

CENTRAL BANK OF THE REPUBLIC OF ARMENIA

FINANCIAL STABILITY REPORT

2011

First half

2011

This Financial Stability Report presents an assessment of potential risks that could threaten the stability of financial system of the Republic of Armenia as well as the capacity of the financial system to absorb such risks.

More detailed information on Armenia's macroeconomic environment and financial system analyses is available in the Central Bank's periodicals, such as *Annual Report of the Central Bank*, *Status Report on Monetary Policy Implementation* and *Armenian Financial System: Development, Regulation, Supervision*.

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Financial stability can be characterized as concurrence of financial and macroeconomic conditions when the financial system i.e. financial institutions, markets and market infrastructures are capable to withstand the probable shocks and instability, in this way minimizing the probability of interruption of intermediation function.

In defining the financial stability, what is taken into consideration is that financial instability can emerge as a result of interruption of internal functions of the financial system as well as unfavorable developments in domestic and world economies, credit risk issues connected with major borrowers and lenders, shifts in economic policies and infrastructures.

Safeguarding the financial stability presumes the efforts for the identification of main risk sources, poor-managed financial risks, ineffective asset pricing and finally implementation of the policy as appropriate.

PREFACE

The Financial Stability Report of the Central Bank of the Republic of Armenia is prepared on a semiannual basis. It contains a broad assessment of risks that could threaten the stability of financial system as well as the capacity of financial system to withstand such risks. Through publishing of information concerning a variety of reviews on financial stability, the Central Bank seeks to bring interested parties' attention to those risks and events that could undermine financial stability of the Republic of Armenia as well as provide an opportunity to debate on how to minimize such risks.

The Central Bank is in charge for maintaining the financial stability of Armenia. The Central Bank's statutory responsibility for the country's financial stability is directly related to the primary goal of price stability and maintaining the sustainability and functionality of the financial sector. Serious disruptions in the financial sector may create impediments to effective implementation of monetary policy. Contrariwise, the monetary, macroeconomic stability contributes to reduce risks threatening financial stability. The financial sector plays an important role in overall economic system, and the financial sector needs to maintain continuity and sustainability of processes thus contributing to the normal development of the entire economy.

The Central Bank carries out an ongoing monitoring and analysis of financial stability for early disclosure of any changes and variations that could threaten financial stability. The assessment of Armenia's financial system stability in this report is presented in two aspects: one to evaluate how effectively the financial system intermediates to macroeconomic processes and the other to measure the stability of the financial system of its own and its ability to mitigate and absorb risks. The report refers to the risks revealed in macro-environment and financial sector and their influence on the developments in all sectors of the economy and financial system.

Risks affecting financial stability of Armenia can emerge in the domestic economy, external economy and the financial sector itself. In this sense, the main preconditions for financial stability are:

- a domestic and external macroeconomic environment with sustainable development whereby households and companies would be creditworthy enough,
- a stable and effective financial system with risks that are prudent and manageable,
- efficient financial infrastructures with operational continuity to the benefit of functioning of the financial system.

As presented in this report, risks that can potentially undermine financial stability of Armenia derive from:

- developments in world economy,
- developments in macroeconomic environment in Armenia,
- developments in financial market in Armenia,
- financial institutions of Armenia, and
- financial infrastructures of Armenia.

The report addresses the risks revealed in those areas and attempts to measure their possible impact on the developments in the economy on the whole and all parts of the financial sector. The report makes a special focus on the risks to the banking sector and development trends: the role the sector plays in overall financial system is vital, since assets of commercial banks account for more than 90 percent of entire financial system assets. As a principal pillar to the financial system of today, banking sector determines overall financial stability and development trends. In this report, the assessment of banking sector stability includes reviews on credit, market and liquidity risks.

ABSTRACT

During the first half of 2011 there was no reported growth of risks undermining Armenia's financial stability, while all changes along the way further solidified the stability of the system.

Increased prices of raw materials as well as recovering inflow of transfers and domestic demand contributed to the growth of GDP.

The rise in prices of basic commodities, food products in particular, in world markets noticed since the second half of the previous year as well as reported slump in supply of domestic agriculture in the first half of the year further fuelled high inflationary environment, added to inflationary expectations and negatively affected real household incomes¹.

No worsening of risk levels was observed in the financial sector while expectations of further positive development solidified instead. The banking system brought growth of lending back on track yet it broadly remained conservative in terms of assessing borrowers.

The global economic growth continued albeit downside risks to the economic growth increased. In advanced

¹ Despite such developments, prices of imported goods and domestic manufacture fell notably during the first two months of the second half of the reporting year, and such price fall mitigated the said negative developments.

economies the sovereign and private debt burden persisted at high levels which limit the state's ability to intervene and hinder the growth of demand and prevent the economy from reviving further. In a complicated situation like this, implementing exceptionally coordinated policies and taking unified approaches to regulation and supervision reforms in the financial system is equally important to all countries. In the face of continued rise in manufacture and food prices, curbing inflation has become a priority for developed countries, too, bringing forward risks to restricting further economic growth. The recovery is slower-than-forecast in Armenia's main partner countries – Russia, some Euroarea countries – which may create negative impact on the Armenian economy already (see details in *Developments in world economy* section).

According to the Armenian National Statistics Service data, Armenian economy expanded at an annualized rate of 2.7 percent in the first half of 2011. Growth was reported in all sectors of the economy, except for construction where volumes of privately funded construction are still small.

In the first quarter of 2011, amid high inflationary environment, the Central Bank gradually tightened the monetary policy conditions by raising the refinancing rate a total of 1.25 pp² since the start of the year. In the months ahead, the Central Bank was predominantly neutral with its policy as it left the refinancing rate unchanged and preferred to not tighten monetary policy conditions further. Based on June data, the 12-month inflation was 8.5 percent, remaining far above the confidence band³ (see details in *Financial stability in macroeconomic environment in Armenia* section).

In the first half of 2011 Armenian commercial banks posted growth indicators while maintaining their capital adequacy and liquidity ratios above normative requirements and handling market risks within a comfortable territory of manageability. During the first half of the year profitability of the banking sector has grown, with return on assets reaching 2.2 percent and return on equity, 11.7 percent. Banks and credit organizations further eased lending conditions and the growth rate in lending persisted, amounting to 18 percent (see details in *Stability of financial institutions in Armenia* section).

² See details in *Inflation Report, Q2, 2011*.

³ At the end of August the 12-month inflation was near the confidence band, resting at the 4.8 percent level, and although in September it rose up to 6.2 percent, the downsloping trajectory of inflation is most likely to be persisting in the forecast time horizon, regardless its propensity to fluctuate.

1. DEVELOPMENTS IN WORLD ECONOMY

Assessing current situation of the global economy from the financial stability point of view is very difficult. It appears at a first glance that the situation returned to normal yet existing economic imbalances keep on deteriorating. The quantitative and qualitative parameters varying across countries in terms of economic advancement and level of growth in different sectors and market segments continue to deteriorate. These quantitative and qualitative differences can now be seen as signs of future risks. The difference in the levels of economic growth between emerging and developed countries is considerable as emerging countries face risks to overheating of their economies, while developed countries are being challenged for the slowing of their economic growth. The parametric differences are increasingly observable in European countries too, as economic conditions, the path on which events progress and challenges faced by policymakers vary country by country.

In the first half of 2011, the global economic growth has slowed down notably relative to the forecasts made earlier the year. The main reasons for slowdown included existing structural problems in developed countries, huge sovereign and private debt burden in the USA and a number of Euroarea countries, sluggishly recovering real estate market, persistently high rate of unemployment especially in the USA, and lasting global imbalances.

IMF estimates of global economic growth

Indicator	31.12.10	31.03.11	30.06.11	30.09.11
Global economic growth	4.4	4.4	4.3	4
Developed countries	2.5	2.4	2.2	1.6
USA	3	2.8	2.5	1.5
Euroarea	1.7	1.6	2	1.6
Emerging countries	6.5	6.5	6.6	6.4
CIS	5.3	5	5.1	4.6
Russia	5.1	4.8	4.8	4.3
China	9.6	9.6	9.6	9.5

Source: IMF.

According to the IMF estimations⁴, in the first half of the year world output growth was 4.3 percent whereas economic growth is forecast to reach 4.0 percent for 2011 and much the same for 2012 (the June forecast is downside, 0.3 percent and 0.5 percent, respectively). Higher growth rates are predicted for emerging economies (as much as 6.4 percent), whereas economic growth in developed countries will amount to 1.6 percent. Targeted fiscal consolidations and even tighter monetary conditions in developed countries, on the one hand, and demand rebalancing in emerging and transition economies, on the other, will be critical for further sustainability of the economic growth.

⁴ *World Economic Outlook, IMF, September, 2011.*

1.1. MACROECONOMIC ENVIRONMENT

In the first half of 2011, a persistently low level of monetary policy interest rates nourished economic recovery in spite of negative shocks which slowed the economic growth rate down. The slowdown and further growth uncertainties were caused by the events associated with so called “Arabic spring”, economic problems in Japan and countries in the region arisen in the aftermath of the disaster, as well as challenges faced by the world economy in taking action to tackle debt issues in the Euroarea and the USA.

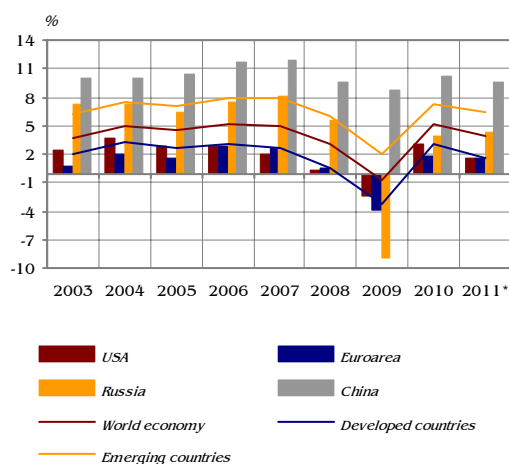
Lower-than-forecast economic growth was determined also by slowing rates of recovery of unemployment, debt and fiscal issues and rapid growth rates of commodity prices. In the first half of the year in the USA economic growth was 0.9 percent against the early of the year forecast of 1.2 percent, which was due to higher commodity prices, adverse weather conditions, and negative impact of the Japan disaster on the US manufacturing. In contrast to the USA, economic growth in the Euroarea has been noticeably higher – some 1.7 percent⁵ of economic growth was recorded in the second quarter powered by recovering economies of Germany and France.

Economic growth in emerging countries has been considerably higher, and the annual forecast is 6.6 percent according to the IMF estimations. Nevertheless, differences across regions and countries persist. High inflation and the risk of overheating of economies remains a primary concern for emerging countries for the period under review and throughout 2011.

Among emerging economies, China posted the fastest growth, nearly 9.5 percent, followed by India, 8.2 percent. As predicted by the IMF, some modest economic growth will be recorded in countries of Central and Eastern Europe and CIS, 5.3 percent and 4.8 percent, respectively. No high economic growth is forecast for both developed and emerging countries in the next two years as high unemployment, debt issues and fiscal exasperations on the one hand, and tightened monetary policy steered to reduce supply in order to handle high inflationary environment on the other, are the main drags to economic growth.

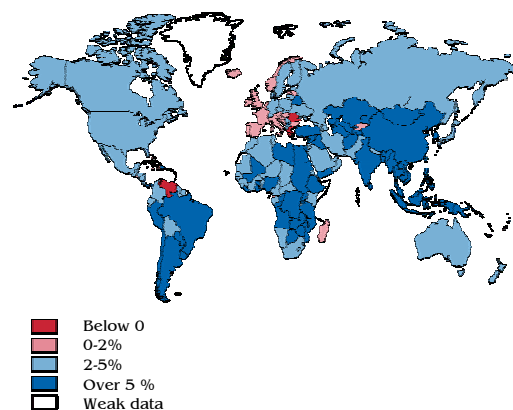
In the first two quarters of 2011 the global unemployment rate has somewhat reduced yet it stays above the pre-crisis levels. Recovery of the unemployment in developed countries lags behind recovery rates of some key macroeconomic indicators such as real GDP growth, private consumption, aggregate investment and international trade. In the context of recovering of labor market, not only

Regional growth rates



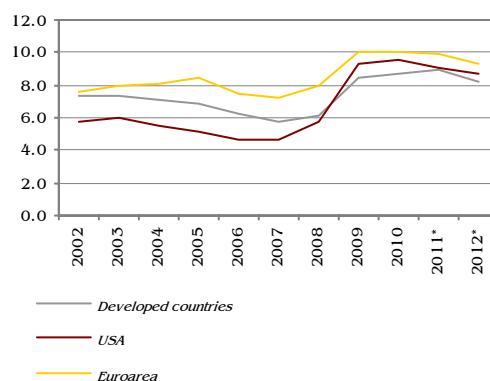
Source: IMF.

Average projected real GDP growth in 2010-2011



Source: IMF.

The unemployment in developed countries

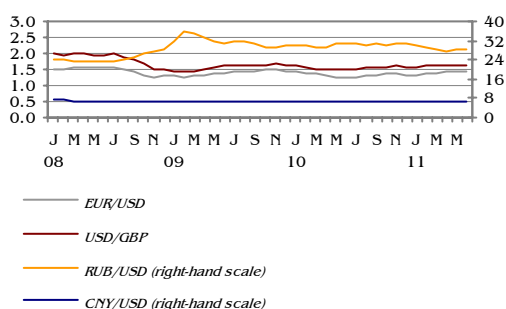


Source: UN.

* The indicators marked with asterisk in this chart and the next ones are the IMF estimations (September 2011).

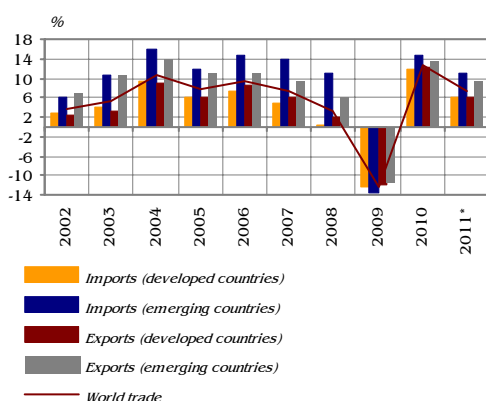
⁵ Source: Eurostat.

Developments with main currencies



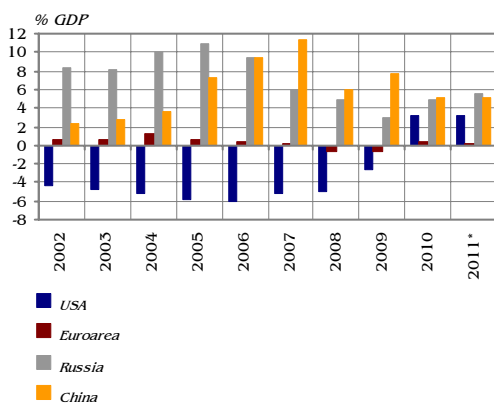
Source: central banks of different countries.

Annual growth rate of world trade



Source: IMF.

Current accounts of USA, Russia, China and Euroarea countries



Source: IMF.

Reuters/Jefferies CRB Index Dynamics



Source: Bloomberg.

problematic is the gap between production and employment growth but the gap between real productivity and real wage growth. Long-term and structural unemployment as well as unemployment of young labor force is especially worrisome. In some emerging countries the labor market continues to recover, even reaching the pre-crisis levels.

During 2011 currencies of such countries as USA, Great Britain, Euroarea, Russia demonstrated patterns of volatility amidst financial market instability and events that occurred in the USA and Arabic countries. There was a further surge in capital inflows to emerging countries fuelled by quantitative easing policies in developed countries while upward pressures on the exchange rate of local currencies were observed in emerging countries.

In the first half of 2011 rapid rates of recovery of the global economy were pulled back to some extent due to weak demand in developed countries, risen oil prices as well as the Japan disaster. According to WTO estimations, in the current year the growth of global trade will be modest, 7.5 percent, as opposed to the previous year's 12.8 percent growth. Sluggish recovery of economies and high unemployment levels in developed countries as well as extremely contractionary policy implementation in a number of European countries will remain an impediment to the global economic growth rates. Export and import volumes of Brazil, China, India, among others, continued increasing at a rapid pace, 11.2 - 12.1 percent, although indicators forecasted for the next year are somewhat lower. Export and import volumes of developed countries were pretty modest, due to sluggish economic growth, making up 6.8 percent and 6.0 percent, respectively.

During 2011, countries as heavyweights in global trade saw their current account imbalances broaden to some extent, although they are considerably below the pre-crisis levels. The US current account deficit has grown to reach 3 percent of GDP in the light of a relatively fast recovering economy, whereas in China, though the current account surplus has grown in absolute value, the current account to GDP ratio has not changed and amounted to 5.2 percent.

In the first half of 2011 raw material and food prices grew considerably which was attributable to shock events and contracted supply in individual commodity markets. At the end of semi-annum food prices were adjusted steeply downside. Despite fast growing prices, consumption in emerging countries has been increasingly buoyant during the first quarter. Urbanization trends and growing disposable income in emerging countries, China in particular, made consumption least elastic to prices. Contrariwise, consumption in developed countries, OECD member countries in particular, kept on reducing.

In the first six months 2011 investors preferred investment in gold as the most reliable asset amid massive financial assets price volatilities. As a result, the gold price has risen continuously, hitting new records. In June, the gold price rose by an average 12.3 percent against the previous year's December and amounted to USD 1528 per oz⁷, according to Bloomberg Agency.

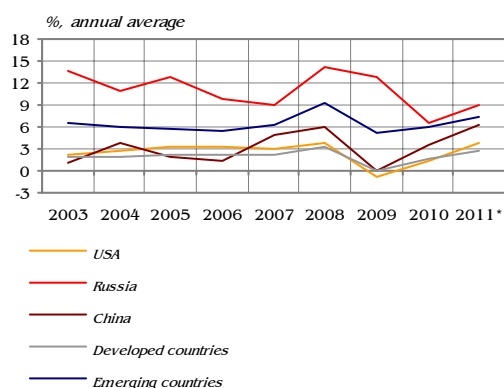
⁷ At the moment of publication of this report, the gold price already topped the USD 1660/oz mark.

The graph displays the monthly number of new cases in the United Kingdom from January 2007 to March 2011. The y-axis is labeled 'Number of new cases' and ranges from 400 to 1600. The x-axis is labeled 'Month' and shows years from 07 to 11, with specific months (J, M, S) marked. The data shows a steady increase from approximately 600 cases in early 2007 to over 1400 cases by early 2011, with notable seasonal peaks and troughs.

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In the first six months of 2011 a high inflationary environment was observable almost everywhere, with inflationary pressures not only in emerging economies due to steep food price increases and broadened capital inflows but also in developed countries. Persisting inflationary pressures urged governments of emerging countries to carry on implementing aggressive contractionary monetary policy, while developed countries started to tighten fiscal policies. More on that, the European Central Bank has lifted the policy rate.

Inflation in selected countries



Source: IMF.

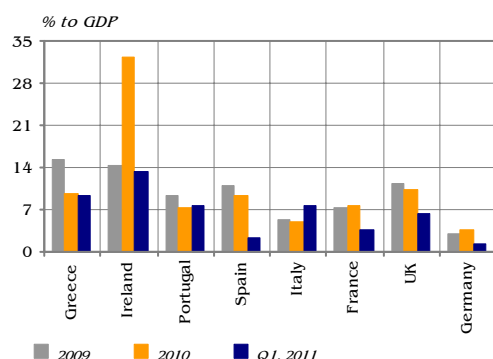
Inflation in 2011 will reach 2.6 percent in developed countries and 7.5 percent in emerging countries, according to the IMF estimations.

During the first half of the year the main advanced countries further avoided tightening monetary conditions, pointing out to the high unemployment level and still a fragile economic growth. However, in fear of painfully lasting high inflationary environment and slowdown of economic growth rates, some countries have tightened monetary conditions. The ECB, in particular, has twice lifted the refinancing rate to 1.5 percent⁸. China, too, has continuously raised the refinancing rate during the reporting period, concomitant with an increase of reserve requirement ratio. The US Federal Reserve system, instead, further kept interest rates low, at a 0-0.25 percent level, pointing to the low economic growth and high unemployment.

1.2. INTERNATIONAL FINANCIAL MARKETS

Risks threatening financial stability persisted during the first half of 2011, too. Issues pertinent to the Euroarea sovereign debt and bank stability have escalated, spreading their impact over financial markets as well. Debt issues of the countries in Euroarea and doubts questioning the effectiveness of aid packages to these countries added to the volatility and uncertainty in financial markets. In the first half of the year political risks associated with fiscal adjustments in the USA and Japan also brought more volatility into the markets. Banks further used potentially insecure sources of liquidity, which is troublesome in the face of growing volatility in the markets. Banks may run into serious problems of refinancing of such debts when conditions in financial markets change unfavorably. Analysts reckon that in the upcoming two years alone financing need of European banks has hit historic highs, while these banks continue to be reliant on short-term dollar liabilities.

Budget deficits in some Euroarea countries



Source: IMF.

⁸ The ECB Board of Directors resolutions of 07.04.2011 and 07.07.2011.

Financial markets have become far sensitive to any news relating to the global economy and changes in macroeconomic indicators. Worries about economic slowdown in the US resulted in smaller real yields on government securities and created pressures in markets of risky assets. Challenged by uncertainties, investors have given preference to non-risky assets, treasury bills in the main, which led world stock exchange indices to plummet down during the first half of the year, demonstrating extremely a volatile performance.

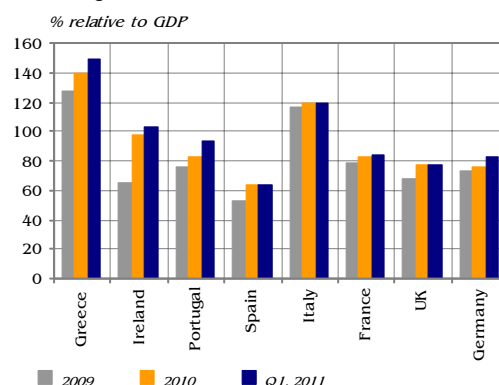
In the first half of 2011 the Euroarea debt issues remained poisonous to the stable recovery of the global economy. Markets were anxious all the time for the situation in and programs of financial support to the countries facing sovereign debt and budget deficit constraints (Portugal, Spain, Greece, Italy). The downgraded credit rating of Spain, Greece and Portugal played its part in exacerbating concerns over debt crisis. During the semi-annum, there appeared new risks in connection with Italy's debt troubles. The Italian budget deficit amounts to 7.8 percent of GDP whereas the country's sovereign debt makes up 120 percent of GDP, which is double the figure acceptable under the EU criteria. During the semi-annum, credit rating agencies regularly appeared announcing the likelihood of revising Italy's sovereign rating downwards. So, already in September of the reporting year STANDARD & POOR'S rating agency downgraded Italy's sovereign rating from A+ to A, with a negative prospect though⁹.

Throughout the entire semi-annum a variety of support programs (e.g. the IMF in cooperation with the EU endorsed a help package in support of Portugal and, later on, the EU endorsed a similar help package for Greece) were launched for countries facing debt problems, with no material outcome, unfortunately.

In the first half of the year, amidst escalation of sovereign debt and budget deficit problems, priority was given to tightening of fiscal policies, which dragged to some extent a rapid growth of the economies. Most emerging countries and some developed economies have tightened monetary conditions, too. The QE2 policy of the US Government was accomplished during the semi-annum, which *per se* means tightening of monetary conditions, albeit the Fed may be expected to only raise the policy rates at the start of 2013 due to current non-satisfactory developments with the US economy.

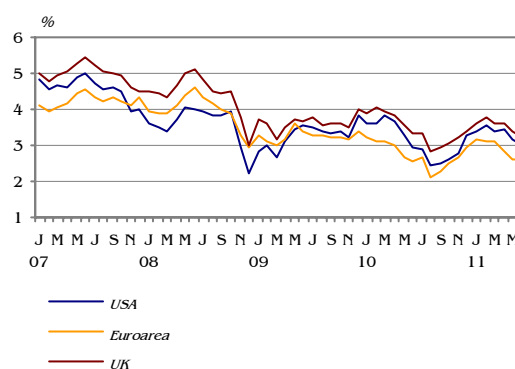
In the first half of 2011 the US Federal Reserve System and the Bank of England kept the refinancing rates at low

Sovereign debt of some Euroarea countries



Source: IMF.

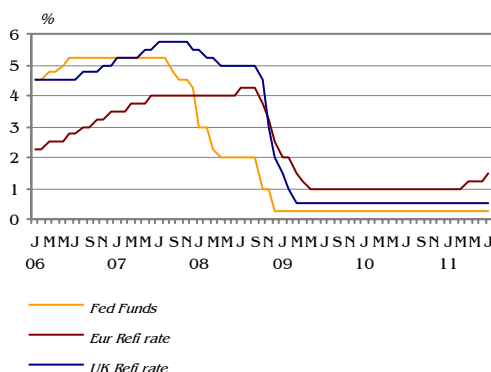
10-year government bond yield



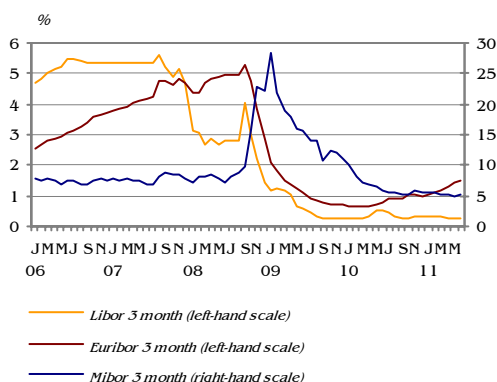
Source: Bloomberg.

⁹ In October, 2011, Moody's also downgraded Italy's sovereign rating from A2 to A2.

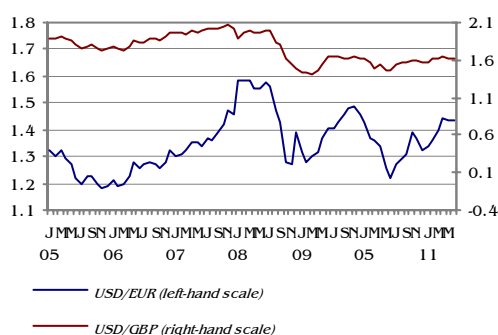
Central bank policy rates



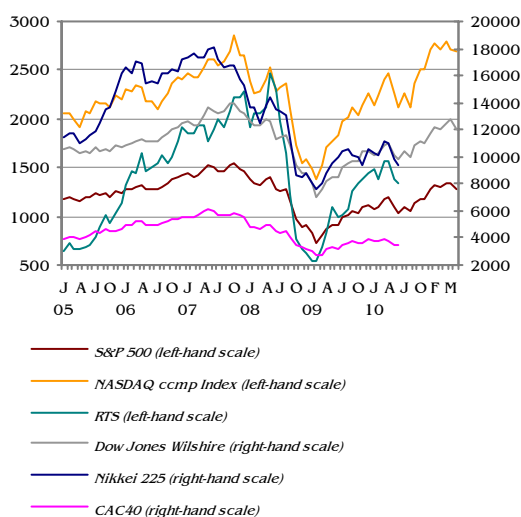
Interbank interest rates



USD exchange rate versus EUR and GBP



Stock exchange indices



levels, pointing out to sluggish economic and employment growth rates. Despite serious inflationary pressures, the Bank of England left the refinancing rate unchanged in the entire semi-annum, aiming to promote economic recovery. The main argument supporting the decision was that cutting government expenditures is what could hit the economy, while in the medium run inflationary pressures are expected to diminish. It should be noted that, as of June data, inflation in England was 4.2 percent (the target is 2 percent).

The ECB, in view of pressures of intensifying inflation, has twice lifted the refinancing rate by 25 basis points each and set it at the 1.5 percent level. Faced with the 'overheating' of the economy and high inflationary pressures, some emerging countries (China, Brazil, and Russia, among others) have tightened their monetary policy conditions. In particular, during the reporting semi-annum the Chinese Government has lifted the refinancing rate four times and it concurrently (6 times) changed the reserve requirement ratio¹⁰.

During the first half of the year interbank interest rates were also kept at low levels in response to persistently low policy rates in developed countries.

Unfavorable developments with the US economy and quantitative easing policy measures implemented during the first half of 2011 led the US dollar to slightly depreciate versus Euro (average y-o-y depreciation was 3.7 percent). In emerging economies, pressures from appreciation of local currencies persisted amid continued massive inflow of capital.

Stock indices in developed and emerging countries demonstrated a rise early in the semi-annum after some reported volatility. In the second quarter however these indices started to decline, determined by the slowing of the economic growth and uncertainties in the financial markets.

During the semi-annum 2011 capital inflow to emerging economies remained vigorous. This pinpoints the significance of the role these countries are already playing at a global level and demonstrating even steadier economic developments in comparison with the main advanced countries. The IMF assessment¹¹ suggests that in 2011 net private capital inflow to emerging economies will reach USD 1.4 trillion. Though a massive inflow of capital shores up the recipient country's economy, it however has brought in certain problems to policymakers in the form of inflationary pressures and potential risks of unprecedented growth in asset prices and lending.

¹⁰ The policy rate of the Central Bank was lifted at end-December of 2010 and at the beginning of February, April and July of 2011 for a total 0.9 pp. Since the start of the year, the reserve requirement ratio was increased by 0.5 pp each month up to 21.5 percent.

¹¹ The Institute of International Finance.

SUMMARY

In the first half of 2011 the global economic growth was recovering at unstable and sluggish rates. Downside risks kept on growing during the entire semi-annum. Scarcity of possibilities to stimulate economic growth, high level of unemployment, sovereign debts and budget constraints hence a need to implement fiscal consolidation policies, and high prices remained problematic for both developed and emerging countries. Finding right solutions to sovereign debts and budget deficits, coordinated anti-crisis measures by all countries as well as keeping prices of raw materials stable are important for a sustainable economic recovery.

During the first half of the year financial markets performed extremely volatile while financial institution stability is still fragile: bank balance sheet restructuring is incomplete, elevated debt burden of the private sector is further a concern from the credit risk point of view, the share of borrowed funds remains large.

Persisted high inflation urged monetary authorities in emerging economies to go in for step by step tightening of monetary conditions, which will restrain economic growth in the medium run along with inflation.

While definitely not positive at a global level, world economic developments in the first half of 2011 proved beneficial to Armenia in terms of recovery of the industrial growth and household incomes. Main adverse events included high inflationary pressures spilled over from food commodity markets as a result of record price increases.

Expectations of further developments with global economy are primarily on the downside direction. The US sovereign debt issues, divergence of attitude at the Government, and credit rating of the USA downgraded by STANDARD & POOR'S all have resulted in further uncertainty and loss of confidence in international markets. Escalated debt issues in Euroarea (Portugal, Greece, Italy, Spain) undermine expectations of future developments. Debt issues of these countries tend to expand farther to the main Euroarea countries. Major banks in Germany, France, Great Britain have in their balance sheets tens of billions of dollar government bonds of Greece and other countries facing debt crises. Some analysts say that the Europe's debt and banking troubles are largely correlated, and banks will heavily need additional capital injections amidst escalated debt crises. Currently, such banks as BNP Paribas, Credit Agricole, Societe Generale, a Franco-Belgian Dexia and some German banks face similar problems.

Forecasts regarding emerging countries are not reassuring, either. Particularly in China and Brazil, economic growth rates

now trend downward and this is expected to persist along with possible reduction of developed countries' demand for imports.

According to the IMF predictions¹², world output growth is estimated to be 4.0 percent in 2011, yet risks to persisted inflation and unstable economic growth remain high. The slow recovering of demand in developed countries may hold back the growth of global trade significantly. As predicted by the IMF, upside risks to increased prices of raw materials and food will weaken notably in the next half of the year, reflecting expected slowdown of the global economy and shrinking demand as a result of contractionary policies in emerging countries.

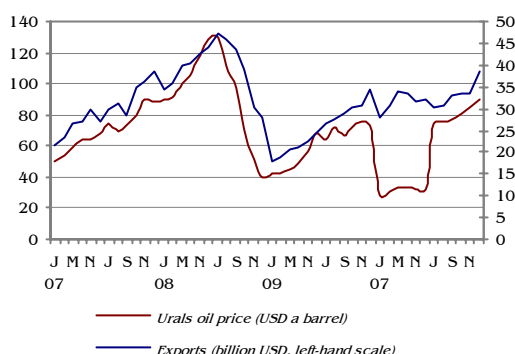
1.3. DEVELOPMENTS IN REGIONAL ECONOMIES¹³

As an open economy, Armenia can not stay immune to potential influences from the developments that take place in neighboring and partner countries. This section has been prepared to introduce the main developments in selected regional countries which may determine, directly or indirectly, the developments in the Armenian economy and affect the country's financial stability. Based on the H1, 2011 data, 82.0 percent of transfers and factor incomes and 40 percent of FDI came from Russia; also exports to and imports from Russia were, respectively, 12.18 percent of Armenia's total exports and 16.45 percent of total imports. These indicators for neighboring Georgia were 4.6 percent and 5.7 percent, and for Turkey, 0.07 percent and 5.3 percent, respectively.

RUSSIAN FEDERATION

In the first half of 2011 economic recovery in Russia continued, with some negative trends accompanying however. Economic growth has been weak enough to overcome the crisis in spite of more than favorable developments with international oil prices. Urals oil price averaged USD 108.1 a barrel, representing a slight increase in relation to the pre-crisis price. According to preliminary estimations of Ministry of Economic Development, the GDP growth in the first half of the year was 3.9 percent and is forecast to reach 4.5 percent in the next half. On general terms, the annual growth will be congruent with the global economic growth rate, which is estimated to reach 4.3 percent, yet it will lag behind the annual growth rate indicator projected for other emerging countries.

Oil price and Russia export trends



Source: Ministry of Economic Development of Russia.

Weak investment demand during the reporting semi-annum, the growth of which might be a prime driver of the

¹² World Economic Outlook, IMF, September, 2011.

¹³ Review on Islamic Republic of Iran is not provided due to difficult accessibility to and delayed publication of the required data.

economy under other circumstances, can be seen as a negative trend. The first six months were stagnating in terms of investments in total capital and construction as there had been merely 2.7 percent growth of investment in total capital based on semi-annual results and just 0.9 percent of growth of investment in construction based on annual results. Further, there had been only 3.7 percent growth in residential housing.

Increased consumer demand has, virtually, been the central driver to economic growth. Final consumption of households has grown by 5.7 percent and retail trade volumes, by 5.3 percent. Interestingly, the said developments evolved on the back of diminishing real disposable income (1.4 percent, based on semi-annual results) and timid growth of real average wages (2.4 percent). In other words, demand has grown primarily owing to household savings and consumer loans.

In the first half of the year external trade volumes neared the peak of the 2008 pre-crisis levels. More on that, high growth rates of exports were maintained almost totally due to the price factor. Specifically, the growth of exports in May was determined by 2.6 percent increase in physical volumes and 35.5 percent rise in prices. During the reporting semi-annum the growth of imports exceeded the growth of exports largely attributable to increased physical volumes. Despite faster growing rates of imports, positive balance of trade in absolute value remains high: based on the first five months' results it had reached USD 85.17 billion, which exceeded the pre-crisis level.

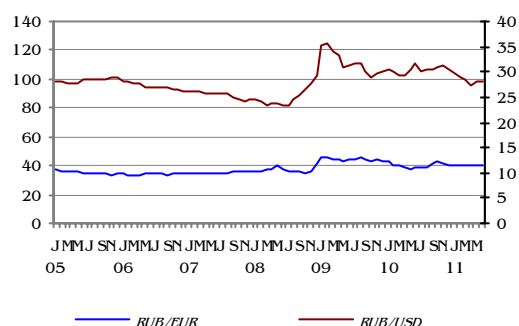
Russia's official foreign currency reserves have increased by USD 49.1 billion and neared their historic highest – USD 528.5 billion. During the first six months the Ruble further tended to appreciate. According to June 2011 data, the Ruble has appreciated by 8 percent against December of the previous year, with the y-o-y appreciation of 9.7 percent. The Ruble's appreciation was fuelled primarily by the high level of oil prices as well as unfavorable developments in the USA and Euroarea.

In 2011 too, further net outflow of capital was observed; preliminary estimations suggest that it amounted to USD 31.2 billion, representing 2.7-fold increase in relation to the previous year's indicator.

The rate of unemployment has subsided, reaching 6.4 percent of economically active population. Notwithstanding this trend, real disposable household incomes further diminished.

Though moderate to a certain extent during the first half of the year, inflation was still high. Based on June 2011 data,

Ruble average monthly exchange rate



Source: Ministry of Finance of Russia.

the 12-month CPI was 9.4 percent against the previous year's respective indicator of 5.8 percent.

In view of inflationary pressures and high inflation expectations, the Russian Central Bank had lifted the refinancing rate during the first half of the year by a total 0.5 pp to 8.25 percent.

The developments in the banking sector in the first half of the year have been positive. Preliminary estimates suggest that annual lending growth in January-June was 6.4 percent (0.6 percent was recorded in the same period of the previous year). Highest growth rates were reported on loans provided to natural persons, which outstripped even the growth rates of lending in 2008. Based on the data of the first four months, profit generated by commercial banks amounted to 50 percent of the previous year's profit.

GEORGIA

Based on the data from National Statistics Service of Georgia, the y-o-y economic growth in the first half of the year was 5.6 percent, somewhat lower from the previous year's indicator of 6.4 percent. Economic activity was recovering as exports were growing, inbound transfers perking up and construction enlivening.

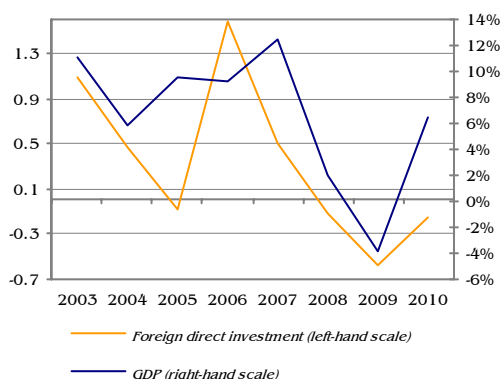
In the first six months of 2011, relative to the previous first six months, exports have grown by 44.1 percent. The growth of imports was somewhat moderate, yet high enough, 35.8 percent. Based on the first quarter 2011 results, foreign direct investment – as proven locomotive of the Georgian economy in the last couple of years – has increased by 4.3 percent but still lagged behind the pre-crisis levels.

In 2011, driven by foreign currency flows, average exchange rate of the Georgian Lari has appreciated by 2.7 percent y-o-y. During the semi-annum, in order to curb exchange rate appreciation, the National Bank intervened to the foreign exchange market by purchasing a total USD 45 million, net.

High inflationary environment which had transmitted from the previous year persisted during the first half of the year. Scaling up to 13.7 percent, inflation went down to 10 percent y-o-y in June. To curb inflation, the National Bank raised the refinancing rate at the start of the year by 0.5 percent to 8 percent, and left it unchanged for the entire duration of the semi-annum. Early in the year the National Bank tightened the reserve requirement by raising the prudential ratio up to 15 percent.

Developments in the Georgian banking sector in the first half of the year were positive. The economy lending has

Georgia GDP and FDI growth



Source: National Bank of Georgia.

grown by 9.5 percent compared to 21 percent growth recorded at the end of 2010. The share of non-performing loans was 5 percent based on the first quarter results (5.9 percent, based on yearend 2010 results). The growth of deposits attracted by the banking sector has been weak, making up 2 percent against yearend 2010. The deposit dollarization has been 70.1 percent. The banking system profitability indicators posted improvement versus the performance in the previous year. In particular, return on assets (ROA) reached 2.2 percent (0.9 percent in the first half of the previous year) and return on equity (ROE) made up 13.3 percent (4.8 percent in the first half of the previous year).

TURKEY

Though Turkey entered 2011 with positive economic developments – specifically, the country posted 11.6 percent economic growth in the first quarter – economic growth in the second quarter tended to slow. According to preliminary estimates, the volumes of industrial output have persistently contracted since February, and the indicator of domestic demand has declined either. However, the dynamics of main macroeconomic indicators is such that a long-term downfall will not happen. The domestic demand is expected to further be fragile in the light of lagged impact of implemented policies and slowdown of the economy at a global level.

In the first quarter the growth of exports was 7.7 percent whereas the growth of imports, fuelled by strong domestic demand, has notably exceeded exports, having amounted to 27.0 percent. These developments negatively contributed to further GDP growth. The growth of exports is still markedly behind the pre-crisis level, and the rates of recovery remain sluggish. Also, it is expected that future export growth will remain slow, reflecting a sluggish economic development perspective for Euroarea which is the main partner to Turkey. The slowdown of economic growth rates is expected to have its second-round effects on future import growth.

In the first quarter of 2011 the level of unemployment subdued considerably hitting the pre-crisis level.

As of the end of semi-annum, inflation was 6.24 percent, somewhat exceeded the 2011 target of 5.5 percent. A relatively intense inflationary environment in the first half was due to lagged impact of import prices and increased food prices.

In the first half of 2011 the Central Bank of Turkey used almost every monetary instrument from its toolkit to bring inflation back to the confidence band. At the beginning of the semi-annum the Bank lowered the refinancing rate by

0.25 pp to 6.25 percent and raised the reserve requirement ratio on a phase by phase basis.

According to the Central Bank of Turkey forecasts, economic growth in the country is expected to be low. Downside risks to the economic growth will largely depend on the developments with exports and weak demand for imports in European countries.

Bank lending has increased during the first six months, especially in the first quarter of the year. The lending growth rates by individual branches of the economy varied, however.

The share of non-performing loans in total has reduced in relation to the previous year and amounted to 4.1 percent. This was explained by both increased lending and reduced unemployment and added borrower income.

Though the profitability of the banking sector has increased as a result of decreased provisioning against non-performing loans, the profitability indicators however trended down. In the third quarter of 2010 the return on assets (ROA) was 3.1 percent and return on equity (ROE), 24.7 percent.

SUMMARY

During the first six months 2011 neighboring countries saw their economies recovering further, although some risks specific to these regions showed up as well. On general terms, the developments in these countries positively affected the Armenian economy in the form of more inbound private remittances from Russia, increased exports of prepared food and agricultural products in response to recovering private demand in Russia and Georgia.

Keeping transportation costs steady and the transport corridor functional was possible owing to the political and economic stability in Georgia. High inflation recorded in neighboring countries provoked price increases on some goods that are imported to Armenia.

2. DEVELOPMENTS IN MACROECONOMIC ENVIRONMENT IN ARMENIA

2.1. MACROECONOMIC DEVELOPMENTS

In the first half of 2011 the real GDP growth was 2.7 percent. Faster recovery of the economic activity was seen in the second quarter of the year, 3.9 percent, whereas economic growth in the first quarter was merely 1.2 percent.

In the first half of the year industry reported 14.6 percent growth of value added driven by considerable increase of metals prices in global markets and mounting industrial demand amid recovering global economy. The highest growth rates were reported in metal ore mining, food and metallurgy sub-branches, which seems to point to the recovering demand domestically and globally.

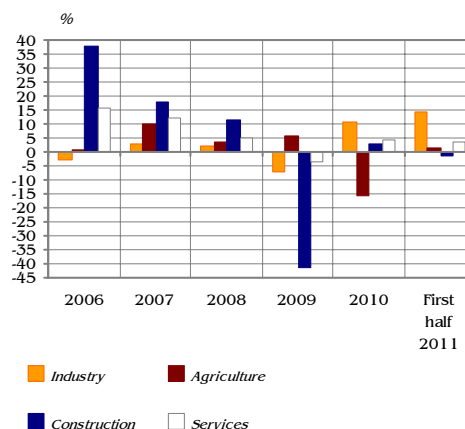
Agriculture reported 1.8 percent y-o-y growth of value added. The small growth was mainly explained by the decline in animal breeding due to 24.3 percent reduction in egg production. The growth in plant growing was 17.6 percent, which was attributable, among others, to the decline recorded in the previous year.

Because of a reported decline in construction in the previous year persisted, this sub-branch posted 1.5 percent y-o-y decrease of value added this semi-annum. The volumes of construction financed by international loans, resources of households and organizations have shrunk. The reduced volumes of construction financed by international loans were attributable to the accomplishment of some major construction projects. The persisting decline in residential housing points to the sluggishly recovering household incomes, as the largest part of the income pays consumption expenditures, still not creating an investment demand.

In the first half of the year growth in services has been 3.5 percent y-o-y owing to increased volumes of retail and wholesale trade, reflecting some trends of recovering private demand and household incomes.

Based on the first half of 2011 data, the lending market remained active amidst positive developments and more optimism about economic environment. Commercial banks and credit organizations, while responding to the surveys¹⁴ conducted by the Central Bank, stated that they had further eased lending terms and procedures. The terms and procedures of lending were most affordable during the first

Economic growth rates, by sector



Source: National Statistics Service of Armenia.

¹⁴ Source: surveyed results on "Loans made by commercial banks and credit organizations of the Republic of Armenia", as conducted by the Central Bank in the course of the first two quarters of 2010.

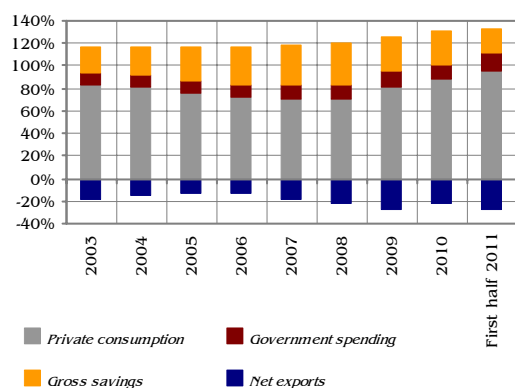
quarter, and the main contributing factors included increased competition among banks, easier access to financial resources and banks' plans to diversify loan portfolio. In the second quarter the lending terms were further facilitated at a slower pace though, whereas some terms were even tightened (loan disbursement limits, creditworthiness, and collateral requirements). The falling of interest rate on almost all types of loans was highlighted as the most remarkable alteration in lending terms.

With an 18 percent increase in bank lending, the share of non-performing loans has slightly increased (0.3 pp) against the yearend to reach 3.4 percent. The increase of the share of non-performing loans was reported in construction and industry sub-branches only, by 4.4 percent and 3.8 percent, respectively.

The results of the survey in the first two quarters of 2011 show that composite indices¹⁵ trended as follows: Economic Activity Index has increased by 6.0 percent and Business Climate Index fallen by 5.2 percent in relation to the previous year. The rising of EAI reflected positive expectations of potential increases of output and demand in both services and industry. The falling of BCI was reported in almost all branches of the economy which was associated with deterioration of assessment of risk expectations.

In contrast to expectations of businesses about the changes, expectations of consumers were more optimistic. The Consumer Confidence Index has increased by 4.7 percent in relation to the previous year mostly driven by some 16.8 percent improvement in the Current Conditions Index. How the developments will unfold in the future is the primary concern among consumers: the Future Conditions Index has fallen by 2.5 percent explained by lowered assessments on incomes and employment prospects.

GDP expenditure components
(share in GDP)



Source: National Statistics Service of Armenia.

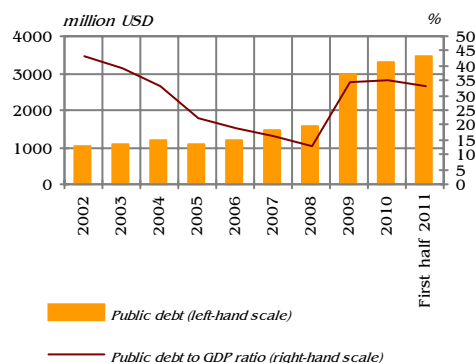
In the GDP expenditures structure, the real growth of consumption reached 2.5 percent, which was determined by some increment in real household incomes as a result of rebounded inflow of private remittances, faster wage growth rates and improved consumer confidence. Moreover, as the Central Bank estimates show, the growth of consumption was boosted up primarily by increased private consumption (2.9 percent), whereas the growth of public consumption amounted to 10.3 percent. Capital investment has reduced by 1.9 percent mostly due to 34.9 percent decrease in public investment. Private investment has grown by 7.6 percent, reflecting the rising of EAI. Negative developments with public investment are mainly a product of a state budget deficit-cutting policy.

¹⁵ For more details on indices calculated on the basis of the Central Bank surveys, please see the CBA website.

With exports growing faster over imports as well as reported growth of GDP, the negative share of net exports in GDP has diminished by 7.8 percent relative to the first six months of the previous year.

In 2011, relative to the previous year, the public debt has grown by 4.4 percent to reach USD 3442 million. The debt to GDP ratio (33.1 percent) will reduce against the previous year, largely attributable to faster growing rates of GDP. The structure of external public debt has incurred a change as well. During the first half of 2011 the share of concessionary loans in the structure of public debt was roughly the same, 62.9 percent. The share of loans with floating interest rate was also much the same, 36.6 percent.

Public debt and public debt to GDP ratio



Source: Ministry of Finance of Armenia.

Qualitative indicators describing Armenia's debt

Ratio	2005	2006	2007	2008	2009	2010	H1, 2011
Debt/GDP (limit 50%)	22%	19%	16%	14%	34.7%	35.1%	33.1%
Debt/Export	78% (less indebted)	80% (less indebted)	82% (less indebted)	90% (less indebted)	227% (moderately indebted)	182.1% (moderately indebted)	165.4% (moderately indebted) ¹⁶
Debt service/Export	4.6% (less indebted)	4.2% (less indebted)	2.9% (less indebted)	3.1% (less indebted)	6% (less indebted)	5.0% (less indebted)	2.4% (less indebted)
Interest/Export	0.9% (less indebted)	0.7% (less indebted)	0.6% (less indebted)	0.7% (less indebted)	2.0% (less indebted)	2.4% (less indebted)	1.2% (less indebted)

Source: Ministry of Finance;
(Public Debt Report, 1st half, 2011).

Public Debt Sustainability Stress-Scenarios*

The forecasts of macroeconomic indicators for baseline scenario were made, as follows:

In view of positive developments in domestic economy and developments in the global economy in the first half of 2011 Armenia's economic growth was estimated to reach 4.6 percent for the entire year and real GDP growth to reach 4.2 percent, 4.5 percent and 4.8 percent for 2012, 2013 and 2014, respectively. The medium-term forecasts were based on expectations of global economic recovery, meaning that the global economy, all else being equal, would be expecting to post weak yet continuous growth while the global demand would bounce back. International metals prices would be stable in medium run perspective, and remittances from abroad would further recover determined mainly by optimistic expectations about the Russian economy.

* For numerical conformity and comparability, all forecasts were taken from the Public Medium-Term Expenditures Program 2012-2014.

¹⁶ For comparison, the export figure was based on the cumulative value of July 2010 – June 2011.

Ratio	2007	2008	2009	2010	2011	2012	2013
	actual	actual	actual	actual	program	forecast	forecast
Economic growth	13.7	6.9	-14.1	2.1	4.6	4	4
GDP deflator	104.2	105.9	102.6	109.2	106	104.8	104.5
Budget revenue/GDP (%)	20.10	20.50	20.90	21	22	21.20	21.30
External public debt/GDP (%)	15.7	13.5	34.3	35.2	36.9	36.4	34.8

* For numerical conformity and comparability, all forecasts were taken from the Public Medium-Term Expenditures Program 2012-2014.

Alternative scenario: real GDP growth slows down by 2 percent annually

Alternative scenario is possible for the main presumptions, as follows:

If the scenario of international institutions' forecasts on downside risks to general economic growth occurs, the overall demand would grow slower than forecast, meaning that it would have its potential adverse impact on Armenia's economic growth.

Escalation of problems in connection with low economic growth, budget constraints and financial pressures in some European countries might result in financial instability in European markets which, most likely, would have its impact on other regional markets, also negatively affecting external demand for goods produced in Armenia.

Ratio	2011	2012	2013
Economic growth (program)	4.6	4	4
Real economic growth (shock datum)	2.6	2	2
External debt/GDP (program)	36.9	36.4	34.8
External debt/GDP (shock datum)	44.42	44.62	44.12

As it appears from the outcome, in case the stress-scenario occurs, the Debt/GDP ratio would deteriorate but would still stand below the 50% marginal value.

Alternative scenario: dram exchange rate gradually depreciates by 10 percent annually

Alternative scenario is possible for the main presumptions, as follows:

In view of slower-than-forecast global economic growth, economic growth and demand in Armenia's main partner countries would slow down too, which would markedly affect the volumes of Armenian exports. The slowing of economy at a global level would also have impact on prices of primary goods, including base metals and oil. If international prices grew at a slower pace than forecast or even went down, this would domestically affect the lower-than-forecast GDP growth through: a/ reduced production volumes and decreased prices, attributable to export of raw materials, as a direct impact, and b/ reduced private remittances from Russia, as an indirect impact. In the outcome, inflow of foreign currency funds would narrow, somehow creating pressures toward depreciation of the local currency.

Ratio	2011	2012	2013
Real economic growth (program)	4.6	4	4
External debt/GDP (program)	36.9	36.4	34.8
External debt/GDP (shock datum)	40.76	44.26	46.13
Debt service/Budget revenue (program)	5.31	11.45	18.48
Debt service/Budget revenue (shock datum)	5.84	13.23	22.37

If the stress-scenario of gradual depreciation of the local currency occurs, the debt sustainability indicators would deteriorate markedly; in particular, the external debt/GDP would grow (although not topping the 50 percent value) and so would the debt service/GDP ratio, meaning that Armenia would have become a moderately indebted country.

Encouraging developments in the domestic economy in 2011 contributed positively to the state budget. There has been nearly 9 percent reported y-o-y increase in collection of revenues in the first six months of the year, whereas budget expenditures have decreased to some extent. As a result, the budget deficit has shrunk by 62 percent in relation to the previous year to AMD 21.8 billion (PIU funds inclusive). The growth of tax revenues was again high, 9.9 percent, and the fastest growth was reported on profit tax, 30.2 percent. In the expenditures structure, expenses on healthcare and general public services have grown by 16.7 percent and 9.3 percent, respectively, but expenses on residential housing and public utilities have decreased. The budget deficit has reduced as a result of increased revenues and cut costs and amounted to 1.5 percent of GDP.

In the first half of 2011 an inflationary environment persisted in Armenia, fuelled by high prices of food and raw materials in world markets as well as price increases due to steeply shortened supply of agricultural products. Under such conditions, the Central Bank has repeatedly tightened monetary conditions in the period February-April, with the aim to have inflationary expectations anchored and mitigate second-round effects of the said supply shocks. The Bank raised the refinancing rate by a total of 1.25 basis points from 7.25 at the start of the year up to 8.25 percent.

Though international prices tended to relatively stabilize at the end of the semi-annum, the 12-month inflation in June was considerably above the confidence band, making up 8.5 percent. However, given the tightening of monetary conditions since the beginning of the year, further easing of inflationary pressures transmitted from the external sector and the lack of inflationary pressures due to positive developments in agriculture and aggregate demand, keeping inflation near the confidence band could be possible already at the end of the year.

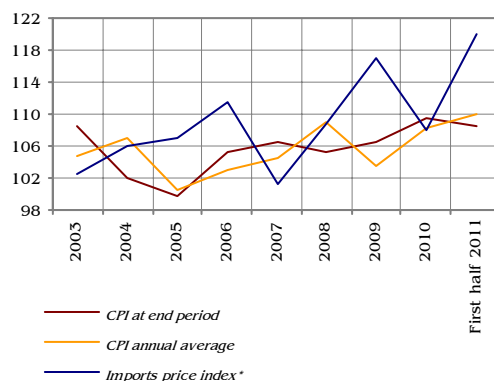
Based on the first semi-annual results, the dram exchange rate slightly depreciated versus the US dollar (by 1.7 percent). The depreciation was reported primarily in the first quarter. No material change in exchange rate took place during the second quarter.

2.2. FOREIGN TRADE¹⁷

In the light of developments in global and domestic economies, the current account deficit has improved in relation to the previous year and amounted to USD 714.2 million, according to Balance of Payments. The volumes of foreign commodity turnover have increased by 18.9 percent and reached USD 2.4 billion.

¹⁷ Data are presented according to the Balance of Payments provided from the National Statistics Service of Armenia.

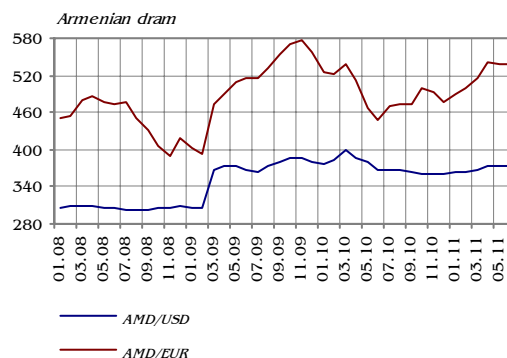
Consumer price and imports price indices



* The National Statistics Service of Armenia started a new methodology for calculation of imports prices in 2007; the 2002-2006 indicators have been estimated by the Central Bank based on the former methodology for calculation of imports prices.

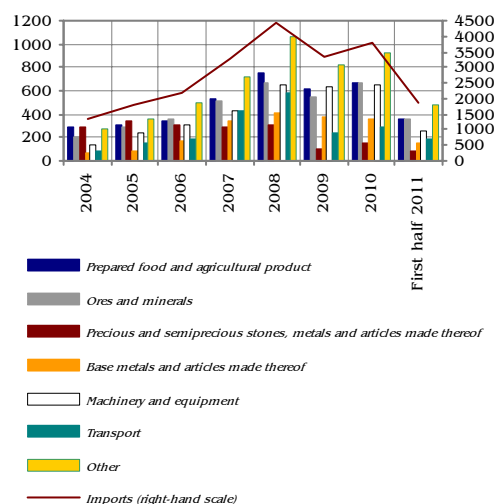
Source: Central Bank of Armenia; National Statistics Service of Armenia.

AMD exchange rate versus USD and EUR



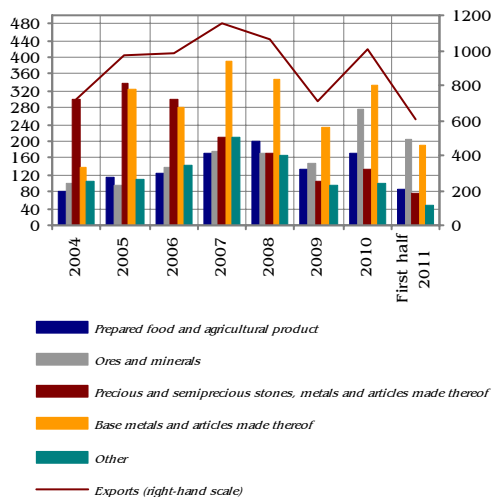
Source: Central Bank of Armenia.

Armenia's imports by commodity groups (mln USD)



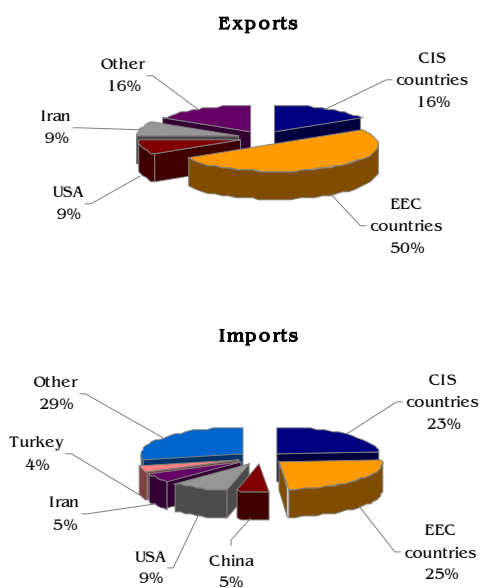
Source: Central Bank of Armenia.

Armenia's exports by commodity groups
(mln USD)



Source: Central Bank of Armenia.

Armenia's foreign trade, by country, as of 30.06.2011



Source: Central Bank of Armenia.

Import of goods and services has increased by 1.7 percent y-o-y and reached USD 1.9 billion. The growth of import of goods alone has been 12.6 percent y-o-y. The import growth rates were observed during the two quarters although they started to somewhat accelerate in the second quarter. According to the Central Bank estimations, in the first half the import volumes in real terms have reduced by 6.1 percent, and the growth of import was totally due to increased imports prices.

There has been a reported increase in import volumes for items such as "mineral produce", "transport means" and "items of prepared food and agricultural product".

Export of goods and services has increased by 27.8 percent (USD 225.7 million) to USD 1034.6 million. Furthermore, export of goods has grown by 36.3 percent. High growth of export was attributable to the increase of prices of raw materials in world markets as well as reported high growth in industry branch. The growth of export was largely due to increased prices of export goods, since real export volumes have increased by 12.5 percent only. In the structure of exports, the main increases were recorded for items such as "mineral produce", "items of prepared food and agricultural product", "non-precious metals and articles made thereof" and "precious and semi-precious stones, precious metals and articles made thereof".

With exports having grown faster than imports, the trade balance deficit grew at somewhat slower rates (while the y-o-y growth of the deficit in January-July 2010 was 13.2 percent, the y-o-y growth in January-July 2011 was 0.75 percent) and amounted to USD 945.8 billion for the first half of the year.

In terms of geographic distribution of external trade, major concentrations remain, and the composition of the main partner countries has not changed much either. In the exports structure, the share of CIS has decreased by nearly 4 pp, the share of the EU countries remained unchanged, while the share of Iran has increased by about 4 pp. In recent years, fastest growth rates of exports to Bulgaria were reported, with copper ore being the main export item. Export remains concentrated by geography and by commodity, which means that vulnerability of ore mining will increase in the event of possible shocks in any particular country of export or elsewhere in the global economy.

In terms of imports, the EU countries and CIS, which together constitute 48.7 percent share, remain the main partners to Armenia.

2.3. NET FACTOR INCOMES AND REMITTANCES

A large share of private remittances and net factor incomes in GDP remains a risk in the financial stability point of view, as concentration of the share drive the Armenian economy to rely heavily on economic developments in Russia.

In the first half of 2011 recovering economic activity in Russia promoted the growth of net private remittances and factor incomes. However, their growth rate is still below the pre-crisis levels. In that context, some positive impulses can be seen coming from the growth reported in construction and retail trade in Russia (according to the semi-annual data, growth has been 0.9 percent in construction and 5.6 percent in retail trade). Furthermore, recent research¹⁸ shows that most migrants from Armenia seek a long-term residence in Russia and the likelihood that they would choose not to come back to Armenia is rather high. Over years, this could, in turn, lead to a narrowed inflow of private transfers and net factor incomes.

In the first half of the year the inflow of net private remittances and factor incomes has broadened by 30.7 percent y-o-y, amounting to AMD 123.9 billion, in which private remittances alone have increased by 26.1 percent y-o-y. In the period under review the share of net factor incomes and private remittances in Gross National Disposable Income has risen by 1.1 pp to 7.8 percent.

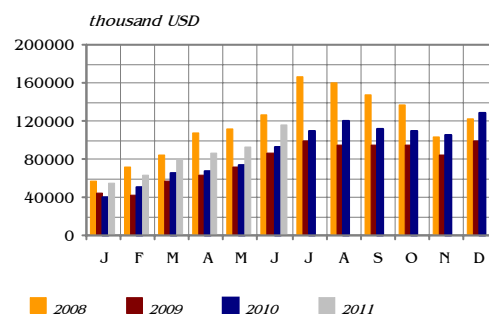
In the first half of the year the net inflow of non-commercial transfers of individuals executed via the banking system has grown by 26.5 percent y-o-y (against the previous year's 6.6 percent y-o-y) and amounted to USD 493.2 million. The breakdown of non-commercial transfers of individuals executed via the banking system by country is as follows: 87.3 percent from the Russian Federation and 4.1 percent from the USA.

In view of declining growth rates in consumer lending, one may conclude that slowing of further growth of net factor incomes and private transfers associated with negative trends in economic recovery in Russia will not create systemic drawbacks to loan recovery.

2.4. HOUSEHOLD INCOMES AND DEBT BURDEN

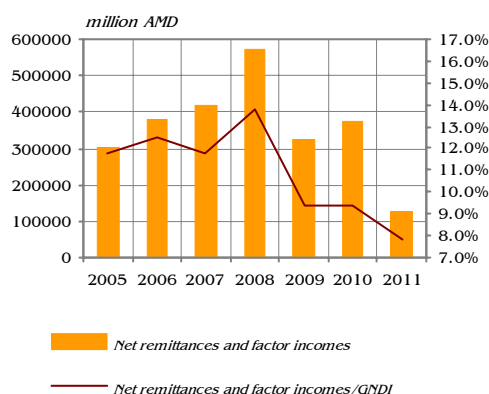
Risks to financial standing of households remained comfortably manageable during the first six months, owing to economic growth as well as low level of households' debt

Net non-commercial transfers of banking system



Source: Central Bank of Armenia.

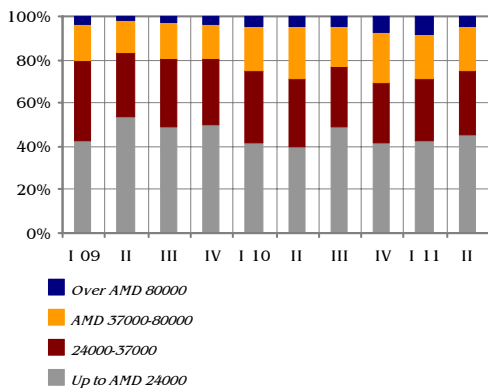
Net factor incomes and remittances



Source: Central Bank of Armenia;
National Statistics Service of Armenia.

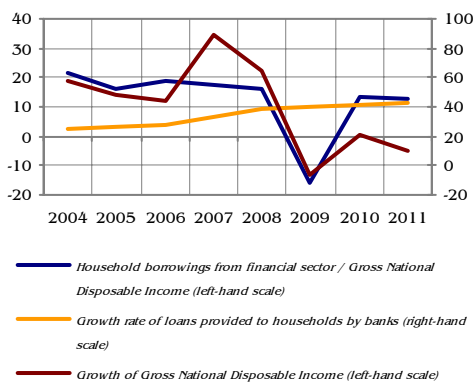
¹⁸ *Migrant Money Remittances to Armenia, International Labour Organization, 2009.*

Household income groups



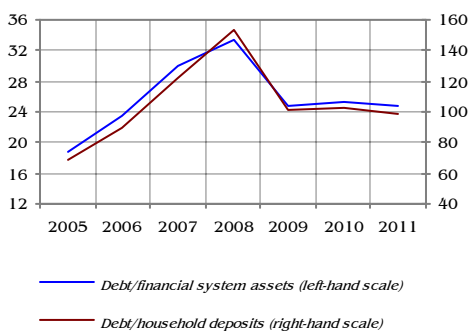
Source: Central Bank of Armenia.

Household debt and household income indicators (%)



Source: Central Bank of Armenia.

Household debt burden (%)



Source: Central Bank of Armenia.

burden to commercial banks at a low level. Foreign exchange risk is the main exposure which the households are exposed to when dealing with mortgage loans, since more accurate forecast of exchange rates and assessment of foreign exchange risks in a long run is difficult. All, else being equal, the likelihood of commercial banks' loss on mortgage loans in foreign currency could grow. The mortgage loans account for only 9.1 percent of total banking loan portfolio, and in the last two years the growth of these loans has slowed down substantially.

In the first six months 2011 economic recovery continued along with subsiding unemployment. Compared to the end of 2010, the rate of unemployment has reduced by 0.8 pp to 6.2 percent. In the second half, however, it scaled gradually down to 7.1 percent at the end of the year.

In the reporting semi-annum average monthly nominal wages have increased by 6.7 percent against the same period of the previous year but stood below the previous year's y-o-y growth of 8.9 percent. Growth of wages was reported in both private and public sectors. Despite the growth of nominal wages, there has been a reported 1.8 percent reduction in real wages in the reporting semi-annum against the same period of the previous year. Increased net private remittances and net factor incomes further contributed to the overall increase of household incomes. The share of low-income population remains large which is impediment to further strengthening of financial intermediation. In the first half of the year the household debt burden has decreased which is explained, first and foremost, by faster growth of gross national disposable income and household deposits.

In June 2011, relative to June 2011, total liabilities of households to the financial sector have grown by 24.3 percent. Meanwhile growth indicators of deposits of individuals and GNDI have been 36.2 percent y-o-y and 12.8 percent y-o-y, respectively. The liabilities to commercial banks still prevailed in the household debt burden, making up 86.3 percent. Consumer and mortgage loans provided to household by the banking sector have grown by 12.5 percent, mostly thanks to increased consumer loans. Total loan investment has grown by 18.0 percent. This is explained by the fact that commercial banks are still cautious with their lending policies towards households, so they remain prioritizing lending to businesses. The liabilities to credit organizations and pawnshops have grown at a faster rate, by 16.1 percent and 20.4 percent, respectively. This pinpoints to the observation that households which failed to meet lending requirements of banks are more easily funded by credit organizations and pawnshops. It should be noted however that lending terms offered by commercial banks are

more favorable in comparison with those of offered by credit organizations, so it means that borrowers are forced to purchase costlier loan liabilities.

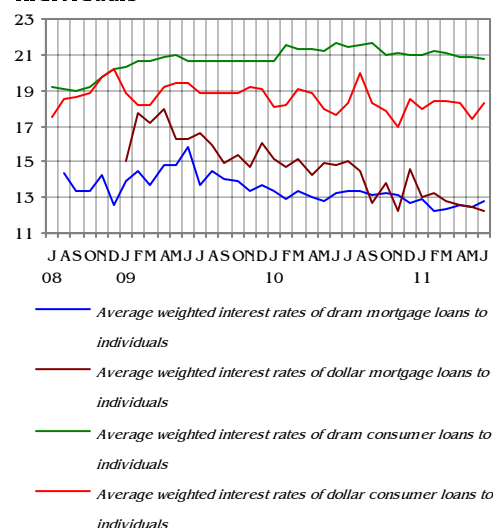
According to the Central Bank quarterly surveys, for the third quarter most commercial banks expect an unchanged level of interest rates of dram and foreign currency loans and deposits. In this case, no essential change in a burden of servicing loan liabilities is anticipated.

In the first half of 2011 deposits of individuals, term deposits in particular, grew faster in comparison with lending, amounting to 15.5 percent. Foreign currency deposits, the share of which had reduced by 1.6 pp to reach 79.2 percent, still prevailed in total term deposits. In the event the dram exchange rate appreciates versus other currencies, the households can be exposed to foreign exchange risk.

In the first half of the year commercial bank and credit institution losses on lending to households trended downward for consumer loans and trended up for mortgage loans. Relative to end-year 2010, the share of non-performing loans has reduced by 0.2 pp to 3.5 percent of the consumer credit portfolio but increased by 0.5 pp to 6.1 percent of the mortgage loan portfolio. More on that, the said indicators with credit organizations were even higher, 6.5 percent and 8.3 percent, respectively. The share of non-performing loans was larger with regard to foreign currency loans and, particularly, foreign currency mortgage loans. At commercial banks, this has grown by 0.9 pp and reached 8.0 percent. In the reporting semi-annum, relative to the end-year 2010, off-balance sheet consumer and mortgage loans has decreased by 0.5 pp and amounted to 4.5 percent. However, the second quarter survey results suggest that commercial banks and credit organizations planned to increase the mortgage loan portfolio, reflecting expectations of improved financial standing of households.

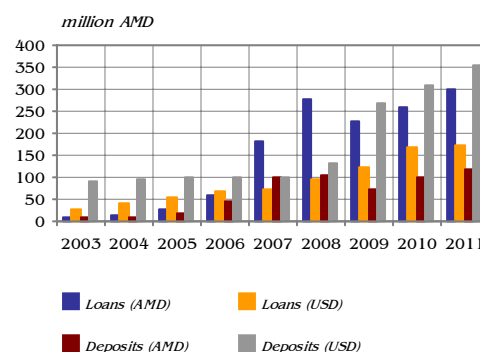
The Consumer Confidence Index¹⁹ can be used to denote households' expectations. In the first and second quarters of 2011, relative to the previous quarters, the Consumer Confidence Index components have performed differently. In the first quarter 2011, relative to the previous quarter, there has been a reported 2.4 percent decline in the index, driven by 13.4 percent falling of the Current Conditions Index. In the second quarter the index trended upward (4.7 percent) owing to 16.8 percent increase of the Current Conditions Index. The highest increase was reported for assessment of households concerning Armenia's current economic conditions. In the aforementioned period the deterioration of

Average weighted interest rates of loans to individuals



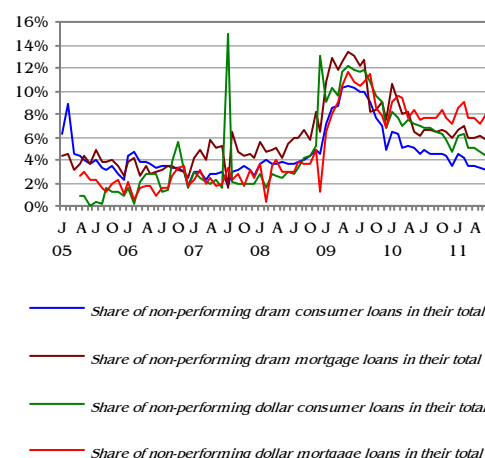
Source: Central Bank of Armenia.

Structure of individuals' loans and deposits, by currency



Source: Central Bank of Armenia.

Share of non-performing loans, by currency



Source: Central Bank of Armenia.

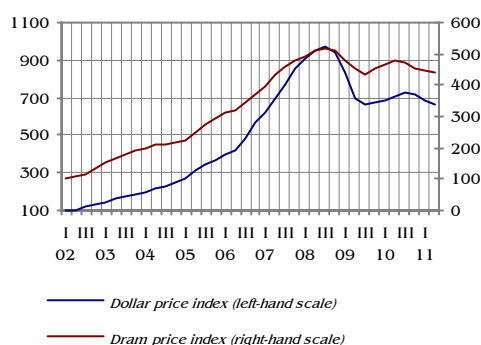
¹⁹ The consumer confidence index is calculated by striking an average of Current Conditions Index and Future Conditions Index; for more details please visit the Central Bank website.

the Future Conditions Index is attributable to unoptimistic expectations about household employment and income growth.

2.5. REAL ESTATE PRICES

The real estate prices that were used to be buoyant up until the first quarter of 2008 as well as reported considerable growth in construction by that time gave the developments in the real estate market even more sense in terms of assessment of financial stability. Changes in the real estate prices are important since investment in real estate is an alternative to financial investment, a real estate normally is used as pledge in lending and, finally, a real estate is an asset as part of peoples' wealth. This can further mean that an abrupt change in real estate prices can adversely affect the stability of financial markets and financial institutions. Similarly, a steep decrease of real estate prices can negatively influence the stability of households as they can be unable or unwilling to repay their liabilities on the mortgage loans involved.

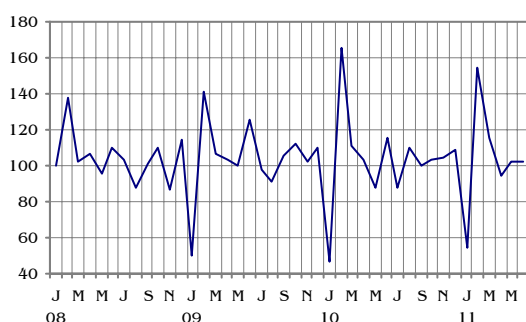
Average apartment price index in Yerevan (sq m)



Source: State Committee of Real Estate Cadastre at the Government of Armenia.

In the first six months 2011 real estate prices have fallen; this could negatively affect the construction branch yet it would contain no serious risks in terms of security of loans. The key factors contributing to the falling of prices were the shrinkage of solvent demand and expectation of downside real estate prices. The supply of real estate has declined as well because of home sales transactions delayed by home owners (in anticipation of increasing of home prices). This however has not been enough to hold prices back from falling. One impediment to further enlivening of real estate market is concentration of mortgage lending in which Yerevan takes the largest weight. The amount of mandatory prepayment for mortgage loans is another significant drawback that impedes the development and activity of the mortgage market.

Real estate transactions index



Source: State Committee of Real Estate Cadastre at the Government of Armenia.

In the first half of 2011 real estate prices in Armenian dram have decreased by 6.5 percent relative to the first half of 2010 and by 4.2 percent relative to the second half of 2010. In the first six months of this year, relative to the same period of the previous year, the number of real estate transactions has increased by 12.9 percent but decreased by 1.5 percent relative to the second half of 2010.

Real estate transactions remain concentrated in Yerevan which accounted for 37.3 percent of the number of home sales, up by 1.2 pp against the respective indicator of the previous year. The second largest concentration is Kotayk region accounting for 15.2 percent of real estate transactions. The smallest amount of transactions was

reported for Vayots Dzor and Tavush regions, with home sales having not exceeding 3 percent. The number of home sales in regions of Armenia has reduced by 0.7 percent and 10.1 percent against, respectively, the first and second halves of 2010.

The amendments to the Republic of Armenia Civil Code as well as to the Law on Mandatory Execution of Legal Acts and the Law on Bankruptcy, intended to facilitate the marketing of the pledged property thus minimizing the risks associated with such marketing, was an important initiative in giving the pledging procedure an even stronger legal basis.

In the first semi-annum 2011 commercial banks and credit organizations generated 2072 mortgage loans with a total amount of AMD 22.3 billion. In the reporting period the National Mortgage Company has refinanced 405 mortgage loans with a total amount of AMD 3.1 billion; this represents 19.0 percent and 11.7 percent decline against, respectively, the first and second halves of the previous year. Yerevan accounted for more than 71.2 percent of loans refinanced by the National Mortgage Company.

A total of 280 mortgage loans amounting to AMD 2 billion were refinanced under the program “Affordable Housing for Young Families”, of which 236 loans with a total amount of AMD 1.2 billion provided in Yerevan. Easing of lending terms under this program at the end of 2010 made lending in regions of Armenia somewhat livelier, with its share having grown by 7.7 pp to make up 40.0 percent.

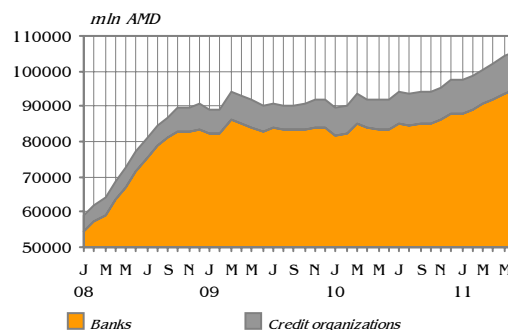
Dwelling house operation by sources of financing

Source of financing	Operated residential apartments in H1, 2011 (sq m)	Share in total	Percentage change to H1, 2010
Total, o/w:	121967	100%	58.2%
state budget	3169	2.6	-31.9%
resources from organizations	69136	56.7	3.3-fold
household funds	49662	40.7	-3.3%

Source: the National Statistics Service of the Republic of Armenia.

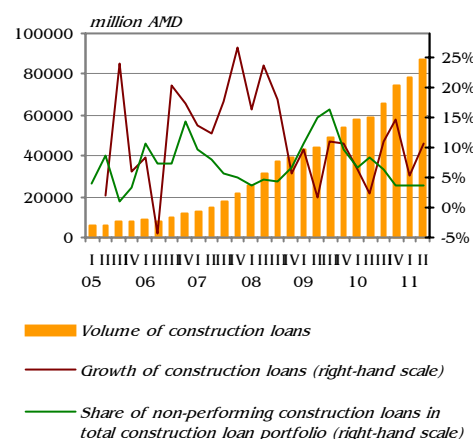
In the first half of 2011, the volume of residential apartments operated has increased by 58.2 percent relative to the first half of 2010 but decreased by 70.9 relative to the second half of 2010 (the main construction activity was in the second half of 2010). The notable increase of volumes of construction financed by organizations has contributed to the

Mortgage loan portfolio of banks and credit organizations



Source: Central Bank of Armenia.

Volume and growth of loans to construction and share of non-performing loans in their total



Source: Central Bank of Armenia.

operation of residential apartments, pushing the share of the latter up by 29.1 pp to reach 56.7 percent. Continued growth (14.9 percent) of construction lending by commercial banks and credit organizations, which still lagged behind the previous year's 31.9 percent growth, can easily be among the main drivers to construction activity. Real estate and, especially, multi-apartment house building still boasted a larger share in construction. This indicator in the first half of 2011 was 27.6 percent, representing a 4.1 pp increase in relation to the same period of the previous year.

SUMMARY

The recovery of the economy, which started from the previous year, continued during the first six months of 2011, reflecting positive developments in both external and domestic sectors. Prices of raw materials as well as recovering inflow of remittances and domestic demand all contributed to the GDP growth.

Unprecedented price increases on commodities – and food products in particular – in international markets intensified inflationary pressures in the domestic economy thus negatively affecting real incomes of households.

Price increases on commodities in international markets were reflected in the dynamic with which Armenia's exports and imports performed. The growth of exports outpaced the growth of imports, thus pushing the trade balance deficit down.

With positive developments observable in the macroeconomic environment, there has been some improvement in labor market indicators, namely the subdued unemployment rate and the annualized growth of average monthly nominal wages.

Commercial banks further eased the terms and conditions for both corporate and household lending through increasing accessibility to loan resources, although the lending growth rates lag behind the pre-crisis levels. Given the present low level of financial intermediation and household debt burden, a further advancement of the economy lending, with all else being equal, will not actually be a generator of major risks to loan repayment.

The economic growth for 2011 is forecast to be up to 5 percent, which will largely depend on the developments in world economy and the dynamics of domestic demand in Armenia.

In the light of moderating inflationary pressures coming from world commodity markets, expected deflation on

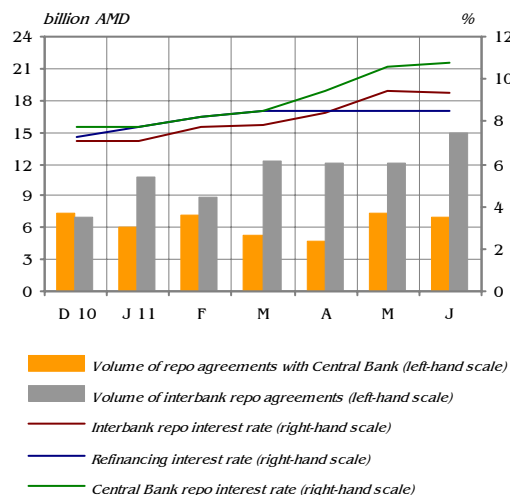
agricultural products, the lack of inflationary impulses and the influence of implemented contractionary monetary and fiscal policies, the inflationary environment will be easing considerably in the forecast time horizon, while the 12-month inflation will most likely rest within the 4 ± 1.5 percent confidence band.

There are downside risks to economic growth, however, which is associated with an anticipated slowing of global economic growth. This, in turn, may lead to deceleration of growth rates of Armenian exports and inflow of private remittances, hence slower-than-forecast economic growth, in 2011.

3. FINANCIAL MARKET STABILITY IN ARMENIA

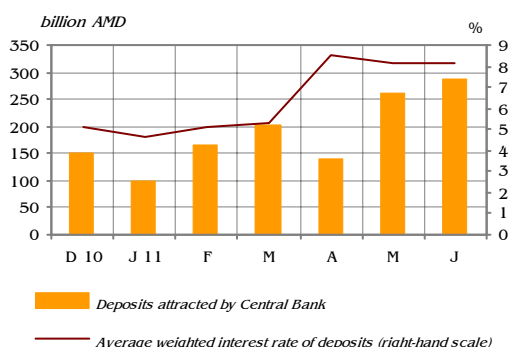
3.1. MONEY AND CAPITAL MARKETS

Repo agreements and repo interest rates



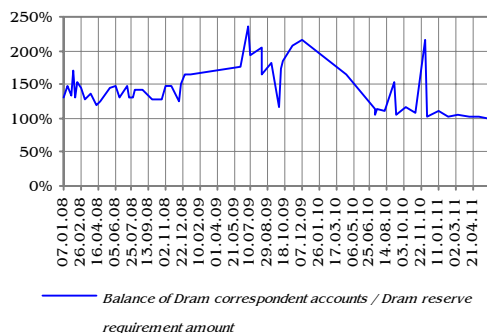
Source: Central Bank of Armenia.

Volume of transactions on credit resource platform and average weighted interest rate



Source: Central Bank of Armenia.

Dram correspondent accounts of commercial banks with Central Bank and Dram reserve requirement



Source: Central Bank of Armenia.

During the first half of 2011 interest rates in almost all segments of the Armenian financial market have increased. In the meantime inflationary pressures have persisted, and the Central Bank moved to gradual tightening of monetary conditions and has raised the refinancing rate three times since the beginning of the year by a total of 1.25 pp. In the months ahead, in the pack of keeping policy stable and withholding further tightening of monetary conditions, the Central Bank left the refinancing rate unchanged. Interestingly, despite the changes mentioned above, interest rates in the banking system tended to decline and commercial bank lending has grown during the first half of the year. The decline in interest rates was driven by faster increasing volumes of loans provided to legal persons, which along with their interest rates at a lower level in comparison with consumer loans drove the weighted average interest rates down.

As the economy was further recovering, the interbank money market also tended to show active performance, reflecting steady increases in volumes of interbank market repo transactions in the last couple of months and the double growth of average daily turnover at the interbank credit trade floor. In June of 2011 the market repo rate was 10.2 percent, representing a 1.7 pp increase against the same period of the previous year. It is worth mentioning that divergence between market interest rates in the Armenian financial market has reduced in 2011, which may lead to increased effectiveness in using monetary instruments.

In the first half of 2011 the Central Bank changed the reserve requirement prudential²⁰. This change resulted in substantial reduction in commercial banks' excess liquidity in AMD in their correspondent accounts at the Central Bank. The reduction in excess liquidity²¹ went along with a reported increase in average daily balance of deposits at the Central Bank, which points to the increased effectiveness of asset management by commercial banks.

As the comparison of yield curves shows, bond yields in the secondary market have risen in the short-term segment, whereas interest rates of 1-2-year bonds have fallen. In the

²⁰ In the first quarter, the reserve requirement stipulated to keeping 75 percent of foreign currency funds, attracted by commercial banks, in Armenian Dram, and 25 percent of foreign currency funds, in a respective foreign currency.

²¹ The difference between correspondent account balance and funds subject to reserve requirement.

medium-term and long-term segments no material changes in the yield curve took place, except for convexity of the curve having sloped slightly down, from 0.32 to 0.31, which points to the narrowed spread in short-term and long-term interest rates.

As of end-June 2011, the ratio of Average Modified Duration Indicator (D_M) calculated to evaluate interest rate risk was 2.7 for government bonds outstanding, up by 0.6 points relative to the previous year's December indicator.

Modified Duration of Outstanding Government Securities as of 30.06.2011 for Different Maturity Baskets

D_M	up to 6 months	from 6 months to 1 year	1-2 years	2-5 years	5-7 years	7-10 years
	0.17	0.73	1.35	2.82	4.81	6.1

Source: Central Bank of Armenia.

Modified Duration of Available-For-Sale and Trading Government Securities of Commercial Banks as of 30.06.2011 and Probable Profit/Loss in case of 1% Change in Yield for Different Maturity Baskets

	up to 6 months	from 6 months to 1 year	1-2 years	2-5 years	5-7 years	7-10 years	total
Trading government securities (million AMD)	13143	17970	8704	44945	3104	7073	94938
Share in total portfolio	13.8%	18.9%	9.2%	47.3%	3.3%	7.5%	100%
D_M	0.17	0.32	1.36	2.65	4.77	6.1	2.14
Price change +/- (million AMD)	22.3	128.3	123.9	1205	133.4	370.1	1983

Source: Central Bank of Armenia.

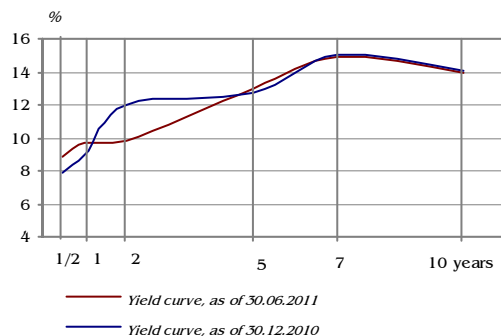
In case of 1 percent increase of the yield, the potential loss in commercial banks' portfolio of government securities could reach AMD 2.0 billion (constituting 0.6 percent of commercial banks' equity). As such, most loss is likely to come from medium-term securities as they have a large share in the securities portfolio.

In the first six months of 2011 average variance of returns of government bonds has increased by 0.33 points against the second half of 2010 to reach 2.66 points. Average variance for +/- market repo interest rates has increased by 0.57 points and amounted to 1.37 points.

Operations in securities markets (including repo transactions, excluding operations with the Central Bank) carried out by investment service providers²² amounted to

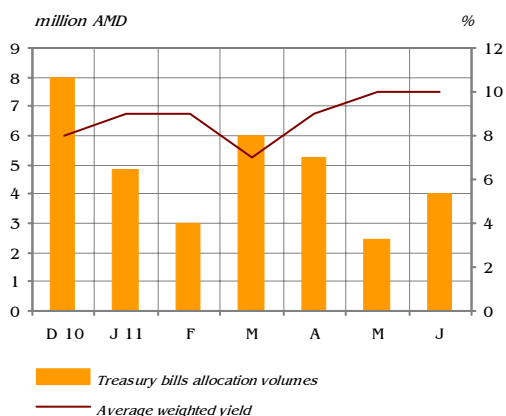
²² As of 30.06.2011, investment service providers included 21 commercial banks and 8 investment companies.

Government bond yield curves



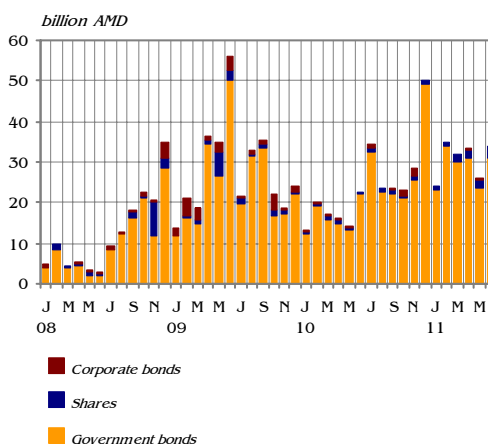
Source: Central Bank of Armenia.

Treasury bills allocation volumes and average weighted yield



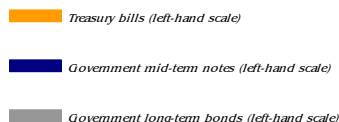
Source: Central Bank of Armenia.

Securities trades by investment service providers



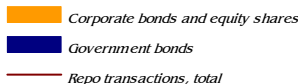
Source: Central Bank of Armenia.

billion AMD



Source: Central Bank of Armenia.

billion AMD



Source: Central Bank of Armenia

million AMD



Source: Central Bank of Armenia.

In the first half of the year the volatility of the government securities market liquidity²³ has diminished in relation to the second half of the previous year, whereas liquidity and yields have trended slightly upward. The standard deviation of the government securities market liquidity reached 2.7 versus 6.2 recorded in the previous half of the year. The performance of the indicators mentioned above also point out to the recovery from the 2008-2009 crisis.

Repo transactions (excluding operations with the Central Bank) carried out by investment service providers amounted to AMD 952.9 billion. Again, operations with government securities accounted for the largest share, 98.7 percent, of repo transactions. Repo transactions with corporate bonds and with equity shares constituted 1.0 percent and 0.3 percent of total transactions, respectively.

Repo operations accounted for 69.6 percent of operations executed in the regulated market.

²³ The liquidity of government securities market is calculated as ratio between the amount of monthly trade transactions executed by investment service providers in the secondary market of government bonds and the amount of government bonds outstanding.

3.2. FOREIGN EXCHANGE MARKET

Over the first six months of 2011 the Armenian foreign exchange market has been stable. In the reporting period, relative to the end of the previous year, USD/AMD exchange rate remained almost unchanged, making up 368.9, while the USD/AMD variation coefficient was only 19.47 points.

SUMMARY

The developments in the Armenian financial market in the first half of 2011 were determined mostly by tightened conditions of monetary policy and increased interest rates. However, because of excess liquidity high enough in the banking sector at the beginning of the year, even in the light of the aforementioned changes the lending market proved sufficiently vigorous along with the economic activity. This resulted in growth of lending and some falling in interest rates. Interbank market, too, was rather active, fuelled by recovered economic growth and more demand for loans, and it therefore contributed to the establishment of the mechanism of effective distribution of liquidity.

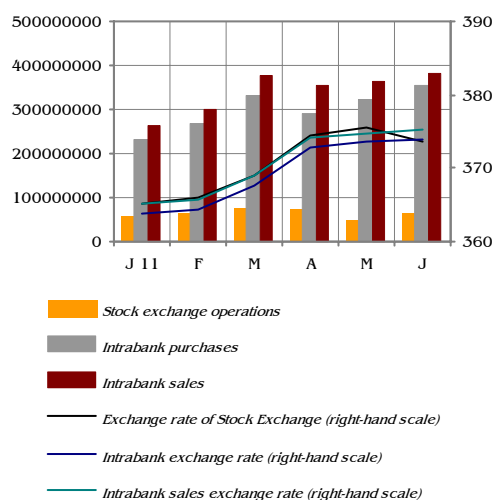
Government bonds were the largest share in securities trades and repo transactions performed by investment service providers. Yet the equity market remains small, with its level of capitalization and turnover volumes standing behind those of other countries.

The level of integration of the Armenian financial market to international markets is still modest, so the primary risk (sovereign debt crises in some EU countries, possible instabilities in other financial markets, and so on) spilling over from global financial markets would not directly affect the stability of the local market.

The situation in the domestic foreign exchange market was estimated to be stable. It should be noted, however, that it is largely sensitive to fluctuations in transfers and net factor incomes, which means that the developments in world economy may have their impact on the volatility of the Armenia's foreign exchange market.

Summing up the financial market developments in the first half of 2011, one may conclude that excess high liquid assets accumulated in the financial market have reduced and the divergence of market interest rates diminished. This, in turn, added to the effectiveness of the use of monetary instruments.

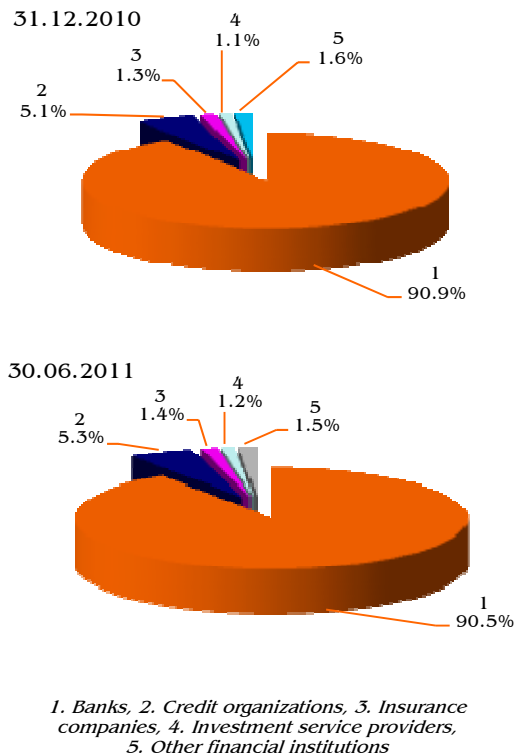
Volumes of operations in Armenian foreign exchange market and exchange rates



Source: Central Bank of Armenia.

4. FINANCIAL INSTITUTION STABILITY IN ARMENIA

Financial system assets, by financial institutions



Source: Central Bank of Armenia.

The Armenian banking system²² holds 90.5 percent of the financial system assets. Therefore, from the financial stability point of view, assessing and disclosing risks relating to the banking activities is rather important. Insurance companies, securities market participants and other financial organizations are small enough in comparison with the banking system, so their potential impact on financial stability in Armenian financial system is estimated to be minor.

In the first half of 2011 banks were highly active in the lending market owing to positive trends in the real sector of the economy and increased transfers. Further steps taken by banks to stimulate lending to legal persons, a relatively stable AMD/USD exchange rate, and the launch of the Government's *Subsidized Agricultural Lending Program* all contributed to the active lending. The trend of faster growth in lending to legal persons over individuals persisted during the first half of 2011.

The first six months under review were quite favorable also in terms of profitability. Banks tracked success in maintaining a reasonably high level of profitability although it was still below the pre-crisis levels.

During this period banks continued to branch out and provide more quality services and products, thus increasing accessibility to the banking services and progressing with the banking culture.

²² This refers to the 21 commercial banks functioning in the territory of the Republic of Armenia.

4.1. COMMERCIAL BANKS

Banking System Stability Map

A banking system stability map²³ has been designed to illustrate the behavior of the banking system stability. It denotes how values in the set of indicators of banking risks have improved relative to previous periods. In the first half of 2011, relative to the first and second halves of 2010, almost all indicators have improved, except foreign exchange risk and capital adequacy. These two indicators deteriorated due to the growth in lending.

4.1.1. Financial intermediation; concentration

Over the first half of 2011 a rapid growth of the banking system assets has been reported in line with the nominal GDP growth, thus pushing the (annualized) ratio of banking system assets to GDP up by 3.6 pp to have reached 48.1 percent at the end of the semi-annum year (this indicator still lags behind the respective indicator of a number of CIS countries). Similarly, the (annualized) ratio of banking system loans to GDP has risen by 2.6 pp to 27.9 percent, as a result of faster growing loans in relation to the GDP growth.

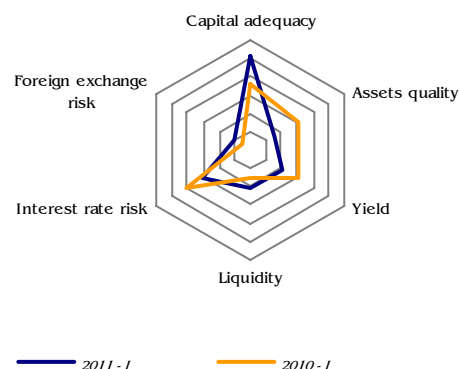
The (annualized) ratio of bank-attracted deposits to GDP has also increased, by 1.3 pp, and reached 20.5 percent at the end of semi-annum. The indicator that denotes financial intermediation, namely the (annualized) ratio of broad money to GDP has fallen by 2.5 pp to amount to 26.7 percent at the end of semi-annum.

In the first half of 2011 statutory capital of the banking sector has increased by AMD 27.2 billion, of which AMD 13.7 billion replenished from external sources and AMD 13.5 billion from net profit from the previous period. As a result, the share of non-resident participation in the statutory capital has reduced by 3.6 pp to make up 75.3 percent at the end of semi-annum.

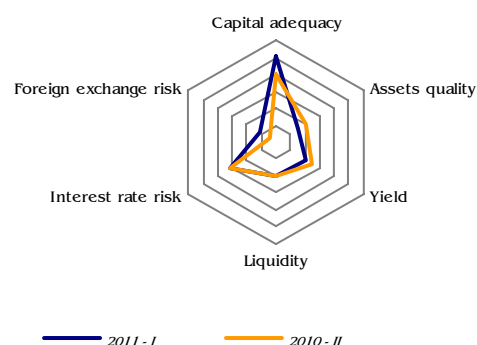
Total capital of the banking sector has grown by 6.5 percent or AMD 20.7 billion; and total assets, by 12.7 percent or AMD 198.8 billion. The ratio of capital to assets, which indicates the banks' ability to cover risks on assets by the use of own funds (the leverage ratio), has dropped by 1.1 pp to amount to 19.3 percent.

²³ The banking system stability map contains indicators denoting capital adequacy, assets quality, liquidity, profitability, interest rate risk and foreign exchange risk. Before usage, these indicators were measured on a 1 to 10 scale basis and calculated in accordance with the IMF methodology. On the map, note that away from the center signifies higher risks, and nearer to the center signifies lower risks. The banking system stability map shall not be interpreted as an eventual reflection of the level of financial stability, rather it provides a picture whether the level of risks involved has increased or decreased.

Banking system stability map (H1, 2011 average to H1, 2010 average)

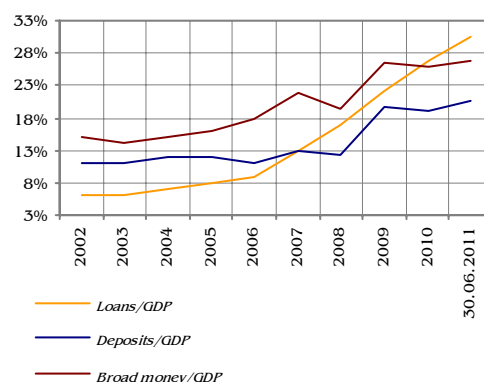


Banking system stability map (H1, 2011 average to H2, 2010 average)



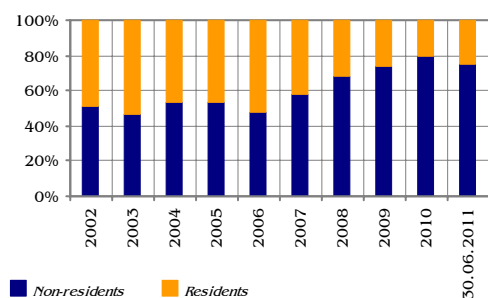
Source: Central Bank of Armenia.

Financial intermediation

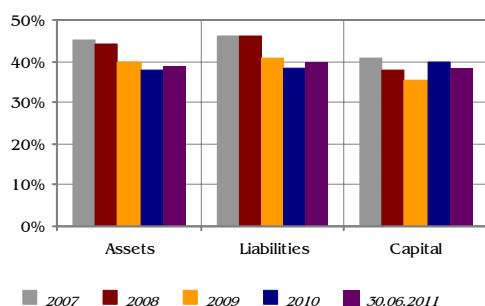


Source: Central Bank of Armenia.

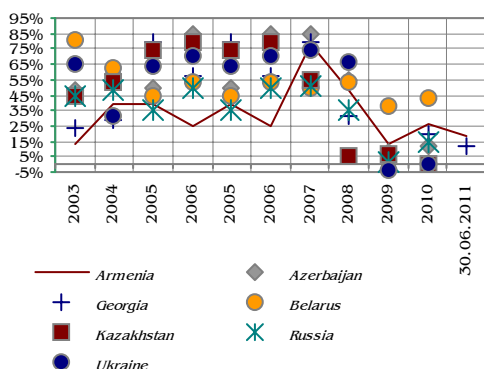
Foreign participation in Armenia's banking capital



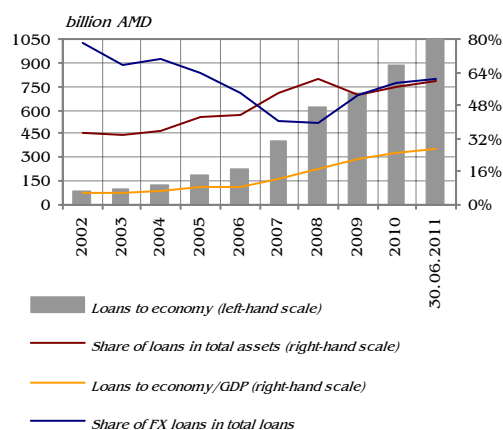
Share of 4 largest bank assets, liabilities and capital in total banking system



Annual growth of loan portfolio



Volume of loans to the economy



Source: Central Bank of Armenia.

The Herfindahl-Hirschman Concentration Index

	31.12.08	31.12.09	31.12.10	30.06.11
Total assets	0.07	0.07	0.07	0.07
Total liabilities	0.08	0.07	0.07	0.07
Total capital	0.06	0.06	0.06	0.06

Source: Central Bank of Armenia.

The Herfindahl-Hirschman Index of Concentration²⁴ for some balance sheet items (assets, liabilities, capital, loans, and deposits) of the banking system signifies a low level of system concentration, which limits the likelihood of the impact of risk concentration on the financial stability.

In Armenia, the share of participation in banking capital of 4 largest commercial banks out of 21 has contracted by 1.4 pp whereas the shares of assets and liabilities have grown by 0.9 pp and 1.5 pp, respectively, owing to an increased competition between larger banks.

The Gini Concentration Index²⁵

	31.12.08	31.12.09	31.12.10	30.06.11
Total assets	36.5%	40.5%	35.8%	35.7%
Total liabilities	41.3%	44.4%	37.5%	37.7%
Total capital	25.7%	30.7%	31.7%	31.1%

Source: Central Bank of Armenia.

The values of the Gini Concentration Index for survey banking sector indicators signify a lower level of concentration of the Armenian banking sector compared to the previous period.

4.1.2. Credit risk

In the first half of 2011 lending has grown by 18.0 percent, which represents a 2.3-fold increase compared to 7.9 percent growth reported for the same period in 2010. Though banks have become somewhat less selective in respect to borrowers, these procedures remain strict enough. Notwithstanding a low level of financial intermediation (the ratio of loans to GDP), the number of potential borrowers is still great. This means that lending could expand while

²⁴ The Herfindahl-Hirschman Concentration Index varies between 0 and 1, characterizing the level of concentration (values near to 0 denote lower concentration).

²⁵ The Gini Concentration Index varies between 0 and 100%, denoting the unevenness of distribution (values near to 0 means a lower level of uneven distribution). The minimum value of the Index is 0 regardless of the number of banks, and it characterizes full evenness of distribution.

financial intermediation could grow stronger on the back of economic growth, continued increase in household incomes and notably loosened terms of lending.

In 2011, the growth rate of lending exceeded the growth rate of total assets by 5.3 pp. As a result, the share of loans in total assets has increased by 2.6 pp to 59.6 percent at the end of semi-annum.

During the first six months under review the share of non-performing loans in the portfolio of total loans (classified as “watched”, “substandard”, and “doubtful”) has grown by 0.3 pp to have reached 3.4 percent relative to the start of the year (4.8 percent, as of 30.06.2010), which is rather low compared to the same indicators in some CIS countries. In the total loan portfolio structure, the share of non-performing loans was relatively high in *mortgage, construction* and *public catering sectors*, making up 5.9 percent, 4.4 percent and 4.1 percent, respectively. As calculated by the IMF methodology, the share of non-performing loans (classified as “substandard”, “doubtful” and “loss”) in the portfolio of total loans has dropped by 0.7 pp and amounted to 4.9 percent at the end of semi-annum, pointing out the general improvement of the loan portfolio.

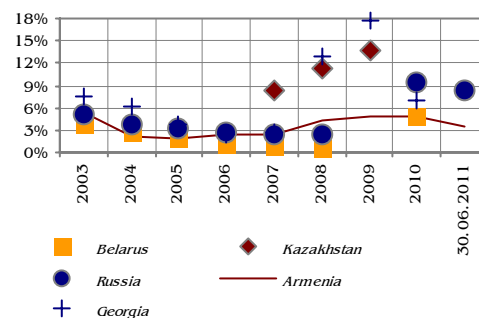
In the first half of 2011 the share of loans to legal persons again prevailed. As a result, their share has grown by 2.6 pp in relation to the beginning of the year to make up 61.6 percent at the end of semi-annum. It should be noted that faster growing lending to legal persons persisted from the trends in the 2009 crisis when re-defined lending policies prioritized loans to legal persons so as to ensure economic growth.

In the first six months under review, loan investments have increased by 18.0 percent to reach AMD 1 trillion 209 billion at the end of semi-annum. The highest increases were reported in *transport and communications, agriculture*, and *public catering and services*, by 48.9 percent, 26.9 percent and 21.1 percent, respectively. In the loan portfolio, industry loans had the largest share, 20.5 percent, followed by trade loans, 19.7 percent, and consumer loans, 16.7 percent.

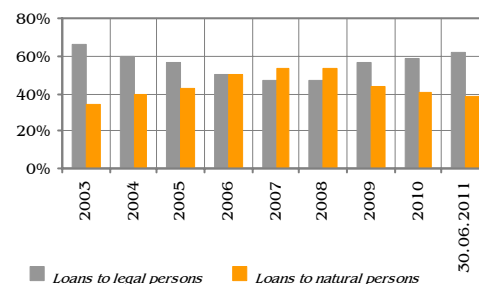
Total loan investments by the sectors of economy demonstrate stable Herfindahl-Hirschman Concentration Index, having made up 0.11, which points to the moderate concentration of loans. However, the same indicator based on the banks’ average was 0.17 which is an evidence of high sectoral concentration of loans provided by some banks.

In the first half of 2011, in line with improving loan portfolio quality, the ratio of net provisioning against assets losses to assets has dropped by 0.3 pp to make up 0.3 percent at the end of semi-annum.

Share of non-performing loans in total loan portfolio

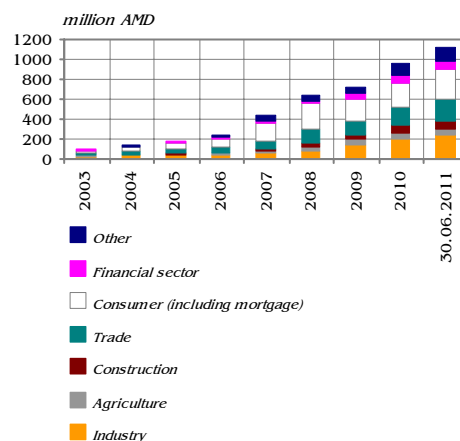


Share of loans to natural persons and legal persons in total loan portfolio



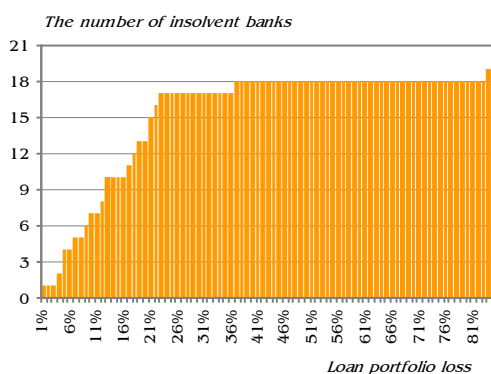
Source: Central Bank of Armenia.

Balance of bank loans to residents, by sector



Source: Central Bank of Armenia.

Change in the number of insolvent banks under loan losses



Source: Central Bank of Armenia.

Credit risk stress-scenarios²⁶

30.06.2011	25 percent of loans in watched, substandard and doubtful categories classified into loss loans	75 percent of loans in doubtful category classified into loss loans	30 percent of loans in standard category classified into watched loans
Loss of the banking system	AMD 7.4 billion or 2.3 percent of regulatory capital of the banking system	AMD 1.4 billion or 0.4 percent of regulatory capital of the banking system	AMD 32.4 billion or 9.9 percent of regulatory capital of the banking system
Total capital adequacy of the banking system in case of stress scenario	19.6%	19.9%	18.4%

Source: Central Bank of Armenia.

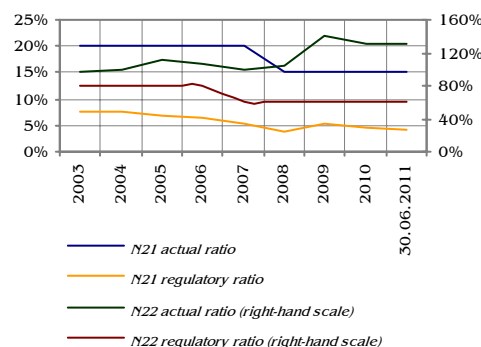
The results of credit risk assessment test scenarios²⁷ showed that the amount of potential banking system loss has increased in relation to the beginning of the year, due to faster growing rate of loan portfolio over that of total regulatory capital. Yet, even in case of worst possible stress-scenarios, the banking system losses do not bring an abrupt change to the bank solvency level, not having stressed negative impact on Armenia's financial stability.

4.1.3. Liquidity risk

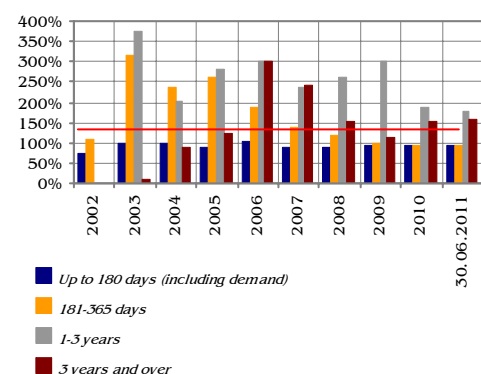
Over the first half of 2011 the banking system liquidity trended down despite fast growth rate of loans provided by the banking sector. During this semiannual period, however, the level of liquidity has been roughly twice as high as the minimum prudential requirement. The prudential standard of total liquidity has fallen by 2.7 pp but current liquidity has increased by 0.5 pp, having reached, respectively, 26.8 percent and 132.0 percent at the end of semi-annum²⁸.

In terms of assets and liabilities maturity, the assets and liabilities duration gap is estimated to have been insignificant, with an exception of the 1-3-year and 3-year and more maturity groups where assets exceed liabilities by 1.8-fold and 1.6-fold, respectively. Therefore, the banking system, while keeping current maturity structure of assets and liabilities unchanged, will not face liquidity shortages in any maturity basket.

Actual and regulatory banking system liquidity ratio dynamics



Assets to liabilities ratio by maturity baskets



Source: Central Bank of Armenia.

²⁶ This stress-scenario and the other ones following were prepared to forecast emergence of any risks, but rather aim to reveal the weaknesses of the financial system, as well as assess its ability to absorb such risks.

²⁷ Stress-scenarios are built on an assumption that the amount of bank loans is unchanged and the collateral is ignored (which means that where loans are classified, a possible sale of the collateral is not considered).

²⁸ The prudential standard of total liquidity is calculated as a ratio of high liquid assets to total assets while the prudential standard of current liquidity, as a ratio of high liquid assets to demand liabilities; the minimum prudential requirement of these standards are, respectively, 15 percent and 60 percent.

The liquidity risk assessment stress tests demonstrate a positive level of liquidity management in Armenian banking system. Based on stress-tests results, in case of worst possible stress-scenarios there is likelihood of breaching the total liquidity and the current liquidity prudentials. Nevertheless, the likelihood of liquidity problems in banking system as a whole is low.

Foreign borrowings of commercial banks have grown by 25.6 percent to have reached AMD 228.4 billion. Funds attracted from international financial institutions have increased by 42.6 percent and accounted for 33.1 percent of total foreign borrowings. The main lender countries to the banks included Russia (15.5 percent), Luxemburg (11.6 percent), Germany (9.2 percent), France (6.9 percent), and Netherlands (4.8 percent). The share of long-term loans amounted to 86.2 percent, which turns the likelihood of refinancing of those liabilities to almost zero.

There has not been a reported growth of risks to the concentration of banking system liabilities. At the end of semi-annum, the share of major debt²⁹ in total has been 27.7 percent.

Liquidity risk stress-scenarios

30.06.2011	Repayment of 25 percent of time deposits of individuals	Repayment of 25 percent of demand liabilities	Repayment of 25 percent of demand liabilities and repayment of 25 percent of time deposits of individuals
Ratio of high liquid assets to total assets of the banking system	22.7%	22.9%	18.3%
Ratio of high liquid assets to demand liabilities of the banking system	105.3%	142.0%	107.0%

Source: Central Bank of Armenia.

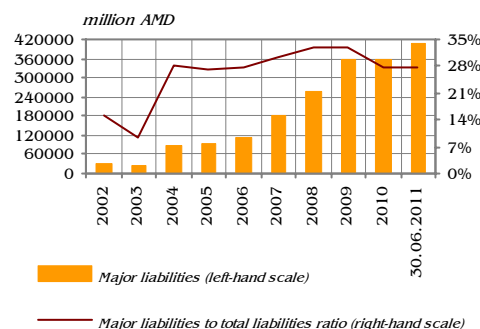
In case of worst possible stress-scenarios, no liquidity problems will appear for the banking system as a whole and the likelihood of emergence of risks undermining the financial stability is very low.

4.1.4. Market risks

Foreign exchange risk

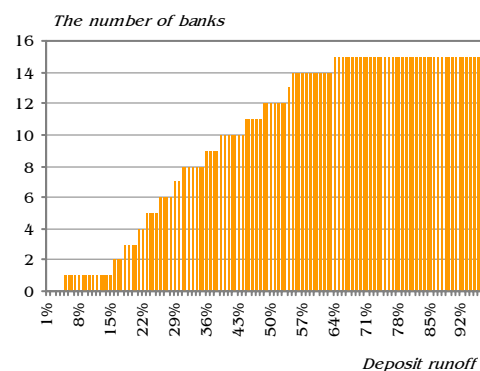
In the first half of 2011 the Dram fluctuations against other currencies led to a situation where the banking system incurred revaluation losses amounting to AMD 572 million, which constituted 0.2 percent of regulatory capital. As a result of FX revaluation, 14 banks incurred losses and 7

Major liabilities to total liabilities ratio in the banking system



Source: Central Bank of Armenia.

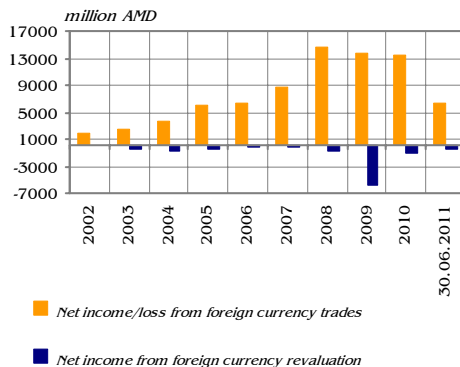
The number of banks in breach of total liquidity requirement in case of household deposit runoff



Source: Central Bank of Armenia.

²⁹ This represents the sum of all liabilities to one person, which individually exceed the 5 percent margin of total liabilities of a bank, without taking affiliation into account.

Net income of the banking system from foreign currency trades and revaluation



Source: Central Bank of Armenia.

banks reported profit. The banking system generated revenue of AMD 6.3 billion from foreign exchange transactions, which was 7.6 percent more compared to the revenue reported in the same period of the previous year.

The share of foreign currency loans in total loans and the share of foreign currency deposits in total deposits have grown by 2.0 pp and 0.5 pp, respectively, relative to the beginning of the year, to have constituted 60.6 percent and 70.2 percent, respectively, at the end of semi-annum. In the first six months of 2011 commercial banks' Group 1 net position (inclusive of derivative instruments) has shrunk to amount to AMD 798 million (0.2 percent of regulatory capital) at the end of semi-annum.

Foreign exchange risk stress-scenarios⁵⁰

30.06.2011	AMD/USD appreciation (depreciation) by 20%	AMD/EUR appreciation (depreciation) by 20%	Possible maximum annual loss estimated through VaR Model
Banking system's profit/loss from foreign currency revaluation	AMD 101.4 million or 0.03 percent of regulatory capital	AMD 130.5 million or 0.04 percent of regulatory capital	AMD 755.2 million or 0.2 percent of regulatory capital

Source: Central Bank of Armenia.

In case of worst possible stress scenarios reviewed in this stress-test, bank losses incurred as a result of foreign exchange risk are estimated to be insignificant, so the impact of such losses on the financial stability is weak.

Interest rate risk

There has been a reported decline in interest rates of both dram and foreign currency loans. Especially pronounced was the fall in interest rates of foreign currency loans, reflecting commercial banks' intention to spur up demand for such loans, since foreign currency resources prevail in the structure of liabilities. Such interest rate falls were also fuelled by an increased competition among bigger banks, leading to the narrowing of the interest rate spread.

Interest rate risk stress-scenarios

30.06.2011	Impact of 2 pp increase (decrease) of market interest rates on total portfolio, estimated through the "Duration Method"	Where market interest rates decrease (increase) by 2 pp, there will be deviation of net interest income from expected income of the three months ahead, estimated through the "Gap Method" (a method of interest rate-sensitive assets and liabilities gap)
Banking system's profit/loss	AMD 2.3 billion or 0.7 percent of banking system capital (AMD -2.3 billion or 0.7 percent of banking system capital)	AMD -175.3 million or 0.05 percent of banking system capital (AMD 175.3 million or 0.05 percent of banking system capital)

Source: Central Bank of Armenia.

⁵⁰ The calculation of losses estimated through stress-scenarios and the VaR Model (the VaR Model is not considered as a stress-scenario since the calculation of the model takes historical exchange rate series of currencies) is based on an assumption that the foreign currency position of the banking system would not change during the year.

The gap of average weighted maturity of assets and liabilities has reduced slightly in relation to the previous year, resting around a 0.3-year range. If the gap like this persists, possible fluctuations in market rates will not entail major losses in the banking system during 2011.

In case of worst possible stress scenarios, the share of commercial banks' losses of the capital of the system will neither be significant nor leave the system vulnerable to financial distress.

Price risk

In the first six months under review the price risk of the banking system was estimated to have been rather low. The share of available-for-sale and trading securities in total assets has fallen by 0.9 pp to reach 7.0 percent at the end of semi-annum. Reported loss from revaluation of available-for-sale and trading securities has amounted to AMD 9 million (0.003 percent of capital).

Risks associated with real estate price volatility remained within a comfortable territory of manageability. Armenian commercial banks further originated mortgages at no more than 60-80 percent of the loan to value ratio while taking quite a strict approach in evaluating borrower credibility. Such restrictions are very instrumental as they hold back potential risks from real estate price volatilities.

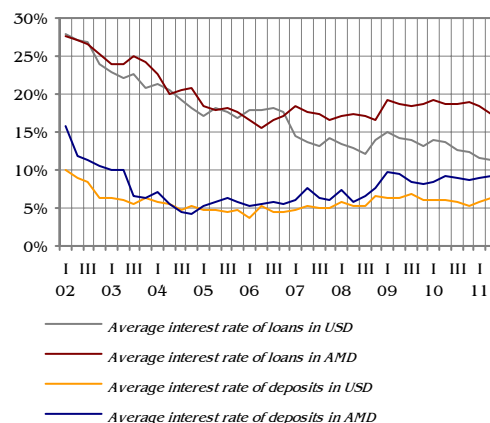
In case possible stress scenarios for a 30 percent devaluation of real estate price emerge, potential maximum commercial bank losses will trend upward. However, real estate price volatility is not high.

Real estate price change stress-scenarios

30.06.2011	30 percent depreciation of real estate
The banking system's loss due to revaluation of own property (price risk)	AMD 6.7 billion (or 2.1 percent of banking system capital)
The banking system's loss due to a 30 percent loss of vulnerable credit portfolio ³¹ (taking into consideration that the collateral involved has been sold at a depreciated cost), if a stress-scenario occurs (credit risk)	AMD 4.1 billion (or 1.2 percent of banking system capital)
The banking system's loss due to a 100 percent loss of vulnerable credit portfolio (taking into consideration that the collateral involved has been sold at a depreciated cost), if a stress-scenario occurs (credit risk)	AMD 13.5 billion (or 4.1 percent of banking system capital)

Source: Central Bank of Armenia.

Average interest rates of bank deposits and loans

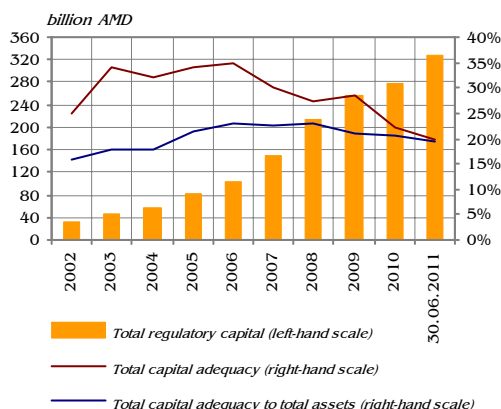


Source: Central Bank of Armenia.

³¹ A vulnerable credit portfolio involves the sum of loan residuals for which the residual value exceeds the 30 percent depreciated collateral value.

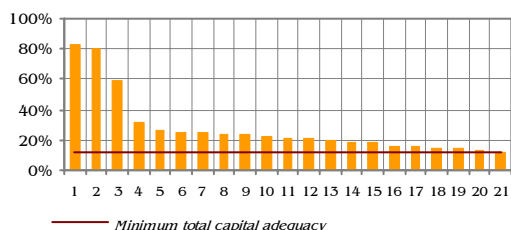
4.1.5. Capital adequacy and profitability

Banking system capital adequacy



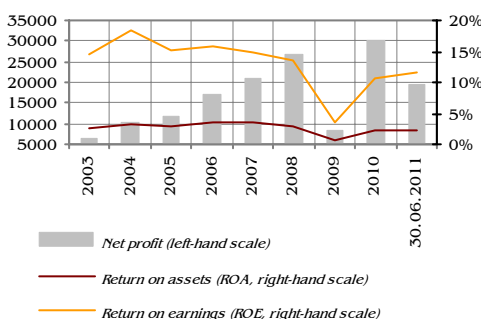
Source: Central Bank of Armenia.

Total capital adequacy by banks, as of 30.06.2011



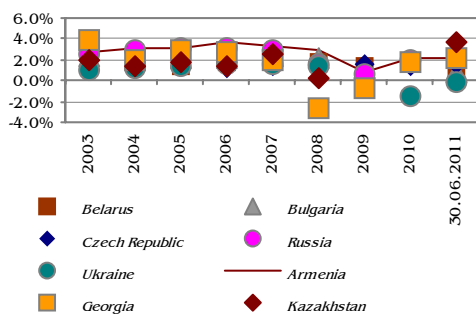
Source: Central Bank of Armenia.

Profitability ratios in the banking system



Source: Central Bank of Armenia.

Banking system RoA in selected East European and CIS countries



Source: IMF.

The capital adequacy and profitability of the Armenian banking system has always been higher in comparison with East European and a number of CIS countries. High level of profitability and capital adequacy of banks provide cushion for absorbing risks with its own resources. In the first half of 2011, as a result of brisker lending policy, the growth of risk weighted assets outpaced the growth of regulatory bank capital thus driving the capital adequacy ratio of banking system down by 2.2 pp from the beginning of 2011 and amounted to 20.0 percent at the end of semi-annum (an established minimum requirement threshold is 12 percent).

During the year, 2 banks added a total of AMD 22.6 billion to the statutory capital. By individual banks, the capital adequacy ratio was above 12 percent. Commercial banks remained strongly capitalized; no violation of the capital adequacy requirement has been committed by commercial banks.

Profit and profitability indicators of commercial banks have improved substantially thanks to heightened activity in the lending market and to the absence of sharp fluctuations of the exchange rate of foreign currency. In the first six months under review, relative to the previous reporting period, the banking system's net profit, calculated in accordance with Central Bank requirements³², has grown by 1.6-fold to have amounted to AMD 19.3 billion. In the same reporting period, 19 banks reported profit and 2 banks reported loss. In the first half of the year the banking system's profitability was as follows: return on assets, 2.2 percent; return on equity, 11.7 percent.

In the first six months of 2011, relative to the same period of the previous year, gross revenues of the banking system have grown by 20.7 percent to have reached AMD 134.9 billion, and gross expenditures have grown by 14.5 percent to have reached AMD 110.7 billion at the end of semi-annum.

Overall, in the first half of the year, relative to same period of the previous year, the shares of interest income, non-interest income and the shares of interest expense and non-interest expense have reported increases in the banks' income and expense structure respectively, while the share of return to/from assets loss provisioning in the expense structure has decreased.

³² The main difference between the Central Bank and IFRS reporting modules is pertinent to the provisioning of standard assets.

Net profit of the banking system calculated in accordance with IFRS amounted to AMD 20.5 billion in the first half of 2011, and according to this calculation of net profit, return on assets was 2.4 percent and return on equity was 12.4 percent.

4.2. CREDIT ORGANIZATIONS

The second largest sector of Armenia's financial system is credit organizations, with their assets constituting about 5.3 percent of total financial system. In the period under review, credit organizations generated growth of assets, liabilities and capital.

Assets, liabilities, capital and profit of credit organizations

(thousand AMD)

	31.12.2010	30.06.2011	Growth (%)
Assets	87,204,906	103,732,852	18.9%
Liabilities	51,232,047	63,557,084	24.0%
Capital	35,972,742	40,175,183	11.7%
Net profit	4,308,688	1,231,486	-

Source: Central Bank of Armenia.

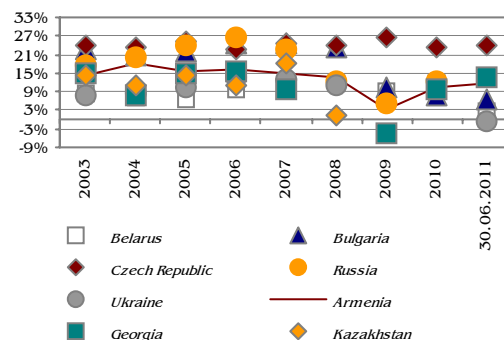
Compared to the commercial banks, capitalization and profitability of credit organizations is stronger, and according to various stress scenarios, they are fully capable to absorb possible risks. During the year, the ratio of total capital to total assets of credit organizations has fallen by 2.5 pp to 38.7 percent at the end of semi-annum.

In the first half of the year 26 credit organizations reported profit and 5 reported loss. As a result, relative to the same period of the previous year, such ratios as return on assets and return on equity of credit organizations have dropped by 2.6 pp and 5.8 pp to have reached 2.4 percent and 6.1 percent, respectively.

In the first six months of 2011 the profit of credit organizations calculated in accordance with IFRS has amounted to AMD 3.8 billion; with return on assets having reached 7.7 percent and return on equity, 18.9 percent.

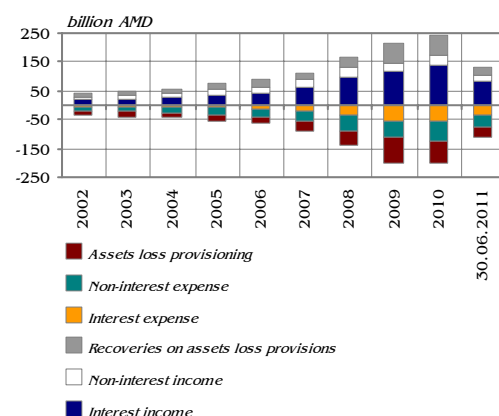
In spite of some 0.4 pp increase of the share of non-performing loans (classified as "watched", "substandard", and "doubtful") of credit organizations in the reporting period, it is still at a pretty low level (3.1 percent as of 30.06.2011). In terms of sectoral lending, the share of non-performing loans is the highest in transport and communications (16.0 percent), industry (8.3 percent), mortgage and consumer loans (6.5 percent) sectors.

Banking system RoE in selected East European and CIS countries



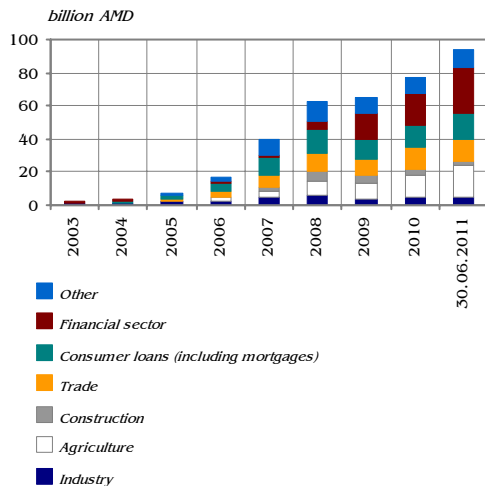
Source: IMF.

Banking system income and expense account



Source: Central Bank of Armenia.

Balance of credit organization loans to residents, by sectors



The share of non-performing loans (classified as “substandard”, “doubtful” and “loss”), calculated by the IMF methodology, has dropped by 0.5 pp relative to the beginning of the year and amounted to 4.8 percent at the end of semi-annum, pointing out to the general improvement of the loan portfolio.

In the first half of 2011, relative to the previous period, the ratio of net provisioning against assets loss to total assets has increased by 0.8 pp to have amounted to 2.1 percent.

Credit risk assessment stress-scenarios³³

30.06.2011	25 percent of loans in watched, substandard and doubtful categories classified into loss loans	75 percent of loans in doubtful category classified into loss loans	30 percent of loans in standard category classified into watched loans
Total loss of credit organizations	AMD 532.9 million or 1.5 percent of regulatory capital	AMD 141 million or 0.4 percent of regulatory capital	AMD 1.8 billion or 5.3 percent of regulatory capital

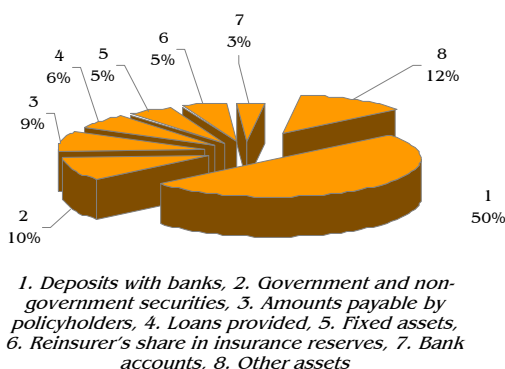
Source: Central Bank of Armenia.

In all maturity baskets of assets and liabilities (up to 180 days (including demand resources), from 180 days to one year, more than one year), the volumes of assets exceeded the volumes of liabilities, pointing out to the low level of liquidity risk, other things being equal, with credit organizations.

4.3. INSURANCE COMPANIES

At the end of semi-annum 2011 there were 9 insurance companies licensed to perform insurance business in the territory of the Republic of Armenia.

Assets structure of insurance companies, as of 30.06.2011



Source: Central Bank of Armenia.

In the first half of the year, assets of insurance companies have grown by 20.6 percent to AMD 30.9 billion; liabilities have grown by 17.7 percent to AMD 15.4 billion; and total capital has increased by 23.6 percent to AMD 15.5 billion, at the end of semi-annum 2011. In the period under review the share of insurance companies in the financial system of Armenia has increased by 0.2 pp, representing 1.4 percent of the financial system assets as of 30.06.2011. In the first six months of the year, relative to the previous period, the main indicator that describes activity of the insurance market- the insurance premiums accrued - has increased by 3.2-fold and reached AMD 15.4 billion (in the first half of 2010 the growth of the indicator was 13.7 percent), largely owing to the compulsory third party motor liability insurance.

³³ Stress-scenarios are built on an assumption that the amounts of loans of credit organizations are unchanged and the secured property is ignored (which means that where loans are classified as loss, a possible sale of the collateral is not considered).

Though the introduction of the said scheme boosted up the activity of the insurance market, the likelihood of insurance companies impacting the financial stability is estimated to be very low, attributable to low riskiness of insurance activities.

Circumstances described below further point to the low level of riskiness of the activities of insurance companies, as follows:

- The loss ratio³⁴ of insurance companies was 48.6 percent, according to the six months' results, which shows that the insurance business is not exposed to significant risks;
- During the first six months of 2011 the expense ratio³⁵ of insurance companies has reduced to 34.7 percent, pointing out to the increased operational effectiveness of the insurance sector;
- As of 30.06.2011, the capital adequacy ratio of the insurance sector has been 216.4 percent, double the minimum requirement level.

In case of worst possible stress-scenarios shown below, the level of solvency of insurance companies is estimated to not incur notable changes, so the likelihood of emergence of risks to the financial stability coming from insurance sector is very low.

Solvency assessment stress-scenarios

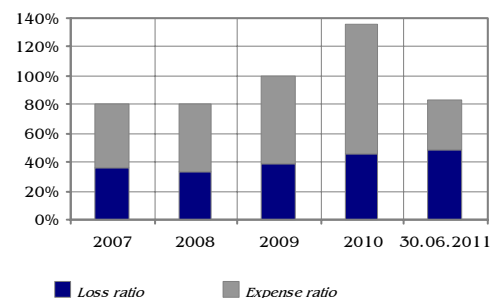
30.06.2011	Increase in frequency of claims by 20 %, and price increases by 5 %
Required growth of UIPR of the insurance sector, if the stress-scenario occurs	AMD 1.9 billion or 12.3 % of regulatory capital of the sector
Total capital adequacy ratio of the insurance sector, if the stress-scenario occurs	189.7%

Source: Central Bank of Armenia.

Where possible stress-scenarios (20 percent increase in frequency of claims and 5 percent growth of indemnification price) unfold, the change of the level of solvency of insurance companies was estimated and, as a result, the total capital adequacy requirement for the insurance sector would not be breached by any insurance companies.

The results of credit risk assessment stress-tests (i.e. classifying 30 percent of "standard" assets into "watched" category and 10 percent of "standard" assets into "loss" category) show that potential loss of the insurance sector is small. More on that, in case of worst stress-scenario, the total

Loss and expense ratios of insurance companies



³⁴ The loss ratio was calculated using the following formula: (net accrued indemnity + net provisions to technical reserves (except for unearned insurance premium reserves, UIPR) + other transaction costs on insurance) / (earned insurance premiums - sums refunded on the contracts terminated).

³⁵ The expense ratio was calculated using the following formula: non-interest expense / (earned insurance premiums - sums refunded on the contracts terminated).

capital adequacy requirement of the insurance sector would not be breached by any insurance companies.

Credit risk assessment stress-scenarios

30.06.2011	Classifying 30 percent of "standard" assets into "watched" category	Classifying 10 percent of "standard" assets into "loss" category
Loss of the insurance sector	AMD 580.4 million or 3.9% of the regulatory capital of the sector	AMD 2.1 billion or 14.1% of the regulatory capital of the sector
The total capital adequacy ratio of the insurance sector, if the stress-scenario occurs	210.2%	192.9%

Source: Central Bank of Armenia.

Foreign exchange risk assessment stress-scenarios³⁶

30.06.2011	AMD appreciation versus USD by 20%	AMD appreciation versus USD by 20%	Maximum potential loss valued through a VaR method
Loss of the insurance sector	AMD 1.7 billion or 11.4 % of the total regulatory capital of the sector	AMD 233.7 million or 1.6 % of the total regulatory capital of the sector	AMD 1.1 billion or 7.2 % of the total regulatory capital of the sector

Source: Central Bank of Armenia.

In the foreign exchange risk assessment stress-scenario (i.e. AMD appreciation versus USD by 20%, AMD appreciation versus USD by 20%, and maximum potential loss valued through a VaR method), in case of worst stress-scenario, the loss of insurance companies incurred from foreign exchange risk is estimated to be insignificant.

Liquidity risk assessment stress-scenarios

30.06.2011	Increase in reported but not settled claims reserves (RSCR) by 50%
Required growth of RSCR of the insurance sector in case the stress-scenario occurs	AMD 1.5 billion or 9.3 % of the regulatory capital of the sector
The total capital adequacy of the insurance sector in case the stress-scenario occurs	195.6%
Number of insurance companies in breach of the liquidity ratio of the sector	1

Source: Central Bank of Armenia.

The level of liquidity risk in the insurance sector is low, and this is supported by the fact that over the first six months of 2011 no violation of the liquidity prudential has been reported.

Allocating funds of the insurance sector in low-risk assets allows keeping investment risk at a low level. Assets equivalent to technical reserves are invested primarily in time and demand deposits of commercial banks as well as in Armenian government and non-government bonds.

³⁶ The calculation of losses estimated through stress-scenarios and the VaR Model (the VaR Model is not considered as a stress-scenario since the calculation of the model takes historical exchange rate series of currencies) is based on an assumption that the foreign currency position of the insurance sector would not change during the year.

4.4. SECURITIES MARKET PARTICIPANTS

As of June 30, 2011, there were 21 banks providing investment services and 8 investment companies in the Armenian securities market.

In the first half of the year, relative to the end of 2010, total assets of investment companies have grown by 15.0 percent and amounted to AMD 22.5 billion; total capital, by 17.4 percent, to AMD 3.8 billion. Profits of investment companies have totaled AMD 487 million; 6 investment companies reported profit and 2 reported loss.

At the end of semi-annum 2011, credit risk of investment companies amounted to 26 percent of regulatory capital; market risk amounted to 38 percent; and operational risk, to 2 percent. Remarkably, interest risk had the largest share (70 percent of market risk) while foreign exchange and share price risks of investment companies constituted 28 percent and 1 percent of market risk, respectively.

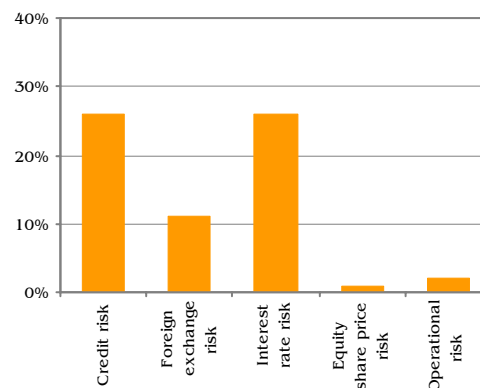
As of the end of semi-annum 2011, a total of 18 classes of securities of 15 reporting issuers were admitted to trading in the regulated market. Of these issuers, 4 were banks accounting for 26 percent of equity shares. The total amount of shares issued and placed in the regulated market was AMD 49.8 billion and the total amount of bonds, AMD 4.1 billion. One issuer is accountable on both shares and bonds.

As of the end of semi-annum 2011, there were 1569 issuers of securities listed and 93756 individuals as owners of securities issued by companies running registries at the Central Depository of Armenia. Further, in addition to Central Depository of Armenia, two investment service providers in the securities market run registries of 308 companies with a total of 29078 persons involved as owners of registries.

4.5. OTHER FINANCIAL SYSTEM PARTICIPANTS

The participants of the Armenian financial system, other than those mentioned above, include 122 pawnshops (excluding branches), 233 foreign exchange offices (excluding branches), 4 insurance brokers, 10 payment and settlement organizations, and 1 currency dealer. All these organizations' potential impact on the financial stability of Armenia is estimated to be very low as their share in the financial system assets is far too small.

Investment company risk profile (share in regulatory capital), as of 30.06.2011



Source: Central Bank of Armenia.

SUMMARY

Banks remain a prevailing part in overall financial system in Armenia, and the impact of other sectors on financial stability remains negligible. During the first six months of 2011, along with positive developments in macroeconomic environment, banks were further active in their lending business, a trend seen back in the second half of 2010.

Despite accelerated growth rate in loan investments by commercial banks, which affected capital adequacy and liquidity ratios downward, the actual levels of the banking sector liquidity have almost doubled the minimum established thresholds.

During the first half of the year the statutory capital of 2 banks has increased, which provides an additional cushion for the commercial banks' ability to cover the risks. Overall, risks in the financial system have been manageable along with positive developments in the macroeconomic environment.

5. FINANCIAL MARKET INFRASTRUCTURES STABILITY

Given the importance and impact of the Armenia's payment and settlement system on its monetary policy and financial stability³⁷, the Central Bank further pays due attention to the country's systemically important payment and securities settlement systems and the telecommunication network supporting their activities.

In Armenia, most interbank settlements are made via the Central Bank systems³⁸. The largest value (over 99 percent) of interbank payments is made via the Central Bank systems, which is a little bit more from the previous year's level.

5.1. INTERBANK PAYMENTS

The Central Bank Electronic Payment System

In the first half of 2011, 42 percent of gross payments via the Central Bank systems were made through the Electronic Payments System of the Central Bank. The share of the payments via EPS has reduced by around 14 pp in relation to the previous year. This was determined by the decreased value of EPS payments as well as the increased value of payments via Paper-Based Gross Settlement System for deposits with the Central Bank (about 74 percent of PGSS) and repo transactions (Lombard repo transactions - nearly 25 percent of PGSS).

The indicators derived from monitoring of the EPS performance suggest that the system is safe and trouble-free from the system stability point of view.

Credit risk

Credit risk of the settlement bank (the Central Bank) in the system lacks since there is no mechanism in place to lend to system participants in case of insufficient funds. Nor is there credit risk to the recipient as it receives the notice of the payment only after the payment is made final and irrevocable³⁹.

Liquidity risk

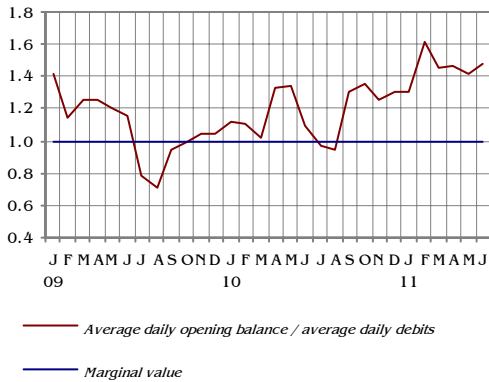
The indicator of average daily payments to the expense of own resources used for assessment of liquidity risk tended to

³⁷ For details, see the "Financial Stability Report", 2007, and the paper "Payments and Securities Clearance and Settlement Systems in the Republic of Armenia", 2007.

³⁸ Payments via the Central Bank systems involve the payments through: i) Electronic Payments System, EPS, excluding stock exchange trades, ii) Paper-based Gross Settlement System, PGSS, and iii) Government Securities Accounting and Settlement Systems, GSASS. For details, see the paper "Payments and Securities Clearance and Settlement Systems in the Republic of Armenia", 2007.

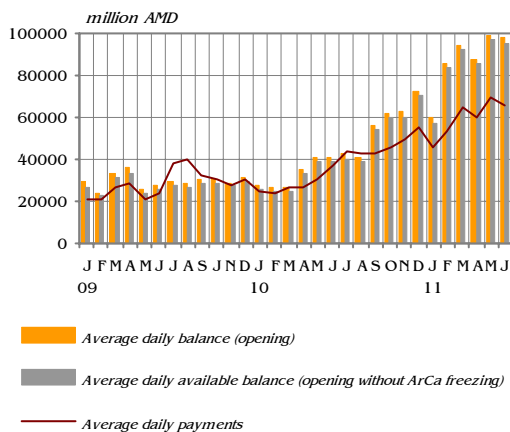
³⁹ For details, see the "Financial Stability Report", 2007, and the paper "Payments and Securities Clearance and Settlement Systems in the Republic of Armenia", 2007.

Average daily opening balance to average daily payments (debit)



Source: Central Bank of Armenia.

Average daily payments, average daily opening balances, average daily available liquidity comparative analyses (all banks)



Source: Central Bank of Armenia.

improve during the first half of 2011⁴⁰ (1.46 in 2011 and 1.17 in 2010).

Average monthly liquidity at the beginning of the day in the system always exceeded average daily payments. More on that, the growth rate of liquidity at the beginning of the day (which doubled the growth rate of liquidity reported in the same period of the previous year) was higher than the growth rate of average daily payments (representing almost a triple growth relative to the same period of the previous year).

The monthly dynamics of the daily indicator points out to the fact that during the first half of 2011 banks had more opening liquidity on average than they needed for making payments within a day. Also, taking into consideration that incoming payments (crediting with the account) and/or other sources of liquidity are not included in the calculation of the indicator, the likelihood of the liquidity risk to the system and emergence of systemic problems was estimated to be very low.

The number of rejections because of insufficient liquidity, sharply reduced in the reporting period while making a negligible part in payments through the EPS in terms of value and number, provided more evidence that there are no problems connected with liquidity (more details in the subsection “Rejections”).

Rejections

Rejections reported in the system and their share in total payments made through the system provide signals of insufficient liquidity and serve as criteria for the disclosure of other associated problems.

During the first half of 2011, relative to the same period of 2010, the number and value of rejections of payments through EPS because of insufficient liquidity have increased. However, the share of such rejections in payments through EPS was negligible (0.07 percent in Q1 2011 and 0.008 percent in Q2 2011 in terms of number, and 0.08 percent in Q1 2011 and 1.21 percent in Q2 2011 in terms of value). As monitoring of the system performance can suggest, there has been more than enough liquidity for payments with the system (see also the *Liquidity risk* subsection). The said increase can be attributable to just one bank or a few ones with their inadequate management of liquidity within a day or

⁴⁰ The indicator of average daily payments to the expense of own resources was calculated on the basis of a ratio of opening liquidity on dram correspondent accounts of commercial banks to debits (payments) through the account. Incoming payments are not included in the indicator so that a stress-scenario can assess the likelihood of bank rejections if additional liquidity is not available within a day, namely to which extent would banks generate their payments using only opening balances of their own funds. The calculation does not include cash enhancements through their own accounts of commercial banks. The indicator is calculated by systemic breakdown, so indicators may vary across commercial banks.

several days, so it could not affect the system liquidity. In the outcome, one may confirm that the liquidity with the system has been sufficient for payments and that it could not have entailed systemic problems.

Intraday distribution of payments

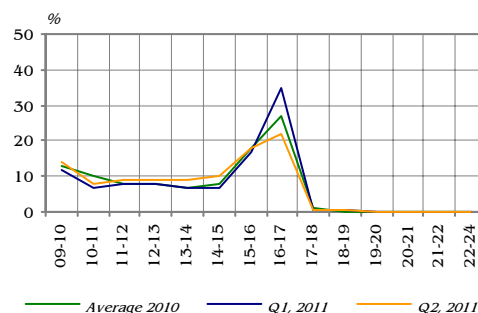
The concentration of payments at any time interval of the day can be a source for potential risks: in the event of insufficient liquidity or operational failures occurred at the closing of the day such concentration of payments may, for example, lead to rejections or delays of most payments of the day. Therefore, a regular monitoring of indicators of the payments in terms of number and value within a day is required.

In 2011 the intraday distribution of payments by value and number on an average quarterly basis remained uneven. Over the years, hourly distribution of payments has been smoothed out to some extent for non peak hours (a time spanning 10:00 am to 3:00 pm) of the day (especially in the second quarter of 2011), yet concentration of the payments at the closing of the day remains high in average intraday distribution of payments. In the reporting period, the time span of 3:00 pm - 5:00 pm was the peak period for execution of payments, and it made up an average 30 percent of number and 46 percent of value of the intraday payments. Further, payments executed after 5:00 pm have grown, constituting nearly 2 percent of number and around 1 percent of value of the intraday payments. It should be noted however that such growth was determined by extended operational days of the system for only the last couple of days of the month, and it does not have a regular nature.

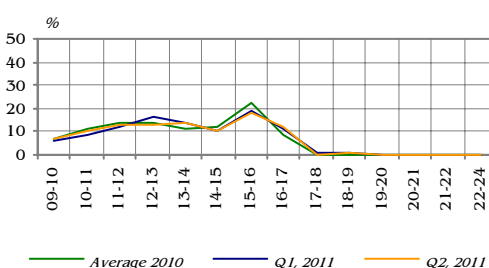
The results of monitoring showed that, over the last three years, any major increase in total payments had occurred roughly within the closing hours of the day instead of even or smooth distribution during a day. This fact is supported by the smooth dynamics with which the payments (by number) were executed in other hours of the day. This finding manifests that commercial banks remain assertive in their strategy to execute payments at the closing hours of the day.

An uneven intraday distribution of payments like this and the concentration of payments at the closing of the day as well as the considerable growth of payments executed after 4:00 pm could result in adverse effects to the system participants and the system as a whole, further leading to systemic risks. Considering the positive dynamics of the liquidity and availability of the system, a sufficient capacity of the system as well as absence of material incidence and a negligible amount of rejections within a day, an uneven intraday distribution and concentration of payments at the closing of the day have not brought in problems while the likelihood of the risk to the system is estimated still low on the whole.

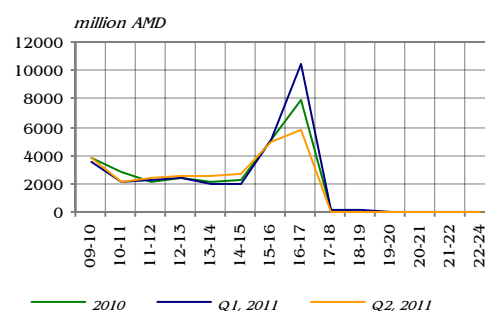
Intraday distribution of the value of payments on an average quarterly basis, 2010-2011



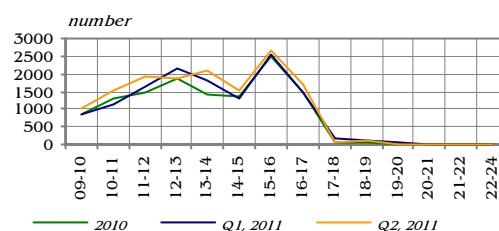
Intraday distribution of the number of payments on an average quarterly basis, 2010-2011



Hourly dynamics of the value of average annual payments via EPS (excluding stock exchange trades), two quarters 2011 and year 2010

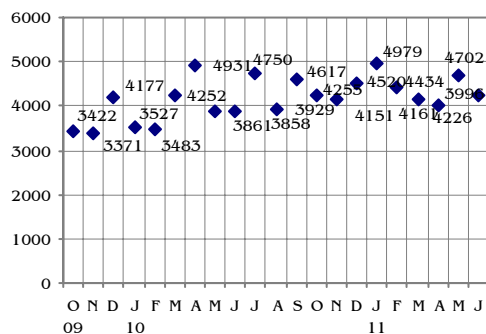


Hourly dynamics of the number of average annual payments via EPS (excluding stock exchange trades), two quarters 2011 and year 2010

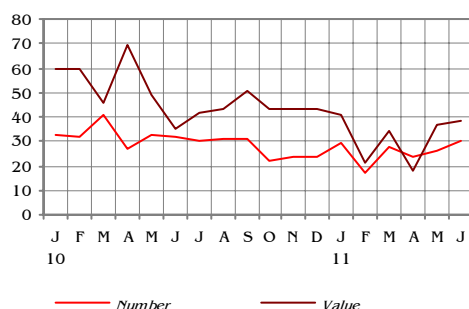


Source: Central Bank of Armenia.

Maximum number of payments per hour, by month



Share of payments in peak hours in the intraday payments



Source: Central Bank of Armenia.

System capacity

Preliminary expert assessment by the system Operator suggested that since 2008 EPS had been generating more than 4300 payments per hour through EPS (an average 30000 payments per day).

In the first half of 2011 the maximum number of payments per hour reached 4979. Such a peak hour was reported at the closing of the day for the time span 3:00 pm - 4:00 pm, making up 29.3 percent of number and about 40.7 percent of value of the payments⁴¹.

One remarkable trend was that during the first half of 2011 the monthly peak hour levels exceeded several times (in several months) and, in the rest of cases, were very close to the potential minimum capacity (4300 payments per hour). As such, reported peak levels were very close to the closing hours of EPS, i.e. after 3:00 pm.

The shares of payments executed within peak hours tended to decrease in terms of both number and value of total payments in those days.

In the reporting period payments per hour have increased considerably, making up a notable share in work hours.

In the first six months 2011 there were considerably more reports of payments exceeding the 2500 per hour threshold, making up 17 percent of operational hours. Certain increase was reported for other indicators as well (3500, 4300 and more payments per hour).

Such concentration of payments, both by number and value, in peak hours and especially at the closing of the day may bring considerable risks into the system in case the system faces any operational problem or failure. As a result, the payments would be rejected or delayed thus leading to the extension of the operational day of the system.

However, no problems with the system capacity were reported. Considering that there were not incidences reported in this period of time thanks to the system reliability, the system operation proved to be smooth.

The concentration of payments in terms of value at the closing of the day could result in the rejection of payments because of insufficient liquidity. Yet, the analysis of the rejections by number and value, reported in the system, showed that these rejections were virtually a small part in total (see the *Rejections* subsection). This could point to the fact that commercial banks managed their liquidity effectively and/or had much more liquidity than they needed for making payments (see the *Liquidity risk* subsection).

⁴¹ This excludes stock exchange trades.

Though in the first half of the year a considerable growth was reported with regard to all capacity indicators, this has not been a large amount in total payments, however. Also, taking into account that this potential capacity level provided by experts of the Operator is considered the minimum, rather the maximum, the capacity of the system is assessed to be sufficient for processing the incoming payments. At the same time, the operational availability of the system remains in compliance with international standards while the system reliability is estimated to be at a high level (see *Operational availability of the system* subsection).

Operational availability of the system

In the first six months 2011 there have been only 3 incidents (approximately 30 minutes altogether) occurred in the software system *Operational Day* that affected sound operation of EPS. The analysis showed that both the number and duration of incidents in the system were too small to disrupt the system availability.

In the reporting period an estimated operational availability to EPS has been 99.8 percent, which is again a good indicator according to international criteria⁴².

So, the EPS risk assessment allows assuming that the structure and reserve facilities of the system are more than sufficient to prevent possible systemic risks.

CBANet availability

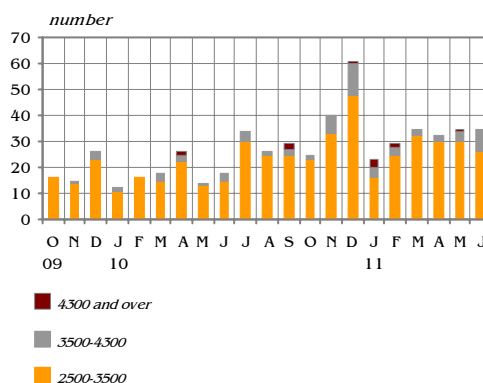
In the first half of 2011 disruptions of the CBANet nodes were minor and, as a result, the operational availability of all nodes of the network was 99.97 percent and the calendar availability was 99.99 percent. Availability of nodes installed in Yerevan was 100 percent.

In the reporting period the number of lasting failures has reduced sharply. In the regions of Armenia the longest failures of the network were registered in Gegharqunik and Lori. The longest failure of 7 operational hours was in Lori. However, the operational availability in that region has been high, 99.74 percent.

No disorders were recorded for Yerevan nodes.

Nonetheless, considering that in aforementioned regions the EPS payments constituted merely 0.83 percent of the EPS payments initiated in the regions of Armenia, one may conclude that the delays in interbank payments due to the disorders of CBANet regional nodes had just a minor effect on the total interbank payments, with no reported negative impact in terms of financial stability.

Payments exceeding potential capacity level of 2500, 3500 and 4300 payments per hour



Source: Central Bank of Armenia.

⁴² The 2008 Financial Stability Report of the National Bank of Denmark states that operational availability for systemically important RTGS system, which is compliant to ESCB system requirements, should be very high, e.g. operational availability of TARGET was 99.65 percent, which is considered a good indicator.

During 2011 there were no reported incidents of disruption at head office subscribers, so both operational and calendar availability has been 100 percent. The lack of incidents at the head office subscribers is explained largely by the fact that in 2010 the head offices of banks were linked to the network by reserve communications – if disrupted, head offices now can be instantly linked to the reserve communications to ensure normal functioning of the head office subscriber.

In general, the hardware and software environment and reserve capacities of CBANet are estimated to provide for a sustainable EPS operation.

5.2. GUARANTY OF DEPOSITS

In the first half of 2011 deposits of individuals kept on growing. As of the end of semi-annum 2011, relative to the end of the previous year, the amount of deposits of natural persons has increased by around 15.9 percent and the amount of guaranteed deposits, by 7.8 percent. The number of individuals holding guaranteed deposit has grown by 4.5 percent to 1074371 persons (excluding former ArmSavings Bank depositors who are registered in VTB Armenia Bank CJSC). In the reporting period, the share of depositors who hold only deposits in dram remained the same, 81 percent in total. As estimated by the Deposit Guarantee Fund, the number of depositors who hold deposits not exceeding the amount to which the deposit is guaranteed accounted for more than 98 percent of the total number of depositors.

5.3. CREDIT REGISTRY AND ACRA CREDIT BUREAU

The Central Bank Credit Registry

The Credit Registry has been functioning since January 1, 2003. The Credit Registry is designed to collect data on credit history of borrowers, to process such information and provide it to commercial banks, credit organizations, and borrowers. The Credit Registry keeps records of loans in excess of AMD 1.5 million and loans in the amount less than AMD 1.5 million that were overdue and were classified. At the end of semi-annum 2011 the number of loans recorded in the Credit Registry reached 977427 from which 898196 were loans to natural persons and 79231 were loans to legal persons. The total number of loans registered with Credit Registry has increased by 140542 in relation to the first half of the previous year.

The Credit Registry possessed information on 146110 loans in use and 831317 loans repaid. Continued growth of records makes information used to determine borrower creditworthiness even more integral and instrumental for supervision purposes, which in turn allows evaluating borrower credit risk more effectively and preventing from non-diligent borrowers.

The number of loans registered with the Credit Registry in the first half of 2011 was 65183 compared to that of 58135 in the previous reporting period. The increase points to the livelier lending practices. In the first six months of this year the average entry rate of information was 8500 registrations per day, representing a 6 percent increase compared to the previous year.

Most commercial banks and credit organizations further made their reporting to the Credit Registry on an automated basis, allowing for an increased efficiency of the system. Improved *Credit Registry* software of the Central Bank made it possible to provide banks and credit organizations with information on credit history within one day utmost after receipt of such a request. The share of errors in data presented to the Credit Registry has reduced to a minimum.

As shown in the chart, in the first half of 2011 the number of requests has increased in relation to the previous year, which was driven by the reported increase in the number of loans granted. Commercial banks and credit organizations are increasingly stressing the importance of credit history, especially when it comes to making loans to new clients. To this effect, the number of loans granted and the number of requests received have increased during the first six months of the year.

The Credit Registry's activity has pushed business discipline of borrowers upward and scaled down the delays in installments, which reflects the clients' understanding of the importance of their credit history.

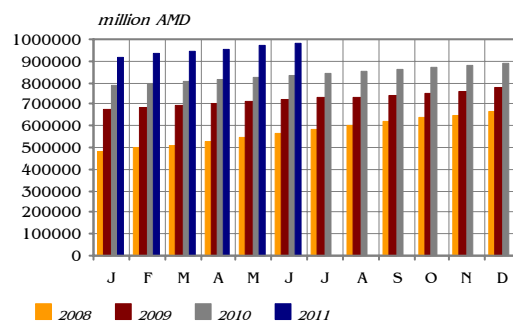
The amount of registered information and utilization rate in the Credit Registry would most probably increase during the second half of 2011 as well. Work done by commercial banks and credit organizations suggest that provision of information to the Credit Registry will be fully automated at the end of 2011.

More methodological change will come in to reduce weaknesses and raise efficiency of the Credit Registry.

The ACRA Credit Bureau

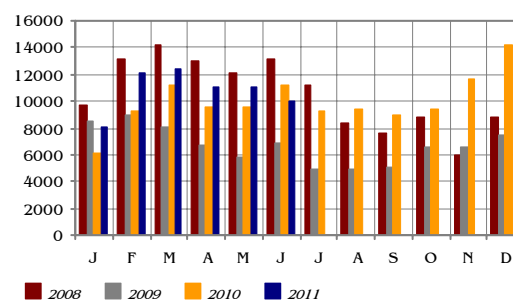
In the first half of 2011 the number of the borrowers registered with the ACRA Credit Bureau has increased by 2.1 percent against the first half of 2010 and amounted to 1152

The number of loans entered Credit Registry



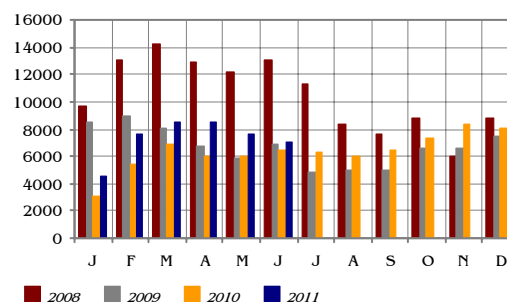
Source: Central Bank of Armenia.

The number of new loans and loans entered Credit Registry



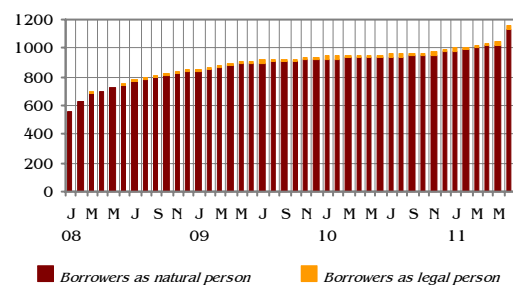
Source: Central Bank of Armenia.

The number of requests received by Credit Registry

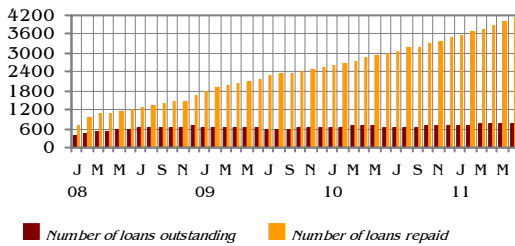


Source: Central Bank of Armenia.

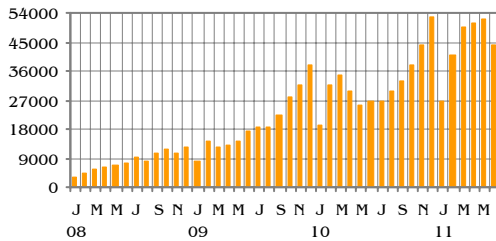
The number of borrowers registered in ACRA database (in thousand)



The number of loans registered in ACRA database (in thousand)



The number of reports provided by ACRA



Source: ACRA.

thousand borrowers, as of June 30, 2011. Of this number, 98.2 percent are natural persons.

Relative to the first half of 2010, the number of loans available with the database has grown by more than 1.3-fold to have reached 4870 thousand at the end of semi-annum.

Any natural person or legal person is entitled to receive information from the Bureau concerning his personal credit history. For the legal persons to obtain credit history of its client or counterparty, it should enter into a service contract with the Bureau and receive consent in writing from the borrower.

The Bureau started providing credit reports since April of 2007. The number of credit reports provided during the first half of 2011 has grown by 1.6-fold compared to the number of reports provided during the first half of the previous year.

A multi-level coding system, supported by special firewall hardware, has been developed to protect information owned by the Bureau and to prevent its illegal usage by the third parties whatever. The system traces all actions as well as an ongoing monitoring of the system is in place to prevent suspicious and unauthorized action.

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ABBREVIATIONS

CBA	Central Bank of the Republic of Armenia
GDP	Gross Domestic Product
GNDI	Gross National Disposable Income
NSS	National Statistics Service
IMF	International Monetary Fund
UNO	United Nations Organization
CIS	Commonwealth of Independent States
ECB	European Central Bank
USA	United States of America
FDI	Foreign Direct Investment
RF	Russian Federation
IFRS	International Financial Reporting Standards
MLIC	Motor Liability Insurance Contracts
CDA	Central Depository of Armenia
GB	Government Bonds
TB	Treasury Bills
EPS	Electronic Payments System
GSASS	Government Securities Accounting and Settlement System

