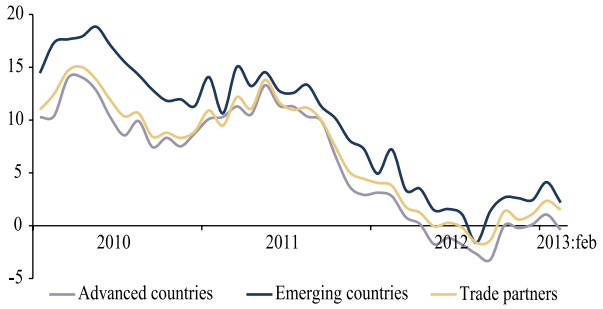
Source: IMF, World Economic Outlook, April 2013

According to the managing director of the IMF Christine Lagarde, *the world economy is operating in a "three-speed mode": (i) countries with acceptable economic performance – most DGCs; (ii) countries with positive trends – the US; (iii) lagging countries – Eurozone and Japan.*

Other thinktanks also back IMF's pessimistic expectations. Thus, according to the revised outlook by the European Commission (EC), the Eurozone economy is expected to decline 0.3% in 2013 (previous outlook predicted 0.1% growth). According to the EC, the Eurozone economy is likely to revert to positive dynamics only in 2014 (expected growth 1.4%).

Growth rate of the global trade is still weak (Chart 1.3.). While in January – February, 2013 y.o.y. increase in the volume of trade in the US and Eurozone was 1%, y.o.y.decrease in Japan was 10%. Given the recent trends, the World Trade Organziation predicts only 3.3% growth rate for the world trade. However, 30% decline in imbalances in current operations balances may be recorded as a positive trend.

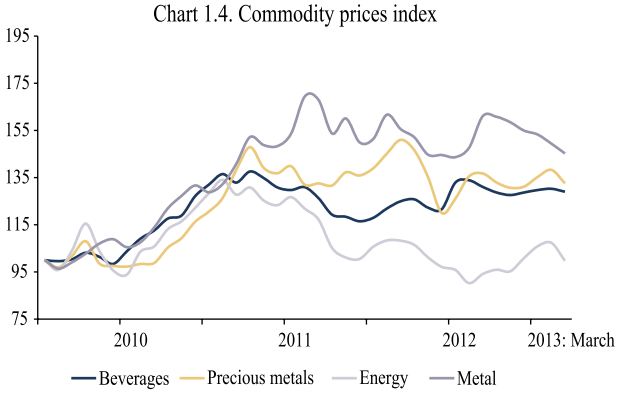
Chart 1.3. Global export, y.o.y., %



Source:IMF, UNCTAD

In the environment of weak global trade, commodity prices are prone to decline in international markets. As of end-Q1, 2013 the y.o.y decrease in the commodity prices index was 9.1%, while it increased compared to early in the year. Price falls in March primarily stem from cheapening of grain. Prices for energy carriers are also declining. Y.o.y. decline in the price of Brent crude oil as of the end-quarter (113$) was 13%.

Chart 1.4. Commodity prices index



Source: World Bank, IMF

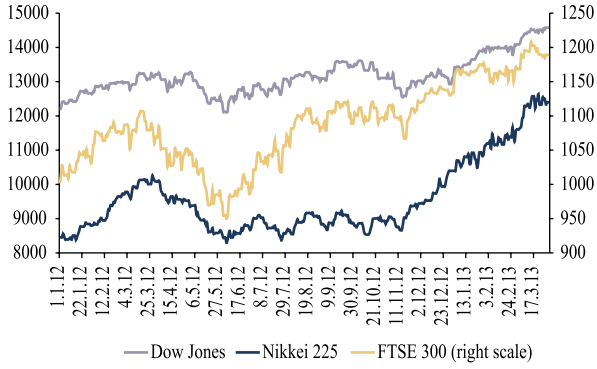
Unemployment is still a serious problem for the world economy, which is particularly high among the youth. According to the recent estimations of the International Labor Organization, the number of the unemployed among the youth aged 15-24 reached 74.2 million persons having risen 3.8 million since 2007.

Unemployment in the Euro zone is predicted to rise 12.2%, the unemployed will be added

up by 19 million. Unemployment in the US is declining on an ongoing basis. The report released by the US Labor Department indicates 7.6% unemployment level, the record lows of recent four years.

Processes in the global economy are felt in the dynamics of fund markets. Thus, whereas fund indices are revised downward amid higher borrowing risks and stronger negative expectations on GDP in the Eurozone, fund markets of the US and Japan are growing in the background of better macroeconomic expectations. Volatility in stock markets dropped to the level of 2008. Risks of weakening of euro vis-a-vis USD in the global foreign exchange market elevated.

Chart 1.5. Activity index dynamics in global financial markets

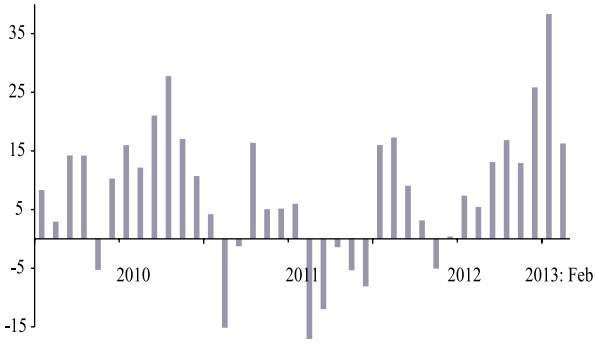


Source: IMF, UNCTAD

Investments remained weak in advanced economies over the reporting period (Chart 1.6.). Overall, the scale of capital flows has declined up to 60% since the onset of the global crisis, which primarily stems from DDCs. Over the recent quarter, capital continued to flow to DGCs, which raises the economic overheating risk in those countries.

The key challenge for DDCs is to revive weak aggregate demand through policy initiatives, while the DGCs are to stabilize overheating trends. However, policy opportunities to recover aggregate demand in DDCs are gradually shrinking. Stronger consolidation trends in a number of DDCs minimize the capacity for fiscal impulses for possible growth. To remind,

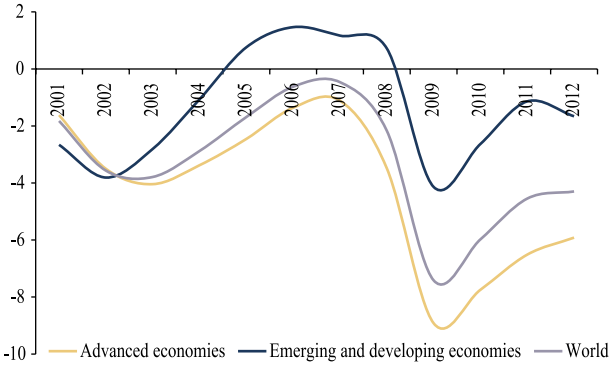
Chart 1.6. Net capital flows to DGCs, USD billion



Source: IMF, UNCTAD

in 2012 the fiscal deficit declined 0.75%. Central banks swollen balances make questionable, whether monetary support for the economy is purposeful to continue (Chart 1.8.).

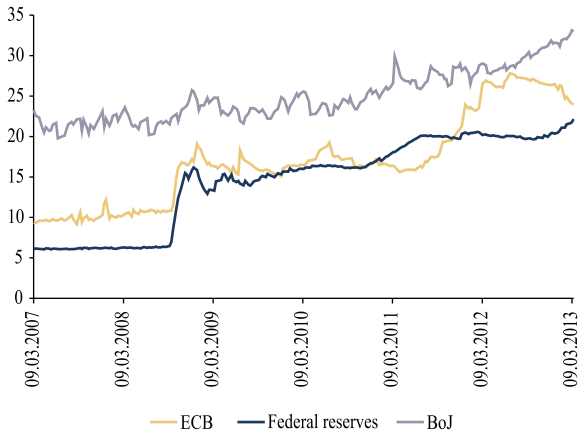
Chart 1.7. Fiscal balance, percent of GDP



Source: IMF

Over the reporting period, leading central banks (the Fed, the Bank of England, and the Bank of Japan) left interest rates unchanged and

Chart 1.8. Assets-to-GDP ratio, %



Source: Reuters Datastream

declared continuous assets purchase programs. The Bank of Japan is reviewing expansion of assets purchase programs.

In total, over the reporting period to counter the global crisis, coordinated national and global measures moderated the banking sector fragility and supported stabilization of financial markets. Albeit short-term positive impact of the measures taken (low interest rates of central banks, liquidity support, and etc) on banks, potential risks are still on the air for financial stability in the long-run. Thus, a number of factors stipulate prospects of the global banking system: the negative impact of the global crisis, short-term anti-crisis measures of monetary authorities, institutional changes in a medium- and long-run, structural changes in the banking system in response to adaptation of fluctuating macroeconomic and institutional environment.

The crisis in the Cyprus banking system in Q1, 2013 evidences high credit risks in the Euro zone. With the banking crisis in the country, the default probability became topical. The Eurogroup allocated a special credit to remedy the Cyprus banking system, and prevent the threat of further deepening of the crisis.

Unlike the Euro zone, the US banking system is going through positive trends. In current March the Fed disclosed findings of stress-tests in 8 largest holding companies (which cover 70% of total assets of the banking system) whose assets are over USD 50 billion. The goal of the stress-testing was to evaluate banks' sustainability to sharp deterioration in the economic situation. The stress-test surfaced sustainability of the US banking system to the recession risk. According

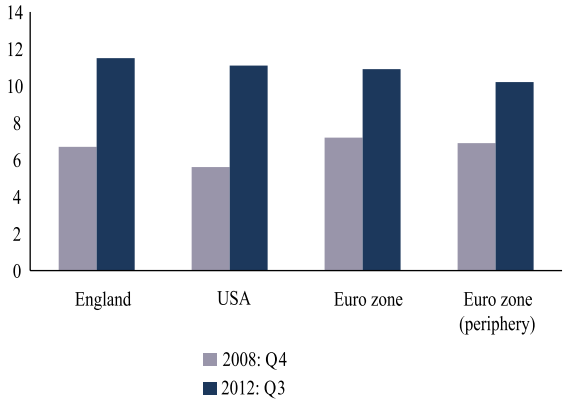
Box 1. Macroprudential and capital flow measures in DDCs

Area of concern	Measures
Credit growth and banking sector health	• Periodic variation in the LTV ratio and application of the DTI ratio to curb excessive borrowing by households, and subdue risks in the banking sector. (Hong Kong, Korea, Singapore) • Financial tax on consumer credit cards was increased to 6.38% from 2.38%. Also 1% financial transaction tax introduced on increases of short positions in foreign exchange derivatives. • A maximum LTD ratio of 100% introduced in Korea. The authorities took a series of steps to discourage banks from accumulating excessive foreign-exchange-denominated debt via tighter restrictions on foreign exchange forward positions, a macroprudential levy on non-deposit liabilities, and regulatory guidance to lengthen the maturity of funding structures and increase foreign exchange liquidity buffers. • İndonesia imposed a limit on banks' overseas borrowing at 30% of bank capital. The authorities also introduced 8% reserve requirement on banks' total forex holdings.
Effective corporate governance	• India has instituted an External Commercial Borrowing (ECB) framework to regulate access to funding by corporations and public sector undertakings through specific limits sets on overseas borrowings. UP to 50% of infrastructure, telecommunications and greenfield projects can be funded by the ECB. • Brazil extended the 6% financial tax on foreign-exchange-denominated loans obtained by domestic corporations abroad with maturities up to 720 days.
Asset prices and capital inflow pressures	• Korea reintroduced a withholding tax of 14% on interest income on foreign holdings of treasuries. • China has imposed a series of measures to counter the risk of bubble in a housing market including higher downpayment requirements, limits on the number of properties that individuals can buy, restrictions on property developer funding, introduction of property taxes in some cities, and stepped-up construction of apartments for low income earners.

Source:
Global Financial Report, Restoring Confidence and Progressing on Reforms, IMF, October 2012.

to the Fed, findings of the recent stress-test were more positive than those of 2012 (In 2012 stress-test identified vulnerability of 4 banks to the risk of recession).

Chart 1.9. Capital adequacy of banks



Source: IMF, Global Financial Stability Report, April 2013

The IMF's recent Global Financial Stability report recommends policymakers to be flexible and watchful. According to recommendations, the policy of central banks should support the economy and maintain financial stability. However, related authorities should take relevant measures with respect to potential and emerging sources of financial stability risks. To preserve financial stability, measures should be taken to remedy banks and decrease their vulnerability to potential shocks. Micro- and macro prudential policy initiatives that abate financial sector risks create a favorable environment to implement the monetary policy to stimulate the economy.

1.2. Macroeconomic processes in Azerbaijan

In Q1, 2013 a favorable foreign position and high internal demand had an upward effect on economic growth.

As in recent years, over current Q1 the foreign position of the country was favorable. According to the State Customs Committee, in Q1, 2013 foreign trade turnover comprised USD 8.6 billion, USD 6.3 billion of which falls to the share of export and USD 2.2 billion to import. In January-March y.o.y increase in export was 8.7%, while in import it was 7.6%. Surplus of the foreign trade balance surpassed USD 4.1 billion. In total, export exceeded import by 2.9 times as much.

The IMF expects surplus of current accounts balance to make 11% of GDP as of end-2013. The country is the leader in the CIS in terms of this indicator and takes one of the leading places among DGCs. The Fund's estimations indicate that large scale surplus will endure in a medium run as well.

In addition to export, dynamics of foreign capital flows also contributed to FX inflows. According to the SSC, the amount of foreign investments to the country economy climbed over 60 percent and exceeded USD 1.2 billion in January-March.

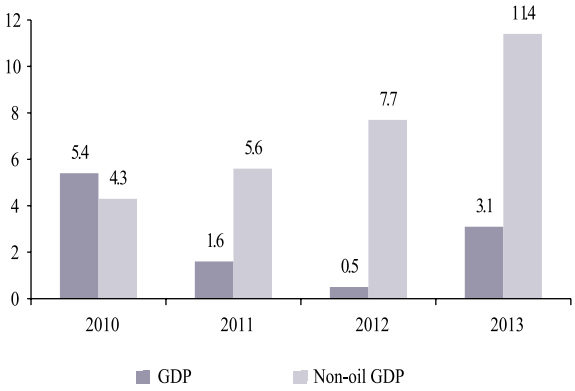
FX reserves of the country exceeded USD 47.1 billion in Q1, 2013 having increased by USD 1.1 billion or 2.3% – sufficient for a three-year commodities and services import. Strategic FX reserves equal 70% of GDP and exceed the external debt about 8 times as much.

All components of the aggregate demand, including the final consumption expenditures, investments and foreign demand had a positive effect on the economic growth in Q1, 2013. High average monthly salary and wages, high number of the population engaged in the economy and high consumer loans of individuals resulted in overall high consumer activity.

Over the reporting period, total investment to the economy increased 36.1%, out of which investments to trades rose 2.5 times, while those to non-trades increased 12.5%.

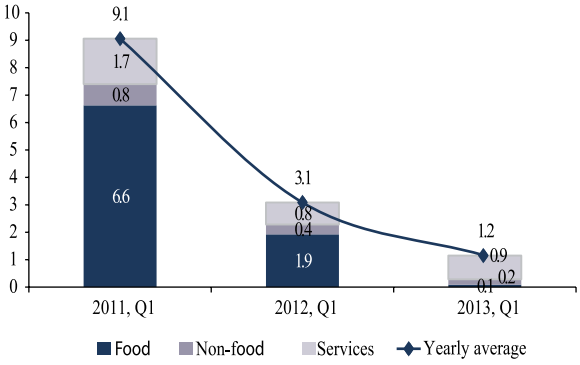
Over current Q1 GDP rose 3.1% in real terms and constituted AZN 13 billion in nominal terms. Over the reporting period, the non-oil sector grew 11.4%. The share of manufacturing sector in the value added was 2/3, service sector 3/1.

Chart 1.10. Economic growth in January – March, %



Source: CBA

Chart 1.11. Average annual CPI, %



Source: CBA

The Central Bank, as well as international organizations forecast continuous economic growth in the country in a short-run.

Over Q1, 2013 price stability was preserved, while inflation was maintained within the CBA's target.

Average annual inflation made 1.2%, record low in recent years. Prices rose only 2.3% against the year launch, y.o.y increase being only 1.5%.

In Q1, 2013 the exchange rate policy targeted exchange rate stability of manat against USD. Parameters of the exchange rate policy were set considering the stance of the balance of payments, and targets of maintaining financial stability in the banking sector and competitiveness of the non-oil sector.

Supply exceeded demand in the foreign exchange market in the environment of large surplus in the balance of payments of the country. However, in order to prevent considerable strengthening of manat in the FX market and neutralize negative impacts on the competitiveness of the non-oil sector, the CBA sterilized USD 844.7 million worth currency over the quarter.

In Q1, 2013 broad money supply kept pace with the demand of the economy, money supply in manat gained 0.2%. The structure of money supply continued to improve.

II. DEVELOPMENT OF THE BANKING SYSTEM

2.1. Dynamics of key indicators of the banking system

In Q1, 2013 the banking sector preserved growth dynamics and access to financial services kept growing.

As of end-current Q1 assets of the banking sector constituted AZN 18 494.4 million. Over the quarter banks assets rose AZN 851 million or 4.8%. Loans increased 1.7% and reached AZN 12 606.2 million as of the end-quarter, which makes 64.7% of bank assets.

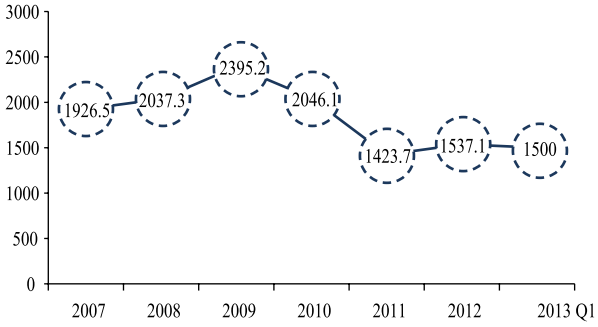
Whereas funds, attracted by banks from financial and non-financial sectors declined 2%, deposits of individuals rose 8.3% and reached AZN 55 36.4 million over the quarter.

The banking system continues to financially deepen. In recent 5 years the bank assets-to-GDP ratio grew 6.1 p.p.

High financial depth manifests itself in the level of financial services usage. Thus, as of end-Q1 the Centralized Credit Registry (CCR) collected data on 1 632 119 borrowers, which exceeds the early year indicators by 6 percent.

The banking system is less concentrated. The share of large banks (top 5 in terms of the volume of assets) in systemic assets declined from 57.8% to 57.6%, while in credit investments it contracted from 54.2% to 53.6%. The HHI[1] (applied to estimate concentration in the banking system) shows a slight decline in concentration compared to the beginning of the year (the average concentration level of HHI as of the end 2012).

Chart 2.1. Herfindahl – Hirschman index (in terms of volume of loans)



Source: CBA

Institutional and infrastructural measures aimed at growth of the banking system resulted in preserved attractiveness of banks for foreign investors. Over the quarter the number of banks with foreign capital reached 22 and the volume of foreign capital investments to the banking sector increased AZN 11.6 million (3.4%) and reached AZN 341.5 million.

Table 2.1. Growth rate of key indicators of the banking system, %

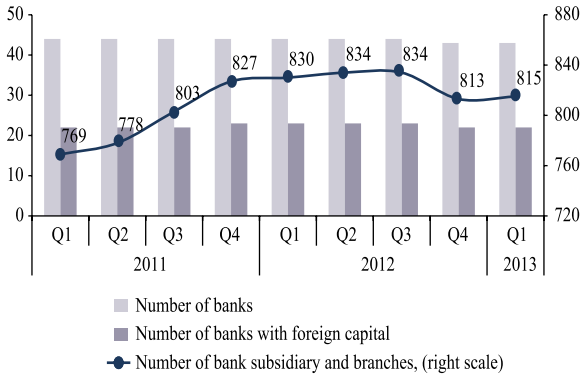
	01.01.2011	01.01.2012	01.04.2012	01.01.2013	01.04.2013
Assets	13.9	7.3	2.4	26.5	4.8
Loans	9.0	8.1	3	27.8	1.7
Deposits of legal entities	4.3	16.1	5	-0.2	-2
Deposits of the population	29.8	36.0	4.3	24.1	8.3
Aggregate capital	7.8	12.7	0.8	36.4	4.2

Source: CBA

[1] Herfindahl-Hirschman index equals to the sum of squares of the share of banks in the banking system.

As of 01.04.2013 operating banks were numbering 43. Over the quarter banks opened 13 new branches (total 666) and 1 new bank department (total 149).

Chart 2.2. Dynamics of the banking network



Source: CBA

The number of NBCIs is also increasing, which rose to 138 from 133. Credit unions were numbering 108 (104 as of 01.01.2013), while the number of credit institutions funded by international humanitarian organizations was 29. One NBCI (Agri Credit) renders financial services along with credit unions and institutions. The number of their branches rose to 106 as of 01.04.2013 over the period (102 as of 01.01.2013).

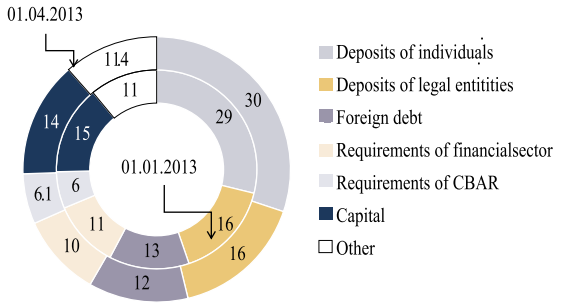
The number of branches of AzerPost LLC, which is expanding free access of the population to banking – financial services did not change over the quarter (63 as of 01.04. 2013), while the departments are numbering 953 (945 as of 01.01.2013).

2.2. Liabilities of the banking system

In Q1, 2013 the share of funds attracted from the domestic market remained high in the resource base of the banking system.

In Q1, 2013 banks' liabilities rose 4.9% (AZN 738.6 million) and reached AZN 15 826.7 million. Also, banks' total deposits rose by 13.3% and reached AZN 11 012.7 million and took 69.6% of total liabilities.

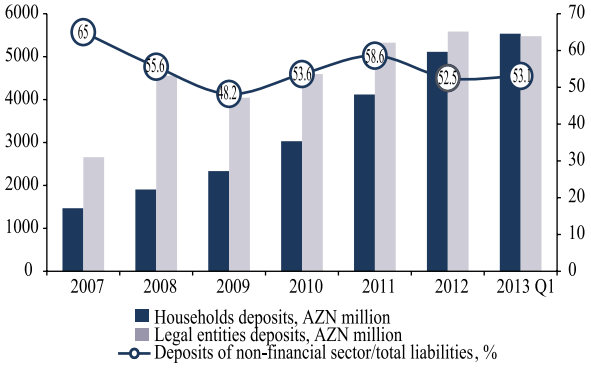
Chart 2.3. Structure of banks' resource base, %



Source: CBA

Deposits of the population rose 8.3% over the quarter and reached AZN 5 563 million, whose share in banks liabilities made 35% as of the end-period.

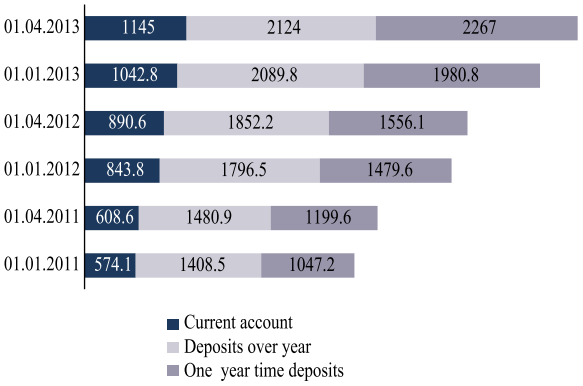
Chart 2.4. Dynamics of deposits of the non-financial sector



Source: CBA

As of end-Q1, 2013 the share of term deposits in total deposits was 79.3% and made AZN 4391 million. As a result of higher quality of banking

Chart 2.5. Term structure of deposits, AZN million



Source: CBA

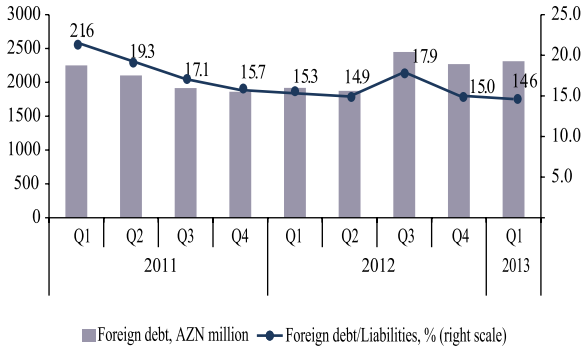
services long-term deposits have risen over the reporting period. They rose 14.4% and made 41% of total deposits.

Deposits in the national currency rose 10% over the quarter, and reached AZN 3 260 million which makes 59% of total deposits (58% early year).

Deposits of non-resident individuals increased 13% compared to the year launch.

Deposits of legal entities (financial and non-financial institutions) made AZN 5 476.7 million as of 01.04.2013. The share of term deposits in total deposits of legal entites was 49.3%.

Chart 2.6. External debt dynamics



Source: CBA

The scale of funds attracted from non-resident banks and international financial institutions rose 1.9 percent and made AZN 2 311.7 million as of the end-quarter. However, the level of foreign funds was acceptable and made 14.6% of total liabilities.

2.3. Assets of the banking system

In Q1, 2013 access to financial services kept expanding. Lending still remains the main active bank operation.

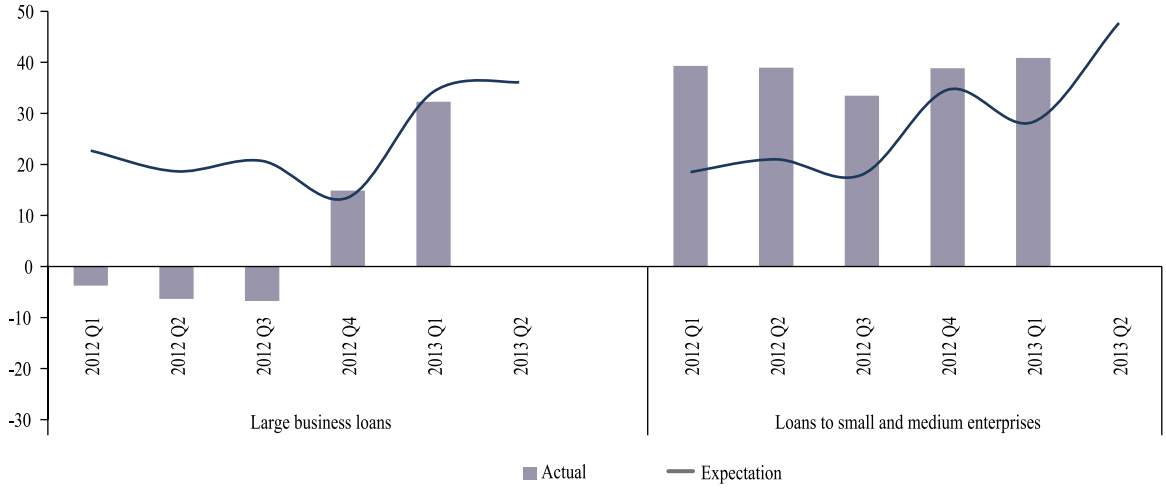
In current Q1 bank assets grew 4.8%, which is primarily related to capital investments. Credit investments rose 1.7% over the period and reached AZN 12 606.2 million.

The CBA survey suggests that demand for loans was reviving in curent Q1. Consumers need long term loans. Demand for large business loans has been increasing over the recent 2 quarters.

Banks issue consumer loans more actively. As in the previous quarter, in current Q1 also credit card and mortgage loans posted particular growth. The survey suggested that, over the quarter the quality of total credit portfolio improved, operational and liquidity risks abated, and access to finance expanded. The role of deposits of legal entities, issue of shares and debt securities in banks' financing increased.

The CCR data also exhibit broader credit operations. Thus, as of end-Q1 y.o.y. increase in the number of loan inquiries was 2.4 times and

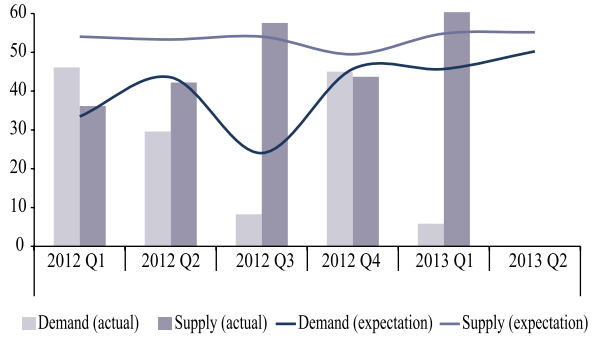
Chart 2.7. Demand for business loans, (lending survey results)



** positive balance- increase in credit demand, negative balance- decrease in credit demand*

Source: CBA

Chart 2.8. Supply and demand for consumer loans, (lending survey results)



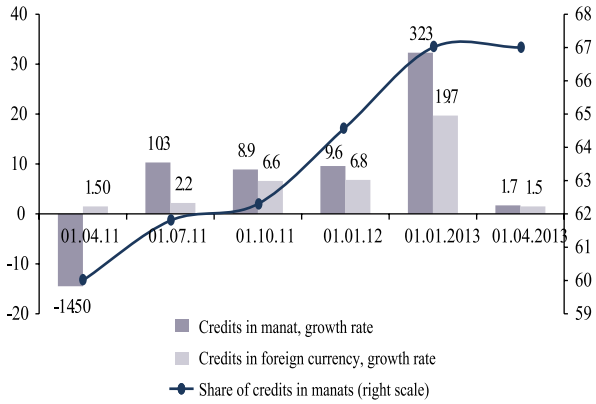
** positive balance - increase in credit demand, negative balance - decrease in credit demand*

Source: CBA

reached 133 269, out of which 132 896 inquiries were issued by credit institutions and 373 by individuals.

Over the quarter credit investments rose through long term loans. They rose 7% and took 74.3% of the credit portfolio. The share of short-term loans in the portfolio dropped 3.7 p.p. over the period and made 25.7% as of 01.04. 2013.

Chart 2.9. Currency structure of credit portfolio, %

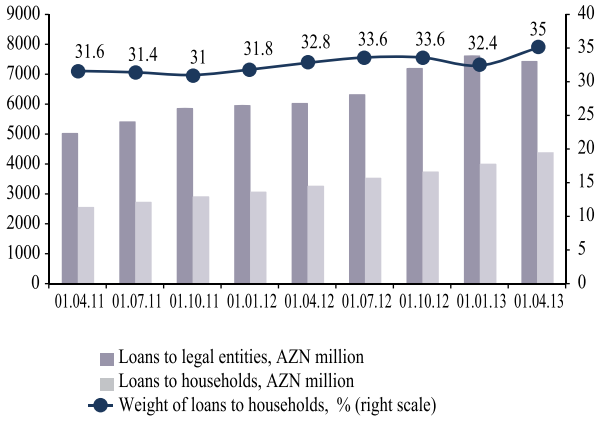


Source: CBA

Over the reporting period growth rate of loans in the national currency (1.7%) surpassed that of loans in a foreign currency (1.5%). The share of loans in the national currency in the structure of credit portfolio was 67% as of the end-period.

As of the end-quarter banks issued AZN 7 460 million worth loans (share in the portfolio 59.2%) to legal entities. Loans to households rose 9.5% in current Q1 (on banks) and made AZN 4 395 million.

Chart 2.10. Dynamics of the credit portfolio structure by subjects



Source: CBA

As of 01.04.2013 loans issued for individuals for real estate construction and purchase amounted AZN 621.8 million. The share of these loans in loans to households was 13.2 percent. Loans to individuals engaged in entrepreneurship rose 31.6% and took 8.3% of loans to households.

As of end-Q1 the share of long-term loans to individuals in total portfolio was 74%.

Loans to agriculture and processing increased 11.1%, transportation and communication 1.4%, construction and property 38.6%. Over the quarter credit growth on plastic card operations was 22.2%.

In Q1, 2013 credit institutions continued crediting of regions. Over the quarter credit investments to regions grew 2.4%. The share of economic regions in the portfoilo was as follows – Absheron (22.7%), Aran (33.9%), Ganja-Gazakh (13.3%), Lankaran (10.5%).

Box 2. Impact of information sharing on the banking sector

The world practice shows that easy access to finance factors in economic growth. However, the world practice shows that in most cases informational asymmetry between debtors and creditors leads to loss of functionality of economic factors. Borrower information is shared to decrease informational asymmetry in financial markets, and prevent undesired cases of the kind.

Necessary information on the volume of funds owned by banks and on borrowers is considered to be a vital factor for the stability of banking performance. Collection and analysis of borrower information are of the key measures to ensure sustainability of banking performance. However, in most cases it is not easy to obtain the information of the kind and a bank is challenged by adverse selection[3] and moral hazard[4] when lending. One of the measures to prevent such challenges is to require collateral from borrowers. However, the volume of pledged capital of certain companies, especially small ones, is not sufficient and necessary information on a borrower is collected as an alternative. This information may include – timely repayments by a borrower, regular changes to residential and work places and activities, high risk engagements, too large volume of loans, or small amount from a number of credit institutions. Under the international practice, such information is collected by various agencies. Information collected by private credit bureaus (credit registry agencies in some instances) is volunteer and in case of entering erroneous data, access of the credit institution to the information is banned. In most cases information is to be delivered to the agencies of the type when created by the government (central bank).

Information sharing on borrowers individual specifics has a significant effect on credit performance. Thus, information sharing enables to identify specific qualities of a borrower and exactly identify the credit repayment probability and, especially, prevent excessive indebtedness of a borrower through obtaining loans from a number of banks.

Information sharing limits banking crises. The scale and availability of information sharing vary across countries. Evaluation among 98 DDCs and DGCs identified that information sharing considerably decreases banking crises. Rapid credit growth is less likely to lead to a banking crisis in countries with credit information sharing.

Depth of credit information index[5]

Country	Index	Country	Index	Country	Index	Country	Index
Angola	4	Columbia	4	Israel	5	New Zeland	5
Argentine	6	Algeria	2	Italy	5	Japan	6
Australia	5	Ecuador	5	Jamaika	0	Jordan	2
Belgium	4	Egypt	2	Kuwait	3	Oman	1
Banqladesh	2	Ethiopia	2	Cambodia	0	Pakistan	6
Bolivia	5	United Kingdom	6	Laos	0	Peru	6
Brazil	5	Guatemala	5	Kenya	2	Philippines	3
Brunei	0	Ghana	0	Madagascar	1	Poland	6
Botswana	5	Hong Kong	5	Mexico	6	Paraguay	6
SAR	2	Haiti	2	Mongolia	3	Qatar	0
Canada	6	Hungary	5	Mozamique	3	Uganda	0
Chile	6	Indonezia	2	Malaysia	6	Uruguay	6
Camerun	2	India	3	Nigeria	0	USA	6
Gabon	2	Ireland	5	Holland	5	Venesuela	0
Kongo	2	Iran	3	Norway	4	Vietnam	3

Source:

Credit information sharing and banking crises: An empirical investigation. B.Berrak, V.Neven, 2012; Doing Business.

[3] Adverse selection is the risk of undesired results for less informed party when selecting non-observed feautures. Issuance of loans to risky borrowers due to insufficient information of banks on borrowers is considered to be adverse selection.
[4] Moral hazard – desire of a not fully controlled person to take incompetent or other undesired actions.
[5] This index addresses the scale and availability of the data collected by public and private credit registries: 0-the lowest; 6-the highest level

Table 2.2. Sectoral structure and dynamics of banks' credit portfolio

Sectors	01.04.13	
	AZN million	Share in credit portfolio, %
Trade and services	2 091.2	16.6
Households	4 395	35
Agriculture and processing	595	4.8
Construction of property	1 761	14
Industry and production	1 140	9
Transportation and communication	817.2	6.5
Energy and natural resources	395.2	3.1
Other	1 410	11

Source: CBA

Loans to regions in the national currency exceeded those in the foreign currency as in previous periods and as of 01.04.2013 took 75.1% of the credit portfolio. Long-term loans take 70.1% of loans to regions.

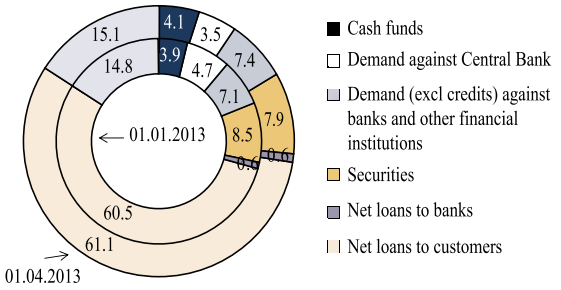
Bank investments to securities made AZN 1 467.4 million as of 01.04.2013.

Table 2.3. Credis and deposits by regions (excluding Baku), AZN million

Tarix	Credit investments			Deposits		
	Total	in manat	in foreign currency	Total	in manat	in foreign currency
01.01.2012	1 271.7	940.1	331.5	327.6	242.7	85
01.04.2012	1 273.4	972.1	301.3	386.9	270.2	116.7
01.01.2013	1 546.1	1 144.5	401.6	359.1	270.7	88.4
01.04.2013	1 583.9	1 188.8	395.1	381	281.4	99.6

Source: CBA

Chart 2.11. Structure of bank assets, %



Source: CBA

2.4. Financial indicators of the banking sector performance

Over the reporting period banking system's overall financial results were positive.

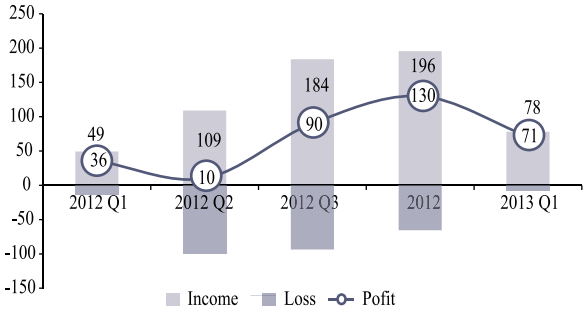
In Q1, 2013 banks generated AZN 74.8 million profit. Net profit after taxes was AZN 71.2 million.

The number of banks operating with profit and loss were respectively 39 (33 as of 01.01.2013),

and 4 (10 as of 01.01.2013).

In Q1, 2013 revival of credit performance and stabilization of asset quality contributed to growth in profits of the banking system, which manifested itself in high interest income and low reserve oriented resources.

Chart 2.12. Profit of the banking system, AZN million



Source: CBA

Over the period y.o.y. increase in banks' interest income on loans to customers was 20.8 percent (in Q1, 2013 AZN 339.6 million, in Q1 2012 AZN 280 million.). The interest income to average assets ratio was 7.6%.

Income from other interest bearing operations (interbank exposures, investments and financial lease) rose 11,9% and made 0.6% against average assets.

The y.o.y. increase in banks' total non-interest income was 22.7% and constituted AZN 92.2 million. Rise in net income from foreign exchange operations and commissioning fees for other services and other commissioning fees contributed to this increase.

In general, banks' total income (interest and non-interest) made AZN 458.8 million in Q1, the y.o.y. increase being 21.3% (AZN 80.7 million).

Over the period interest expenses made AZN 192 million, which comprise of interest expenses on individuals' term deposits. The interest expenses to average assets ratio dropped 0.3 p.p. against Q1 of the previous year and made 4.3%.

Non-interest expenses rose 22.7% in Q1 and constituted AZN 167.5 million. The non-interest expenses to average assets ratio dropped 0.1 p.p. and equaled 3.7%. Total expenses (interest and non-interest) having increased 20.3% (AZN 60.6 million.) constituted AZN 359.6 million.

Deductions to loan loss provisioning tend to decline. Thus, y.o.y. decrease in deductions was 40%, which, in its turn, had a downward effect on banks' total expenses.

In 2013 banks' operational profit was AZN 328.3 million.

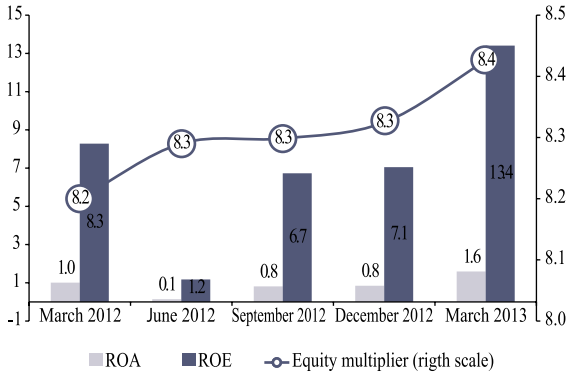
Banks' profitability considerably rose in current Q1. Y.o.y increase of ROE being 5.1 p.p. reached 13.4%. High ROE is associated with stable assets quality and less loan loss provisioning. In parallel, ROA of banks rose by 0.6 p.p. and

Table 2.4. Profit structure, AZN million

	Q1, 2012	Q1, 2013	Change, %
Interest income	279.3	366.6	31.3
Interest expenses	162.5	192.1	18.2
Non-interest income	74.6	92.2	23.6
Non-interest expenses	136.5	167.5	22.7
Total income	378.2	458.8	21.3
Total expenses	299	359.6	20.3
Net operational profit	79.2	99.2	25.3
Deductions to loan loss provisioning	40.6	24.2	-40.4

Source: CBA

Chart 2.13. Profitability of the banking system, %

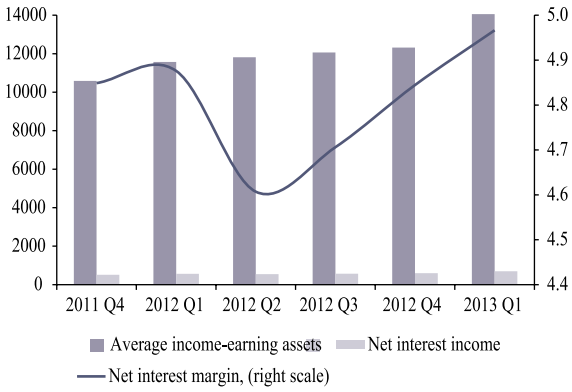


Source: CBA

made 1.6%.

Growth dynamics of the capital multiplier[6] indicates that banks raise their assets through borrowings. Thus, this ratio in Q1 approximates

Chart 2.14. Net interest margin, AZN million



Source: CBA

8.4.

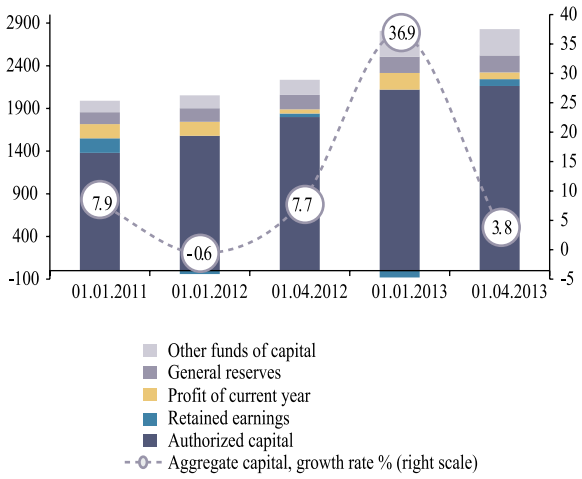
Net interest margin7 was 5% in the first quarter of the current year, the reason for which is that growth of net interest income prevails over that of interest bearing assets. It displays better quality of interest bearing assets and broader access to cheaper resources.

2.5. Capital of the banking sector

Over the reporting period the banking sector kept strengthening the capital base and capital adequacy indicators of the system maintained an acceptable level.

In Q1, 2013 the volume of banking system's aggregate capital increased 3.9% or AZN 97.5 million and reached AZN 2 680 million. The key source of aggregate capital growth (81%) was authorized capital. Thus, the authorized capital grew AZN 43.3 million or 2%. Total reserves rose 4.3% (AZN 8.2 million). Investments to shares of subsidiaries and other credit institutions, and intangible assets were AZN 308.5 million (AZN 302.6 million as of

Chart 2.15. Structrue of the banking capital, AZN million



Source: CBA

the beginning of the current year).

Capital adequacy on the banking sector was far above the threshold (121) and made 16.8%, remaining stable over the quarter.

As of end-Q1 Tier I capital gained 0.8 p.p. and made 13.81, which surpasses the threshold over 2 times (Tier I capital adequacy ratio 61).

2.6. Interest rates in banks

In Q1, 2013 average weighted nominal interest rates on loans and deposits in manat and a foreign currency declined.

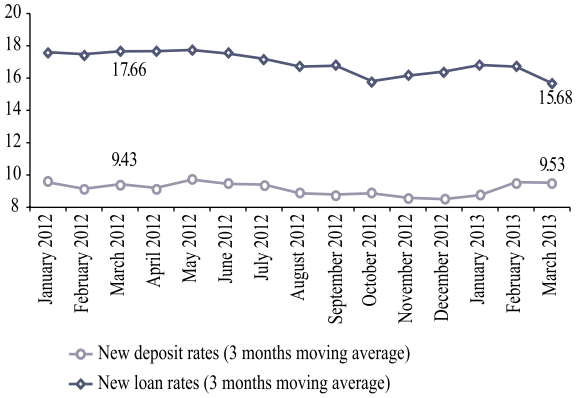
Average interest rates on loans in manat dropped 0.35 p.p. compared to early year and

[6] Capital multiplier – assets/capital, or ROE/ROA. Every manat indicates the share of assets in capital.
[7] Net interest margin- (Net interest profit/ Average interest bearing assets).

equaled 14.85%. In the similar period nominal average interest rates on deposits declined to 9.84 from 9.85. Interest rates on foreign-currency denominated loans and deposits declined respectively 0.5 and 0.15 p.p. Interest margin in manat averaged 5.1%, while in a foreign currency it was about 4.97%.

Average weighted interest rates kept declining on newly issued loans and attracted deposits, as well as interbank loans.

Chart 2.16. Interest rates on newly attracted deposits and issued loans



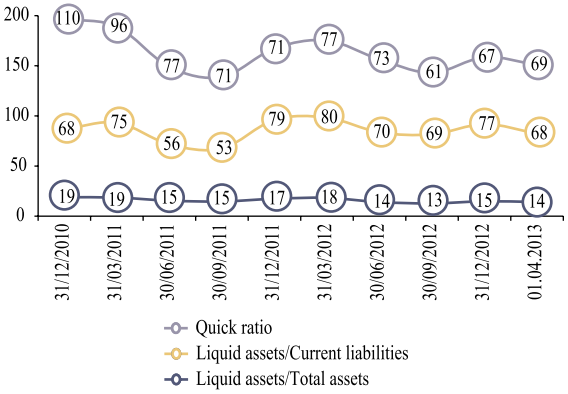
Source: CBA

III. RISKS IN THE BANKING SYSTEM

In Q1, 2013 risks in the banking system were maintained at a manageable level. The maturity gap analysis of assets and liabilities suggests acceptable liquidity in the banking system.

In current Q1 banks maintained an acceptable liquidity level to timely fulfill their commitments before creditors and borrowers. The share of liquid assets in total assets surpassed the threshold (10%) and made 14%. The share of liquid assets in current liabilities constituted 68.3% as of the end quarter. The instant liquidity ratio was 69 percent (67% as of 01.01.2013), which surpasses the CBA requirement (30%).

Chart 3.1. Liquidity indicators, %



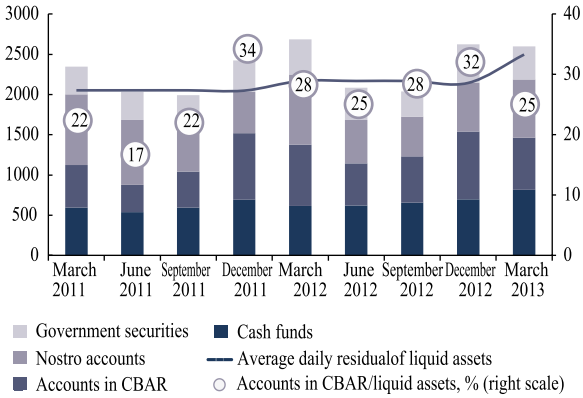
Source: CBA

Average daily balance of highly liquid assets rose by AZN 353 million (16.5%) compared to the early year and reached AZN 2498 million.

As of 01.04.2013 the share of cash funds, nostro accounts and state treasury bills in the structure of liquid assets respectively was 31.4%, 27.8% and 15.9%. The share of banks' accounts with the CBA in liquid assets made 25% as of the end-period.

Loans are incrementally financed through

Chart 3.2. Dynamics and structure of liquid assets, AZN million

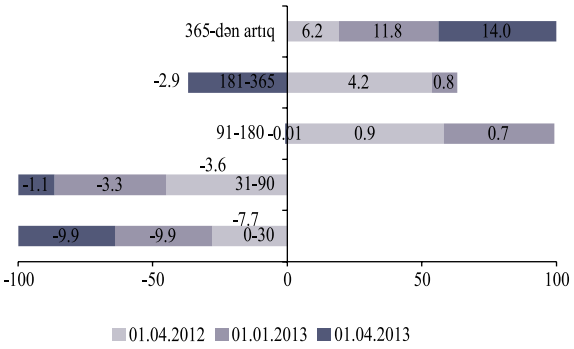


Source: CBA

internal resources. Over the quarter the loans to total deposits ratio was down to 145.3% from 147.3%.

The maturity gap on assets and liabilities analysis displays an acceptable level of maturity. Over 90-day gap declined over the period and had a downward effect on the liquidity risk. At the same time, while over the 365 day-gap rose due to high lending activity, the liquidity risk remained on a manageable level.

Chart 3.3. Gap between assets and liabilities to assets, %



Source: CBA

The foreign currency structure of assets and liabilities was balanced to minimize the effect

Box 3. The link between NPLs and macroeconomic performance

NPLs threatened macroeconomical and financial stablity of DDCs during the recent financial crisis, which necessitated analysis of the link between NPLs and macroeconomic indicators. Given the importance of the issue, the IMF expert analyzed NPL determinants and the effect of problem loans on macroeconomic indicators in 26 DDCs.

Over the past decade the level of NPLs has considerably changed across years in DDCs. Thus, from the East Asian crisis through 2003 NPLs sharly jumped and reached the threatening level. In contrast, (precrisis) 2003-2007 was accompanied with lower NPLs. In 2008 – 2009 fragile economic growth conditioned NPL growth. In total, an average NPL indicator on 2000 – 2007 fell below the 2008 – 2009 level in major countries.

The paper made an econometric estimation to evaluate the link between NPLs and credit/GDP, real estate prices, economic growth and inflation. The findings display that:

- 6.1% rise in real estate prices increases NPLs by 0.3% in the following year and 1.5% after 4 years;
- 1.6% rise in inflation (decreasing borrower income in real terms) increases NPLs 0.3% in the following year and 1.6% after 4 years;
- 2.7% drop in economic growth increases NPLs 0.4 percent in the following year and 1.7% after 4 years;
- one standard deviation decline in the credit/GDP ratio increases NPLs 0.3% in the following year and 1% after 4 years.

To note, since the NPL growth is procyclic, it has a negative impact on macroeconomic and financial indicators. Thus, 2.4% rise in NPLs:

- decreases real estate prices 1.2% in the following year, and 3.2% after 4 years;
- decreases real sector loans 4.5% in the following year, and 28% after 4 years;
- decreases economic growth 0.6% in the following year, and 1.1% after 4 years;
- NPL itself 1 percent in the following year, and 3.8% after 4 years.

The negative impact of NPLs on economic growth varies accross countries. Thus, 0.6 – 1.7% rise in NPLs has a considerable effect on macroeconomic and financial stability in DDCs unlike DGCs.

According to the research findings, to prevent the threatening level of NPLs, banks' high risk appetite should be limited through macroprudential tools an economic cycle accelerates.

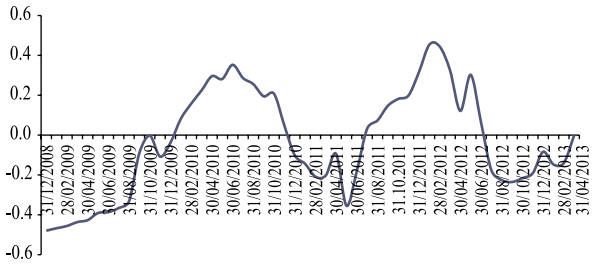
Source:
Mwanza Nkusu, "Nonperforming loans and Macrofinancial Vulnerabilities in Advanced Economies", IMF, 2011.

of exchange rate risks. As of 01.04.2013, assets and liabilities in a foreign currency made 36.5% (34.1% as of 01.01.2013) and 42.8% (44.3% as of 01.01.2013), respectively.

In current Q1 quality of the credit portfolio was maintained on an acceptable level, while credit risks remained on a manageable level. The share of overdue loans in total loans was 6%.

The fragility index[8], which addresses sustainability of the banking sector, displays an optimum level of the banking system's fragility level (Chart 3.4.).

Chart 3.4. Banking system's fragility index



Source: CBA

CBA's regular stress-tests demonstrate that preventive regulation and improvement of

[8] Fragility index – is defined as an average value of standard deviation of loans to the private sector, foreign debt liabilities and deposits of the population. The optimum value for the index ranges between -0.5<BSFI<0.

risk – management systems in banks enable maintenance of an adequate level of assets quality. An acceptable level of liquidity and ongoing capitalization in banks elevate resilience of the system to possible shocks.

Box 4. Evolution of stress-tests

To evaluate financial sustainability of the overall financial system and certain institutions *stress-testing* is being widely used in recent years. Stress-testing is a macroprudential analysis tool that helps follow and forecast potential weaknesses of the financial system, and enables to evaluate sustainability indicators (capital adequacy, liquidity, profitability etc) via early warning during various macroeconomic shocks and scenarios of the financial system.

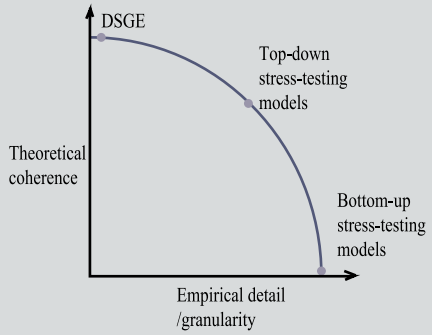
Stress-testing covers the following methods:

- *Sensitivity analysis:* the goal is to identify probability of elastic response of financial institutions to changes to interest rates, exchange rates, share prices and other important economic variables and the degree of risk exposure;
- *Scenario analysis:* the goal is to evaluate how financial institutions and the entire financial system comply with the situation in certain exceptional, however plausible scenarios;
- *Chain response analysis:* the goal is to consider results of spillover of shocks caused by certain financial risks to weaknesses of the entire financial system when analysing tough conditions.

Stress-testings apply 2 approaches: *(i) top-down* and *(ii) bottom-up*. In *top-down* approach banks are stress-tested without being involved through macroeconomic scenarios. In *bottom-up* approach banks are stress-tested via the models and scenarios built by banks themselves and results are delivered to related supervisory authorities.

Both methods - *top-down* and *bottom-up* are built upon a diverse modelling philosophy. *Top-down* modelling prefers evaluation of risks based upon a unified and logical theory, while *bottom-up* method prefers depth of data (Chart 1). As for macroeconomic models, including the

Trade-off between theoretical coherence and empirical detail of stress-testing models



Dynamic Stochastic General Equilibrium (DSGE) model, they are primarily built upon a theory and empiric depth hardly exists (Burrows, Learmonth, McKeown, 2012)

Original stress-testing models evaluated the impact of macroeconomic factors on credit risk through use of aggregated time series. Whereas the forecasting capacity of the models built upon aggregated time series is limited, they are more useful for communication.

More exact evaluation of risks necessitated new generation models. These models evaluate dependency of banks' financial sustainability indicators on macroeconomic factors using individual – panel data[9] rather than aggregated ones. In this instance, a model is built considering indicators per bank separately. *The key advantage of the panel data stress-testing* is to evaluate to what extent every bank will be affected by macroeconomic shocks, shifting evaluation down to the micro level. Central banks of major DDCs use panel *data stress-testing*.

Source:

Quagliariello, M. (2009). Stress-testing the Banking System. Cambridge University Press, New York.

Burrows O., Learmonth D. and McKeown J. (2012). RAMSI: a top-down stress-testing model. Financial Stability Paper No. 17, Retrieved from Bank of England website: http://www.bankofengland.co.uk/publications/Documents/fsr/fs_paper17.pdf

[9] Panel data – data generated from joining time series and cross-section data.

IV. PAYMENT SYSTEMS

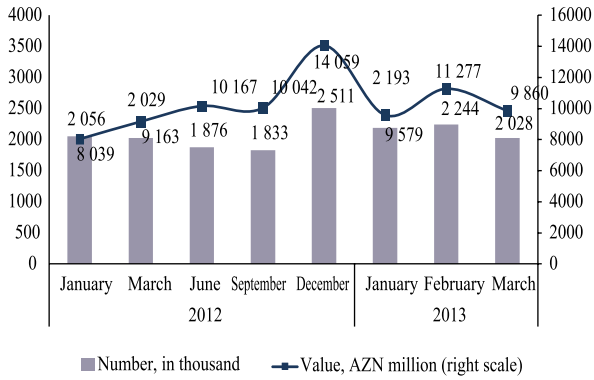
Over the reporting year payment systems ensured stable and uninterrupted operation. The scale and the number of transactions in the National Payments System adequately responded to the economic activity in the country.

In Q1, 2013 AZN 30 716 million worth 6.465 million pcs of transactions were executed in the National Payment System. Y.o.y increase in the number of transactions was 4.3 percent (267 thousand pcs), while total volume jumped 19.5% (AZN 5 009 million).

Over the reporting period average daily number of payments was 98 thousand pcs, while average daily volume was AZN 465,4 million. (In Q1, 2012 respectively 93.9 thousand pcs and AZN 389.5 million).

89.9 percent of e-payments were made through AZİPS, whose total volume was AZN 27 607 million (103 thousand transactions). Y.o.y. increase in total volume of transactions was 17.4% (AZN 4 101 million.). The amount per payment order averaged AZN 280 thousand.

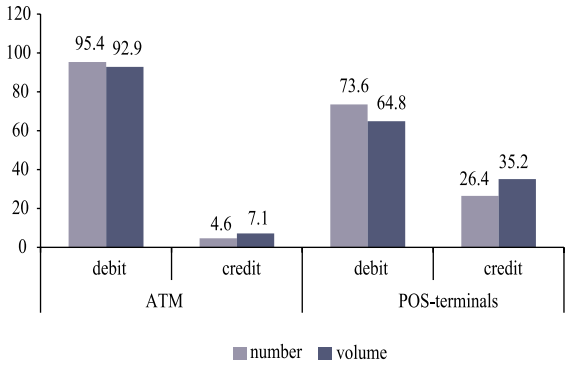
Chart 4.1. Dynamics of payment transactions in the National Payment System



Source: CBA

In terms of amount, 10.1% (AZN 3.109 million) of payments were made through the BCSS. In terms of number, the share of the BCSS was 98.4% and 6,362 million pcs of payments as of end-Q1, which prevails over the relevant period of the last year by 41.3 percent (AZN 908 million) in terms of amount and 4.1% (252 thousand pcs) in terms of number. Amount per payment averaged AZN 490.7.

Chart 4.2. Share of debit and credit cards in transactions with ATMs and POS-terminals across the country in Q1, 2013, %



Source: CBA

Over the quarter the number of ATMs rose 1.5%, while that of POS-terminals – 1.1%.

In Q1, 2013 AZN 1 939 million worth 12.233 million pcs of transactions were conducted via ATMs. The number of POS-terminal operations was 1 825 thousand pcs and the volume – AZN 197 million.

The number of payment cards increased 167 thousand pcs and reached 5.175 million pcs over the quarter, which makes average 862.5 pcs of payment cards per thousand (mature) persons. As of 01.04.2013 total card users

Box 5. Growth of global e-trade

In past years global e-trade or trade over Internet has been accelerating. E-trade is expected to amount USD 1.5 trillion on the end-2012, out of which about 26% falls to the share of the Euro zone, 24% – the US, 50% – other countries. In total, e-trade is forecast to rapidly expand. Thus, up to 2016 sector's annual global growth is expected to average two-digit. Only in Russia and Turkey the sector's turnover will rise over 2 times as much in the medium run. Currently Turkey hosts over 14 thousand relevant web-sites and 7 million persons (10% of the population).

According to annual per capita e-trade turnover, England is the world leader. Australia lags behind with USD 3547, Norway with USD 2530, US with USD 2293, and Denmark with USD 2185. This indicator

is USD 93 in Russia and USD 275 in Turkey. The share of e-trade in total trade is the highest in Korea (11.9%). This ratio equals to 8.8% in England, 5.8% in the US, 4.1% in Poland, 3% in Brazil and 1.7% in Turkey.

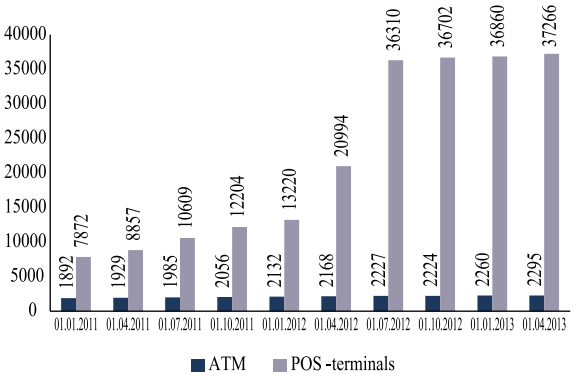
Buyers can buy various products via e-trade. For instance, whereas 42% of those who make purchases in the US over Internet buy foodstuff and 32% – clothes, 45% orders electronic appliances in Germany. DGCs mainly buy electronic products – 36% in Argentine, 45% in Brazil, 35% in Russia and Turkey. Particularly in Russia a considerable portion of e-trade falls to the share of railway and air ticket orders.

Companies specialized in e-trade accross the world are capable to fulfill large order volume. For instance, daily product sending capacity of the Markafoni, which is in top 5 e-trade companies with the 15% market share, is 50 thousand pieces. It goes without saying that it necessitates additional delivery services.

What makes the global e-trade widespread is that it is easier for a seller to launch business, a buyer saves time for purchases, shipping etc. When launching e-trade, a producer frees himself/herself from purchase or rent of a sales point, staffing and a considerable portion of other alternative expenses. At the same time, global experience displays that rapid growth of e-trade is reltaed to complex factors. These factors include computer ownership and access to Internet, use of smart phones, wide scope of social networks, higher security standards of related Internet sites, protection of consumer rights etc.

Source:
Maven Partners, McKinsey reports.

Chart 4.3. The number of ATMs and POS-terminals installed



Source: CBA

are numbering 4.5 million persons across the country.

89.9% of payment cards are debit cards (out of which 55% social, 29% pay and 16% other cards), remainder 10.1% – credit cards.

Over the quarter 86.8% (AZN 14.058 million) of total volume of transactions across the country were cash withdrawals, while 13.2% (AZN 2,136 million) - cashless operations.

Internet-banking is expanding. Thus, over the quarter AZN 80.547 million worth 12.3 thousand pcs of transactions were executed through Internet-banking. AZN 147.541 thousand worth 4.499 thousand pcs of transactions were executed through mobile-banking.

Charts and Tables used

Charts

Tables

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