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Republic of Armenia: Financial System Stability Assessment

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REPUBLIC OF ARMENIA

Financial System Stability Assessment

Prepared by the Monetary and Capital Markets Department

Approved by José Viñals and Masood Ahmed

June 11, 2012

This report summarizes the findings of the Update under the Financial Sector Assessment Program (FSAP) for Armenia. This updates previous FSAP missions in 2005 and 2001. A joint Bank-Fund mission visited Yerevan from February 1 to 14, 2012, and comprised Jennifer Elliott (Chief, IMF), John Pollner (co-Chief, World Bank), Su Hoong Chang, Kenji Fujita, Dinah Knight, and Erik Lundback (all IMF), Brett Coleman, Katia D'Hulster, Uzma Khalil, Consolate Rusagara, Heinz Rudolph (all World Bank), as well as external experts Michael Deasy (former Central Bank of Ireland), Mindaugas Leika (Central Bank of Lithuania), and Richard Symonds (former World Bank). Guillermo Tolosa (IMF Representative in Yerevan) and Armine Ghazaryan (IMF Yerevan office), and Edgar Karapetyan (World Bank Yerevan Office) also participated in the mission. The FSAP findings and recommendations were discussed with the Armenian authorities during the Fourth Review of the EFF/ECF mission in April 2012.

Key findings of the FSAP Update:

- The banking system proved resilient to the financial crisis and the severe exchange rate depreciation and GDP contraction of 2009, in part due to the low level of intermediation and exposure to key sectors such as construction, but also because of swift efforts on the part of the authorities to provide support to the banking sector. Stress tests show that banks would be resilient to a repeated shock, although there are some heightened vulnerabilities.
- The country remains vulnerable to a current account shock. Further action could be taken to protect the banking sector, including the introduction of a liquidity coverage ratio in foreign currency to ensure sufficient liquidity for the high level of dollar deposits. In addition, authorities should develop more robust monitoring of foreign currency exposures of borrowers, because foreign currency lending generates significant credit risk.
- The regulatory and supervisory framework is well-founded, with the well-resourced and skilled Central Bank of Armenia (CBA) responsible for the full range of the financial sector. Bank supervisors should begin use of Pillar 2 analysis and introduce a number of enhancements to regulations, including a better definition of large exposure and a clear requirement for reporting of events with a potential material adverse impact. The insurance regulatory framework is adequate but will require significant enhancement if a life insurance industry develops.
- Macroprudential oversight is embedded in CBA work, with further development of stress testing capacity on-going. The crisis management framework is largely in place, although some additional authority to intervene in banks ahead of insolvency is needed.

FSAP assessments are designed to assess the stability of the financial system as a whole and not that of individual institutions. They have been developed to help countries identify and remedy weaknesses in their financial sector structure, thereby enhancing their resilience to macroeconomic shocks and cross-border contagion. FSAP assessments do not cover risks that are specific to individual institutions such as asset quality, operational or legal risks, or fraud.

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GLOSSARY

AML/CFT	Anti-Money Laundering and Combating the Financing of Terrorism
BCP	Basel Core Principles
BPS	Basis points
CAR	Capital Adequacy Ratio
CBA	Central Bank of Armenia
CPSS	Committee on Payment and Settlement Systems
CT1	Core Tier 1
DGF	Deposit Guarantee Fund
ECB	European Central Bank
ELA	Emergency Liquidity Assistance
FATF	Financial Action Task Force
FSAP	Financial Sector Assessment Program
FSC	Financial Stability Committee
IAIS	International Association of Insurance Supervisors
ICP	Insurance Core Principles
IFRS	International Financial Reporting Standards
IOSCO	International Organization of Securities Commission
MOF	Ministry of Finance
MOU	Memorandum of Understanding
NBFI	Nonbank financial institution
NPL	Nonperforming loan
P&A	Purchase and Assumption
PCA	Prompt corrective action
RTGS	Real-Time Gross Settlement
RWA	Risk-Weighted Assets

Executive Summary

Armenia has a relatively small but growing financial system dominated by banks. The system was resilient to a serious economic contraction and exchange rate depreciation in 2009 and remains sound. Levels of non-performing assets remain low and the system on the aggregate is well capitalized. Growing levels of credit, albeit from a relatively low base, and the deepening of dollarization will mean the system is now more vulnerable to shocks.

The key risks to the system arise mainly from rapid credit growth, especially in foreign currency. The missions recommended that the CBA develop a program to gather information and monitor the hedging ability of borrowers. In addition, while a number of measures have been taken to limit foreign currency risk, such as greater provisioning and risk weighting of foreign assets, the mission recommended a liquidity coverage requirement in foreign currency to address liquidity risk, which stress tests identified as a source of vulnerability. Liquidity requirements in foreign currency would be an important risk mitigant particularly because the CBA has a limited ability to extend foreign currency emergency liquidity assistance. Because of their small size relative to eligible borrowers, banks (in particular some smaller banks) are vulnerable to concentration risk. CBA supervision should use Pillar 2 to address possible weaknesses in risk management in banks and risks such as a concentration risk that may be institution specific. The CBA should also undertake a more systematic analysis of the foreign currency exposure of borrowers, beginning with large borrowers.

The regulatory and supervisory system seems robust, but there is scope for improvement. The CBA is charged with banking and non-banking supervision as well as financial stability, crisis management, and resolution. The CBA is well resourced and has a very professional and dedicated staff. Yet the CBA's broad range of responsibilities has the potential to undermine the credibility it currently enjoys in the market. The authorities should be vigilant in limiting and managing competing mandates. For example, the CBA should not use its financial resources to recapitalize regulated entities; plan for an exit of ownership stakes in regulated entities; and ensure that its development mandate remains secondary to financial stability and monetary objectives.

The regulatory framework also requires enhancement. The framework for banks could be strengthened with sounder definitions of large exposures, a clear responsibility for banks to report any changes in operations that could have a material adverse impact, and clear risk management standards. The framework for handling and sharing of confidential information with foreign counterparts should be enhanced to meet international standards. While insurance regulation and supervision is comprehensive and thorough, steps to enhance insurance regulations to better reflect international regulatory developments and to tailor prudential and market conduct regulations to support the establishment of life insurance industry would be timely.

The non-bank market remains underdeveloped, with very limited alternatives to bank funding or deposits. Pension reform will be introduced beginning in 2014, bringing additional investments to the market. Licensing standards for asset managers and rules governing investment policy as well as a complete analysis of transition costs should be in place prior to implementation. The authorities should develop a regulatory framework with a suitable investment policy, fee structure, custody safekeeping, and consumer protection regulation.

There is a crisis management framework in place that allowed the CBA to respond effectively to the 2009 crisis. The framework could be improved with clearer delineation of resolution and liquidation procedures in law. Emergency liquidity assistance should be clearly defined and any recapitalization assistance should be undertaken by the government, rather than the CBA.

The key recommendations of the mission are presented in Table 1. Appendix II shows the status of recommendations made by the 2006 FSAP.

Table 1. Armenia FSAP Update: Main Recommendations

Recommendations	Priority	Timeframe
Introduce liquidity coverage ratio for foreign currency	High	Immediate[1]
Amend the law to require banks to immediately report changes to operations that would have a material adverse impact on the bank	High	Immediate
Develop a program to gather information and monitor the hedging ability of borrowers	High	Immediate
Introduce use of Pillar 2 supervisory techniques	High	Medium-term
Amend legislation to establish clearer and earlier triggers for a provisional administrator to conduct resolution operations.	Medium	Medium-term
Amend Deposit Guarantee Fund legislation to allow funds to be used in resolution operations and to shorten the depositor pay-out period.	Medium	Medium-term
Revise Deposit Guarantee Fund governance structure to limit the participation of active bankers	Medium	Medium-term
Develop sound framework for the investment policy and asset manager regulations for pension funds	High	Medium-term
Develop pension regulation capacity at CBA	High	Medium-term
Assess reform transition cost of pension reform	High	Medium-term
Amend the Civil Code and other relevant laws to simplify and accelerate registration and execution of collateral	Medium	Medium-term

1/ Immediate planning should begin, with implementation of new rules over time.

I. Background

A. Financial and Macroeconomic Setting

Structure of the financial system

1. **The Armenian financial sector is dominated by a (relatively fragmented) banking sector.** 95 percent of financial assets are held by 21 commercial banks,[1] with the largest having less than 11 percent of system assets. There are few inter-linkages between banks and a limited interbank market. Approximately half of the banking sector (by assets) consists of subsidiaries of foreign banks (Appendix IV), from Russia, France, UK, Cyprus and Kazakhstan. Domestic banks are generally smaller but the second largest is a domestic bank. Banks are profitable relative to comparable banking sectors in other countries (see Figure 1).

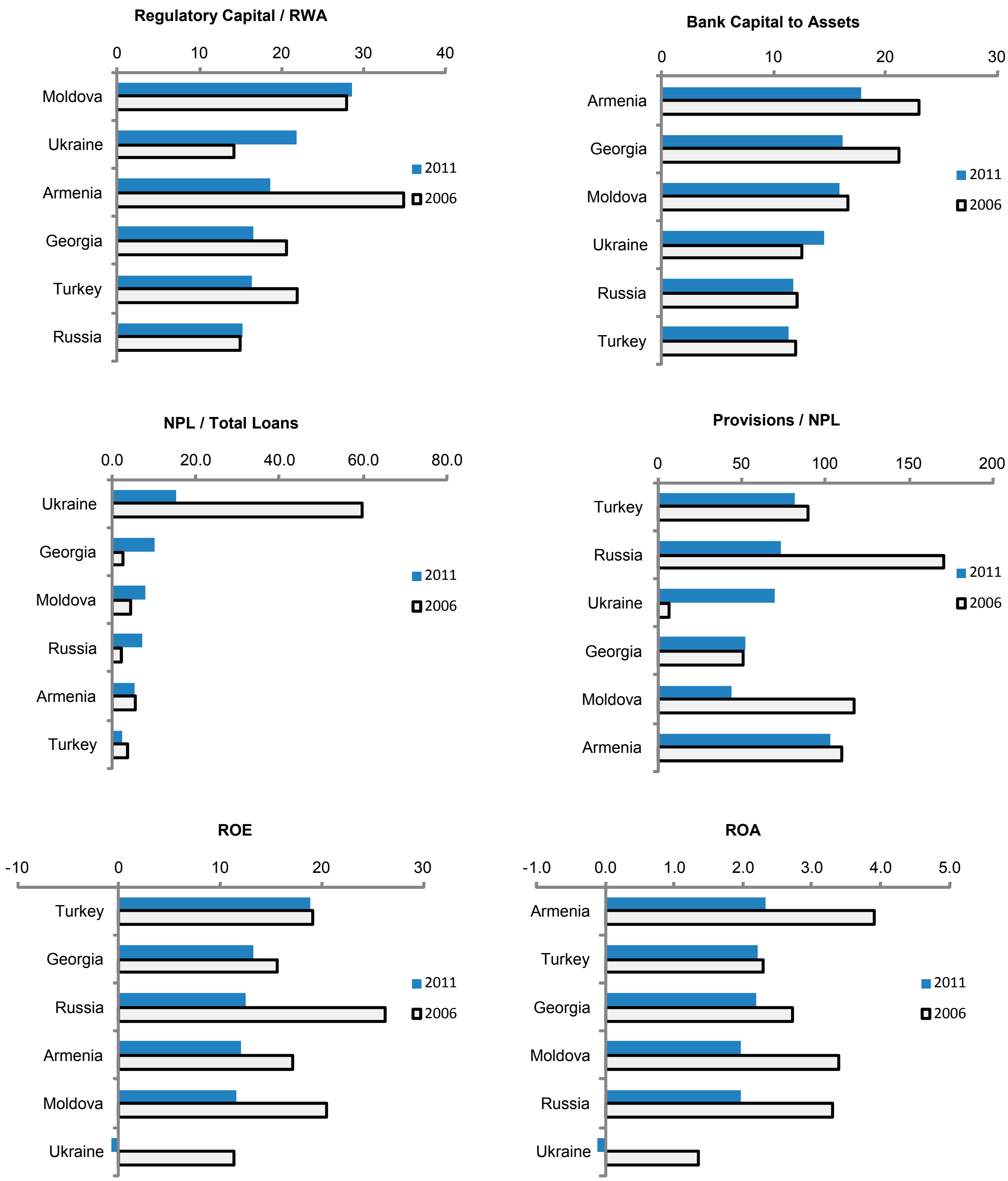
2. **The banking sector still exhibits relatively low credit penetration and a relatively wide, albeit declining, intermediation spread.** Despite rapid growth, the system has a relatively low level of intermediation with credit to the private sector at less than 32 percent of GDP at end 2011, compared to about 33 percent in Georgia and Moldova, or 44 percent and 62 percent in Russia and Ukraine, respectively. Banks offer uncomplicated credit products, mainly in four sectors; trade (21.3 percent), manufacturing (11.7 percent), consumer lending (16.7 percent) and mortgages (8.5 percent).

3. **The non bank sector is underdeveloped with a small but growing insurance sector and a tiny capital market.** Developing this sector is a priority for the authorities as pension reform and other policy measures are being taken to promote the presence of institutional investors and product innovation.

4. **Dollarization has been a defining feature of the Armenian economy since independence and it intensified following the crisis.** The preference for dollars is, in part, due to the high levels of remittances, but the 2009 dram devaluation increased the holdings of dollar as depositors switched the currency denomination of their deposit. The authorities have taken measures to limit further dollarization including the imposition of increased risk weights and provisioning charges on dollar assets, and higher reserve requirements on dollar deposits. Foreign currency lending is limited to corporations and small businesses, and a small mortgage sector.

[1] In addition, there is one development bank, established in 2011and not yet fully operational. There is also a special purpose national mortgage company. Both of these institutions are supervised by the CBA.

Figure 1. Armenia: Financial Stability Indicators—Peer Countries Analysis

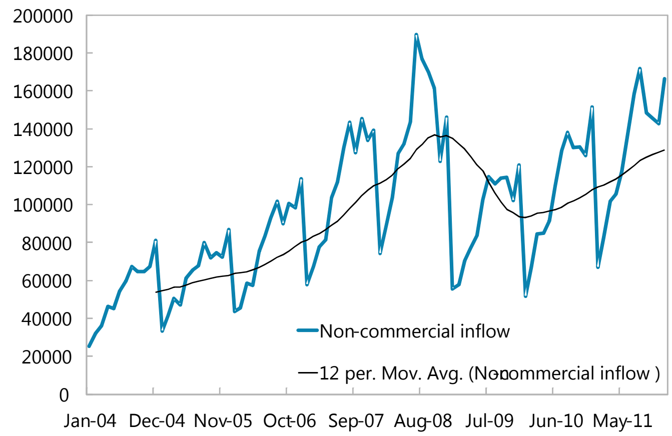


Source: GFSR February 2012, CBA, and staff calculations.

Effects of the global crisis on the economy

5. **The Armenian economy was hard hit by the global financial crisis, which caused a GDP contraction of 14.1 percent in 2009.** The contraction reflected the effects of the shock to the current and capital accounts, associated with a drop in remittances (Figure 2), a collapse in the construction sector, and deteriorating export prices and demand. As a result, the current account deficit widened substantially and the exchange rate depreciated sharply.

Figure 2. Armenia: Net Non-Commercial Inflows
('000 US$)



Source: CBA

6. **A Stand-by Arrangement with the Fund in 2009 to support its crises response was followed by a three-year Extended Fund Facility/Extended Credit Facility-supported program in mid-2010.** The Third Review of the EFF/ECF was completed in December 2011.

Macroeconomic performance

7. **The economy has since rebounded, but is still in a recovery phase.** The economy remains vulnerable to external shocks and Armenia has fewer policy buffers than in 2008 (see Appendix Table 2). Inflation came down rapidly in 2011, and the policy rate was lowered in September 2011, the first time since September 2009. Monetary policy is geared to price stability under an inflation targeting framework adopted in 2006.

B. Implementation of 2005 FSAP Update Recommendations

8. **The previous FSAP Update identified foreign currency lending and increased credit growth as sources of risk, which they remain today.** The report called for greater integration of prudential regulation and macroprudential monitoring, which has been undertaken by the CBA (Appendix II). The report also recommended higher standards for bank governance and banking supervision, many of which have been introduced. An insurance law has been introduced as per the recommendations. The 2005 assessment also focused on monetary operations, which have been considerably strengthened. Challenges remain in the conduct of

monetary policy, including high volatility in short-term interest rates and lack of consistency with a floating exchange rate regime.

II. Vulnerability Analysis

A. Key Macroeconomic and Financial Risks

9. **A possible downturn in the Russian economy and a drop in commodity prices are key risks to the real economy.** Armenia is a small open economy with a significant dependence on remittances, primarily from Russia, and is vulnerable to a shock to the Russian economy that could be caused by a drop in oil prices and spillover from the euro area (Appendix III). As exports consist largely of raw materials such as minerals and metals, a drop in commodity prices for the exporting Armenian mining industry is also a risk.

10. **Direct spillover effects from any future financial sector distress in the euro area would likely be limited.**[2] Second-round effects of a downturn in Europe and, in particular, Russia, might have a greater impact on banks through increased credit risks in the real sector, including through lower remittance inflows, which, however, to a considerable extent are channeled directly into other investments or consumption rather than saved in banks.

11. **The large external current account deficit is a potential vulnerability**. The current account deficit fell by nearly 4 percentage points in 2011, but remains high at 10.9 percent of GDP. In addition, at the time of the Third Review in December 2011, Fund staff estimated that the real effective exchange rate was overvalued by 10–15 percent.[3] While capital inflows have remained strong (foreign direct investment (FDI), official financing, banking flows), risks of pressures on the dram remain.

B. Banking Sector Risk Assessment

12. **Since the onset of the global financial crisis, Armenia's vulnerabilities have intensified in a number of ways:**

- The shares of foreign currency in both deposits and lending have increased significantly (Figure 3).

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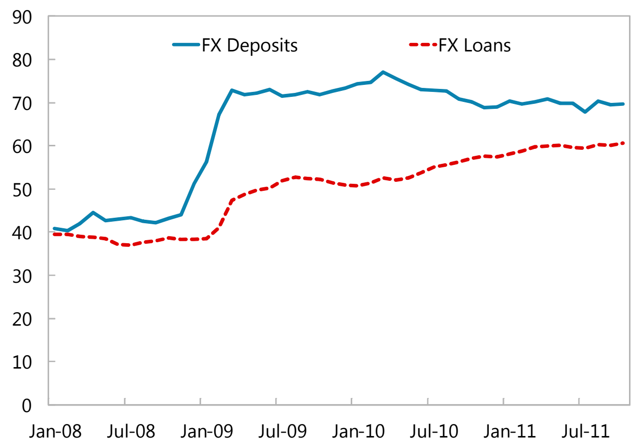
[2] There are no wholly owned subsidiaries of eurozone banks and little relation between Armenian banks and eurozone banks. Wholly owned subsidiaries have parents outside of the eurozone that are more likely to face second round effects than direct effects of the eurozone crisis.

[3] The official exchange rate was 388.69 AMD to the 1USD on Feb 10, 2012. At the time of the Third Review of the EFF/ECF-supported program in December 2011, the Fund staff indicated that the real effective exchange rate of the dram was likely overvalued by 10-15 percent (see IMF Country Report No. 11/366). The authorities have disagreed, noting that developments in 2011 and early 2012 reduced or eliminated overvaluation. They have emphasized the importance of structural measures to support external adjustment."

- While banks have weathered the worst of the crisis, their capital buffers have declined from pre-crisis levels (in part due to increased risk weights on foreign currency assets). Loan portfolios are somewhat weaker, as evidenced by nonperforming loan (NPL) ratios. Borrowers are also likely to be weaker than before the downturn began, though there is little data available (e.g., on household and corporate balance sheets) to make a firm assessment

Figure 3. Armenia: Foreign Currency Shares in Total Loans and Deposits (percent)



Source: CBA

- As in many other countries, policy buffers have been reduced since 2008. Public debt to GDP has increased. Gross international reserves, which were used to defend the currency in 2008 and 2009 (before it was allowed to fall), are on par with pre-crises levels. The current account deficit, despite a narrowing, remains sizeable and total external debt to GDP has increased from less than 30 percent in 2008 to a projected 65 percent in 2011.

- The level of credit is higher and growth is accelerating. These trends imply a bigger effect on the economy of a similar shock and more severe feedback effect through weaker balance sheets.

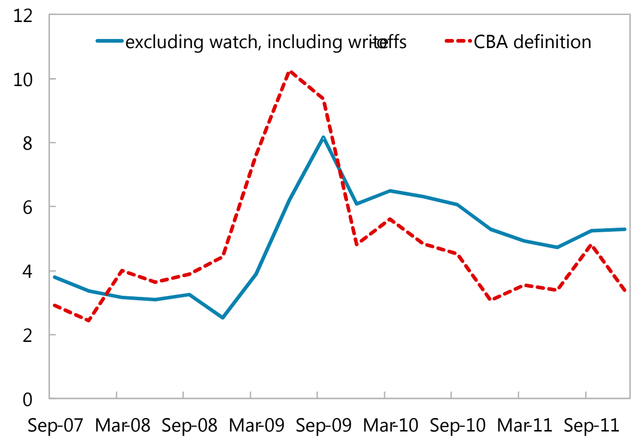
One positive factor in the post-shock environment is a greater awareness of exchange rate risks among banks and borrowers. For example, it appears that some commercial banks have stepped up their risk management regarding credit risks stemming from exchange rate volatility.

Asset quality

Although NPLs remain somewhat above pre-crises levels, they are moderate (Figure 4, and Appendix Table 3). NPLs are defined by the CBA to include watch, substandard, and doubtful loans, but not loss loans (i.e., more than 270 days past due). Much of the sudden increase in 2009

(Figure 4) was quickly reversed as the economy started to recover. Banks did not have much exposure to the construction and real estate sectors, which were severely hit by the crises. Importantly the government provided AMD60 billion in guarantees for lending to small-and-medium sized enterprises oriented towards exports or production for the domestic market. As of end-December 2011 NPLs stood at 3.4 percent of gross loans, up from 3.1 percent at end-2010. There is no significant qualitative difference across sectors, although NPLs in loans to agriculture increased less than in other sectors.

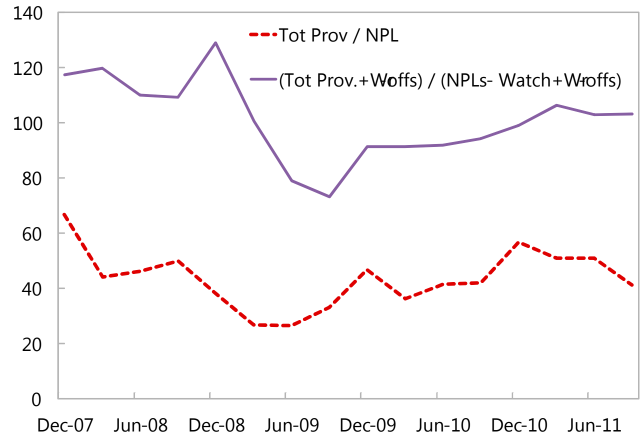
Figure 4. Armenia: NPL to Gross Loans Ratio
(percent)



Source: CBA

13. **Provisioning against NPLs, according to the local definition, was only 41 percent at end-September 2011 (Figure 5).** This is somewhat below pre-crises levels, but well above the low point of 26.5 percent in 2009. The picture is similar when considering provisions for NPLs including write-offs and excluding watch category loans (a more standard definition) which were covered by 103 percent at end-September 2011. This level of provisioning compares favorably to other countries in the region, partly reflecting Armenia's relatively low level of, and moderate increase in, NPLs. Loan-to-value ratios are prudent—CBA data shows an average loan-to-value of 34 percent for loans registered in the credit registry.

Figure 5. Armenia: Provisioning and Write-offs
(percent)

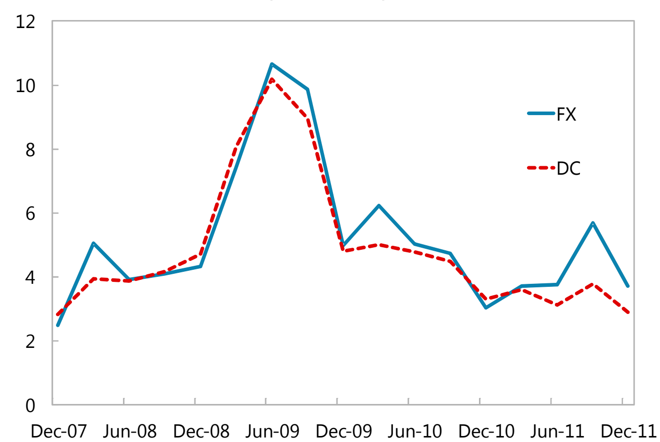


Sources: CBA, and staff calculations.

14. **NPLs levels are, however, elevated in some banks.** As of end December 2011, NPLs, including write-offs, in five banks exceeded 10 percent. A key factor behind the asset quality deterioration in these banks is the concentration of their credit portfolio with large exposures to just a few borrowers. These banks do, however, remain adequately capitalized.

15. **The ratio of NPLs in foreign currency loans has been similar to domestic currency NPL ratios (Figure 6).** Levels of nonperformance for foreign currency loans could be expected to be somewhat higher since the exchange rate depreciation of 2009 has not reversed. However, the negative effects of depreciation are mitigated by the lack of foreign currency lending to households (banks cannot lend in foreign currency to households except for a small amount of mortgage lending).

Figure 6. Armenia: NPL to Gross Loan Ratio by Currency
(percent)



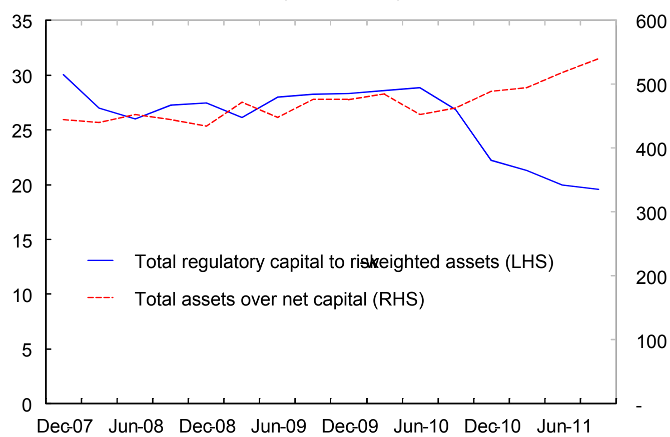
Sources: CBA, and staff calculations.

16. **The lack of foreign currency income for many foreign currency borrowers adds to credit risk.** There is no systematic collection of information to the extent to which foreign currency borrowers are naturally hedged through a corresponding income stream, and hedging is not taken into account for capital requirements, although some banks do incorporate this analysis into internal risk management.

Capital adequacy

17. **Banks appear to be well capitalized (Figure 7).** Banks are subject to Basel II requirements for calculation of capital. The capital adequacy ratio (CAR) declined from 27.5 at end-2008 to 19.6 at end September 2011. Leverage increased from 435 percent to 540 percent, possibly reflecting a general trend of increasing risk appetite within the banking system. Tier 1 Capital accounts for about 90 percent of total capital, and there are only a couple of banks where Tier 2 capital accounts for more than 20 percent of the total. An analysis of balance sheet data suggests that all banks would meet Basel III capital levels should those be implemented.

Figure 7. Armenia: Capital Adequacy
(percent)



Sources: CBA, and staff calculations.

Resilience to shocks: stress testing results

18. **Solvency stress tests conducted during the mission suggested that Armenian banking system is robust enough to withstand significant shocks (Appendix V and VI).** The stress tests simulated the impact of a baseline and two recession scenarios: a moderate and a severe slowdown in economic activity paired with a significant AMD depreciation vis-à-vis the USD. The stress tests suggest that only a few banks would face capital strains, but also illustrate that in the face of shock, banks will be severely constrained in their abilities to generate additional capital as an increase in interest rates would worsen their income streams. This reflects the fact that Armenian banks' portfolios are dominated by fixed interest rate loans, limiting the possibility for pass-through of funding cost increases to their customers. Banks that largely rely on domestic funding sources would face negative net interest income margins, which, combined with additional loan loss provisions would further erode capital buffers. Still,

relatively high capital buffers help banks mitigate these risks. Furthermore, banks' CAR would be supported in a downturn relative to the baseline by (i) slower or even negative growth in risk-weighted assets; (ii) higher pre-provisioning returns on assets. In effect, the economic shock would be borne by borrowers rather than the banks themselves.

19. **Although the stress test results are generally favorable, they may understate vulnerabilities.** The macro stress test results were based on recent developments, including the shock experienced in 2009. However, these historic experiences may not capture more recent vulnerabilities, including an increase in dollarization, increased competition among banks, and relatively high credit growth.

Concentration risk

20. **Concentration of individual banks' exposures constitutes a further vulnerability**. Although concentration in the banking system is low (HHI index is only 0.66),[4] banks' loan portfolio concentration is fairly high and warrants particular vigilance from the authorities (Figure 8). Concentration risk is not unexpected in a small financial sector and concentration risk is especially important for small banks that have small loan portfolios with a number of bigger clients. Stress tests assuming that the largest borrower will fail reveal that several small and mid-sized banks would need additional capital; although as in the case of macro scenarios, these amounts are very limited.[5] Failure of the four largest borrowers would have a more significant impact; however the amount of recapitalization needs in terms of GDP would still be limited on account of the relatively small size of the Armenian banking system and the small size of the most vulnerable banks.

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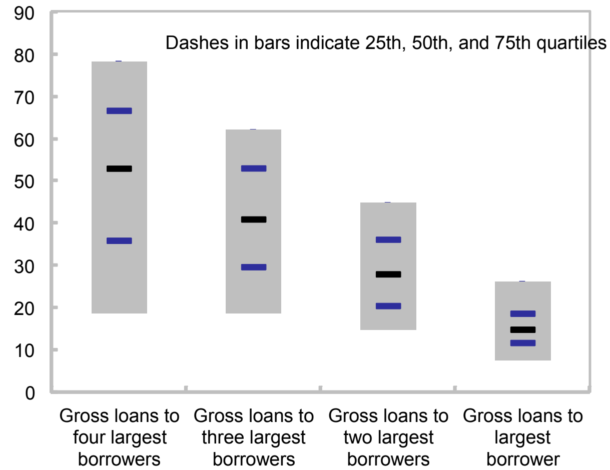
[4] Hirshman-Herfindahl Index equals sum of squared market shares for each bank. Maximum value is 1.

[5] Stress tests were based on 2011 Q3 data. In 2011 Q4 one bank increased its capital ratio.

Figure 8. Armenia: Large Exposures to Total Capital Ranges
(percent)

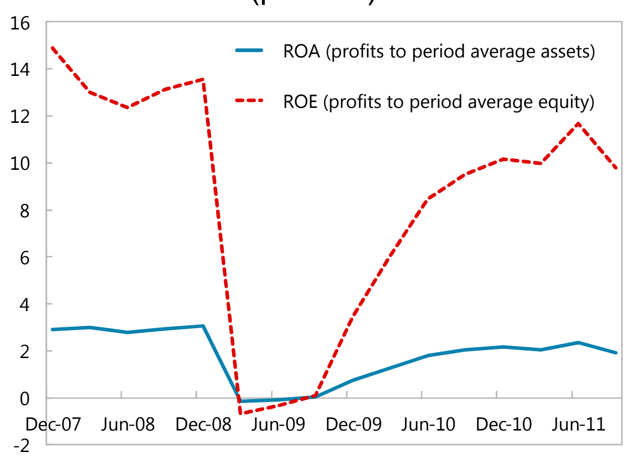


Sources: CBA, and staff calculations.

Profitability

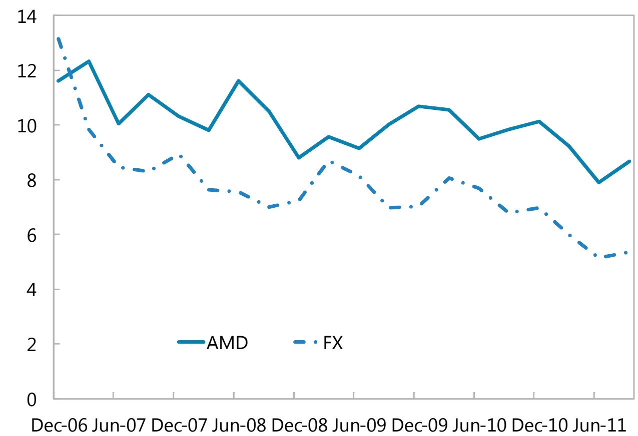
21. **Banks' profitability has recovered, but is below pre-crises levels (Figure 9)**. Banks reported that competition both for attracting deposits and to lend has stiffened recently, and this can also be seen in tighter lending to deposit interest rate spreads (Figure 10), especially in foreign currency. Such competition may put pressure on profitability in the future.

Figure 9. Armenia: Profitability
(percent)



Source: CBA

Figure 10. Armenia: Short-term Lending Less Short-Term Deposit Interest Rates (percent)

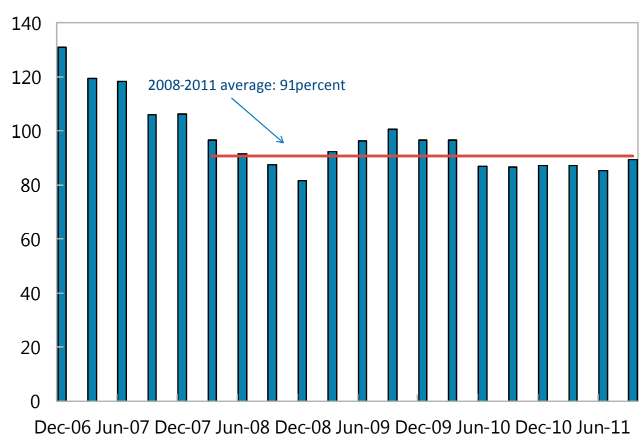


Sources: CBA, and staff calculations.

Funding and liquidity

22. **Armenian banks are largely deposit funded (Figure 11).** The customer deposit to non-interbank loan ratio has been fairly stable in the last four years. Banks have increased funding from foreign banks, including parents, international organizations, the government, and the CBA. The interbank market is fragmented and does not constitute a significant source of bank liquidity or funding.

Figure 11. Armenia: Customer Deposits to Non-interbank Loans (percent)

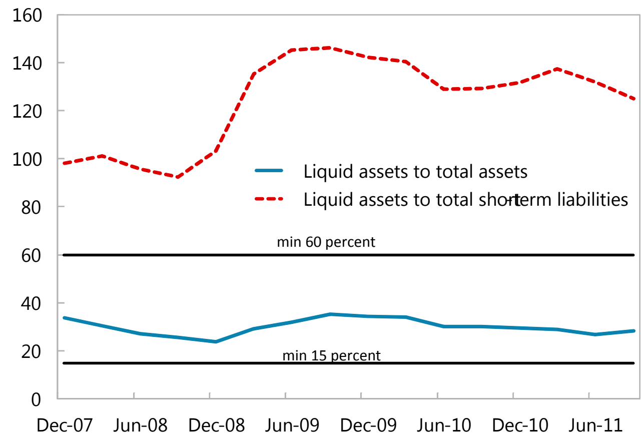


Source: CBA

23. **Banks are generally quite liquid, in particular in domestic currency (Figure 12).** Most banks are well above the regulatory minimum ratios for liquid assets over total assets and demand liabilities. Foreign currency liquidity is lower than that of dram. The overall foreign currency liquidity ratio over total foreign currency assets is 21 percent, and 83 percent over

demand liabilities, but there are significant differences across banks and several banks have substantially lower ratios.

Figure 12. Armenia: Liquidity
(percent)



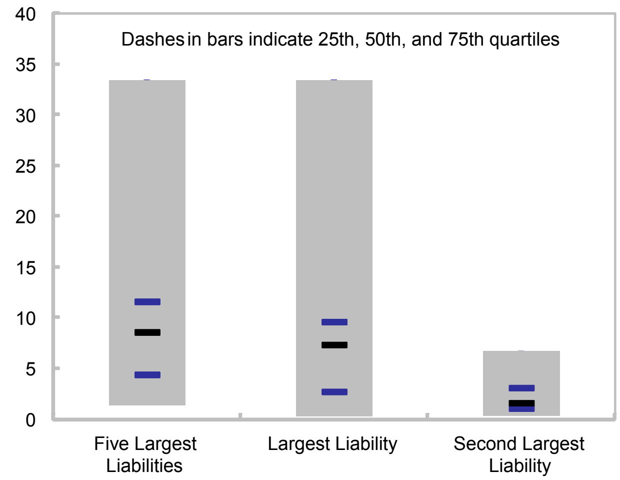
Sources: CBA, and staff calculations.

24. **Liquidity stress tests highlight that banks would be able to cope with large liquidity outflows although an outflow in foreign currency would be more challenging.** The banks maintain fairly large liquidity buffers in both domestic and foreign currency. The CBA imposes strict liquidity requirements, although no differentiation among various currencies is made. Banks are not exposed to market funding risk, as main sources of funding for majority of banks are domestic deposits and IFI deposits. Foreign-owned banks indicated that in the case of a systemic liquidity event they expect support from parent institutions. The failure of a foreign parent would therefore be a risk for these banks. For other foreign owned banks, the effect of the failure of the parent would be reputational only.

25. **While a majority of banks have fairly diversified structures of liabilities, in a few small banks the largest deposits account for a substantial share of all deposits (Figure 13).**[6] Notably, banks that have high level of loan portfolio concentration also tend to have higher concentration of funding, and the underlying stability of such banks could be in question, suggesting a need for improved risk management in banks and supervision of risk management by the CBA.

[6] Deposits and loans from international banks and organizations are excluded.

Figure 13. Armenia: Interquartile Ranges of Large Liabilities to Total Liabilities (percent)



Sources: CBA, and staff calculations.

Risk management

26. **Risk management in banks has improved since the onset of the crisis, though there appears to be significant variation across banks.** Several banks have created separate risk management departments, which report directly to management. Risk management departments have also in some cases been given a strengthened key role in decisions on larger loans. Awareness of exchange rate risk seems to have increased, and has resulted in intensified loan monitoring, including clients' revenue streams. Stress-testing by banks has increased, in line with recently issued CBA regulations. Stress tests are, moreover, the basis for mandatory contingency plans prepared by banks. Still, there is room for improvement, in particular in smaller banks where capacity is lower. CBA's regulations regarding risk management (including, e.g., for indirect foreign exchange risk) can also be enhanced to promote further improvement. Banks acknowledge that credit risk is important and challenging to manage, and in keeping with this, emphasize that they demand a high degree of collateral and internal provisioning in their lending.

III. Non Bank Sector

A. The Pension Sector

27. **The recent approval of a law that allows the creation of a multi-pillar pension system is a positive development.** The impact of the reform on the future welfare of citizens will depend not only on pension regulation and supervision of pension funds, but also on fiscal sustainability, a sound and diversified financial sector, and growth in the labor market. The authorities should work quickly to develop a full analysis of costs of the reform to government and future financing needs. The authorities should also increase the capacity at the Ministry of Finance to make accurate projections in order to develop a full understanding of costs. The

authorities should also quantify the liabilities arising from the provision of guarantees on the real value of contributions as these also represent future contingent obligations.

28. **A framework for pension regulation should be developed and implemented by the CBA**. The authorities should carefully design regulatory entry requirements for asset managers, focusing on risk management capacity, recognized investment qualifications and global experience. The regulatory framework should also set investment policy and define amounts allowed to be invested abroad to diversify the portfolio, and consider imposing a benchmark (market index) for such investments.

B. The Insurance Market

29. **The insurance industry in Armenia is small and has recently consolidated.** Assets held by insurers (AMD 25.6 billion) accounted for only 1.3 percent of total financial sector assets as at end-2010. There are four insurance brokers but a large number of registered agents whose numbers rose sharply from 65 in 2008 to 5,524 as at end-2011 due to the introduction of the mandatory motor third party liability insurance in 2010. There are no life insurers currently operating in Armenia.

30. **The key risks of the Armenian insurance industry are those arising from natural catastrophes and credit exposures to reinsurers**. It is critical that insurers have effective risk management to control their retentions of risk accumulations arising from catastrophic events such as earthquakes and establish prudent risk strategies and tolerance limits. Due to limited financial and underwriting capacity, insurers typically reinsure a significant portion of the large risks accepted. To ensure the security of reinsurance protection, the CBA requires reinsurers to meet its eligibility criteria. Insurers' investments were highly liquid, mainly in deposits with domestic banks, due to the limited investment opportunities locally. Some insurers are exposed to foreign exchange risks arising from deposits denominated in foreign currencies, mainly in US dollars. The CBA has identified this risk and has proposed a standard to become effective July 1, 2012. The cost and practical ability to hedge may pose challenges. Insurers held only 9 percent of their assets in government securities.

31. **Significant challenges confront the establishment of a life insurance industry in Armenia.** The low level of awareness of the benefits of life insurance protection and shallow financial markets are key impediments. Inadequate local actuarial expertise is another consideration. It will take time for the nascent insurance industry to build trust in order to attract long-term savings.

C. Capital Markets

32. **There is a limited capital market in Armenia, largely due to the small size of the economy.** NASDAQ OMX operates the Yerevan exchange which supports limited trading in a few stocks as well as government bonds. Most government bonds mainly are traded over-the-counter.

33. **Consumer protection and market conduct regulation are currently carried out by the CBA.** The regulatory framework in place is adequate to meet the needs of the market. Should the market further develop, the CBA could consider establishing a separate market conduct unit that could address consumer protection issues and eventually securities markets. The demand for securities could grow with the implementation pension reform. However, the level of corporate development, and the reluctance of large corporates to meet transparency requirements suggests that equity and corporate bond issuance will be a longer term goal.

IV. Financial Sector Oversight

A. Cross-Cutting Issues

Regulatory structure and governance

34. **The CBA has a broad mandate, which includes monetary policy, financial stability, and the regulation, supervision, and development of the financial sector.** While in practice the CBA treats financial stability as an equal objective to monetary policy, this could be formally adopted in law. Further, the CBA's multiple roles could result in difficult conflicts of interest—for example it is responsible for prudential regulation as well as market development, yet strong supervision may at times be at odds with development of markets. The CBA is aware of these conflicts and has some separation of development and prudential regulation. However, the CBA may wish to institute more formal written objection procedures by pertinent departments (e.g., licensing, monetary, stability, regulation) to allow for dissenting views to be recorded in the corporate minutes and archives, before initiatives go for a final decision to senior management or the Board.[7] The CBA should also consider adding an account of how competing mandates were balanced in its annual report, as a measure of accountability.

35. **The CBA's credibility and capacity set it apart from other official agencies, causing it to be the 'go-to' agency in the case of crisis and development.** The CBA should consider limiting its role in some area, lest its credibility be eroded. For example, the CBA is the main shareholder in both the development bank and mortgage guarantee company, which it in turn supervises. Supervising an institution it owns is inappropriate and a careful exit plan should be set in motion. Similarly, the involvement of the CBA in non-standard crisis lending, described below, has potential to undermine its credibility and flexibility.

Legal protections

36. **Protection of staff from liability for acts undertaken in the course of duty should be enacted in law.** Currently such protection is found for all public servants in the civil code but a

[7] Protocols for corporate meetings within the CBA are being developed and transmitted to heads of pertinent departments for their signature.

clear, more robust section should be added to the central bank law. International insurance supervision standards too require that the CBA itself be protected in law from liability for acts taken in good faith, which it currently is not.

Cross border cooperation and information sharing

37. **Armenia is host to a number of cross-border institutions and the CBA enjoys good relations with foreign counterparts.** In particular the CBA has frequent contact with its counterpart the Central Bank of Russia, as Armenia is host to three Russian banks and an Armenian subsidiary operates in Russia. It has Memoranda of Understanding (MOUs) with a number of countries, with the notable exception of the UK FSA, which is the home regulator of a large subsidiary in Armenia.

38. **In keeping with international standards, the CBA should have greater flexibility in sharing of information with foreign regulators.** Under the law, the CBA can only provide information to a foreign regulator where it has an MOU in place with that regulator; the CBA should be able to provide information where it can satisfy itself that any information released to another regulator will be used for supervisory purposes only and will be subject to appropriate confidentiality standards at the receiving institution. Currently, the CBA has no ability to initiate an investigation on behalf of a foreign authority, a shortcoming that must be addressed, inter alia, to meet IOSCO requirements.

B. Banking Supervision

39. **The Basel Core Principles assessment found that, in general, the CBA has a well structured banking supervisory regime in place, and its supervisory department appears adequately staffed.** More work remains to be done for a sound and comprehensive implementation of Pillar 2 and its integration in the supervisory methodology. Although the minimum legal requirements for Pillar 2 are in place, the assessors recommend more frequent (i.e., annual) structured dialogue with banks' Board or Senior Management on their capital adequacy assessments. The Pillar 2 assessment should at least cover credit concentration risk, interest rate risk in the banking book, indirect foreign exchange risk, as well as risks that are difficult to quantify such as reputational and strategic risk. The stress tests, for example, identified vulnerabilities of some small banks to a concentration in both assets and liabilities, risks that could be addressed via a Pillar 2 assessment. Pillar 2 assessments should form the basis for the setting of the supervisory cycle and scheduling of targeted examinations as well as individual capital ratios that will be better aligned with the risk profile of individual banks.

40. **There is room for reviewing and enhancing CBA's regulations to put greater emphasis on risk management instead of control.** A re-assessment of the distribution of provisions between mandatory regulations and "comply or explain" guidance also needs to be performed. Moreover, specific risk management guidelines for the assessment and monitoring of indirect foreign exchange risk, the revaluation of positions as well as guidelines for the internal validation of risk management model should be issued.

41. **The CBA should require banks to notify it of any significant changes in their operations.** At present there is no legal obligation for banks to notify the supervisor of any substantial change in their activities, structure or overall condition, or as soon as they become aware of any material adverse developments, including breaches of legal or prudential requirements. Also, the banking law should be amended to provide explicit powers to the CBA to carry out consolidated supervision.

42. **The status of the compliance function in banks should be clearly stated in law.** Currently, the banking law specifies that the internal auditor is responsible for the compliance function. However, a key task of the internal auditor is to provide an independent assessment of the work of the compliance function. Clearly, the compliance function should be carried out by someone other than the internal auditor, for instance, a senior officer of the bank or head of legal.

C. Insurance Supervision

43. **The updated regulatory framework in Armenia has a high level of observance with the International Association of Insurance Supervisors' Insurance Core Principles (ICPs), supported by robust supervision by the CBA.** The authorities have implemented all the recommendations relating to the insurance sector arising from the 2005 FSAP. The CBA, which took over insurance supervision in 2006, has a high standing within the insurance sector. The CBA's off-site surveillance and on-site inspections are comprehensive and thorough, facilitated by well-documented internal policies and manuals to promote consistency in supervisory decisions. The CBA updates the regulatory framework regularly to reflect emerging international best practices, for example, the solvency regime for insurers was strengthened in 2010 to adopt a more risk-based and calibrated approach.

44. **While the regulatory regime is adequate for the current stage of market development, there is scope for enhancement to take account of international regulatory developments and the establishment of a life insurance industry in Armenia.** To improve observance with the ICPs, the authorities are advised to expedite the issuance of regulations governing insurers' derivative activities and the finalization of regulatory requirements to combat insurance fraud. The solvency regime could be strengthened to provide for transparent solvency control levels and supervisory intervention ladder, address group solvency requirements and regulatory treatment of assets supporting technical provision that are encumbered. Regulatory requirements relating to risk management could be enhanced to better reflect international best practices. It would also be timely to formulate an appropriate group-wide supervision framework in line with the ICPs. To support the development of life insurance, there is a need to tailor both prudential and market conduct requirements to protect the long-term financial commitments of life policyholders.

D. Regulation of Payments and Settlement Systems[8]

45. **The payment and settlement systems infrastructure for both large value as well as retail payments is well developed.** However, efficiency could be improved if existing basic data collection tools and methods are replaced with a more organized and automated monitoring system (i.e., data warehousing tools and systems). It is also recommended that the human resource capacity of the Payment Systems Oversight Division (PSOD) be strengthened.

46. **Enhancements to operational reliability of the electronic payment system (EPS) are required to achieve full compliance with the Core Principles for Systemically Important Payment Systems (CPSS)**. These include development of the information security policy designed for the operational needs of an RTGS system to ensure transparency for all stakeholders. Acceptable operational reliability or other service levels should be defined and include the recovery time objectives (RTO) for the entire system.

E. Anti-Money Laundering and Combating the Financing of Terrorism Framework

47. **A full anti-money laundering and combating the financing of terrorism (AML/CFT) assessment was undertaken by the IMF and MONEYVAL in February/March 2009.** Considerable progress was made since Armenia's first AML/CFT evaluation in September 2003 by MONEYVAL.[9] However, some deficiencies remained, notably in the areas of confiscation and provisional measures, financial secrecy laws, customer due diligence, designated non-financial businesses and professions, the criminalization of the financing of terrorism and finally freezing and confiscation of terrorist assets pursuant to United Nations Security Council Resolutions 1267 and 1373.

F. Macroprudential Framework

48. **The CBA has made progress in monitoring systemic risks.** The Financial System Stability and Development Department (FSSDD) is in charge of macroprudential policy, separate from the supervisory and regulatory units. FSSDD assesses the stability of the banking sector through various measures including: conducting sensitivity analysis of the banks' balance sheets, monitoring the Banking Stability Index, and checking the maturity composition of banks' funding. The CBA is developing a stress-testing approach incorporating the stress scenario on macroeconomic indicators such as GDP growth and remittance.

49. **The CBA has employed a number of macroprudential policy tools to address risks to the Armenian banking system stemming from dollarization.** The CBA has applied higher risk weight and higher provisioning for FX lending than for dram lending to mitigate credit risks

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[8] These findings and recommendations are taken from the World Bank Payments and Settlement Systems Aide Memoire from the mission that took place October/November 2011.

[9] MONEYVAL is the FATF-style regional body of which Armenia is a member.

associated with foreign exchange lending. To reduce the direct currency mismatch risks, the CBA restricts the banks' net open position to 7 percent of the capital. The CBA has also applied a higher reserve requirement ratio for foreign currency liabilities to stave off deposit dollarization. Though the changes in the reserve requirement ratios were made with a view to strengthen monetary transmission through deposit de-dollarization, it is expected to reduce foreign exchange lending under the relatively strict net open position restriction.

50. **The CBA plays the lead role in the overall macroprudential policy framework in Armenia.** The CBA analyzes the systemic risks, formulates and implements macroprudential tools, and takes lead in crisis management. Other agencies--the MOF and the Deposit Guarantee Fund (DGF)—play a minor role as these organizations shall be involved in crisis management only when financial institutions become insolvent and budget allocation and deposit payouts are needed. The CBA has established a dedicated committee for financial stability issues (Financial Stability Committee, FSC) which includes the Governor, Deputy Governor and all the policy-related departments participate in the committee. MOF and DGF will participate in the FSC at the request of the CBA.

51. **While the current macroprudential policy framework has worked fairly well, there is room for further improvements.** Given the risk-profile of Armenian banking sector, the CBA's strategy to employ a number of macroprudential tools to mitigate risks associated with FX portfolios while stepping up its monitoring capacity is appropriate. Setting up the FSC has facilitated the delineation of macroprudential policy from monetary policy, which is essential in particular when both of the two policies are assigned to the central bank. Nonetheless, further improvements can be made in following areas:

- ***Monitoring the currency mismatch of borrowers***—Information on the extent to which FX borrowers are hedged is critical to assess FX-induced credit risks, and the CBA should introduce a formal procedure to collect the data on credit risk of borrowers' currency mismatch, beginning with large borrowers, while starting to analyze data that has already been collected.

- ***Introduction of liquidity coverage ratios by currency***—Some banks maintain relatively small amounts of liquid assets in foreign currency, and stress tests clearly identified this as a vulnerability. The CBA should introduce liquidity coverage ratios by currency, though this should be done gradually to avoid a disruptive impact on money and credit markets (Appendix I).

- ***Increased public communication***—As more experience is gained, the CBA should consider expanding measures to explain to the public about the CBA's views on systemic risk monitoring and macroprudential policy formulation, for example, by issuing a press statement after the Supervisory Board meeting related to the FSC.

G. Integrated Systemic Risk Stress Testing

52. **The CBA's Macroprudential Analysis Division designs stress testing models and methodology.** The CBA's list of available set of tools includes Vector Autoregression (VAR) and simple Probability of Default (PD) based models for credit risk analysis, and a balance sheet stress test tool for calculation of CAR. Additional efforts are being made to construct models to calculate PDs for various sectors of the economy including households. An interbank contagion matrix is under development. The CBA has an appropriate set of tools for integrated analysis, but however the absence of sufficiently long time series of high quality data affects reliability of the quantitative results. Greater effort should be made to use hypothetical scenarios based on experience of other similar countries rather than historical developments in Armenia. The CBA still needs to fully utilize its existing framework and incorporate its results into decision making process.

V. Liquidity, Crisis Management, and Safety Nets

A. Liquidity Management

Emergency Liquidity Assistance

53. **The CBA provided extraordinary financial support to banks following the 2009 crisis.** The CBA Law allows the CBA to provide a broad range of emergency assistance to banks. In addition to short-term liquidity assistance with a maturity not exceeding six months with collateral, the CBA is able to, in exceptional cases, extend loans with "special lending procedures and conditions," including unsecured loans with terms up to five years. The CBA provided two types of long-term loans in close coordination with the government.

- ***Subordinated loans to support capital replenishment of banks***—Subordinated loans with five year maturity were provided to the banks, which replenished capital by the matching amount. Ten banks took the subordinated loans in total amount of 30.3 billion AMD.

- ***Loans to support bank mergers***—A three-year loan of 7.3 billion AMD was provided to banks that acquired a distressed bank.

54. **The framework for emergency loans beyond short-term collateralized liquidity assistance should be revisited**. The current CBA Law allows the CBA to extend exceptional assistance without coordination with the MOF. The scope of the CBA's emergency assistance should limited to secured loans to solvent organizations. More permanent crisis assistance, including capital support, should be provided directly by government on the clear advice of the CBA.

B. Early Intervention and Orderly Resolution of Problem Banks

55. **The CBA has a broadly appropriate range of powers to intervene and resolve problem banks, but these powers could be clarified and strengthened.** The powers are progressively intrusive, which should allow the CBA to deal with increasingly severe problems at a bank. Tools include measures to compel remedial action while the bank remains under private control, as well as a number of measures that can be taken once the CBA has determined that private control of the bank should cease (i.e., appointing an administrator to resolve the bank as a going concern, revoking the license of the bank, selling the bank's assets, or ultimately commencing bankruptcy and liquidation). In each of these areas, improvements could be made to facilitate the effective use of the tools.

56. **The CBA's power to instruct shareholders to raise capital could be more explicit.** Under the current law, if a bank has violated laws or regulations or undertaken actions, that in the opinion of the CBA, may pose risks to the interest of depositors or the creditors of the bank, the CBA may: (i) issue warnings or mandatory instructions to remedy the violation, including to terminate transactions, or operations conducted by the bank or to modify of their terms, within the time period prescribed by the CBA; (ii) impose fines on the bank or its management, (iii) revoke the license of the bank, or (iv) remove management. Although the CBA could likely issue a mandatory instruction for shareholders to raise capital an explicit statement of this authority in the law would establish a clear basis for taking more intrusive action based on the shareholders failure to do so.

57. **The triggers for provisional administration should be refined to allow for intervention at an earlier stage of the bank's distress.** The CBA is authorized to appoint a provisional administrator to a problem bank who takes over the powers of the bank's shareholders and management. The administrator has the ability to undertake a variety of actions to resolve the bank, including executing a purchase and assumption transaction. Certain triggers for provisional administration are based on breaching prudential measures while others are based on imminent insolvency such as the loss of half of core capital or actual insolvency. The CBA should be able to appoint a provisional administrator much before actual insolvency, when one or more pre-insolvency quantitative (e.g., 50–75 percent of CAR) or qualitative triggers (e.g., the bank is likely to become insolvent or is engaging in an unsafe/unsound practice that pose a serious threat to the interests of depositors/creditors) are breached.

58. **Procedural time delays for provisional administration should be reduced.** There may be up to a two weeks delay between the CBA's decision to appoint a provisional administrator and the actual appointment. To prevent asset stripping by bank insiders, the administrator should take control of a bank promptly following the decision to appoint. Upon appointment, the administrator has 6 months to develop the resolution plan. Given that the CBA should be able to obtain a significant amount of information regarding the condition of the bank through the supervisory process, a shorter period should be considered.

59. **A framework that allows for the prompt, orderly liquidation of failed banks should be established.** The current framework comprises two mechanisms for liquidating failed banks—extrajudicial involuntary liquidation proceedings and court-based bankruptcy proceedings. Both procedures may only be initiated by the CBA and both allow for some degree of involvement of the CBA during the course of the proceedings. However, both procedures are characterized by unique types of delays and lack optimal tools to support financial stability. To promote financial stability, once a bank has entered liquidation or bankruptcy the liquidation or bankruptcy regime could include the ability to promptly transfer viable assets, certain liabilities (including deposits) and essential functions to a healthy institution prior to the liquidation of the remainder of the estate of the failed bank. Another option would be to appoint a provisional administrator early-on since similar powers are already available to the provisional administrator with respect to open banks and affecting these procedures on a bank under administration could preserve going concern value. Granting the liquidator power to sell the rights of such assets to third parties would speed up the liquidation and bankruptcy process.

Deposit insurance

60. **The DGF is developing its capacity to make rapid payouts.** The DGF was established in 2005 and no bank failures requiring payouts have occurred since that time, which has allowed the DGF to focus on building capacity. In 2011 the DGF began conducting payout simulation exercises with the CBA; additional simulations are planned for 2012. The DGF is in the final stages of installing an IT platform for depositor information, which among other things, will allow for the submission of internet-based claims.

61. **Appropriately, the DGF is ex ante funded.** The Kreditanstalt fur Wiederaufbau (KfW) German Armenian Fund provided seed funding for the establishment of the DGF. Further funding was provided in 2010 by the CBA. Initial contributions of AMD 15 million within ten days of becoming a licensed bank and quarterly contributions 0.5 percent of the bank's average daily balance of deposits in a reporting quarter (but not less than AMD 1 million per year) are mandatory for all banks. Currently, it is anticipated that the resources of the DGF would be sufficient to cover the simultaneous failures of 2–3 medium-sized banks and 8–10 small banks.

62. **Further steps should be considered for the DGF to provide an effective safety net.** The authorities should consider whether it is the appropriate time to further align the DGF with best practice, in particular whether the payout period (currently 3 months) could be shortened to approximately 20 days. In addition, the DGF can be made more effective as a bank resolution tool by allowing it to "fill the balance sheet gap" for good assets and insured deposits and other liabilities transferred to a healthy institution through a purchase and assumption transaction if doing so is less costly to the DGF than a direct payout to insured depositors.

63. **The participation of active bankers on the Board of the DGF should not be permitted; and participation of industry representatives, if permitted, should be limited to guard against conflicts of interest and misuse of confidential information.** Of the DGF's

seven member Board, the CBA, the Government, and the Union of Banks may each appoint two members and the final member is elected by the other members of the Board. Since there are no restrictions in the law, in theory all 7 members of the Board could be active bankers. In practice, only one active banker and one industry representative serves on the Board. The DGF should consider prohibiting active bankers and industry representatives from serving on the Board and establishing advisory committee to the Board where such individuals could freely serve.

64. **Mechanisms to replenish the DGF's resources could usefully be clarified.** The law does not provide a clear mechanism for replenishing the resources of the DGF if resources are low. The DGF requires banks to pay a one-time extra contribution in an amount up to 3 times that paid by the bank in the previous financial year but it is unclear under what circumstances banks would be called upon to make an extra contribution. In connection with the 2010 increase in the target ratio, the CBA provided supplementary funding to the DGF and extra contributions were not required from banks. It would be preferable for shortfalls in resources to be filled by the private sector or the government.

C. Inter-institutional Arrangements

65. **Coordination between the CBA, MOF and DGF is effective, but improved focus on preparedness would support the rebalancing of fiscal responsibilities from the CBA to the MOF.** An interagency MOU has laid out a clear and sound division of labor between the government and the CBA in case of financial crisis: the CBA will take the lead in the crisis response actions with its expertise and monitoring capacity while the MOF will coordinate with the CBA to the extent that budget allocation is required. This MOU is well-designed to prevent the CBA from providing assistance to insolvent institutions as well as being involved in distributional policies. Coordination primarily occurs through the Boards of the CBA and the DGF. A Deputy Minister of Finance regularly attends open meetings of the CBA Board; representatives from the CBA and MOF serve on Board of the DGF. Coordination between the institutions also occurs through informal channels on an ad hoc basis and appears smooth. A tri-party MOU was signed in 2010.

66. **In 2011 the CBA established an internal financial stability committee (FSC) which meets regularly.** Representatives of the DGF and MOF may participate in the meetings of the FSC by invitation, but there is no clear framework for determining when such participation would be sought. The authorities should also amend relevant legislation to ensure that the necessary information to determine whether to provide public solvency support in the event of a systemic crisis can be provided by the CBA and the DGF to the MOF. The CBA publishes a semi-annual financial stability report. While FSC decisions are recorded internally, the CBA should consider whether it would be beneficial to make public minutes or formal statements from the FSC

ANNEX I. SUMMARY OF OBSERVANCE OF THE IAIS INSURANCE CORE PRINCIPLES (ICPS)

67. **The insurance regulatory and supervisory regime of the Republic of Armenia (Armenia) is assessed against the ICPs issued by the International Association of Insurance Supervisors (IAIS) in 2003.** The assessment was conducted by Su Hoong Chang, Senior Financial Sector Expert, International Monetary Fund (IMF) from February 1to 14, 2012. The insurance sector in Armenia was previously reviewed in the context of an update Financial Sector Assessment Program (FSAP) in 2005. The authorities have largely addressed the recommendations arising from the 2005 review, as summarized in Appendix 1.

A. Information and Methodology Used for Assessment

68. **The level of observance for each ICP reflects the assessment of the essential criteria only**. Advanced criteria are not taken into consideration in assessing observance of the ICPs but are reported, where applicable.

69. **The assessment is based solely on the laws, regulations and other supervisory requirements and practices that are in place at the time of the assessment**. Ongoing regulatory initiatives, e.g., proposed regulations or amendments to insurance legislation, are noted by way of additional comments. A comprehensive self-assessment and other pertinent information (reports, studies, board resolutions, websites etc) provided by the authorities facilitated a meaningful assessment.

B. Market Overview

70. **The insurance industry in Armenia is small and has been consolidating.** Assets held by insurers **(**AMD 25.6 billion) accounted for only 1.3 percent of total financial sector assets as at end-2010. The number of insurers has been declining steadily since 2006, partly due to the Central Bank of Armenia's (CBA) efforts to weed out marginal players and to encourage consolidation to achieve better economies of scale. There are no insurance groups operating in Armenia although three insurers were affiliated with banks. While the number of insurance brokers has remained stable at four, the number of registered agents rose sharply from 65 in 2008 to 5,524 as at end-2011 due to the introduction of the mandatory motor third party liability insurance in 2010.

71. **The key risks of the insurance industry are accumulation of exposures arising from natural catastrophes and credit risks of reinsurers.** Gross written premiums by insurers totaled AMD 7.8 billion in 2010 with an overall retention level of 51 percent. The largest class of business is fire and natural disaster insurance, which accounted for 23 percent of earned premiums. Due to limited financial and underwriting capacity, insurers typically reinsure a significant portion of the large risks accepted and reinsurers are subject to the eligibility criteria set by the Central Bank of Armenia (CBA). Reflecting the limited investment opportunities, insurers' investments were mainly in bank deposits with only 9 percent invested in government bonds as at end-2010. It is critical that insurers have effective risk management to monitor and

control their risk accumulations arising from catastrophic events such as earthquakes within their risk tolerance limits.

C. Institutional and Macroprudential Setting

72. **The CBA is the integrated supervisor for the financial sector in Armenia.** The authorities and responsibilities of the CBA are established under the Law on Central Bank of Armenia (LCBA). The CBA's roles include on-going supervision of regulated entities; combating money laundering and terrorism financing; protecting consumers' rights; and preventing abuses in the securities market.

73. **The legal framework governing the insurance sector is largely based on the Law on Insurance and Insurance Activities (LIIA) and prudential regulations issued by the CBA.** The LIIA regulates the conduct of private insurance and insurance intermediation activities including licensing, on-going supervision and auxiliary insurance services in Armenia. While the LIIA does not apply to the State Fund for Social Insurance and mandatory social insurance, it applies to the voluntary pension insurance provided by insurers.

D. Main Findings

74. **The updated regulatory framework in Armenia has a high level of observance with the ICPs, supported by robust supervision by the CBA.** The authorities have implemented all the recommendations relating to the insurance sector arising from the 2005 Financial Sector Assessment Program. The CBA has a high standing within the insurance sector. On-going off-site surveillance and on-site inspections are comprehensive and thorough, facilitated by well-documented internal policies and manuals to promote consistency in supervisory decisions. The CBA updates the regulatory framework regularly to reflect emerging international best practices e.g., the solvency regime for insurers was strengthened in 2010 to adopt a more risk-based and calibrated approach.

75. **While the regulatory regime is adequate for the current stage of market development, there is scope for enhancements to take account of international regulatory developments and the establishment of a life insurance industry in Armenia.** To improve observance with the ICPs, the authorities are advised to expedite the issuance of regulations governing insurers' derivative activities and the finalization of regulatory requirements to combat insurance fraud. There is scope to fine-tune the solvency regime to provide for transparent solvency control levels and supervisory intervention ladder, address group solvency requirements and regulatory treatment of assets supporting technical provision that are encumbered. Regulatory requirements relating to risk management could be enhanced to better reflect international best practices. The authorities are also advised to consider providing adequate legal protection to the CBA and its staff and broadening the powers for the CBA to take a fuller range of proportionate enforcement measures. It is also timely to formulate an appropriate group-wide supervision framework in line with the current standards of the IAIS. To

support the development of life insurance, there is a need to tailor both prudential and market conduct requirements to protect the long-term financial commitments of life policyholders.

Conditions for effective insurance supervision (ICP1)

76. Armenia has a sound and clearly defined financial sector policy framework that facilitates insurance supervision. Going forward, supervisory effectiveness could be enhanced through establishment of appropriate actuarial standards and development of well-functioning money and securities markets.

The supervisory system (ICP2 to ICP5)

77. **The CBA's objectives of insurance supervision are clearly articulated in the LIIA and it is also responsible for ensuring financial stability in Armenia.** Given the multiple mandates of the CBA, there is scope for clearly articulating how it balances the potential conflicts in its objectives, particularly between its supervisory and market developmental roles.

78. **The LCBA provides for the operational and financial independence of the CBA and the CBA is subject to clear accountability mechanisms.** While representatives of the government may attend CBA board meetings, they are not entitled to attend closed sessions of the CBA board. There is no legal protection for the CBA and it is unclear whether the legal protection for CBA staff members is at the level envisaged by ICP 3.

79. **The CBA supervisory policies and approach are transparent and published on its website.** It has instituted structured processes for prioritization of supervisory activities and risk assessment to ensure consistency in supervisory measures and decisions.

80. **The LIIA and LCBA does not provide a robust framework for supervisory cooperation and information exchange including appropriate confidentiality safeguards, in respect of insurance supervision.** The CBA is only empowered to exchange information with other supervisors, based on executed memorandum of understanding for supervisory purpose.

The supervised entities (ICP6 to ICP 10)

81. **The licensing policy, criteria, and procedures are clear and transparent. The CBA is the sole licensing authority under the LIIA, with clear powers to set and impose registration and licensing procedures.** While the CBA has no explicit powers to impose licensing conditions, it is able to do so through its broad powers to issue mandatory instructions.

82. **The CBA conducts due diligence checks on managers of insurers** as well as on persons with qualifying holdings in insurers, including conducting professional proficiency examination of key functionaries. It is empowered to remove such persons if they no longer fit and proper criteria.

83. **The regulatory requirements for acquisition and changes in control as well portfolio transfer are set out under the LIIA and CBA regulations.** Before granting approval for such transactions, the CBA must be satisfied that the interests of policyholders are not compromised.

84. **The corporate governance framework for insurers is broadly in line with ICP 9.** The CBA examines insurers' corporate governance practices during its on-site inspections and has taken necessary supervisory measures, where appropriate. There is scope to clarify the board's accountabilities and incorporate measures to enhance board effectiveness.

85. **The LIIA and CBA regulations establish supervisory expectation on insurers' internal controls.** The CBA examines insurers' internal controls as part of its o-site inspections and has taken supervisory measures against insurers for deficiencies in internal controls. To set the tone from the top, it is advisable to explicitly hold board accountable for effective oversight of insurers' conduct of business.

Ongoing supervision (ICP11 to ICP17)

86. **Given the domestic focus of Armenian insurers, the CBA's analysis of domestic market conditions is adequate for the current insurance market structure.** The publication of insurance and other market statistics also facilitate insurers' understanding of systemic developments that have implications for their operations.

87. **The CBA has formulated the off-site supervisory manual of insurers and the CARAMELS rating system aimed at facilitating early identification of supervisory concerns.** It has issued regulations on content and frequency of reports to be submitted by insurers and is empowered to require additional reports, where necessary. The CBA has adequate resources to conduct comprehensive and thorough off-site monitoring of insurers, with minimal reliance on the work of external auditors.

88. **The CBA conducts both full scale and targeted inspections and has instituted risk-based approach**, based on its CARAMELS ratings and Assessment Matrix, to prioritizing and determining the scope of its inspections. The inspection process is structured and well documented.

89. **The CBA is empowered to take a range of progressive escalation of preventive measures to address supervisory concerns.** The CBA has a broad range of sanctions powers and wide discretion to issue mandatory instructions, although its powers have not been fully tested for the more severe sanction measures. The CBA is not empowered to impose conservatorship; or take control of an insurer or appoint officials or receivers to protect the interests of policyholders without invoking insolvency proceedings.

90. **The LIIA and Law on bankruptcy provide for orderly exits of insurers on both voluntary and insolvency grounds.** Policyholders (including ceding insurers) and legitimate beneficiaries have priority rights to the assets covering insurers' technical provisions (TPs) in the

event of insolvency. The absence of explicit restrictions on encumbrances of assets covering TPs may weaken policyholders' priority of claims in the event of insolvency.

91. **There are no insurance groups in Armenia.** Nonetheless, the CBA has developed a draft law on consolidated supervision to establish a framework for supervising financial groups/conglomerate.

Prudential requirements (ICP 18 to ICP23)

92. **The CBA has issued high-level principles on insurers' risk management in its regulations on internal controls.** The CBA planned to review the minimum requirements for insurers' risk management framework in 2012.

93. **The CBA require insurers to properly manage their underwriting and reinsurance risks.** It reviews insurers' underwriting policies and controls as well as reinsurance arrangement as part of its on-going supervision. However, there is no explicit requirement for insurers to monitor their risk accumulation arising from catastrophic events.

94. **The CBA has established a regulatory basis for computing insurers' TPs and is empowered to require insurers to remedy any shortfall in their TPs.** The robustness of the CBA's analysis of insurers' TPs could be enhanced through more granular data by requiring insurers to collate and report claims development triangulation data by lines of business.

95. **The LIIA and regulations issued by the CBA set out high level requirements relating to insurers' investments covering TPs.** The current regime reflects the highly liquid and low risk profiles of insurers' investments. However, the CBA should update regulations to reflect international best practice and provide more detailed regulatory guidance to facilitate compliance by insurers and consistency in supervisory assessments.

96. **Insurers disclose their derivative activities in accordance with the IFRS.** The regulatory requirements relating to the use of derivatives by insurers needs to be tightened and the CBA is in the process of drafting the necessary amendments.

97. **The solvency regime in Armenia takes into consideration underwriting, credit, foreign exchange and operational risks and quality of capital resources.** The regime should be strengthened through the establishment of solvency control levels as well as regulatory measures to address multiple gearing of capital by insurance groups and

Markets and consumers (ICP24 to ICP27)

98. **The regulatory requirements with respect to the licensing and conduct of business by insurance intermediaries are adequate for general insurance business.** The CBA inspects the operations of insurance brokers to check compliance with regulatory requirements. With the sharp increase in the number of agents due to the introduction of MTPL insurance, it is important

to update the regulatory requirements for agents to ensure healthy competition and professional conduct.

99. **The current regulatory regime for consumer protection in Armenia is generally adequate for non-life insurance business.** However, the high-level requirements need to be further elaborated to facilitate compliance, especially to support the establishment of a life insurance market to protect the long-term financial commitment of policyholders.

100. **The public disclosures regime is comprehensive** and adequate for the current stage of market development in Armenia.

101. **There is no explicit legal and regulatory framework for combating insurance fraud.** Nonetheless, the CBA and insurance industry cooperates with law enforcement agencies.

Anti-money laundering, combating the financing of terrorism (ICP 28)

102. The AML-CFT regime in Armenia has been enhanced, in line with the recommendations of the 2008 joint assessment by the IMF and the MONEYVAL Committee. The current AML-CFT regime is adequate for the insurance industry of Armenia, which only conducts non-life insurance business with a low AML-CFT risk profile.

Table 2. Armenia: Summary of Compliance with the ICPs

ICP	Comments
1. Conditions for effective insurance supervision	Armenia has a sound and clearly defined financial sector policy framework that facilitates insurance supervision. Going forward, supervisory effectiveness could be enhanced through establishment of appropriate actuarial standards and development of well-functioning money and securities markets.
2. Supervisory objectives	The CBA's objectives of insurance supervision are clearly articulated in the LIIA and it is also responsible for ensuring financial stability in Armenia. Given the multiple mandates of the CBA, there is scope for clearly articulating how it balances the potential conflicts in its objectives, particularly between its supervisory and market developmental roles.
3. Supervisory authority	The LCBA provides for the operational and financial independence of the CBA and the CBA is subject to clear accountability mechanisms. While representatives of the government may attend CBA board meetings, they are not entitled to attend closed sessions of the CBA board. There is no legal protection for the CBA and it is unclear whether the legal protection for CBA staff members is at the level envisaged by ICP 3.
4. Supervisory process	The CBA supervisory policies and approach are transparent and published on its website. It has instituted structured processes

ICP	Comments
	for prioritization of supervisory activities and risk assessment to ensure consistency in supervisory measures and decisions.
5. Supervisory cooperation and information sharing	The LIIA and LCBA does not provide a robust framework for supervisory cooperation and information exchange including appropriate confidentiality safeguards, in respect of insurance supervision. The CBA is only empowered to exchange information with other supervisors, based on executed memorandum of understanding (MOU) for supervisory purpose.
6. Licensing	The licensing policy, criteria, and procedures are clear and transparent. The CBA is the sole licensing authority under the LIIA, with clear powers to set and impose registration and licensing procedures. While the CBA has no explicit powers to impose licensing conditions, it is able to do so through its broad powers to issue mandatory instructions.
7. Suitability of persons	The CBA conducts due diligence checks on managers of insurers as well as on persons with qualifying holdings in insurers, including conducting professional proficiency examination of key functionaries. It is empowered to remove such persons if they no longer fit and proper criteria.
8. Changes in control and portfolio transfers	The regulatory requirements for acquisition and changes in control as well portfolio transfer are set out under the LIIA and CBA regulations. Before granting approval for such transactions, the CBA must be satisfied that the interests of policyholders are not compromised.
9. Corporate governance	The corporate governance framework for insurers is broadly in line with ICP 9. The CBA examines insurers' corporate governance practices during its on-site inspections and has taken necessary supervisory measures, where appropriate. There is scope to clarify the board's accountabilities and incorporate measures to enhance board effectiveness.
10. Internal controls	The LIIA and CBA regulations establish supervisory expectation on insurers' internal controls. The CBA examines insurers' internal controls as part of its o-site inspections and has taken supervisory measures against insurers for deficiencies in internal controls. To set the tone from the top, it is advisable to explicitly hold board accountable for effective oversight of insurers' conduct of business.
11. Market analysis	Given the domestic focus of Armenian insurers, the CBA's analysis of domestic market conditions is adequate for the current insurance market structure. The publication of insurance and other market statistics also facilitate insurers' understanding of systemic developments that have implications for their

ICP	Comments
	operations.
12. Reporting to supervisors	The CBA has formulated the off-site supervisory manual of insurers and the CARAMELS rating system aimed at facilitating early identification of supervisory concerns. It has issued regulations on content and frequency of reports to be submitted by insurers and is empowered to require additional reports, where necessary. The CBA has adequate resources to conduct comprehensive and thorough off-site monitoring of insurers, with minimal reliance on the work of external auditors.
13. On-site inspection	The CBA conducts both full scale and targeted inspections and has instituted risk-based approach, based on its CARAMELS ratings and Assessment Matrix, to prioritizing and determining the scope of its inspections. The inspection process is structured and well documented.
14. Preventive and corrective measures	The CBA is empowered to take a range of progressive escalation of preventive measures to address supervisory concerns.
15. Enforcement or sanctions	The CBA has range of sanctions powers and wide discretion to issue mandatory instructions for this purpose, although the powers have not been fully tested for the more severe sanction measures. The CBA is not empowered to impose conservatorship; or take control of an insurer or appoint officials or receivers to protect the interests of policyholders without invoking insolvency proceedings.
16. Winding-up or exit from the market	The LIIA and Law on bankruptcy provide for orderly exits of insurers on both voluntary and insolvency grounds. Policyholders (including ceding insurers) and legitimate beneficiaries have priority rights to the assets covering insurers' TPs in the event of insolvency. The absence of explicit restrictions on encumbrances of assets covering TPs may weaken policyholders' priority of claims in the event of insolvency.
17. Group-wide supervision	There are no insurance groups in Armenia. Nonetheless, the CBA has developed a draft law on consolidated supervision to establish a framework for supervising financial groups/conglomerate.
18. Risk assessment and management	The CBA has issued high-level principles on insurers' risk management in its regulations on internal controls. The CBA planned to review the minimum requirements for insurers' risk management framework in 2012.
19. Insurance activity	The CBA require insurers to properly manage their underwriting and reinsurance risks. It reviews insurers' underwriting policies and controls as well as reinsurance arrangement as part of its on-going supervision. However, there is no explicit requirement for insurers to monitor their risk accumulation arising from

ICP	Comments
	catastrophic events.
20. Liabilities	The CBA has established a regulatory basis for the computation of insurers' TPs and is empowered to require insurers to remedy any shortfall in their TPs. The robustness of the CBA's analysis of insurers' TPs could be enhanced through more granular data by requiring insurers to collate and report claims development triangulation data by lines of business.
21. Investments	The LIIA and regulations issued by the CBA set out high level requirements relating to insurers' investments covering TPs. The current regime reflects the highly liquid and low risk profiles of insurers' investments. However, the CBA should update regulations to reflect international best practice and provide more detailed regulatory guidance to facilitate compliance by insurers and consistency in supervisory assessments.
22. Derivatives and similar commitments	Insurers disclose their derivative activities in accordance with the IFRS. The regulatory requirements relating to the use of derivatives by insurers needs to be tightened and the CBA is in the process of drafting the necessary amendments.
23. Capital adequacy and solvency	The solvency regime in Armenia takes into consideration underwriting, credit, foreign exchange and operational risks and quality of capital resources. The regime should be strengthened through the establishment of solvency control levels as well as regulatory measures to address multiple gearing of capital by insurance groups and encumbrances of assets supporting TPs.
24. Intermediaries	The regulatory requirements with respect to the licensing and conduct of business by insurance intermediaries are adequate for general insurance business. The CBA inspects the operations of insurance brokers to check compliance with regulatory requirements. With the sharp increase in the number of agents due to the introduction of MTPL insurance, it is important to update the regulatory requirements for agents to ensure healthy competition and professional conduct.
25. Consumer Protection	The current regulatory regime for consumer protection in Armenia is generally adequate for non-life insurance business. However, the high-level requirements need to be further elaborated to facilitate compliance, especially to support the establishment of a life insurance market to protect the long-term financial commitment of policyholders.
26. Information, disclosure and transparency towards markets	The public disclosures regime is comprehensive and adequate for the current stage of market development in Armenia.
27. Fraud	There is no explicit legal and regulatory framework for combating insurance fraud. Nonetheless, the CBA and insurance industry

ICP	Comments
	cooperates with law enforcement agencies.
28. Anti-money-laundering, combating the financing of terrorism	The AML-CFT regime in Armenia has been enhanced, in line with the recommendations of the 2008 joint assessment by the IMF and the MONEYVAL Committee. The current AML-CFT regime is adequate for the insurance industry of Armenia, which only conducts non-life insurance business with a low AML-CFT risk profile.

Table 3. Armenia: Recommendations to Improve Observance of ICPs

ICP	Comments
1. Conditions for effective insurance supervision	The authorities are advised to consider: • how best to work with the industry to address the challenges arising from the lack of a deep and liquid financial markets to facilitate effective asset-liability management by insurers; • improving collaboration with the actuarial associations on the establishment of actuarial and ethical standards, in line with international best practices; and • providing legal immunity for auditors and actuaries who are obliged to notify the CBA of pertinent concerns as required under the LIIA.
2. Supervisory objectives	To enhance confidence that the CBA's developmental role does not compromise supervisory objectivity, the CBA is advised to consider articulating its policies and processes on how potential conflicts in supervisory and developmental objectives are managed internally.
3. Supervisory authority	The authorities are advised to: • document the nature of issues to be discussed at the closed sessions of the CBA board meetings to better manage public perception on the government's involvement in the CBA's operation; and • provide adequate legal protection to the CBA and reviewing whether the level of protection afforded to the CBA staff members are at the level envisaged by ICP3.
5. Supervisory cooperation and information sharing	The authorities are advised to consider establishing a legal framework to empower the CBA to cooperate and share information with relevant supervisors without requiring an international agreement and subject to appropriate confidentiality safeguards.
8. Changes in control and portfolio transfers	While the current regime for portfolio transfer is adequate for general insurance operations, the CBA is advised to consider an enhanced regime that would safeguard the long term interests of life policyholders.
9. Corporate governance	The authorities are advised to review the current corporate governance standards to better reflect international best practices, including: explicit accountabilities of the board in ensuring effective risk management and compliance with laws and regulations; establishing relevant board committees with clear mandates e.g., audit and risk management committees, taking into account the nature, scale and complexity of their operations; and reviewing policies and procedures to assess the effectiveness of the boards of insurers.

ICP	Comments
10. Internal controls	The CBA is advised to consider updating Regulations 3/10 to more clearly differentiate supervisory expectations relating to internal controls and risk management.
12. Reporting to supervisors	The CBA is advised to regularly review its current practice in not requiring audit opinion on insurers' compliance with prudential requirements and on annual regulatory returns, to take into account of changes in its supervisory resources and priorities. . The use of the arithmetic mean to establish a composite risk score should be reviewed as a single high risk factor may be diluted by a number of low risk factors.
15. Enforcement or sanctions	The authorities are advised to broaden the range of sanction powers of the CBA explicitly to facilitate a proportionate approach to enforcement and sanctions, including imposing conservatorship or other measures to protect the interest of policyholders without invoking insolvency proceedings.
16. Winding-up or exit from the market	The authorities are advised to strengthen protection of policyholders and legitimate beneficiaries by establishing regulatory and reporting requirements on: pledging of insurers' assets intended to support TPs; and clear rules on how assets of an insolvent insurer are to be distributed amongst different classes of policyholder with different rights on insurers' assets supporting TPs, particularly in respect of life insurance business.
17. Group-wide supervision	It is timely for the authorities to formulate an explicit group-wide supervision framework, taking account of international best practices issued by the IAIS in October 2011.
18. Risk assessment and management	The CBA is advised to update its regulatory requirements relating insurers' risk management to better reflect international best practices and consider issuing risk management guidelines to facilitate compliance by insurers.
19 Insurance activity	The CBA is advised to require insurers to adopt effective risk management measures to monitor and manage potential risk accumulation arising from catastrophic events.
20. Liabilities	The CBA is advised to review the current regime on estimating TPs to take account of developments in international best practices including the requirement of an explicit risk margin and the submission of more granular claims development data.
21. Investments	The CBA is advised to expedite the enhancements of the regulatory requirements relating to insurers' investment operations, particularly in the areas of asset-liability management, safekeeping of assets, competencies of key investment staff, business continuity plans and stress testing.
22. Derivatives and similar commitments	The CBA is advised to expedite the issuance of regulations governing insurers' derivative activities.

ICP	Comments
23. Capital adequacy and solvency	The CBA is advised to strengthen the solvency regime by taking into consideration: prohibition of inflation of capital through double/multiple gearing by insurance groups; treatment of pledged assets to secure credit facilities taken up by insurers; appropriate solvency control levels and supervisory intervention ladder to facilitate timely corrective action; and solvency requirements for foreign branches operating in Armenia.
24. Intermediaries	The authorities are advised to review the regulatory regime for insurance intermediaries to incorporate key elements that are essential to safeguard the long-term financial commitments of life policyholders. It is timely to review the regulatory requirements for insurance agents particularly for those who act as underwriting agents and serves multiple principals. Steps should also be taken to ensure that parallel treatment is maintained between ordinary agents and bancassurance agents.
25. Consumer protection	The CBA is advised to: provide supervisory guidance on how insurers and insurance intermediaries are expected to treat consumers fairly and to ensure that clients' needs are properly served; and formulate a consumer protection regime tailored to protect the long-term financial interests of life policyholders.
26. Information, disclosure and transparency towards markets	The CBA is advised to consider enhancing the disclosure regime by incorporating relevant elements from the IAIS public disclosure standards.
27. Fraud	The authorities are advised to expedite the finalization of the draft regulations requiring insurers and insurance intermediaries to implement effective fraud mitigation measures and the legal amendments to clarify the treatment of insurance fraud under the Criminal Code.

Authorities Response

103. **The assessment of the Insurance Core Principals made by the IMF within the scope of the Financial Sector Assessment Program, conducted in February 2012 was of great importance and high priority for Armenia.** In the given stage of the development of Armenian insurance market, it is very important to follow the recommendations of the Assessment Team and to take particular steps for their implementation. Particularly, taking into account the fact that the CBA takes steps for the development of life insurance products, the role of recommendations in these aspects are very important to us.

104. **At the same time, the assessment gave an opportunity to review shortcomings of existing regulatory and supervisory framework and start working on necessary changes.** Taking into account the recommendation made by the assessment team, the CBA commits to their implementation and development of Armenian insurance market regulatory and supervisory framework based on international developments and best practices.

105. **The CBA would also like to thank the assessment team for their high professional and ethical conduct, independent and impartial assessment.**

ANNEX II. SUMMARY OF THE OBSERVANCE OF THE BASEL CORE PRINCIPLES FOR EFFECTIVE BANKING SUPERVISION

106. **This assessment of the current state of compliance with the BCPs in Armenia has been undertaken** as part of a joint IMF-World Bank Report on the Observance of Standards and Codes (ROSC) mission. The assessment was conducted from 1 February until 14 February 2012. It reflects the banking supervision practices of the Central Bank of Armenia as of the end of January 2012.

107. **The assessment was undertaken in accordance with the guidelines set out in the Core Principles (CPs) Methodology.** With the Armenian Authorities' permission, it assessed compliance with both the "essential" and the "additional" criteria, but the ratings assigned were based on compliance with the "essential" criteria only.

108. **The assessment was conducted by Michael Deasy (consultant to the IMF) and Katia D'Hulster (World Bank staff).**

A. Information and Methodology Used for the Assessment

109. **The assessment is based on several sources:** (i) a complete self-assessment prepared by the CBA; (ii) detailed interviews with the CBA staff; (iii) review of laws, regulations, and other documentation on the supervisory framework and on the structure and development of the Armenian financial sector; and (iv) meetings with individual banks, an external auditor, a law firm and the association of accountants and auditors.

110. **The main pieces of legislation are the Law on Central Banking and the Law on Banks and Banking**. These are supported by a body of regulatory Regulations and Directives issued by the CBA which have statutory basis.

111. **This assessment is based solely on the laws, supervisory requirements, and practices that were in place at the time it was conducted.** However, where applicable the assessors made note of regulatory and supervisory initiatives which have yet to be completed or implemented.

112. **The assessment team enjoyed excellent cooperation with its counterparts and, within the time available to perform their work, reviewed all the information provided.**

B. Institutional and Macro-Prudential Setting, Market Structure Overview

113. **The Armenian financial sector is dominated by banks, with only a small non-banking sector that includes a nascent insurance sector.** The system has a relatively low level of intermediation with credit to the private of sector corresponding to less than 26 percent of GDP. There is a nascent capital market, and institutional investors are scarce, with a funded pension system framework just being completed for future implementation.

114. **The banking sector is fragmented—there are 21 banks, with the largest having only less than 11 percent of system assets.** Approximately half of the banking sector (by assets) consists of subsidiaries of foreign banks (Russian, UK, French). Domestic banks are generally smaller though the second largest one is a domestic bank. Banks are profitable relative to comparable banking sectors and concentration is low.

115. **Banks appear relatively well-capitalized at 18.3 percent on aggregate at end-December 2011, although this has declined from 28 percent at end 2008.** Credit growth has been strong in 2011, with an overall year on year credit growth of 37 percent as of end-September and foreign exchange credit (mainly U.S. dollars) growing by 47 percent in the same period. Dollarization is high and increasing with around 60 to 70% of liabilities and loans held in foreign currency.

116. **The banking sector non-performing loans (NPLs) show a stabilizing trend after reaching the peak in the middle of 2009, though some increase in NPLs is witnessed during the third quarter of 2011.** According to IMF/WB methodology, NPLs reached 5.25 percent at end September 2011 compared to 5.36 percent at end 2010. Importantly, NPLs in the watch category tripled during this period. In the event that economic recovery is slow and sustained pressures on the AMD continue, the loans currently under watch category could move to higher risk categories.

117. **NPLs vary widely amongst banks.** As of end December 2011, NPLs in 4 banks exceeded 10 percent – including two medium-sized banks and two small banks. A key factor behind asset quality deterioration in these banks is the lack of diversification of their credit portfolio resulting in large exposure to few borrowers. Given the current weaknesses in risk management in banks and possible overhang of restructured loans from the crisis, the profitability and capital position of these banks may be strained in the near term.

118. **Importantly, banks' exposure to currency indirect credit risk continues to rise due to a larger share of corporate loans issued in FX.** The annual average loan dollarization experienced a steady increase over the last several years: in 2008, it was only 38.4 percent, but it increased to 52.8 percent in 2009, 55.5 percent in 2010 and 60 percent during the first nine months of 2011.Although CBA has adopted prudential measures during 2010 and 2011 to curtail this trend, including among other measures assigning a higher risk weight of 50% in capital requirement for FX loans, loan dollarization has still increased slightly over the period.

C. Preconditions for Effective Banking Supervision

Soundness and sustainability of macroeconomic policies

119. **The CBA operates within an inflation targeting framework and macroeconomic policies are generally sound.** The Armenian economy was hit hard by the beginnings of the financial crisis in 2008, resulting in a GDP contraction of 14.1 per cent in 2009. The contraction

was caused by adverse shocks to the current and capital accounts, particularly emanating from Russia. This included a sharp decline in the inflow of remittances. As a result, the current account widened substantially and the exchange rate depreciated sharply. The economy has since rebounded, but is still in a recovery phase. The exchange rate has stabilized and international reserves have been rebuilt. Armenia has had a three year Extended Fund Facility/Extended credit facility support program from the Fund since 2008 and a financial intermediation loan with the Bank.

A well-developed public infrastructure

120. **Armenia has a well-developed public infra-structure with appropriate government, court, and general public administrative structures in place.** It appears to have adopted a sufficient body of law to meet the demands of banks and business generally. An effective debt recovery regime is in place and laws have been devised to deal with liquidation and bankruptcy. There is also a body of law on consumer protection. Two credit registries exist, one managed by the Central Bank and the other by the banks. Between them, they appear to provide a very effective system. The legal profession appears to be well developed. The accounting/auditing regime, while still in the course of development, is based on best international practices, with IFRSs being mandatory for all entities regulated by the CBA and major companies. Armenia has adopted best international auditing practices and the major international auditing firms are represented in the country.

Effective market discipline

121. **Outside banking, the financial market is underdeveloped**. Armenia has a nascent capital market with a shortage of instruments and a lack of depth in trading. The authorities are attempting to promote further capital market development. The nascent stock exchange is part of the Nasdaq/OMX Group. Hence, the ability of the market to effectively influence the behavior of banks is constrained. The Central Bank is responsible for the supervision of the whole financial sector.

Mechanisms for providing an appropriate level of systemic protection (or public safety net)

122. **The CBA exercises the lender of last resort function**. It has the authority (i) to provide unsecured loans to banks for terms up to 5 years in order to ensure the sustainability and development of the banking system and (ii) to guarantee bank liabilities in order to support development and other special projects. In the past, the CBA has exercised its lender of last resort authority to provide capital support to banks and has also provided capital support to the Deposit Guarantee Fund (DGF)

123. **The DGF was established in 2005 and is ex ante funded**. No bank failures requiring payouts have occurred since that time, which has allowed the DGF to focus on building capacity. In 2011 the DGF began conducting payout simulation exercises with the CBA; additional simulations are planned for 2012. The DGF is in the final stages of installing an IT platform for

depositor information, which among other things, will allow for the submission of internet-based claims. Currently, it is anticipated that the resources of the DGF would be sufficient to cover the simultaneous failures of 2-3 medium sized banks and 8-10 small banks.

D. Main Findings

124. **Objectives, independence, powers, transparency, and cooperation (CP1)** In broad terms, Armenia meets these requirements. However, it should address certain weaknesses under these headings: reassess the position of the government representative who is not a director but attends Central Bank board meetings, so that he/she becomes subject to the confidentiality requirements of the Central Bank of Armenia; prioritize the draft legislation dealing with the issue of legal protection for staff; relax the Law on Banks by allowing the exchange of information without an MOU, subject to specific due diligence requirements (secrecy provisions, etc.)

Licensing and structure criteria (CP2 to 5)

These criteria are met.

Prudential regulation and requirements (CP 6 to 16)

125. **The CBA is to be commended for its strict implementation of Pillar 1 of Basel II and for the introduction of higher risk weights and provisioning percentages to address the higher risk of foreign currency exposures.** That said, more work remains to be done for a sound and comprehensive implementation of Pillar 2 and particularly its integration in the supervisory methodology. Pillar 2 guidance should cover credit concentration risk, interest rate risk in the banking book, indirect foreign exchange risk (this is the risk of a borrower taking out a loan in foreign currency while the borrower only has income in local currency or vice versa) as well as risks that are difficult to quantify such as reputational and strategic risk. Going forward, the CBA should also use the information in the credit registry to periodically validate the adequacy of the provisioning requirements.

126. **The Regulation "Minimum requirements for internal control" covers most risk categories but it should be modernized and updated with a greater focus on risk management instead of control.** During this review, a re-assessment of the distribution of provisions between mandatory regulations and "comply or explain" guidance also needs to be performed. The definition of operational risk should be part of mandatory regulations to ensure the bank's internal legal acts capture all the drivers of operational risk.

127. **As banks start to implement internal risk management models (credit scoring models, simulation approaches for interest rate risk etc), the CBA should issue guidelines for the internal validation of these models.** Also, the requirement for an independent risk management division headed by a Chief Risk Officer should be made mandatory for the larger and more risky banks.

128. **CBA could also consider stricter collateral requirements (LTV ratios), lower limits on concentration of large borrowers subject to foreign exchange risk.** The CBA regulations should also more clearly define and distinguish between FX risk arising from a mismatch at the level of the borrower (indirect foreign exchange risk) and FX risk arising from the banking activity (FX risk). Both risks require specific and different set of mitigation measures.

129. **The regulation on the calculation of large exposures deviates from international good** practice in a number areas; exposures to banks and sovereigns is risk weighted, some forms of collateral are allowed to be taken into account and participations and other items deducted from capital are not taken into account.

130. The Licensing and Supervision department has recently reviewed a concept paper on the introduction of the Basel III liquidity ratios. It has been decided the CBA will introduce a 1 year monitoring period of the Basel III liquidity ratios. It is recommended the CBA introduce a regulatory requirement for banks to stress test separate foreign currency liquidity strategies and set liquidity ratios by currency.

Internal control and audit (CP 17)

131. The law specifies that the internal audit function is responsible for the compliance function. The legislation should be amended to ensure that the compliance function is made independent of that of internal audit.

Abuse of financial services (CP18)

132. Armenia has yet to introduce legislation to address weaknesses identified in the IMF/MONEYVAL Mutual Assessment exercise of 2009. Among the recommendations made by IMF/MONEYVAL were a prohibition on the existence of bearer bank books, bearer certificates of deposit, and other bearer securities and the need to improve certain ‘know your customer’ procedures in the banks.

Methods of ongoing banking supervision (CP 19 to 21)

133. There is no explicit requirement for banks to notify the CBA of any substantive change, including adverse changes, in their circumstances.

Accounting and disclosure (CP 22)

134. Banks are required to prepare their accounts in accordance with IFRSs and to have them audited in accordance with internationally accepted auditing practices and standards.

Corrective and remedial powers of supervision (CP 23)

The Central Bank of Armenia has a wide range of corrective and remedial powers at its disposal.

Consolidation and cross-border banking supervision (CP 24 to 25)

135. There is no explicit detailed law on consolidated supervision and while the current range of laws allows the CBA to carry out consolidated supervision over the very limited level of consolidated activity in Armenia at present, that range of law would not be sufficient to cope with the emergence of a financial conglomerate in Armenia

Table 4. Summary Compliance with the Basel Core Principles—ROSCs

Core Principle	Comments
1. Objectives, independence, powers, transparency, and cooperation	
1.1 Responsibilities and objectives	There is an extensive body of regulatory law in Armenia. However, it is spread over many acts, regulations, directives, etc. In some future review of banking law, the CBA might consider consolidating the law to give it a more orderly structure.
1.2 Independence, accountability and transparency	The position of the government representative who is not a director of the CBA but attends open board meetings should be addressed by making him/her subject to the confidentiality requirements of the CBA.
1.3 Legal framework	
1.4 Legal powers	
1.5 Legal protection	The law does not provide any specific legal protection to the CBA or its staff against lawsuits for actions taken and/or omissions made while discharging their duties in good faith (although amending legislation is pending).
1.6 Cooperation	The CBA will only exchange information with another supervisor where it has signed an MOU with that supervisor. This is excessive given that the Principle requires the supervisor to take reasonable steps to ensure that any confidential information released to another supervisor will be used only for supervisory purposes and will be treated as confidential by the receiving party. While an MOU will certainly facilitate this, it can still be achieved by means other than through an MOU.
2. Permissible activities	

Core Principle	Comments
3. Licensing criteria	The minimum capital requirement for Armenian banks is 5 billion Armenian Drams. This amount, however, can be reduced to 1 billion if an applicant shareholder is an institution with a credit A rating and proposes to acquire more than 51 per cent of the bank. In the interests of consistency and the integrity of the licensing regime, the CBA should consider having one figure for all banks.
4. Transfer of significant ownership	
5. Major acquisitions	The law and the regulation do not specifically require that the acquisition do not expose the bank to undue risk or that the bank has adequate financial and organizational resources to handle the acquisition. Nevertheless, discussions with the CBA clarified that the supervisor does take into account the criteria mentioned above, even if they are not explicitly stated in the Law or regulations.
6. Capital adequacy	The assessors caution the CBA with regard to the use of prudential regulation for development purposes. The setting of an initial minimum capital amount depending on the credit risk of the shareholder at a particular point in time is not in compliance with good practice. Moreover, if the shareholder were to lose his rating, it would be a very inappropriate time to request additional capital for the bank. In practice, this provision has not yet been applied..

7. Risk management process	The CBA is to be commended for its strict implementation of Pillar 1 of Basel II, but more work remains to be done for a sound and comprehensive implementation of Pillar 2 and the integration of Pillar 2 in the supervisory methodology. Although the absolute minimum legal requirements for Pillar 2 are in place, the assessors recommend more frequent (i.e. annual) structured dialogue with banks' Board or Senior Management on their capital adequacy assessments. Also, it is recommended more guidance be prepared for banks and supervisors alike to ensure a sound Pillar 2 implementation. This should include credit concentration risk, interest rate risk in the banking book, indirect foreign exchange risk (this is the risk of a borrower taking out a loan in foreign currency while the borrower only has income in local currency or vice versa) as well as risks that are difficult to quantify such as reputational and strategic risk. A more granular assessment of capital add-ons and/or stricter risk management requirements for these risks should also be considered. This should, together with the existing CAMEL internal ratings, form the basis for the setting of the supervisory cycle and targeted examinations as well as individual capital ratios that are better aligned with the risk profile of individual banks. The Regulation “Minimum requirements for internal control” should be modernized and updated with a greater focus on risks management instead of control. The current regulation does just not give sufficient detail and guidance to banks on supervisory expectations. During this review, a re-assessment of the distribution of provisions between mandatory regulations and “comply or explain” guidance needs to be performed. At a very minimum, risk category definitions (operational risk, FX risk,) should be part of mandatory regulations to ensure the bank’s internal legal acts capture all the risks.

8. Credit risk	As banks start to implement internal risk management models (credit scoring models, simulation approaches for interest rate risk etc), the CBA should issue guidelines for the internal validation of these models. Even if the outcomes are not yet used in the regulatory capital calculation, poorly validated models will have an impact on the risk management of banks. (for example, a credit scoring model that does not differentiate between good and bad credits can affect underwriting practices of banks, and hence NPLs in the medium term). Although this can be challenging to achieve in smaller banks, the requirement for an independent risk management division headed by a Chief Risk Officer should be made mandatory for the larger and more risky banks. The CBA is to be commended for introducing higher risk weights and provisioning percentages to address the higher risk of foreign currency exposures. That said, higher capital and provisioning only address the exposures that are already on the books and these measures should not be the only regulatory response to this risk. They should be complemented with good risk management practices in this area. For example, an explicit regulatory requirement for banks to identify, assess and frequently monitor indirect foreign exchange risk as part of the credit underwriting and monitoring process should be introduced. Also, the CBA could consider stricter collateral requirements (LTV ratios), lower limits on concentration of large borrowers subject to foreign exchange risk. The CBA regulations should also more clearly define and distinguish between FX risk arising from a mismatch at the level of the borrower (indirect foreign exchange risk) and FX risk arising from the banking activity (FX risk). Both risks require specific and different set of mitigation measures.
9. Problem assets, provisions, and reserves	It is recommended the CBA use the information in the credit registry to periodically validate the adequacy of the provisioning requirements.

10. Large exposure limits	The regulation on the calculation of large exposures deviates from international good practice in several areas: • Exposures to banks and sovereigns is risk weighted; • Some forms of collateral are allowed to be taken into account; • Participations and other items deducted from capital are not taken into account.
11. Exposure to related parties	
12. Country and transfer risks	The CBA does not receive regular offsite reports on a banks country risk and transfer risk. That said, the exposures are small in Armenia.
13. Market risks	It is recommended the CBA introduce more explicit regulatory requirements to ensure that the market data used to value positions is independently tested (AC1). Also, specific regulatory requirements with regard to the frequency of revaluation, independent review of the processes, the verification of the consistency, timeliness and reliability of the data sources should be introduced (EC4). Solely relying on the IFRS rules in this respect is not good practice, as they can be changed without agreement of the CBA and differences in interpretation of IFRS between the auditors and the CBA can arise. The Regulation "Minimum requirements for internal control" would benefit from enhancement and a greater focus on risk management instead of control. Also, the qualitative risks management requirements with regard to market risks should be more detailed and comprehensive.
14. Liquidity risk	The Licensing and Supervision department has recently reviewed a concept paper on the introduction of the Basel III liquidity ratios. It has been decided the CBA will introduce a 1 year monitoring period of the Basel III liquidity ratios. It is recommended the CBA introduce a regulatory requirement for banks to stress test separate foreign currency liquidity strategies and set liquidity ratios by currency.

15. Operational risk	A requirement to inform the CBA of developments affecting operational risk (broader than fraud) in banks should be in place. Reliance on offsite reporting forms in this respect will only inform the supervisor after the fact. The Regulation "Minimum requirements for internal control" would benefit from enhancement and a greater focus on risks management instead of control. Also, some of the qualitative risks management requirements with regard to operational risk should be mandatory. A re- distribution of provisions between mandatory regulations and "comply or explain" guidance needs thus to be performed. The definition of operational risk should be part of mandatory regulations to ensure the bank's internal legal acts capture all the drivers of operational risk.
16. Interest rate risk in the banking book	
17. Internal control and audit	The law specifies that the internal audit function is responsible for the compliance function. The legislation should be amended to ensure that the compliance function is made independent of that of internal audit.
18. Abuse of financial services	Armenia has yet to introduce legislation to address weaknesses identified in the IMF/MONEYVAL Mutual Assessment exercise of 2009. Among the recommendations made by IMF/MONEYVAL were a prohibition on the existence of bearer bank books, bearer certificates of deposit, and other bearer securities and the need to improve certain 'know your customer' procedures in the banks.
19. Supervisory approach	There is no explicit requirement for banks to notify the CBA of any substantive change, including adverse changes, in their circumstances.

20. Supervisory techniques	While the CBA has regular contact with the banks, it is recommended that it adopts a more formal approach to such contacts. For instance, in addition to the current ad-hoc contact, a formal meeting should be held, say annually, with the senior management of the banks to discuss issues of common interest to both.
21. Supervisory reporting	
22. Accounting and disclosure	
23. Corrective and remedial powers of supervisors	
24. Consolidated supervision	There is no explicit detailed law on consolidated supervision and while the current range of laws allows the CBA to carry out consolidated supervision over the very limited level of consolidated activity in Armenia at present, that range of law would not be sufficient to cope with the emergence of a financial conglomerate in Armenia.
25. Home-host relationships	

Table 5. Recommended Action Plan to Improve Compliance with the Basel Core Principles

Reference Principle	Recommended Action
Principle 18. Abuse of financial services	Introduce as a matter of urgency legislation to address the weaknesses identified in the IMF/MONEYVAL Mutual Assessment of 2009.
Principle 19. Supervisory approach	Require banks to inform the CBA immediately of substantive changes, particularly of any adverse change.
Principle 1.2. Independence, accountancy, transparency	Reassess the position of the government representative who is not a director but attends meetings so that he/she becomes subject to the confidentiality requirements of the Central Bank.
Principle 17. Internal control and audit	Separate compliance function and the internal audit function, whose function it should be, inter alia, to audit the compliance function
Principle 1.5 Legal protection	Prioritize the draft legislation dealing with the issue of legal protection for staff.
Principle 24. Consolidated supervision	Seek the enactment of the legislation on consolidated supervision as a matter of urgency.
Principle 1.6. Cooperation	Relax the Law on Banks by allowing the exchange of information without an MOU, subject to specific due diligence requirements (secrecy provisions etc)

Authorities response

136. The Central Bank of Armenia, as a regulator and supervisor of the banking system, believes that adherence to Core Principles for Effective Banking Supervision has a significant role towards improving and maintaining the financial stability of the banking system. Thus, bringing the regulatory and supervisory framework in compliance with the Core principles is a high priority task for us.

137. The banking system of Armenia is fully compliant with the majority of the Core Principles, however FSAP recommendations brought to the light several important issues which require improvement. CBA agrees that regulatory and supervisory framework of Armenia has some deficiencies and is intending to make necessary improvements to further align it with international standards and best practices. In some cases, the CBA has already initiated changes and amendments to the existing framework.

138. The Central Bank of Armenia believes that the assessment made jointly by the International Monetary Fund and The World Bank in the scope of The Financial Sector Assessment Program conducted in February 2012, will have an important role in the future development of the banking sector regulation and supervision in Armenia.

APPENDIX I. INTRODUCTION OF LIQUIDITY REQUIREMENTS BY CURRENCY

139. **The Armenian banking system is highly liquid as most banks meet the CBA's liquidity requirements with considerable margin.** The CBA has in place two liquidity requirements: the highly liquid asset to total asset ratio (HLA/TA) should exceed 15 percent, and the highly liquid asset to demand liability ratio (HLA/DD) should exceed 60 percent. The CBA monitors these ratios on a monthly basis and conducts sensitivity analyses.

140. **However, Armenian banks tend to have fewer liquid assets in foreign currency, in part because the liquidity requirement does not apply by currency.** At the system level, foreign currency portfolio of Armenian banks appear fairly liquid, as the HLA/TA ratio and the HLA/DD ratio for foreign exchange are 20.8 percent and 83.1 percent respectively at end-September 2011.[10] However, the distribution of holdings of liquid assets is uneven across banks. 14 out of 21 banks do not meet at least one ratio in foreign currency including a few large-size banks of which liquidity ratios in foreign currency are substantially short of the requirement on the total balance sheet.

141. **Liquidity requirements by major currencies are widely used in dollarized economies.**[11] It is critical for banks to maintain sufficient foreign currency liquidity against their foreign currency liabilities as the authorities have limited lender-of-last-resort capacity in foreign currency compared with the local currency. For this reason, several dollarized economies apply even higher liquidity requirements to banks' foreign currency portfolio.

142. **Armenian banks receive foreign currency in the form of retail deposits and stable funding sources from IFIs and parent banks.** As a result, dependence on foreign currency wholesale markets is relatively small. This funding structure helped Armenian banking sector weather the global financial crisis in late 2008 and subsequent devaluation shock. However, in that shock, deposits did not flow out of banks but between currencies—deposit holders simply shifted deposits from AMD to USD. Should a shock to confidence in the banking sector—either domestic or emanating from problems in a parent bank—take place with outflow pressure on deposits, there would be a need for both AMD and USD liquidity. In some banks, this would create a problem for USD liquidity.

143. **Gradual implementation of a foreign currency liquidity coverage ratio is warranted as rapid introduction of liquidity requirements by currency could lead to disruptive impacts on money and credit markets.** There are a number of ways in which banks can meet the HLA/TA ratio and the HLA/DD ratio in foreign currency including:

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[10] All data in this appendix are at end-September 2011, unless otherwise noticed.

[11] According to Cayazzo and others (2006), Bolivia, Croatia, Honduras, Latvia, Lebanon, Peru, Slovenia, and Uruguay applied a separate liquidity coverage ratio in foreign currency and Croatia, Honduras, Peru, and Slovenia applied a stricter requirement to foreign currency. A more recent research by Kokenyne and others (2010) reported that Cyprus, Egypt, and Turkey also applied a separate liquidity requirement for foreign currency.

- ***Replacing both foreign currency lending and foreign currency demand liabilities with AMD lending and AMD deposits***—this will bring about a positive side-effect of de-dollarization, even though this measure is not *intended* to de-dollarize the economy;

- ***Converting highly liquid AMD assets (i.e., government securities) to highly liquid foreign currency assets***—This may not be the first choice for banks as banks could violate the net open position requirement if they conduct this operation on a large scale. However, given the thin secondary market for government securities in Armenia, the risk that banks are compelled to sell a large size of government securities in a short interval should be minimized.

- ***Converting foreign currency lending to foreign currency HLA***—Banks can increase the HLA/TA ratio in foreign currency with this adjustment. This could lead to disintermediation, and reduce banks' profits as foreign currency HLA generates less interest income than foreign currency lending.

- ***Conversion of foreign currency demand deposits to time deposits***—Banks can increase the HLA/DD ratio by attracting more time deposit in foreign currency. This could again reduce banks' profits as interest rates for time deposits are higher than those of demand deposits.

144. **A simple simulation based on the end-September 2011 data indicates that one-time introduction of liquidity regulations by currency at the current level could have a non-negligible impacts on a few banks.** Assuming that banks adjust their balance sheets in line with the last two bullets above, the entire Armenian banking system could suffer a slight decrease in RoE and foreign currency lending. However, as holdings of foreign currency liquid assets are uneven across the bank, so are the possible impacts on the bank's balance sheet and profit. Gradual introduction and sufficient lead-time between the announcement and implementation would help avoid disruptive adjustments of balance sheets by these banks.

APPENDIX II. 2005 FSAP UPDATE: STATUS OF RECOMMENDATIONS

Sector	Status
Monetary operations	
1. Improve liquidity management by increasing the stock of local currency monetary instruments and rely less on foreign exchange operations; 2. Simplify liquidity management by eliminating the requirement that treasury bills issued for monetary operations mature by year-end; 3. Sterilization costs should shift to the budget, if they lead to losses by the CBA; and 4. Conduct monetary operations more frequently and on a larger scale, to encourage development of money markets	The authorities have put in place local currency monetary instruments and now foreign exchange operations are not geared to regular dram liquidity management. The bulk of sterilization operations are conducted by the issuance of T-bills with the costs borne by the government. Since 2006, the CBA has conducted monetary policy with an inflation targeting (IT) framework in which it uses short-term rates as the operating target. The CBA conducts monetary operations more frequently and flexibly in this context. Monetary operations have been closely scrutinized during Article IV and program missions and remain the subject of discussion. Improvements are still being made to better steer short-term rates under an IT regime.
Banking sector 1. Enhance monitoring of macroprudential risks in the banking sector; 2. Strengthen bank corporate governance through legal and regulatory measures in preference to further increases in the minimum absolute capital requirement; 3. Implement upward consolidated supervision to monitor banks' activities vis-à-vis their beneficial owners; 4. Improve communication between the CBA and external auditors of banks; 5. Amend the CBA law to explicitly protect supervisors from civil liability; 6. Amend Bankruptcy law for banks to extinguish bank owners' shareholder rights in case of insolvency; and 7. Continue to rely on compliance-based supervision while shifting toward risk-based supervision once the preconditions are in place.	The CBA has put in place a financial stability function, which carries out a substantial analysis of macroprudential risks. This work is integrated with supervision. Legislation has recently been introduced (Amendments to Regulation 1) that will require the banks to provide the CBA with details of shareholders (including beneficial owners) on an annual basis. The first submissions in this respect are required before 1 June 2012 for residents and 1 August for non-residents Work with external auditors has been improved but is still a work in progress. The CBA law has not been amended and this recommendation is being made again in the 2012 FSAP. Bank bankruptcy law addresses owners' rights in case of insolvency. The CBA has made good progress in moving toward risk based supervision.
Corporate governance 1. Broaden coverage and enhance enforcement of company law with a view to strengthening the fiduciary duties and accountabilities of Boards in the corporate and banking sector;	Corporate governance improvements have been made, particularly in the banking sector. CBA is now charged with regulation of issuers.

Sector	Status
2. Improve accounting and auditing practices and financial reporting; 3. Strengthen creditor rights and the enforcement in the court system; and 4. Strengthen disclosure of beneficial owners.	IFRS was adopted. Work remains on audit standards due to a shortage of qualified staff. Creditor rights remain a work in progress. Private resolution clauses and arbitration have improved collateral enforcement.
Insurance sector 1. Implement the new insurance law with an initial focus on licensing, accounting and auditing, financial reporting, solvency and technical reserve requirements, and reinsurance; 2. Strengthen the technical capabilities of the supervisory unit; and 3. Ensure implementation of the compulsory third-party-liability motor insurance.	The insurance law was implemented and has been reviewed as in keeping with standards for the current industry but would require further amendment to support a life insurance industry. The supervisory unit is in place with sufficient technical capacity. Mandatory motor vehicle insurance has been adopted.

Armenia: Selected Economic and Financial Indicators
(2008–2015)

	2008	2009	2010	2011		2012	2013	2014	2015
	Act.	Act.	Act.	EBS/11/170	Prel.	Proj.	Proj.	Proj.	Proj.
National income and prices									
Real GDP (percent change)	6.9	-14.1	2.1	4.6	4.6	3.8	4.0	4.0	4.0
Gross domestic product (in billions of drams)	3,568	3,142	3,502	3,871	3,819	4,172	4,533	4,903	5,303
Gross domestic product (in millions of U.S. dollars)	11,662	8,648	9,371	10,126	10,251	10,553	11,055	11,673	12,351
Gross domestic product per capita (in U.S. dollars)	3,606	2,647	2,840	3,039	3,076	3,135	3,252	3,400	3,562
CPI (period average; percent change)	9.0	3.5	7.3	7.8	7.7	3.9	4.2	4.0	4.0
CPI (end of period; percent change)	5.3	6.7	8.5	4.7	4.7	4.2	4.0	4.0	4.0
GDP deflator (percent change)	5.9	2.6	9.2	5.7	4.3	5.3	4.5	4.0	4.0
Poverty rate (in percent) 1/	27.6	34.1	…	…	…	…	…	…	…
Investment and saving (in percent of GDP)									
Investment	43.8	33.8	31.3	33.0	30.8	30.7	31.3	31.6	32.3
National savings	32.0	18.0	16.7	20.8	19.8	20.7	22.6	24.0	25.8
Money and credit (end of period)									
Reserve money (percent change)	5.3	13.8	-0.8	17.4	32.3	6.2	…	…	…
Broad money (percent change)	2.4	16.4	10.6	19.0	23.6	15.5	…	…	…
Velocity of broad money (end of period)	5.0	3.8	3.8	3.6	3.4	3.2	…	…	…
Commercial banks' 3-month lending rate (in percent)	17.9	19.1	17.7	…	…	…	…	…	…
Central government operations (in percent of GDP)									
Revenue and grants	20.5	20.9	21.0	21.7	21.9	21.3	21.9	22.1	22.5
Of which: tax revenue	16.8	16.1	16.2	16.3	16.5	17.1	17.5	17.9	18.3
Expenditure 2/	22.2	28.6	25.9	25.3	24.7	24.5	24.4	24.4	24.5
Overall balance on a cash basis	-1.2	-7.9	-4.5	-3.6	-2.8	-3.1	-2.5	-2.2	-2.0
Government and government-guaranteed debt (in percent of GDP)	16.1	40.2	39.2	42.0	40.6	42.3	42.1	41.5	41.9
Share of foreign currency debt (in percent)	84.0	88.9	87.4	87.5	87.1	87.1	83.2	79.5	76.7
External sector									
Exports of goods and services (in millions of U.S. dollars)	1,757	1,336	1,937	2,295	2,405	2,526	2,711	2,899	3,089
Imports of goods and services (in millions of U.S. dollars)	-4,748	-3,683	-4,212	-4,639	-4,790	-4,920	-5,111	-5,290	-5,491
Exports of goods and services (percent change)	-1.1	-24.0	45.0	18.5	24.1	5.1	7.3	7.0	6.5
Imports of goods and services (percent change)	32.3	-22.4	14.4	10.1	13.7	2.7	3.9	3.5	3.8
Current account balance (in percent of GDP)	-11.8	-15.8	-14.7	-12.2	-10.9	-10.0	-8.7	-7.6	-6.6
FDI (net, in millions of U.S. dollars)	940	725	562	652	447	498	538	578	624
External debt (in percent of GDP)	29.5	57.8	64.6	65.5	65.9	67.6	65.3	62.6	61.0
o.w. public debt (in percent of GDP) 3/	13.6	35.7	34.2	36.7	35.4	36.9	35.0	33.0	32.2
Debt service ratio (in percent of exports of goods and services) 3/	3.1	5.4	4.7	4.7	4.5	10.2	15.6	10.1	6.4
Gross international reserves (in millions of U.S. dollars) 4/	1,407	2,004	1,866	1,806	1,869	1,712	1,613	1,496	1,620
Import cover 5/	4.6	5.7	4.7	4.5	4.6	4.0	3.7	3.3	3.4
Nominal effective exchange rate (percent change) 6/	6.3	-8.4	-2.7	…	0.3	…	…	…	…
Real effective exchange rate (percent change) 6/	8.6	-7.5	1.5	…	6.9	…	…	…	…
End-of-period exchange rate (dram per U.S. dollar)	307	378	363	…	385.8	…	…	…	…
Average exchange rate (dram per U.S. dollar)	306	363	374	…	372.5	…	…	…	…
Memorandum item:									
Population (in millions)	3.2	3.3	3.3	…	3.3	…	…	…	…

Sources: Armenian authorities; and Fund staff estimates and projections.

1/ From 2008, the poverty rate is computed using a different methodology based on the new household survey.
2/ Including the gas subsidy in 2006–08.
3/ Based on government and government-guaranteed debt.
4/ Excluding the special privatization account (SPA), but including the Russian project loan.
5/ Gross international reserves in months of next year's imports of goods and services, including the SDR holdings.
6/ A positive sign denotes appreciation.

Armenia: Financial Soundness Indicators for the Banking Sector, 2008–11

(In percent, unless otherwise indicated)

	2008	2009				2010				2011		
	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep
Capital adequacy												
Total regulatory capital to risk-weighted assets	27.5	26.1	28.0	28.3	28.3	28.6	28.9	26.9	22.2	21.3	20.0	19.6
Capital (net worth) to assets	23.0	21.2	22.3	21.0	21.0	20.6	22.1	21.6	20.4	20.2	19.3	18.5
Asset composition												
Sectoral distribution of loans (in billions of drams)												
Industry (excluding energy sector)	66.2	78.0	76.0	89.6	115.3	121.2	127.7	136.7	156.7	164.9	165.6	172.3
Energy sector	19.7	17.3	18.6	26.7	31.7	32.0	24.3	37.0	47.2	56.3	65.4	72.7
Agriculture	36.5	44.6	45.9	45.2	44.2	48.1	48.7	50.0	52.4	57.3	66.4	75.6
Construction	39.5	43.3	44.0	48.9	54.1	57.5	58.8	65.3	74.8	78.8	87.3	85.8
Transport and communication	10.2	10.3	9.8	14.7	15.4	17.8	22.2	26.0	25.7	30.2	38.2	47.8
Trade/commerce	132.0	140.4	131.0	143.6	145.5	161.0	164.7	174.1	184.8	200.1	222.1	248.0
Sectoral distribution of loans to total loans (percent of total)												
Industry (excluding energy sector)	10.7	12.2	12.5	13.7	16.5	16.2	16.9	17.0	17.7	17.1	15.9	14.8
Energy sector	3.2	2.7	3.1	4.1	4.5	4.3	3.2	4.6	5.3	5.9	6.3	6.2
Agriculture	5.9	7.0	7.6	6.9	6.3	6.4	6.4	6.2	5.9	6.0	6.4	6.5
Construction	6.4	6.8	7.3	7.5	7.7	7.7	7.8	8.1	8.4	8.2	8.4	7.4
Transport and communication	1.7	1.6	1.6	2.2	2.2	2.4	2.9	3.2	2.9	3.1	3.7	4.1
Trade/commerce	21.4	22.0	21.6	22.0	20.8	21.6	21.8	21.6	20.9	20.8	21.3	21.3
Foreign exchange loans to total loans	38.7	48.7	51.5	54.3	54.0	54.3	55.4	56.4	58.0	59.6	59.6	60.2
Asset quality												
Nonperforming loans (in billions of drams)	27.9	50.2	64.6	64.5	36.3	43.9	38.5	37.9	28.6	35.7	37.4	56.0
Watch (up to 90 days past due)	21.8	36.6	38.8	27.0	14.9	23.2	18.3	18.9	11.3	20.7	19.3	35.0
Substandard (91-180 days past due)	3.4	11.4	19.3	23.2	10.1	16.0	13.8	13.8	11.3	8.5	13.9	13.6
Doubtful (181-270 days past due)	2.7	2.1	6.5	14.3	11.3	4.7	6.4	5.2	6.1	6.5	4.2	7.4
Loss (>270 days past due)	10.2	12.7	14.3	20.9	26.2	32.3	32.0	34.0	34.6	36.4	36.6	42.3
Nonperforming loans to gross loans	4.4	7.6	10.2	9.3	4.8	5.6	4.8	4.5	3.1	3.5	3.4	4.8
Provisions to nonperforming loans	38.2	26.9	26.6	33.1	46.7	36.2	41.4	41.9	56.7	51.0	50.9	41.3
Spread between highest and lowest rates of interbank borrowing in AMD	3.0	4.5	5.0	7.0	2.5	3.0	2.8	4.3	4.0	4.0	3.0	2.3
Spread between highest and lowest rates of interbank borrowing in foreign currency	1.0	8.0	11.3	5.8	3.0	4.0	7.6	2.8	5.0	2.0	5.0	4.1
Earnings and profitability												
ROA (profits to period average assets)	3.1	-0.1	-0.1	0.0	0.7	1.3	1.8	2.0	2.2	2.0	2.3	1.9
ROE (profits to period average equity)	13.6	-0.7	-0.3	0.1	3.4	6.1	8.5	9.5	10.2	10.0	11.7	9.8
Interest margin to gross income	45.9	47.1	44.4	42.2	42.2	43.5	44.1	44.3	43.8	43.6	43.4	42.4
Interest income to gross income	72.7	86.2	83.0	79.5	78.3	79.0	78.9	78.2	77.0	78.9	78.9	78.5
Noninterest expenses to gross income	42.0	45.3	44.1	41.5	40.7	39.4	39.6	38.9	39.2	36.9	36.6	35.6
Liquidity												
Liquid assets to total assets	23.8	29.1	32.0	35.2	34.2	33.9	30.1	30.1	29.5	28.9	26.8	28.3
Liquid assets to total short-term liabilities	103.1	135.4	145.3	146.2	142.1	140.4	128.8	129.3	131.5	137.2	132.0	125.0
Customer deposits to total (non-interbank) loans	81.4	92.1	96.3	100.7	96.4	96.5	86.8	86.5	87.2	87.1	85.3	89.3
Foreign exchange liabilities to total liabilities	55.1	69.4	70.9	68.9	67.6	70.3	67.4	66.2	64.9	65.3	65.5	66.0
Sensitivity to market risk												
Gross open positions in foreign exchange to capital	11.5	13.8	8.4	7.1	3.4	3.1	3.8	3.6	2.9	3.0	3.2	3.4
Net open position in FX to capital				4.3	1.9	0.4	-0.1	0.2	-0.2	0.5	0.4	-1.1

Source: Central Bank of Armenia.

APPENDIX III. RISK ASSESSMENT MATRIX

Nature/Source of Main Risks	Likelihood of Realization of Risk	Expected Impact on Financial Stability if Risk is Realized
Exchange rate depreciation as a result of current account shock	***Medium-low*** • The system is heavily dollarized, both in terms of assets and liabilities leaving it vulnerable to exchange rate movement • In 2009 a current account shock (contraction of remittances, chiefly from Russia) resulted in a 21 percent devaluation in a single day • The current account shock was due to the global contraction following Lehman brothers collapse • Many of the risks present in 2009 are still present globally. • Such a shock could occur if the Russian economy or oil prices experienced another such contraction (for example, as a second round effect of a eurozone event).	***Medium-high*** • On the liabilities side, a sharp depreciation accompanied by a liquidity shortages could create serious problems for banks with limited official ability to intervene (i.e., foreign currencyliquidity provision) • On the asset side, a sharp depreciation could feed through to credit risk and earners in AMD must repay in dollars creating losses Banks have capital and liquidity buffers in place and are subject to several measures to reduce f/x risk including higher reserve requirements and net open position limits
Asset quality deterioration as a result of global downturn	***Medium-low*** • Recent rapid credit growth could undermine asset quality • A global downturn that generally depresses economic activity, reduces remittances and the FDI would have an impact on asset quality	***Medium-low*** • This is a greater risk for some smaller institutions and not a broad systemic risk • In the case of a very severe shock or in combination with a general confidence problem, this risk could affect the whole of the banking system rather than individual institutions in isolation • Provisioning levels are currently reasonable, with low levels of actual losses evidenced in banks and overall capital levels remain sound
Failure of a foreign	***Medium*** • Parent banks are looked to as a	***Medium***

Nature/Source of Main Risks	Likelihood of Realization of Risk	Expected Impact on Financial Stability if Risk is Realized
shareholder	source of foreign exchange liquidity • There is some potential for subsidiaries to lose parent support, while most Armenian subs are self-funded, there would be a confidence effect if a parent collapsed. Further some banks rely on parents for liquidity support.	• The failure of a foreign parent is potentially disruptive • However, there is limited interconnectedness of Armenian banks would limit direction contagion; effects would be on the institution and reputational risk for the system institution
Concentration of liabilities and assets	***Medium-low*** • Stress testing shows that some institutions have concentrations in both deposits and loans and are susceptible to a outflow or default of a few, possibly connected, depositors and borrowers	***Medium-high*** • A failure of a few large borrowers or depositors could cause failure of a small or midsized bank • Such failure could result in a reduction of confidence in the banking system and, depending on context, could have a contagion effect

APPENDIX IV. STRUCTURE OF THE FINANCIAL SECTOR

Armenia: Structure of the Financial System

	Dec-09				Dec-10				Sep-11			
	Number	Total assets (in ARM Mln)	% of total assets	% of GDP	Number	Total assets (in ARM Mln)	% of total assets	% of GDP	Number	Total assets (in ARM Mln)	% of total assets	% of GDP
Banks	**21**	**1,346,105**	**100.0**	**42.8**	**21**	**1,553,097**	**100.0**	**44.4**	**21**	**1,889,324**	**100.0**	**48.7**
Of which:												
Five largest banks*	5	647,424	48.1	20.6	5	710,402	46.7	20.3	5	882,305	46.7	22.7
Domestically-controlled	10	643,438	47.8	20.5	10	723,498	45.8	20.7	10	865,536	45.8	22.3
Foreign-controlled	9	617,343	47.5	19.7	9	755,750	46.9	21.6	9	928,234	46.9	23.9
State-owned	1	21,571	1.6	0.7	1	22,462	1.7	0.6	1	32,908	1.7	0.8
Memo items: GDP (ARM Millions)				3,141,651				3,501,638				3,882,690

Source: ARKA and WEO, Sep 2011

*Of the five largest banks, 1 is domestically-controlled and 4 are foreign-controlled, and their data is accrodingly included in these two categories.

APPENDIX V. STRESS TESTING MATRIX

STRESS TEST MATRIX FOR THE BANKING SECTOR: SOLVENCY RISK

<table>
<tr><th rowspan="2">Domain</th><th colspan="2">Assumptions</th></tr>
<tr><th>Top-Down by Authorities</th><th>Top-down by FSAP Team</th></tr>
<tr><td>Institutions included</td><td>• 21</td><td>• 21</td></tr>
<tr><td>Market share</td><td>• 100 percent of total sector assets.
• 100 percent of total sector lending.</td><td>• 100 percent of total sector assets.
• 100 percent of total sector lending.</td></tr>
<tr><td>Data and baseline date</td><td>• Supervisory data.
• Data as of end-September, 2011.
• Consolidated data.</td><td>• Data provided by the CBA.
• Data as of end-September, 2011.
• Consolidated data</td></tr>
<tr><td>Methodology</td><td>• Excel based sensitivity and scenario analysis.
• EViews models considering a number of risk factors: credit to GDP, real and nominal GDP, credit growth, interest rates, real and nominal effective exchange rate, AMD/USD rate.</td><td>• Excel based scenario and sensitivity analysis.
• EViews models tailored to Armenia considering a number of risk factors: credit to GDP, real and nominal GDP, credit growth, interest rates, real and nominal effective exchange rate, AMD/USD rate.</td></tr>
<tr><td>Stress test horizon</td><td>• 2011-2016</td><td>• 2011-2016</td></tr>
<tr><td>Shocks</td><td colspan="2">Scenario analysis
• Combined shocks to real GDP growth and the nominal exchange rate vis-à-vis the US$.
• 1 (2) standard deviation(s) shock to real GDP in mild (severe) scenario; 15 (30) percent depreciation.
Sensitivity analysis
• Shocks to exchange rate, interest rate, and concentration. Authorities also consider loan losses.
• Baseline shocks will follow the CBA regular tests: exchange rate shocked by 18 percent, interest rates shocked by 2 percentage points. Large exposure shocked by assuming default of three largest borrowers for each bank.</td></tr>
<tr><td>Regulatory standards and hurdle metrics.</td><td>• CAR minimum 12 percent following local requirements
• Definition of capital follows Basel II.
• RWA follows local standards, (but is moving to Base II).
• Banks retain profits and do not pay dividends.</td><td>• CAR minimum 12 percent following local requirements
• Definition of capital follows Basel II.
• RWA follows local standards, (but is moving to Base II).
• Banks retain profits and do not pay dividends.
• RWA grows in line with nominal GDP.</td></tr>
</table>

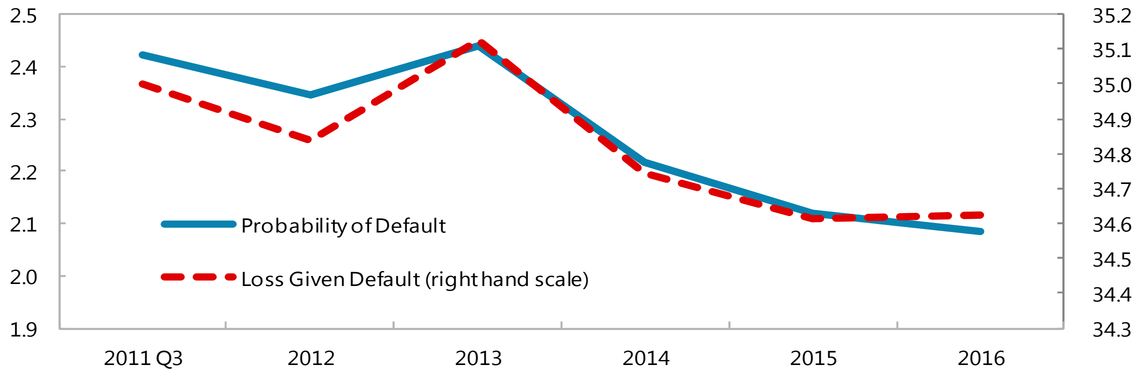
STRESS TEST MATRIX FOR THE BANKING SECTOR: LIQUIDITY RISK

Domain	Assumptions	
	Top-Down by Authorities	Top-down by FSAP Team
Institutions included	• 21	• 21
Market share	• 100 percent of total sector assets. • 100 percent of total sector lending.	• 100 percent of total sector assets. • 100 percent of total sector lending.
Data and baseline date	• Supervisory data. • Data as of end-September 2011. • Consolidated data.	• Data provided by the CBA. • Data as of end-September 2011. • Consolidated data
Methodology (e.g., included in scenario analysis linking solvency and liquidity, separate test using ad hoc model/balance sheet)	• Ad hoc bank-by-bank balance sheet analysis of parent funding and deposit withdrawal shocks..	• Ad hoc bank-by-bank balance sheet analysis of deposit withdrawal shocks.
Risks (e.g., funding liquidity shock, market liquidity shock, both)	• (a) Parent banks withdraw their deposits and loans to their subsidiaries and branches in Armenia; (b) Rapid withdrawals of resident and nonresident deposits; and (c) a combination of the two first scenarios.	• (a) Rapid withdrawals of resident and nonresident deposits; (b) withdrawal of largest deposits..
Regulatory standards and hurdle metrics.	• Two liquidity ratios are followed: (i) Highly Liquid Assets (HLA) over Total Assets (TA) with a 15 percent minimum; and (ii) HLA over Demand Liabilities (DL) with a 60 percent minimum.	• Two liquidity ratios are followed: (i) Highly Liquid Assets (HLA) over Total Assets (TA) with a 15 percent minimum; and (ii) HLA over Demand Liabilities (DL) with a 60 percent minimum.

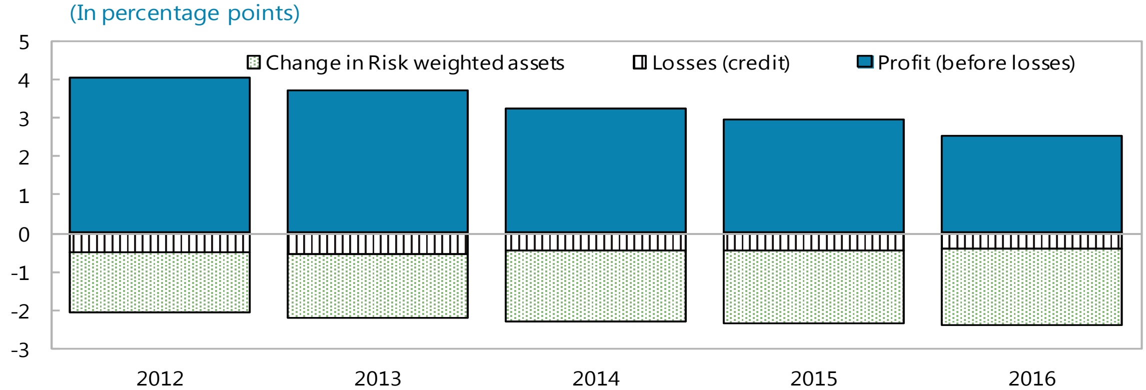
APPENDIX VI. SUMMARY OF STRESS TEST RESULTS

Baseline Scenario

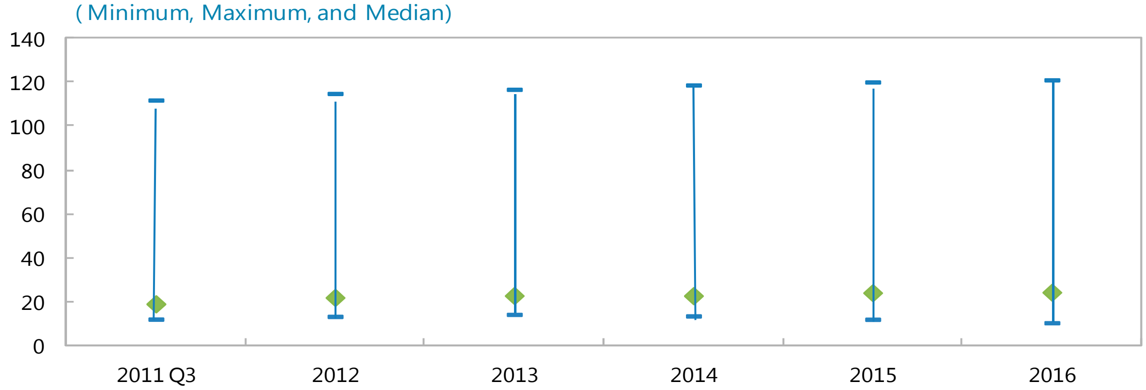
Credit Risk Measures
(In percent)



Contribution to Capital Adequacy Ratio
(In percentage points)

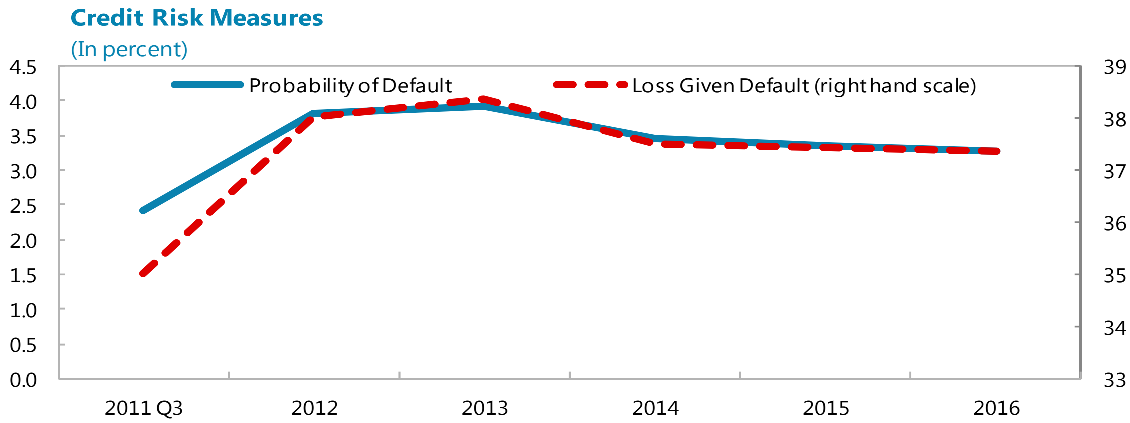


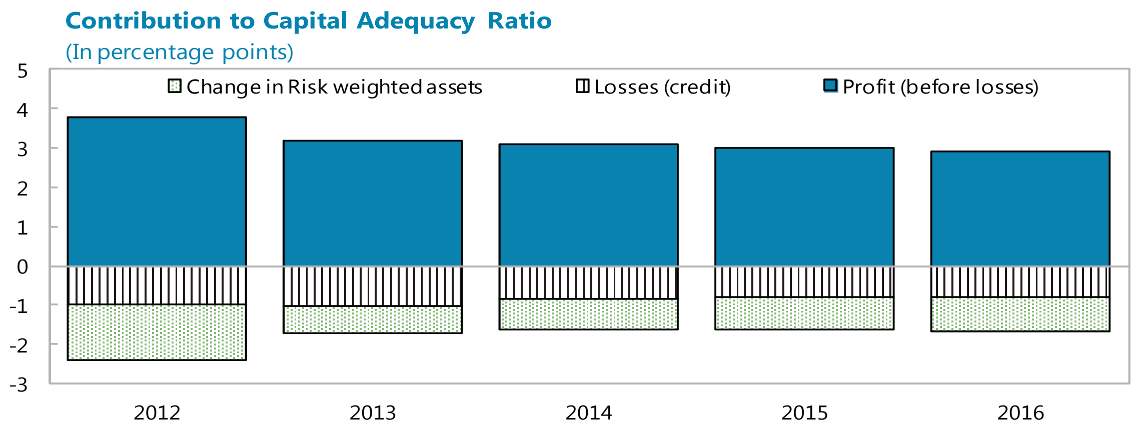
Capital Adequacy Ratio
(Minimum, Maximum, and Median)

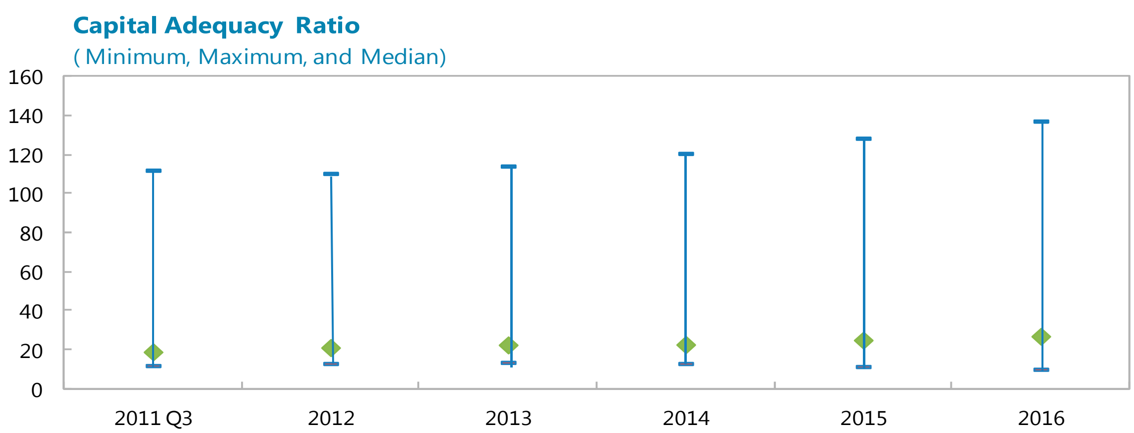


Source: Staff calculations.

Moderate Scenario



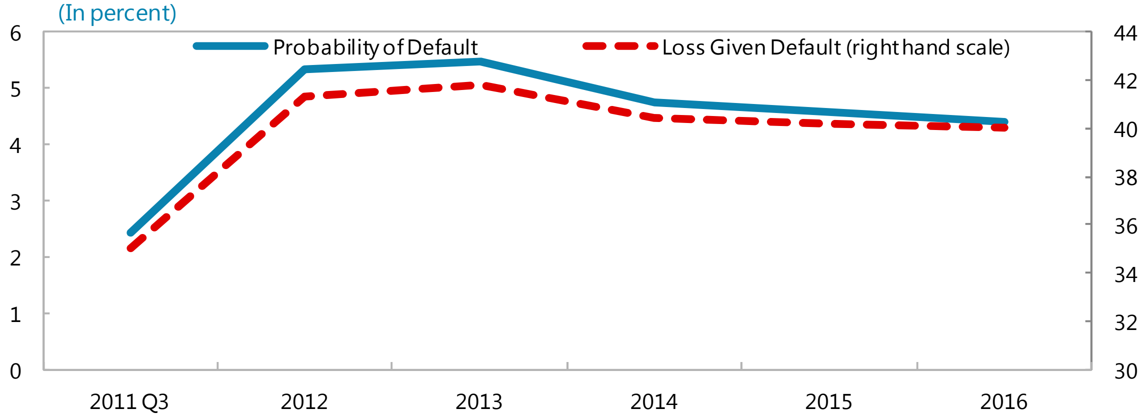




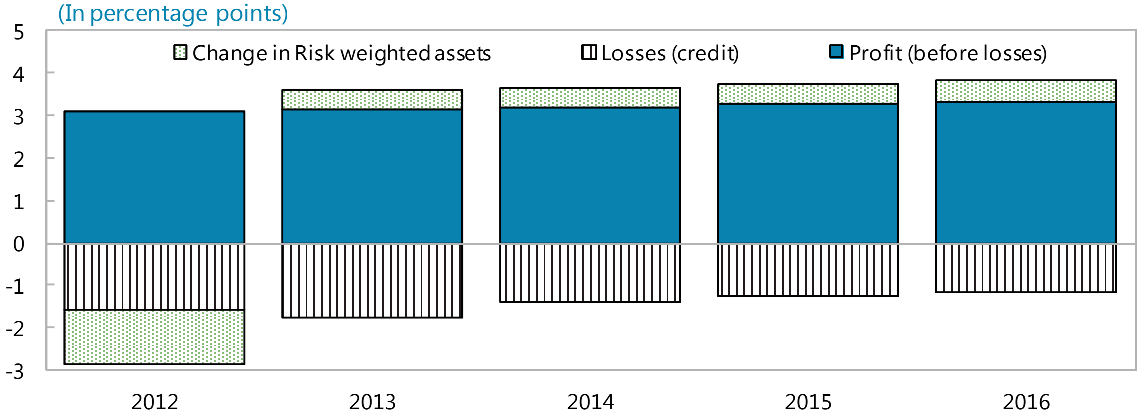
Source: Staff calculations.

Severe Scenario

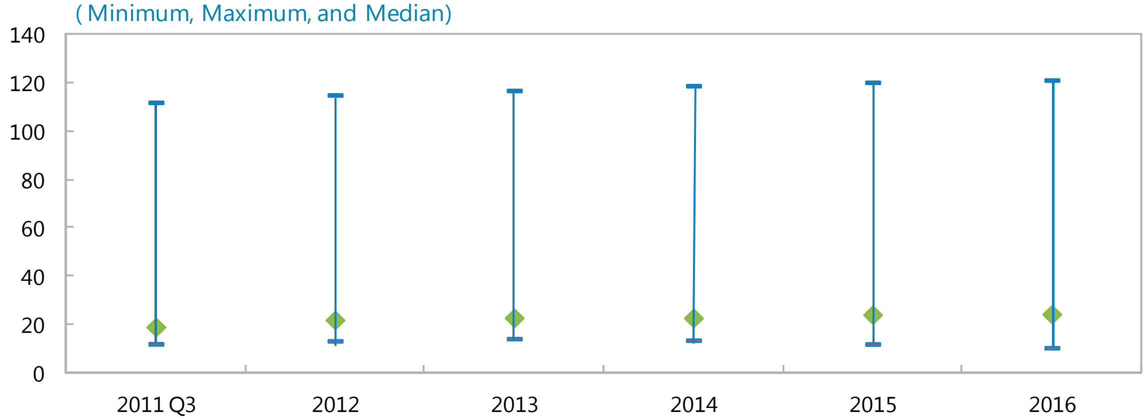
Credit Risk Measures
(In percent)



Contribution to Capital Adequacy Ratio
(In percentage points)



Capital Adequacy Ratio
(Minimum, Maximum, and Median)



Source: Staff calculations.