INTERNATIONAL MONETARY FUND

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REPUBLIC OF ARMENIA

December 2018

FINANCIAL SYSTEM STABILITY ASSESSMENT—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE REPUBLIC OF ARMENIA

In the context of the Financial Sector Assessment Program, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its November 30, 2018 consideration of the FSSA.
- The **Financial System Stability Assessment** (FSSA) for the Republic of Armenia, prepared by a staff team of the IMF for the Executive Board's consideration on November 30, 2018. This report is based on the work of an Joint IMF/WB Financial Sector Assessment Program (FSAP) mission to the Republic of Armenia during January and June 2018. The FSSA report was completed on November 12.
- A **Statement by the Executive Director** for the Republic of Armenia.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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December 3, 2018

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IMF Executive Board Concludes Armenia's 2018 Financial System Stability Assessment

On November 30, 2018, the Executive Board of the International Monetary Fund (IMF) discussed the Financial System Stability Assessment (FSSA) of Armenia.[1]

Armenia's financial system has expanded further since the 2012 Financial Sector Assessment Program (FSAP). The country's macroeconomic performance has been satisfactory, and the financial system has been stable. Armenia's banking sector has weathered the 2014 economic slowdown, aided by additional capital injected by shareholders, several mergers, and improved regulation and supervision. At present, financial soundness indicators show signs of improvement. All banks meet the 12 percent minimum capital requirement. Bank profitability has gradually recovered, although it is still below pre-crisis levels. Nonperforming loans (NPLs) have fallen, of which a substantial proportion is covered by provisions, although NPL ratios are still high in a few banks.

Armenia is a small open highly dollarized economy subject to external shocks. Against this backdrop, the Armenia's financial system is relatively shallow and dominated by banks. The banking sector's assets equal about 78 percent of GDP, and subsidiaries of foreign banks make up a sizable proportion of banking assets. Capital markets are thin, and external financing is important for long-term financing, given a small domestic investor base. As illustrated by the stress tests, risks from a high degree of financial dollarization are significant, including credit risks and limited liquidity cushions in foreign currency in the event of external shocks.

Since the 2012 FSAP the CBA has made progress in strengthening Armenia's financial system. The CBA has adopted measures to mitigate risks from dollarization. Higher risk-weights and

[1] The Financial Sector Assessment Program (FSAP), established in 1999, is a comprehensive and in-depth assessment of a country's financial sector. FSAPs provide input for Article IV consultations and thus enhance Fund surveillance. FSAPs are mandatory for the 29 jurisdictions with systemically important financial sectors and otherwise conducted upon request from member countries. The key findings of an FSAP are summarized in a Financial System Stability Assessment (FSSA), which is discussed by the IMF Executive Board. In cases where the FSSA is discussed separately from the Article IV consultation, at the conclusion of the discussion, the Chairperson of the Board summarizes the views of Executive Directors and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in a summing up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

provisioning were imposed on dollar assets to absorb the credit risk due to unhedged borrowing. Liquidity requirements were introduced in 2012 to mitigate the higher liquidity risk of foreign exchange funding. At the same time, the CBA has pursued an ambitious agenda to strengthen financial oversight, which includes adopting a risk-based supervision framework and addressing gaps in the regulatory framework identified in the previous FSAP.

Executive Board Assessment[2]

Executive Directors agreed with the main findings and recommendations of the Financial System Stability Assessment (FSSA). They welcomed the progress made by the authorities in strengthening financial sector oversight and promoting financial deepening to further enhance financial sector resilience. Directors commended the Central Bank of Armenia (CBA) for the reforms undertaken since the 2012 FSAP review, notably in adopting the prudential measures to mitigate risks from dollarization and upgrading the risk-based supervision framework. They encouraged the authorities to prioritize reforms, recognizing capacity constraints.

While welcoming the measures already adopted, Directors underlined that vulnerabilities remain from high levels of dollarization and insufficient liquidity cushions in foreign currency. They recommended that the authorities adopt the capital conservation buffer and the surcharge for domestic systemically-important banks as planned, as well as measures to address credit risk from unhedged foreign exchange exposures, such as the introduction of a stressed debt service to income ratio limit. In addition, Directors advised the gradual introduction of the requirement for banks to maintain reserves in foreign currency for liabilities denominated in foreign currency and the liquidity coverage ratio and net stable funding ratio in Armenian dram and in U.S. dollars. They also emphasized the need to be prepared to implement the countercyclical capital buffer, if the current trend in credit growth persists.

Directors commended the improvements in banking oversight, but noted that shortcomings remain. They called on the authorities to refine the risk-based supervision framework for a more granular assessment of banks' capital needs, enforce large exposure limits, and amend the definition of nonperforming and restructured loans in line with international best practices. In addition, Directors encouraged the authorities to implement measures to improve transparency in reporting and accounting by corporations and sub-national and state-owned entities.

Directors noted the narrow functions of the Deposit Guarantee Funds and the absence of a true interagency high-level crisis management committee. They urged the authorities to fully develop all components of the financial safety net and crisis management arrangements in line with

[2] At the conclusion of the discussion, the Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summing up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm.

international standards and best practices. Given the significant presence of foreign subsidiaries, they stressed the importance of expanding the supervisory memoranda of understanding to include resolution planning of foreign subsidiaries in Armenia.

Directors welcomed the progress in enhancing the AML/CFT framework since the 2015 assessment. They looked forward to continued efforts to address the remaining gaps to align the framework with the Financial Action Task Force standard.

INTERNATIONAL MONETARY FUND

REPUBLIC OF ARMENIA

FINANCIAL SYSTEM STABILITY ASSESSMENT

November 16, 2018

Approved By
James Morsink and Juha Kahkonen

Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited the Republic of Armenia in June 2018. The FSAP findings were discussed with the authorities during an MCD staff visit in September 2018.

- The FSAP team was led by Liliana Schumacher (IMF) and Isfandyar Zaman Khan (World Bank) and comprised Romain Veyrune (IMF Deputy Mission Chief), Chikako Baba (IMF Deputy Mission Chief); Angela Prygozhyna (World Bank Deputy Mission Chief); Marco Pani, David Parker, Galen Sher (all MCM); SeokHyun Yoon (MCD); Oliver Masetti, Tanya Konidaris, Fiona Stewart, Philippe Marie Aguera, Siegfried Zottel, Gynedi Srinivas, Karol Karpinski , Nina Mocheva and Aquiles Almansi (all World Bank) and Jack Jennings and Benjamin Neudorfer (both external experts).

- FSAPs assess the stability of the financial system as a whole, and not that of individual institutions. They are intended to help countries identify key sources of systemic risk in the financial sector and implement policies to enhance its resilience to shocks and contagion. Certain categories of risk affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not covered in FSAPs.

- The mission met with Deputy Prime Minister Mr. Mher Grigoryan, Minister of Economy Mr. Artsvik Minasyan, Deputy Minister of Finance Mr. Armen Hayrapetyan, Central Bank Governor Mr. Arthur Javadyan, Deputy Governors Messrs. Nerses Yeritsyan and Vakhtang Abrahamyan, senior staff of the central bank and relevant ministries, as well as senior managers of banks, credit institutions, insurance, pension fund managers and donors/IFIs.

- This report was prepared by Liliana Schumacher with contributions from the members of the FSAP team.

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APPENDICES

ANNEX

Glossary

AMD	Armenian Dram
AML/CFT	Anti-Money Laundering/Countering the Financing of Terrorism
ARA	Assessing Reserve Adequacy
ArCA	Armenian Card
ARUS	Armenia Remittance Unified System
BCBS	Basel Committee on Banking Supervision
BCP	Basel Core Principles
CBA	Central Bank of Armenia
CCoB	Capital conservation buffer
CCP	Central Counterparty Clearance
CCyB	Countercyclical capital buffer
CDA	Central Depository of Armenia
CERT	Computer Emergency Response Team
CES	Compulsory Enforcement Services
CET 1	Common Equity Tier 1
CMC	Crisis Management Committee
CPs	Core Principles
CSD	Central Securities Depository
DGF	Deposit Guarantee Fund
DICA	Development and Investment Corporation of Armenia
D-SIB	Domestic systemically important bank
DSTI	Debt service to income
DTI	Debt-To-Income Ratio
ELA	Emergency Liquidity Assistance
EPS	Electronic Payment System
ETF	Exchange Traded Funds
FMC	Financial Monitoring Center
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSD	Financial Supervision Department
FSSA	Financial System Stability Assessment
FSSRC	Financial Stability and Special Regulation Committee
FX	Foreign exchange
GAF	German Armenian Fund
GDP	Gross Domestic Product
GSASS	Government Securities Accounting and Settlement System
GoA	Government of Armenia
HQLA	High Quality Liquid Assets
ICAAP	Internal capital adequacy assessment process
IFI	International Financial Institution
IFRS	International Financial Reporting Standard

IRR	Interest Rate Risk
LBB	Law on Banking and Banking Activities
LCB	Law on the Central Bank of the Republic of Armenia
LCR	Liquidity Coverage Ratio
LOLR	Lender of Last Resort
LTV	Loan to value
M&E	Monitoring & Evaluations
MoEDI	Ministry of Economic Development and Investment
MOF	Minister of Finance
MoJ	Ministry of Justice
MOU	Memorandum of Understanding
MSME	Micro, small and medium-sized Enterprise
MTDS	Medium-Term Debt Management Strategy
NMC	National Mortgage Cooperation
NPL	Nonperforming loan
NSFR	Net Stable Funding Ratio
OTC	Over-The-Counter
P&A	Purchase and Assumption
PCA	Prompt Corrective Action
PEP	Politically Exposed Person
PFMI	Principles for Financial Market Infrastructures
PPP	Public-Private Partnership
PSO	Payments Service Operator
PSPSO	Payments and Settlement Systems and Payment and Settlement Organizations
RBS	Risk Based Supervision
ROA	Return on assets
ROE	Return on equity
ROSC	Report on Observance of Standards and Codes
RRP	Recovery and Resolution Plans
RWA	Risk weighted assets
SOE	State-Owned Entity
SRC	State Revenue Office
SRO	Self Regulating Organization
SRR	Special Bank Resolution Regime
SSS	Securities Settlement System
STeM	Stress Testing Matrix
STR	Suspicious Transaction Report
TA	Total assets
TD	Top-down
UCO	Universal Credit Organization
USD	United States Dollar
VAT	Value Added Tax
WEO	World Economic Outlook

EXECUTIVE SUMMARY

The Armenian banking sector is recovering from the 2014 economic slowdown, aided by additional capital injected by shareholders, several mergers, and improved regulation and supervision. However, banks, including the largest ones, are vulnerable to external shocks because high levels of dollarization expose them to FX-related credit and liquidity risks. These risks can be mitigated with the adoption of a *stressed* debt service to income ratio limit, the gradual introduction of reserve requirements in foreign currency for liabilities denominated in foreign currency, and the adoption of the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) in domestic currency and in United States dollars (USD). The introduction of the capital surcharge for domestic systemically important banks is also needed.

From a cyclical perspective, with the credit to GDP gap estimated to be closing, the recent pick-up in credit growth warrants close monitoring of bank risks. Banks' low profitability levels, coupled with the current abundant liquidity, seem to be providing incentives to adopt excessive risk-taking behavior. Moreover, credit quality has not yet fully recovered from the 2014 slowdown. The authorities should implement the planned Basel III's capital buffers starting from next year, including the framework for the countercyclical capital buffer, and the possibility for supervisors to increase capital requirements for banks with higher risks. Consideration should also be given to remunerating reserve requirements.

The Central Bank of Armenia (CBA) has made significant progress in strengthening banking supervision with the adoption of the Risk-Based Supervision (RBS) framework and addressing gaps in the regulatory framework identified in the previous FSAP. Efforts should now be aimed at refining the risk-based differentiation in capital levels using stress testing and the internal capital adequacy assessment process (ICAAP); consistently enforce large exposure limits; amend the definition of nonperforming and restructured loans to reflect international best practices; and incorporate the understanding of International Financial Reporting Standard (IFRS) 9 methodologies in supervisory practices to enable a more comprehensive assessment of a bank's credit risk management capabilities.

The crisis management framework is weakened by flaws in the approach to bank resolution; the narrow functions of the Deposit Guarantee Funds (DGF); and the absence of a true interagency high-level crisis management committee. Considering the significant presence of foreign subsidiaries, the supervisory Memoranda of Understanding (MOUs) should be expanded to include resolution planning of foreign subsidiaries in Armenia and, in the absence or inadequate resolution provisions, the authorities should develop contingency plans to deal with stress in foreign banks. Recovery and resolution plans should also be implemented for domestic banks, in particular when they are of systemic importance.

Since the last FSAP in 2012, there have been substantial improvements in the legal framework and key policy decisions that led to further development of the financial sector. However, to fully reap the benefits of these reforms, further efforts are needed.

The bankruptcy law was reformed in 2016 with the objective of increasing the potential for rehabilitation of financially distressed companies and individual debtors. However, further improvements are necessary to ensure that the main function of insolvency proceedings is to maximize return to creditors through reorganization of the debtor, or as a collective debt collection mechanism by pooling together a debtor's assets for the benefit of all creditors. Due to existing shortcomings in the insolvency law and inefficient individual debt enforcement processes, insolvency in Armenia is often used as a debt collection tool by individual creditors, while the rights of secured creditors in insolvency proceedings are not sufficiently protected.

Access to finance for medium and small enterprises (MSME) remains constrained by informality and unreliable financial reporting, which result in excessive collateral requirements, high costs, and a non-diversified product offering. The efficiency of the fragmented government support programs should be enhanced by consolidation and improved targeting of programs and a better coordination among the various stakeholders.

The full implementation of pension reform in July 2018 was an important step towards the development of capital markets. The administration of the pension system has been set up on a cost-effective basis and is working well. The mandatory pension system should be maintained.

A cross-cutting issue affecting both financial stability and development is the lack of transparency in reporting and accounting by corporations, sub-national entities and state-owned entities (SOEs). Measures to increase transparency, including improved accounting standards and audit requirements, are thus crucial to support financial stability surveillance and financial development, in particular to enable resources from pension funds to be channeled into the real economy.

	Table 1. Armenia: Key Recommendations	I/ST/MT/1
	Financial Stability	
1	Implementation of Basel III capital buffers as planned (CBA, ¶29).	ST-MT
2	Start collecting income information for the adoption of a stressed debt service to income ratio limit for unhedged FX exposures (CBA, ¶30).	ST
3	Until ready for DSTI implementation, adopt a stressed loan to value ratio limit (CBA, ¶30).	ST
4	Prepare an action plan to reform the reserve requirement regime in the medium term. Include a clear timeline of implementation (CBA, ¶19-21; ¶32).	ST
5	Adopt the LCR and NSFR in AMD and USD (CBA, ¶31-32).	MT
6	Strengthen the liquidity management framework (CBA, MoF, ¶18).	ST
7	Operationalize the emergency liquidity assistance (CBA, ¶23-25).	ST
8	Use Pillar II to mitigate consequences from excessive risk-taking (CBA, ¶34).	ST
9	Develop and implement a plan to bring down gradually exposures exceeding limits (¶CBA, 36).	ST
10	Adopt a definition of nonperforming loans and restructured loans in line with international best practices (CBA, ¶37).	ST
11	Adopt a special bank resolution regime to ensure that no court or other body can reverse any CBA resolution action (¶CBA, Parliament, 42).	MT
12	Expand the DGF's mandate to "paybox plus" (Parliament, ¶43).	MT
13	Establish a high-level crisis management committee including DGF and MOF (CBA, MoF, DGF, ¶44).	ST
14	Ensure that all banks develop acceptable recovery plans and the CBA to prepare resolution plans for systemically important banks (CBA, ¶45).	ST
15	Start expanding supervisory MOUs to include Recovery and Resolution Planning, requesting them from parent supervisors. In the absence of proper arrangements, prepare domestic resolution plans (CBA, ¶46-47).	ST-MT
16	Strengthen AML/CFT measures aimed at detecting the laundering of proceeds of corruption (Parliament, MoJ, CBA, ¶41).	MT
	Financial Development	I/ST/MT
17	Continuing support for pension reform (Parliament; MOF, CBA, ¶48).	I
18	Amend the bankruptcy law to strengthen the protection of secured creditors rights. Introduce further measures to expedite and improve the efficiency of court enforcement of debt-related cases (Parliament, ¶49 first bullet).	MT
19	Consolidate government programs and institutions for MSMEs support to enhance efficiency and targeting (MoF, CBA, ¶49 second bullet).	ST
20	Advance accounting and auditing reform to foster corporate and SOE transparency; introduce simplified financial reporting requirements for SMEs (Parliament, ¶50).	ST

1/ Immediately; ST: short term= less than 1 year; MT: medium term= 1–5 years. When measures require Parliamentary intervention, it is expected that preparations of draft laws are made in the short term.

FINANCIAL SECTOR STRUCTURE

1. **The financial system has expanded since the 2012 FSAP and remains dominated by banks (Table 2).** The banking sector's assets have risen from 58 percent of GDP in 2012 to 78 percent in 2017, and branch and ATM penetration have also grown rapidly. A large proportion of banking assets are of subsidiaries of foreign banks (Table 3); while nonresidents account for about 20 percent of deposits and 8 percent of loans. Higher capital requirements announced in 2014 and implemented in 2017 have led to the merger/acquisition of four banks since 2015. The nonbank sector is still nascent but growing. The share of nonbank credit sector (non-deposit taking institutions) doubled in 6 years to 8.5 percent of GDP at end of 2017. The insurance sector expanded after third-party auto insurance became mandatory in 2010, but since 2013 its assets have remained broadly constant at about 1 percent of GDP; nonlife insurance premia collected are low by international comparison, and there are no life insurance services. The reform of the pension system, which was launched in 2011 and came into full force on July 1, 2018, has introduced a defined-contribution scheme based on funds run by two private management companies under the CBA supervision. By end-2017, there were six funds, with assets equivalent to 2 percent of GDP.

Table 2. Armenia: Structure of the Financial System

	2012				2017			
	Assets, billions of drams	Share of GDP, percent	Share of Total System's Assets	Number of Institutions	Assets, billions of drams	Share of GDP, percent	Share of Total System's Assets	Number of Institutions
Banks	2470.6	57.9	90.1	22	4364.4	78.2	85.5	17
Credit Organizations	168.5	4.0	6.1	32	474.8	8.5	9.3	35
Insurance Companies	38.4	0.9	1.4	7	49.5	0.9	1.0	7
Investment Companies	23.6	0.6	0.9	9	64.3	1.2	1.3	9
Mandatory Pension Funds*	…	…	…	…	105.7	1.9	2.1	6
Other Financial Organizations*	42.3	1.0	1.5	150	44.0	0.8	0.9	139
Total	2743.4	64.3	100.0	220	5102.7	91.4	100.0	209

Source: Central Bank of Armenia.
*Includes payment companies and pawnshops.
*Includes net assets.

Table 3. Armenia: Bank Size and Ownership

	Bank	Share of Assets, percent	Domicile of Majority Shareholder
1	Ameria	15.5	Cyprus
2	Armbusiness	13.2	Armenia
3	Ardshinbank	13.0	Armenia
4	ACBA-Credit Agricole	7.1	Armenia
5	InecoBank	6.4	Armenia
6	Converse	5.8	USA
7	VTB Armenia	5.0	Russia
8	Ararat	4.9	Armenia
9	HSBC Armenia	4.8	UK
10	Unibank	4.7	Cyprus
11	Armeconom	4.4	Armenia
12	ArmSwiss	3.7	Luxembourg
13	Artsakh	3.1	Armenia
14	ID Bank (formerly Anelik)	3.0	Cyprus
15	Evoca	2.4	Russia
16	Byblos	2.0	Lebanon
17	Mellat	1.1	Iran

Source: KPMG, Armenian Banking Sector Overview 2017Q4.

2. **Markets are growing from a low base but remain shallow (Table 4).** Issuances in the primary market are still dominated by government bonds and by three commercial banks, and almost all repo and reverse repo transactions in the secondary market involve government bonds. The interbank market is small but not insignificant for some banks (Figure 1). As of December 2017, interbank transactions in AMD represented 8 percent of banks' funding.

Table 4. Armenia: Key Financial Markets

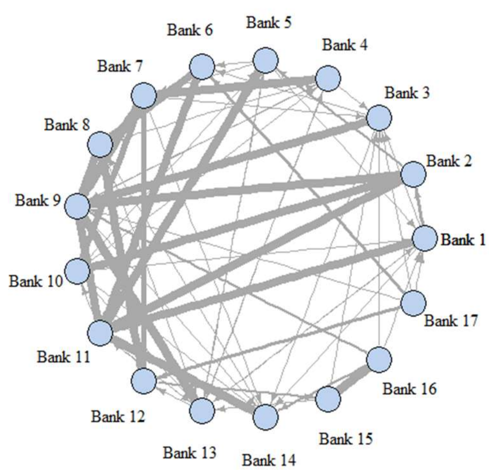
	2012		2017	
	Outstanding Amounts, billions of drams	Share of GDP, percent	Outstanding Amounts, billions of drams	Share of GDP, percent
Government bonds	249.4	5.8	546.6	9.8
Corporate bonds	9.1	0.2	92.2	1.7
Shares	52.9	1.2	57.7	1.0

Source: Central Bank of Armenia.

Figure 1. Interbank Market (November 2017)

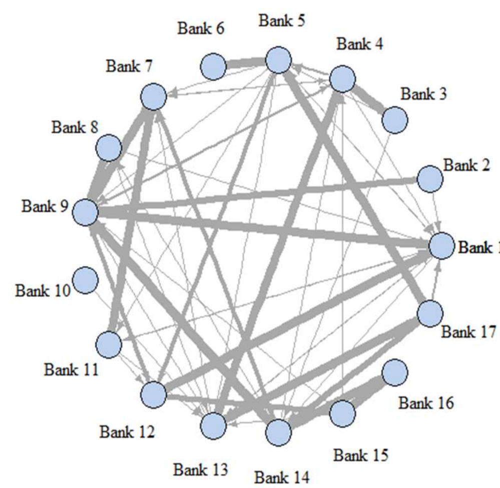
AMD Exposure Network

The intensity of interconnections is higher for AMD than for FX interbank transactions. A few banks play…



FX Exposure Network.

a more important role in reallocating reserves in both currencies; the FX market is concentrated around fewer players.



Source: Central Bank of Armenia; and IMF staff calculations.

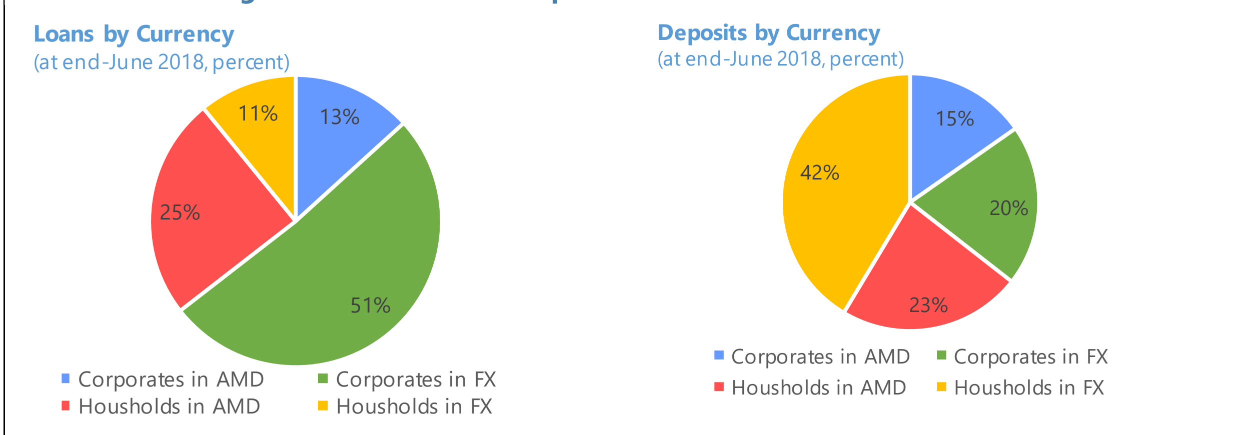
SYSTEMIC RISK AND RESILIENCE

A. Structural Vulnerabilities

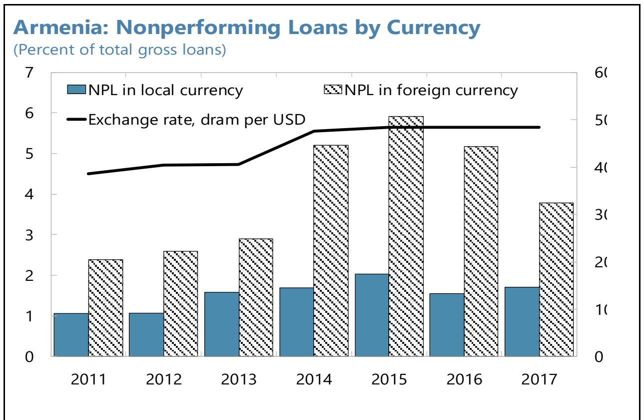
Risks from External Shocks and Dollarization

3. Armenia is highly dollarized (Figure 2), exposing banks to unhedged borrowers. Over 60 percent of household deposits, including most of their saving accounts, are denominated in FX. They are underpinned by remittance inflows, which represented 8.5 percent of GDP in 2017. On the lending side, 80 percent of corporate loans and about 30 percent of household loans (mainly mortgages) are denominated in FX. Competition for market share encourages banks to remunerate FX deposits at rates higher that those consistent with the remuneration of high quality liquid assets (HQLA) holdings; to avoid the negative carry, banks lend to hedged and unhedged customers. Not surprisingly, nonperforming loan (NPL) ratios are higher for dollar-denominated loans and sensitive to currency depreciation.

Figure 2. Loans to and Deposits from the Non-Financial Sector



Source: Financial Stability Department, Central Bank of Armenia



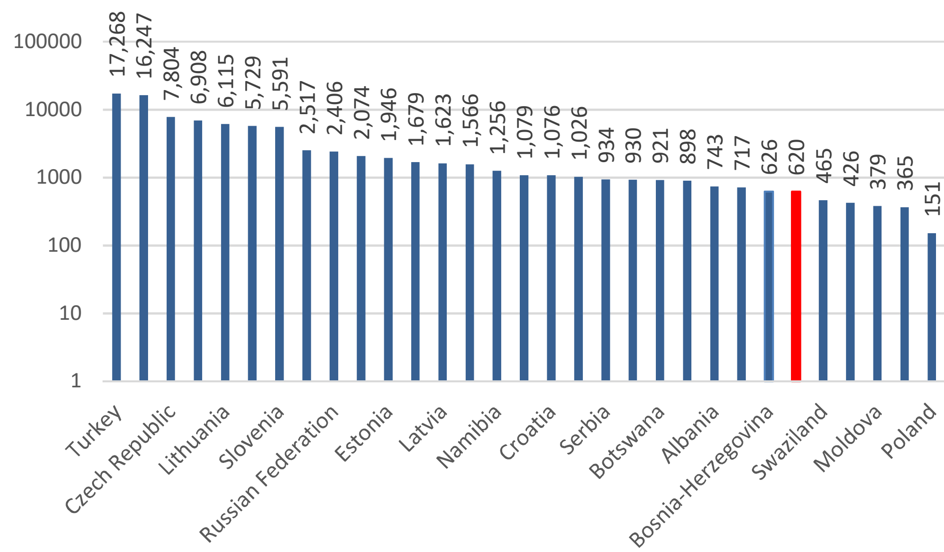
Sources: Central Bank of Armenia; and IMF staff calculations.

4. There are also funding and liquidity risks associated with dollarization. FX funding was about two thirds of total funding between 2012–2017 and the loan to deposit ratio in FX was about 1.4 in 2017 while this ratio was about 1 in AMD. Moreover, as of February 2018, about 30 percent of contractual outflows have a residual maturity of less than 30 days (the bulk of the short-term liabilities is concentrated on corporate demand deposits and retail deposits). Liquidity risks are promoted by the requirement to maintain reserve requirements in AMD for liabilities denominated in foreign currency, which results in lower liquid assets in foreign currency than in domestic currency (about 6 and 18 percent of total assets respectively). Naturally, the central bank has limited capacity to provide emergency liquidity assistance in FX. [1]

Low Profitability

5. The rapid expansion of Armenia's banking sector over the past decade was accompanied by a significant decline in profitability. Between 2007 and 2017, while the total assets of the banking sector increased from 24.3 to 78.2 percent of GDP and banking capital more than doubled, the total profits of Armenian banks remained broadly constant (aside from cyclical fluctuations) in absolute terms (about $60 million per year on average). In 2017, the average return on assets (ROA) of Armenian banks was less than 1 percent and the average return on equity (ROE) was about 6 percent. Low profitability seems to originate from a high volume of nonperforming loans, and declining interest spreads (Figure 3). There are also some indications that profitability could benefit from economies of scale. Armenian banks are generally smaller than banks in comparable countries when using a variety of indicators. These include the average bank assets (which was about $0.53 billion in Armenia in 2017) and the size of their market: the GDP *per bank* amounted in 2016 to $0.62 billion. With a very moderate concentration index of Herfindahl-Hirschman by assets of 8.7 percent, it appears that additional mergers could be beneficial.

Selected Countries: GDP per bank
(average 2016, millions of U.S. dollars)



Sources: FitchConnect, IMF World Economic Outlook data base; and IMF staff calculations

6. Since 2014, the low profitability trend has been accentuated by the economic downturn and by the increase in minimum capital requirements. The economic slowdown triggered an increase in provisions for nonperforming loans. At the same time, the CBA's 2014 decision to raise minimum *absolute* (i.e., not adjusted for risk) capital requirements six-fold from 2017 (to promote mergers) induced an inflow of new capital in the sector that promoted a further expansion of deposits to preserve leverage and thereby returns to shareholders, spurring a

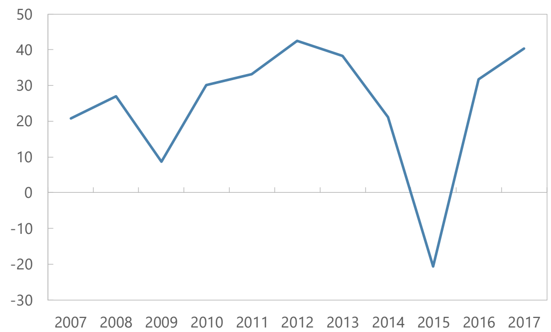
[1] As of end-2017, the CBA's net international reserves were about $1.7 billion—i.e., about 40 percent of bank liabilities in foreign currency.

competition for loans and deposits that further compressed interest spreads as funding costs increased in real terms.

Figure 3. Drivers of Profitability of Armenian Banks

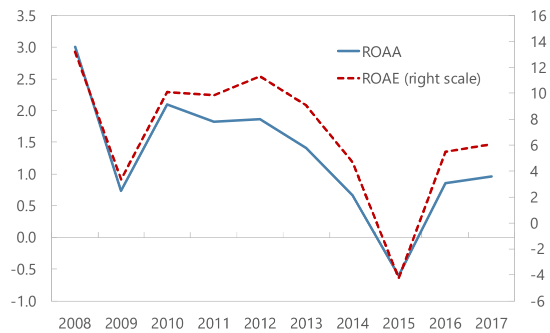
While bank profits remained broadly constant in levels (with some cyclical fluctuations) over the past ten years…

Net Profits 2007–17 (billion of drams)



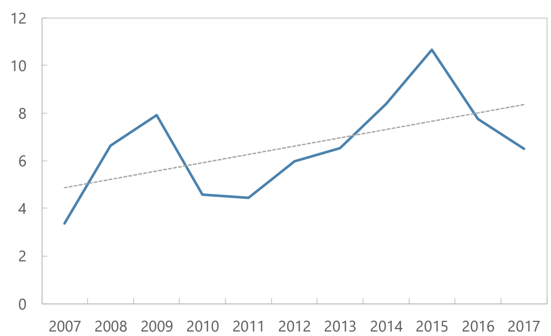
…they exhibit a marked downward trend in proportion to assets and—even more—to equity, signaling a declining capacity of banks to reward investors.

ROAA and ROAE 2008–17



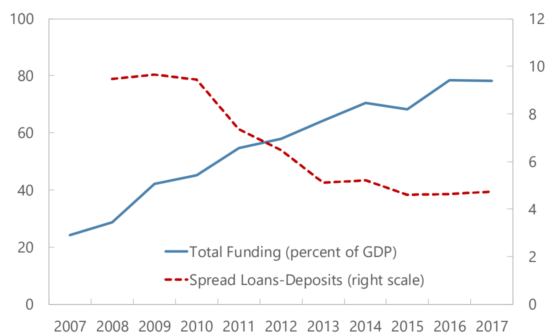
This could be associated with a worsening trend in asset quality…

Nonperforming Loans, 2007–17 (percent of total loans)



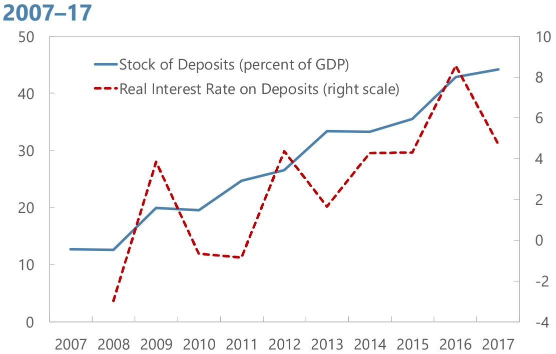
…as well as the narrowing of the spread between active and passive interest rates.

Asset Volume and Interest Rate Spread 2007–17



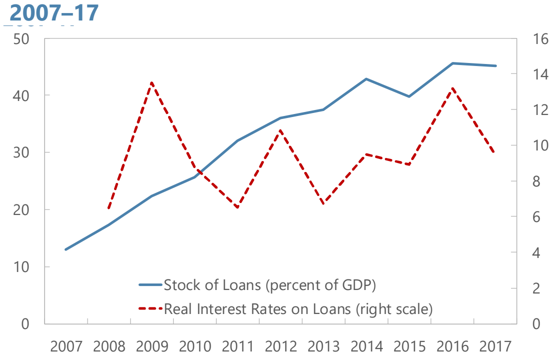
On the funding side, real interest rates have increased together with deposits…

Volume and Real Interest Rate of Bank Deposits 2007–17



…while the search for borrowers has prevented the pass-through of funding costs.

Volume and Real Interest Rates of Bank Loans 2007–17



Sources: Central Bank of Armenia; and IMF staff estimates

7. Low profitability may be encouraging excessive risk-taking behavior. The ROE appears to be, on average, below the cost of bank capital (estimated at about 10–16 percent) and compares unfavorably with yields on government bonds.[2] Although further recovery from the 2014 slowdown and other prospective developments in the financial sector—such as the expansion of the pension funds, higher use of online services and asset growth—could raise returns somewhat, the risk remains that investors' expectations of a significant rebound in rates of return may prove optimistic and that investors' interest may wane if yields remain modest for a protracted period. Protracted low yields could induce bank managers to accept higher risk to improve returns in the short term.

Large Exposures

8. Banks' large exposures to private counterparties are high and banks tend to breach the local statutory limits. The Armenian regulation of large exposures is more conservative than recommended by the Basel guidance; however, enforcement is poor. Large exposures represent about 25 percent of total exposures. Concentration of banks' exposure to the sovereign (exempted from the BIS large exposure framework) is low but on the rise while government borrowing is also rising. Total direct exposure to the government (excluding the CBA) amounted to 10 percent of bank assets at end-June 2018, or 65 percent of regulatory capital at end-June 2018, up from 53 percent at end-2015.

B. Cyclical Vulnerabilities

9. The Armenian economy is still recovering from a significant economic slowdown and sharp declines in asset prices that occurred in 2014–15 (Table 7). In 2014, the Armenian economy was hard hit by a fall in price and volume of copper exports, the weakening of Russian economy, and low remittance receipts. The dram depreciated against the U.S. dollar by almost 15 percent in 2014, and monetary policy was tightened to ease the depreciation pressure and contain inflation. With the high level of financial dollarization, depreciation along with lower foreign currency inflows resulted in increased debt burden for unhedged borrowers in foreign currency and high NPLs.

10. At present, with the credit to GDP gap estimated to be closing, the recent pick-up in credit warrants monitoring, should the trend continue. After two to three years of low growth, both consumption and investment started to revive, supported by rising remittances and monetary easing. Although the credit-to-GDP ratio remains moderate at 45 percent at end-2017, bank credit growth to the private sector started to recover, also as a reaction to the increase in absolute capital requirements (¶6), with total credit expanding over 21 percent (y-o-y) at end-June 2018 and some sectors growing very fast.[3] This requires supervisory monitoring as many banks have described this

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[2] Yields on one-year bonds were 6.8 percent on average; yields on 10-year bonds were 10.6 percent. Only yields on Treasury bills (with maturities up to 9 months) were, on average, below or equal to the average ROE (6.1 percent).

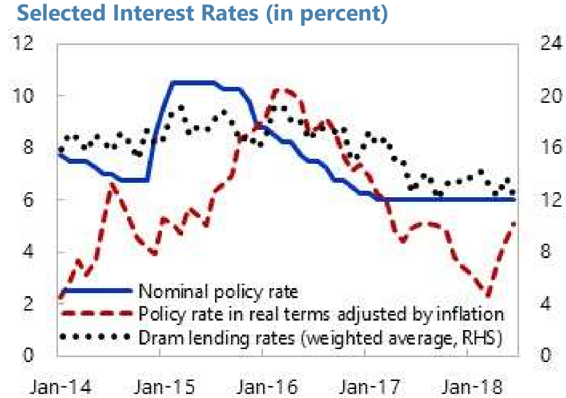
[3] Credit to the manufacturing sector and consumer loans grew by about 40 percent and 25 percent (y-o-y) respectively at end-June 2018. Since the second half of this year, high-frequency data suggest that the growth momentum may have moderated somewhat.

phase as a "borrowers' market" suggesting inadequate pricing of credit risk and/or some relaxation of credit standards.

Figure 4. Monetary and Financial Conditions

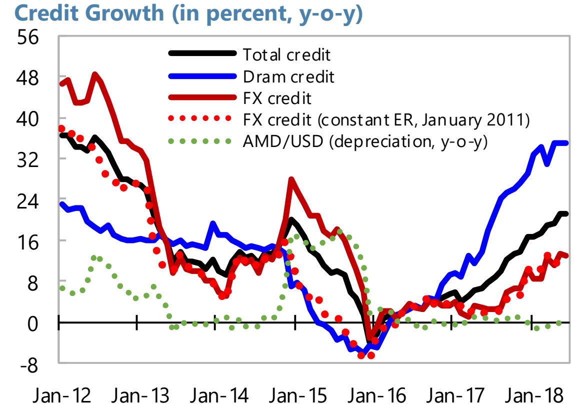
Since monetary conditions have been accommodating…

Selected Interest Rates (in percent)



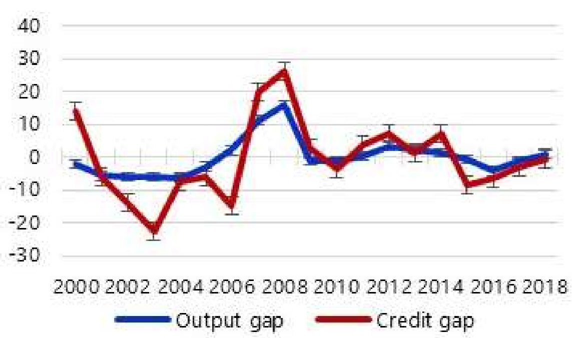
credit growth has been picking up…

Credit Growth (in percent, y-o-y)



As a result, the credit-to-GDP gap is being closed.

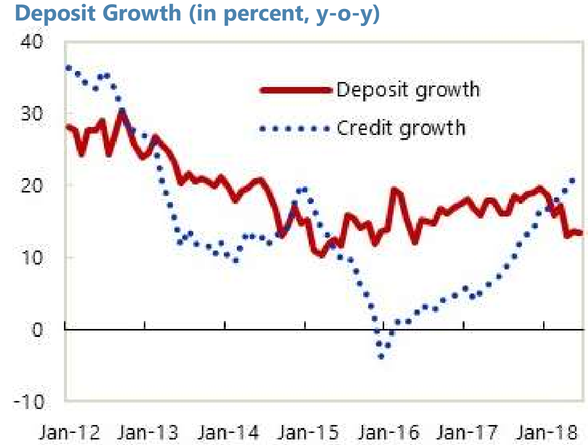
Output and Credit Gaps (percent of potential GDP)



Source: IMF staff estimates

Deposit growth remains stable.

Deposit Growth (in percent, y-o-y)



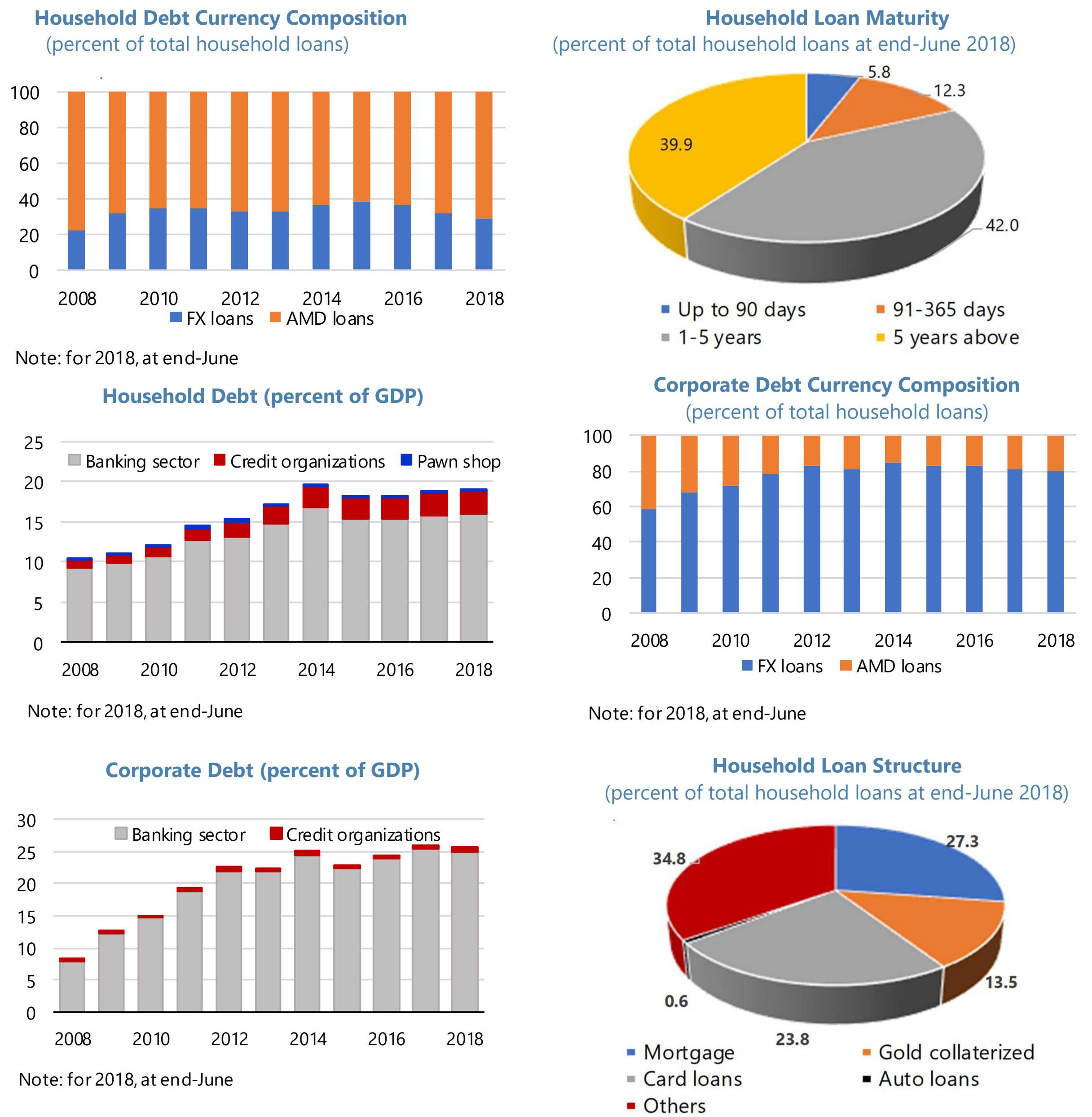
11. Household and corporate debt appears moderate in aggregate (Figure 5). Loans to households represent about 19 percent of GDP (slightly down from a peak in 2014), of which mortgages and credit card loans account for about 30 percent and 25 percent of total household loans, respectively. The real estate market is picking up thanks to the government's tax program,[4] but market prices of residential apartment buildings in Yerevan remain broadly stable after a fall by 3 percent in 2017. On aggregate, loan-to-value ratios lie in the 60 to 80 percent range, indicating potential risks associated with fluctuations in the real estate price remain restrained; however, there are some high values in the distribution of mortgage loans in foreign currency. At end-2017,

[4] Introduction of a tax credit of interest payments on residential mortgages.

nonperforming consumer loans amounted to around 6 percent of total consumer loans, while nonperforming mortgage loans amounted to around 4 percent of total mortgage loans.

12. **Corporate debt is about 25 percent of GDP and dominated by trade credit and loans to the energy and agricultural sectors**. Banks generally manage their open currency positions within regulatory limits. Hedging instruments are not widely available on the market so banks seek to balance on-balance sheet positions. The analysis of corporate leverage for financial stability purposes is hampered by the lack of transparency of corporate financial reporting information, which makes it difficult to assess individual corporates' debt.

Figure 5. Households and Corporates' Balance Sheets



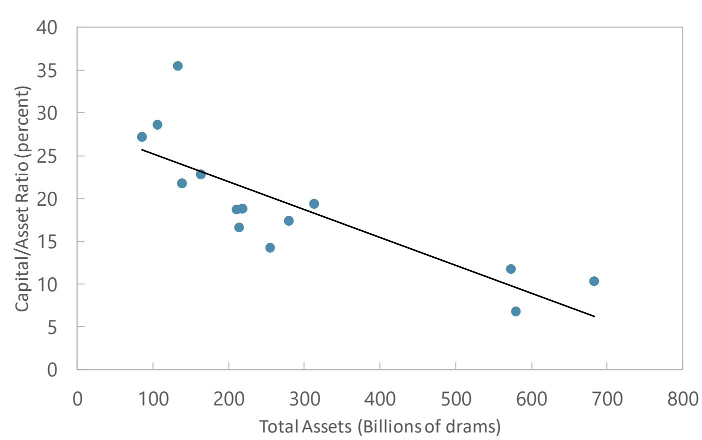
Source: Central Bank of Armenia

C. Risk Assessment

13. Current financial soundness indicators (including from publicly available information) point to high aggregate capitalization of Armenian banks and declining NPL ratios (Figure 6 and Table 8). At end-June 2018, the capital adequacy ratio was about 18 percent (with 16 percent leverage) for the system and all banks had achieved the new CBA-mandated minimum capital (AMD 30 billion, equivalent to $62 million), which came into effect in January 2017. Because the measure was binding for smaller banks, these are the ones with the highest capital to asset ratios, while largest banks are closer to the minimum. At end-June 2018, the system's NPL ratio had fallen to around 6 percent of total loans, of which about 48 percent were covered by provisions; publicly available information shows that NPL ratios are still high in some banks (above 10 percent) and mainly affect the trade, construction and industry segments, together accounting for 30 percent of loans. Restructured loans are estimated to about 3 percent of total loans but the mission did not have access to detail information about their evolution.

14. The large Armenian banks remain vulnerable to adverse external shocks due to low capital buffers, as signaled by the mission's solvency stress test.

Armenia: Capital-Asset Ratio by Total Assets, 2017

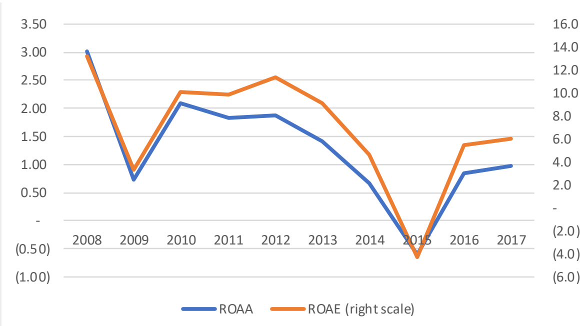


- The adverse scenario assumes a sharp oil price fall that prompts a significant downturn in Russia and would affect remittances by about 24 percent. Armenia's exports are further negatively affected by a decline of copper prices of about 27 percent. The policy reaction features a combination of a 22 percent depreciation of the nominal exchange rate and a large increase in policy rates that doubles to about 12 percent (from the current 6 percent), in line with past developments in late 2014 (see Figure 7 and Table 6). Sovereign yields increase by about 400 basis points. After two years of economic contraction, the economy starts to recover.
- Under this scenario, bank losses materialize due to higher NPLs, interest rate risk given the prevalence of fixed interest rates on the asset side, and higher capital requirements driven by changes in the nominal exchange rate (Figure 8). Capital shortfalls (relative to the minimum required 12 percent) remain contained at some 1 percent of GDP, although these shortfalls occur in banks with a combined share of 58 percent of the assets of the banking system.
- The solvency stress testing analysis may underestimate results due to insufficient data on large exposures and restructured loans.

Figure 6. Financial Soundness Indicators

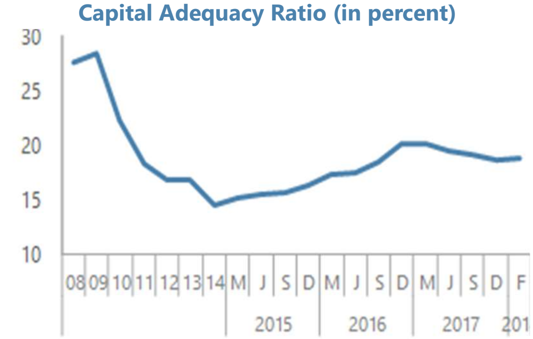
Banks' profitability is recovering although remains low…

ROAA and ROAE, 2008–17



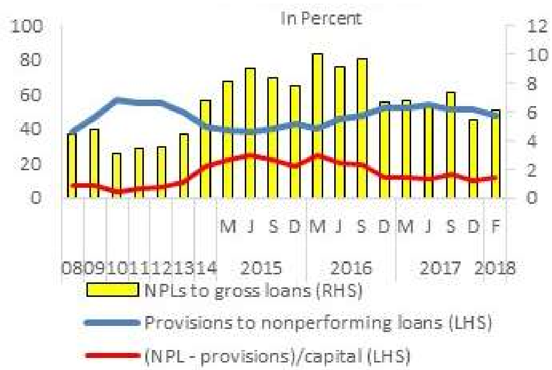
…and capital was boosted by the recent increase of minimum requirements.

Capital Adequacy Ratio (in percent)



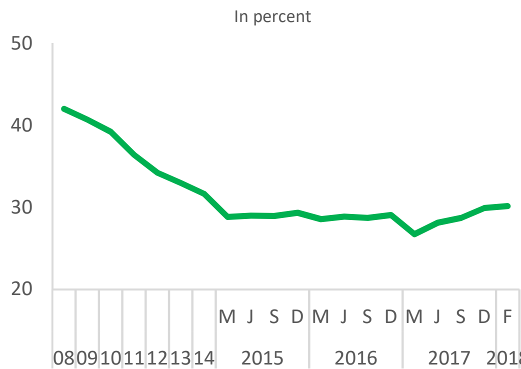
NPLs are gradually declining,

Provisions and NPLs



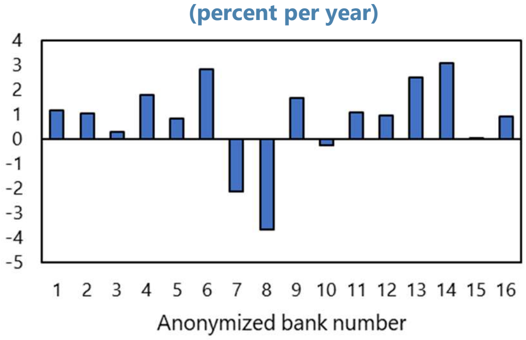
…and cost-to-income ratio remains stable

Non-Interest Expense to Total Income



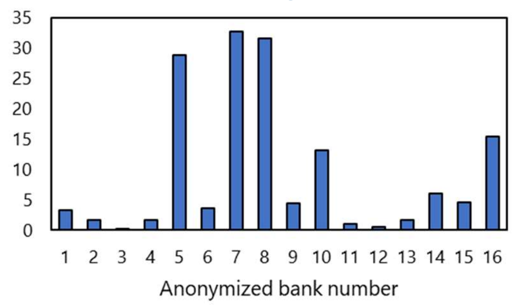
However, a few banks' performance is still weak…

Return on average assets, 2007
(percent per year)



…reflecting the poorer credit quality of their loans.

Impaired Loans, 2017 /1
(percent of gross loans)



Sources: Central Bank of Armenia; and IMF staff calculations; except for individual bank data (Fitch and staff calculations).

1/ Fitch does not provide data on one of the 17 banks.

15. **Liquidity stress tests were based on a standard cash-flow analysis based on time buckets for up to one year under several adverse scenarios featuring funding and market liquidity risks.** These scenarios assumed: a 30-day run based on idiosyncratic risks for each bank; three 12-month scenarios characterized by system-wide deteriorating macro-financial conditions; and a combined (idiosyncratic and severe market) 12-month scenario for each bank. The stress-parameters are applied to the respective cash-flows to derive outflow rates for the maturing

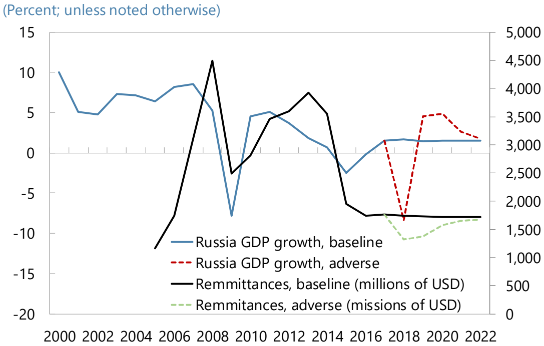
liabilities, roll-over rates for maturing assets and haircuts on banks liquidity buffers under stressed conditions. The stress tests were undertaken on aggregate liquidity as well as for each currency.

16. While on aggregate (i.e., all currencies) banks seem well positioned to confront liquidity shocks, most banks (including the largest ones) would not have sufficient liquid assets denominated in U.S. dollars to confront U.S. dollar outflows in the adverse scenarios. The result is still valid when all liquid assets in foreign currency are considered (e.g., when euro-denominated foreign assets are allowed to be converted in U.S. dollar). For the most severe scenario, the system's open funding gaps in foreign currency would amount to 24 percent of the CBA's international reserves as of May 2018. These results are consistent with banks' funding structure and low level of counterbalancing capacity in U.S. dollar. A counterfactual assessment conducted at the system level indicates that if reserves for liabilities in foreign currency were required to be held in the currency of the liability, FX buffers would be sufficient to cover the FX gaps in all scenarios.

Figure 7. Evolution of Macrofinancial Variables Under the Adverse Scenario

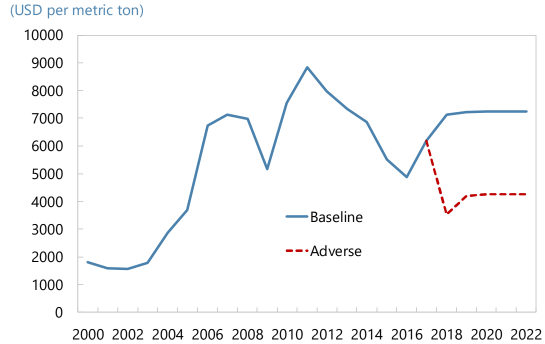
A downturn in a key trading partner causes a decline in remittances…

Russia and Armenia: Real GDP Growth and Remittances
(Percent; unless noted otherwise)



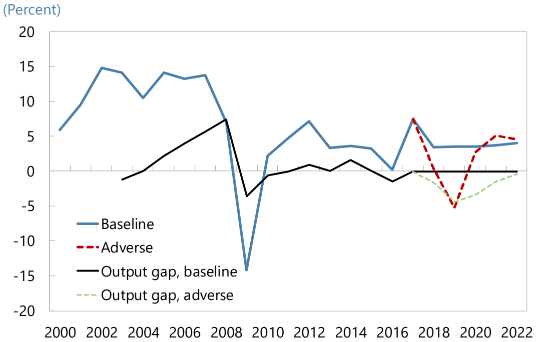
…amplified by a fall of copper prices…

Copper Prices
(USD per metric ton)



it results in a declining output.

Real GDP Growth and Output Gap
(Percent)



To achieve inflation target…

CPI Inflation
(Percent)

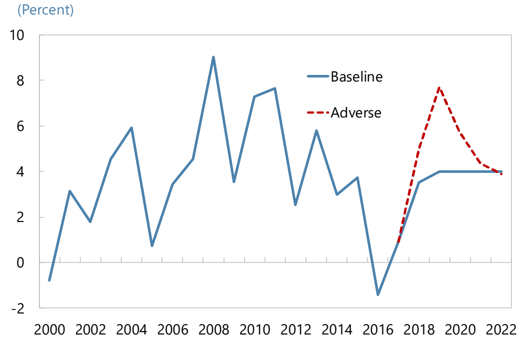
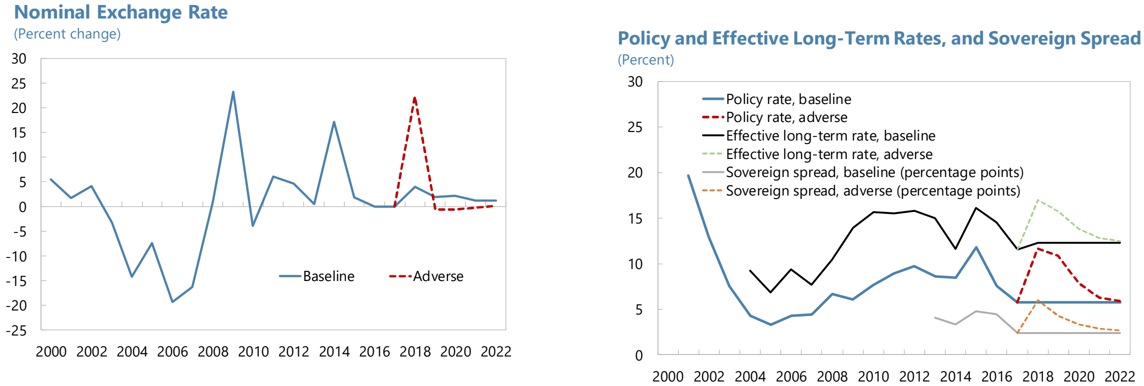


Figure 7. Evolution of Macrofinancial Variables Under the Adverse Scenario (concluded)

a combination of depreciation of nominal exchange rate…

and increase in policy interest rate is used, which pushes up interest rates. Sovereign spreads react to higher risk.



Source: Central Bank of Armenia; and IMF staff estimates.

17. Interconnectedness within the domestic interbank network and within the global network of banking systems is not large enough to threaten the solvency (of individual banks or of the system), even under adverse scenarios. Capital buffers over the regulatory minimum are sufficient to absorb losses in both cases due to thin links. As discussed above, Armenia's largest direct banking system counterparties are Russia and the United States. Nevertheless, the analyses reveal that the banking systems whose distress could most significantly affect Armenia are France and the United Kingdom, because they are connected to counterparties in Armenia that have large cross-border exposures relative to their capital. Most of the cross-border risk would come from potential credit losses, but losses from potential funding shocks and asset fire-sales would not be negligible.

Figure 8. Solvency Stress Test (Aggregate) Results

Regulatory capital ratios fall and then rise under the adverse scenario, and the total capital ratio remains above the regulatory minimum.

The capital shortfall is 1 percent of GDP in the first year, and this shortfall reduces over time as capital ratios improve over the projection horizon.

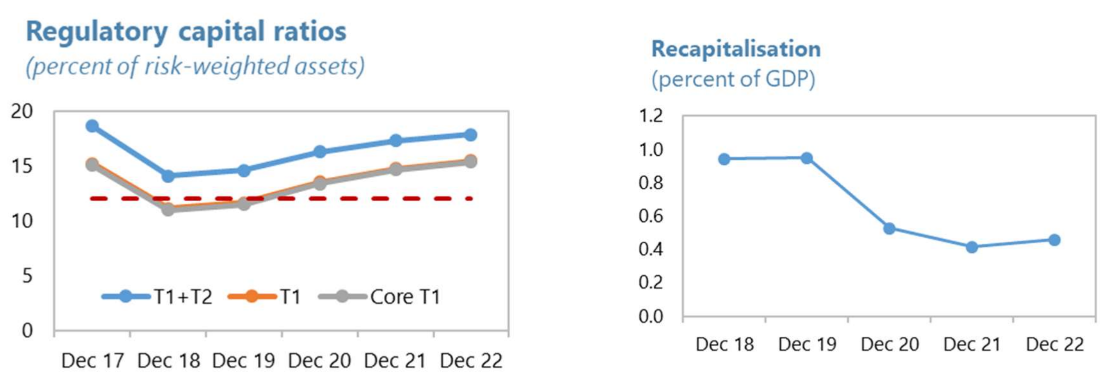
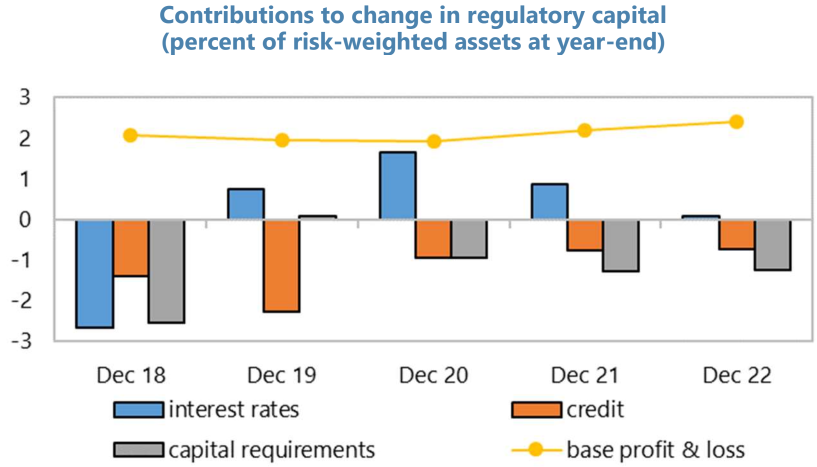


Figure 8. Solvency Stress Test (Aggregate) Results (concluded)

The main contributions to the fall in capital ratios in the first year are losses due to interest rate and credit risk, and rising capital requirements.



Source: IMF staff calculations.

Notes: T1 denotes Tier 1 capital and T2 denotes Tier 2 capital.

FINANCIAL STABILITY POLICY FRAMEWORK

A. Systemic Liquidity Management

18. **The management of systemic liquidity has improved since the last FSAP; however, there are still in need of improvement.** As liquidity forecast errors are largely related to the government cash flows, the Ministry of Finance should improve the quality of its short-term forecasts and provide to the CBA daily cash flow projections at the beginning of each week as well as a 12-month horizon forecasts (with monthly breakdown). The CBA should improve the transparency of its operations by disclosing the formula to determine the allotment of its open market operations, and more liquidity data.[5] Finally, CBA should determine *the range* for the liquidity deficit (i.e., a maximum and a minimum outstanding amount of open market operations), which should be preserved with structural liquidity operations (such as reserve requirements) to maintain a firm grip on short-term interest rates.

19. **Reserve requirements in domestic and foreign currencies should be adjusted to reflect their different roles.** The role of the reserve requirement in AMD is to create enough refinancing

[5] This includes: the previous day's balance of banks' account at the central bank; realized autonomous factors; autonomous factors forecasts; the reserve requirement amount and the average of banks' accounts at the CBA up to the publication date. Examples can be found at the websites of the ECB, Bank of Albania and National Bank of Serbia.

needs in the market to keep the CBA's control on short-term interest rates (monetary policy implementation tool). The reserve requirement on FX liabilities is primarily a prudential tool.

20. It is recommended to set AMD reserve requirement at the level that provide enough room for averaging to stabilize short-term rates and remunerating it.[6] This level should be consistent with the targeted liquidity deficit for monetary policy implementation and should provide enough room for averaging to absorb autonomous factors liquidity shocks. The intertemporal smoothing of liquidity flows over the maintenance period contributes to stabilize short-term interest rates. This criterium would suggest increasing the reserve requirement to at least 5 percent (currently it is 2 percent). It should be fully remunerated at the CBA policy rate to mitigate its impact on banks' cost of funds.

21. Banks should be gradually required to fulfill the reserve requirement on FX liabilities in FX to correct the distortion arising from the requirement to fulfill it in AMD. Because of this requirement, the stock of banks' AMD HQLA, which includes the reserve requirement, is disproportionally large, while the stock of FX HQLA is insufficient to mitigate liquidity risks. This situation is costly for banks[7] because AMD funding is more expensive than FX funding; it also encourages banks to hold lower liquid buffers in FX, where the central bank cannot act as lender of last resort. The transition should be implemented gradually to avoid destabilizing the FX market as banks will have to convert AMD into U.S. dollar to fulfill the FX requirement in U.S. dollar. The CBA could help via U.S. dollar sales in the market. This sale would not change its gross reserves (as these will remain in its balance sheet), will ensure that the exchange rate is not affected and that any excess liquidity in AMD is absorbed.

22. A few initiatives to support funding and market liquidity should be considered. The government debt strategy should include a market development component, focusing on maintaining AMD-denominated securities for some benchmark maturities. The CBA should encourage the market to develop a reference for short-term interest rate, which is compliant with the international principles for the computation of financial benchmarks. The CBA should also gradually transfer to the market the swap of external funding that it executes for the banks.

23. The CBA is allowed to provide emergency liquidity assistance (ELA) but does not have the operational framework. Its law allows the CBA to provide refinancing for maturities of up to six months and, in exceptional cases, five years, including without collateral (which should be avoided). Making ELA operational includes defining the conditions for access (restricted to solvent banks with temporary liquidity problems), establishing the appropriate collateral framework, monitoring the use

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[6] The reserve requirement serves to create a need for the banks to borrow from the central bank. This is the only reason why the central bank has extended loans to the banks in Armenia in the past (besides directed loans for development purposes). Therefore, the CBA will get some compensation to neutralize the cost of remunerating reserves.

[7] The cost of the requirement, based on the February 2017 spread between AMD and USD deposit rates of maturities up to 30 days, is estimated more than two times higher than meeting the requirement in foreign currency.

of the resources, supervising the steps for prompt reimbursement (remedial measures), and setting criteria for the exit strategy.

24. The CBA collateral framework should be defined clearly. It should be extended beyond government securities to address liquidity stress. A broader collateral framework would provide greater refinancing margin to address the refinancing needs that individual solvent counterparties cannot satisfy in a small market, where pockets of segmentation still prevail. It would also improve the neutrality of the collateral framework across assets classes. Extending the framework requires the introduction of appropriate risk management measures to maintain the same level of residual risk after haircuts across classes of eligible collateral.

25. Financial dollarization raises the issue of what sort of liquidity assistance could be provided in FX. The need for liquidity assistance arises when counterparties have exhausted their FX reserves and government securities denominated in FX that could be sold in the market. Therefore, ELA has to be secured with illiquid FX credit claim. In addition, the CBA could extend ELA in FX with AMD collateral, as it operates a swap facility, which allows banks to access FX funding against AMD reserves at the CBA. ELA in foreign currency should be in place only when and after prudential liquidity regulations ensuring that banks keep prudent buffers of FX HQLA have been adopted.

B. Macroprudential Oversight

26. The financial stability mandate is appropriately one of the CBA's main objectives. The CBA is an integrated supervisor which oversees all financial sectors. In December 2017, the CBA formally adopted the financial stability mandate as a primary objective in its law in parallel with price stability (based on an inflation targeting framework). The CBA Board adopts macroprudential policies based on assessments and proposals by the Financial Stability and Special Regulation Committee (FSSRC). Given the new mandate, the CBA would benefit from summarizing its macroprudential policy implementation strategy in a public document, setting out policy objectives, instruments and transmissions, decision-making process, communication strategy, and accountability. In addition, the CBA's financial stability reports should provide more forward-looking perspectives to guide markets' expectations.

27. Safeguards are needed to counter risks from the CBA's dual objectives. Although the high degree of financial dollarization strengthens the case for monetary and macroprudential policy coordination, dual mandates can complicate accountability and reduce credibility. Having separate committees on monetary and macroprudential policies, like the CBA does, helps distinguish the two policy functions, and this should be strengthened by clearly assigning policy instruments to the two committees (e.g., by summarizing macroprudential policy implementation strategy in a public document) and improving the communication strategy.

28. The law allows the CBA to select and use from a wide range of known macroprudential instruments including Basel III buffers. At present, tools in use are focused on FX risks. These include higher risk-weights (150–200 percent) and higher loan loss provisions (20 percent higher)—

both measures applying to exposures denominated in foreign currency; a prohibition to grant loans to households in foreign currency, except mortgages; and requirements for banks to assess whether borrowers should be considered hedged or unhedged for monitoring purposes.

29. The CBA should proceed with implementation of Basel III capital requirements as planned (Table 5). Current capital adequacy requirements are based on the standardized approach of Basel II with a minimum ratio of 12 percent. In practice, almost all capital of Armenian banks is CET1 as there is only a small market for subordinated or hybrid instruments. A draft regulation addresses the phase-in schedule for three buffers (conservation, countercyclical and systemic). These add-ons are likely to affect larger banks that currently hold capital buffers close to the minimum risk-adjusted ratios as they were not affected by the recent increase in absolute capital requirements. Recent analysis shows the lowest level of the leverage ratio in the banking system (5.3 percent) is still above the Basel minimum, not making the introduction of the ratio a high priority. The framework for setting countercyclical capital buffer (CCyB) should be introduced from January 2019 as planned, and a positive buffer requirement should be adopted if the current credit growth trend continues.

Table 5. Central Bank of Armenia: Planned Phase-in of Basel III Capital Requirements

	2019	2020	2021	2022	2023	2024
Minimum total capital	12%	12%	12%	12%	12%	12%
Capital conservation buffer (CCoB)		0.5%	1%	1.5%	2%	2.5%
Minimum plus CCoB	12%	12.5%	13%	13.5%	14%	14.5%
Countercyclical capital buffer	0-2.5% (in effect within 6 months following the decision date)					
D-SIB surcharge (systemic bank only)		1%	2%	2%	2%	2%

30. Vulnerabilities from dollarization require additional measures to mitigate credit risks from unhedged borrowers and address data gaps related to income information.

- One option is to introduce a *stressed* debt service to income (DSTI) limit. For unhedged FX borrowers, the debt-service would be calculated under a stress scenario of a depreciation that matches historical large depreciations (e.g., 20 percent) to ensure sufficient loss absorption capacity.

- The implementation of the DSTI limit requires borrower income information that needs to be collected by the CBA. If the CBA judges that it is appropriate to include income from informal sources (including remittances) in the calculation, it should provide some guidance to banks on how to include them.

- The DSTI limit can be first introduced as an indicative limit to allow the CBA to assess the quality of banks' reporting of their clients' income, refine the parameters of the limit based on the DSTI distribution, and give time to the banks, as well as their clients, to adjust to the new norm.

- Until the DSTI limit could become feasible, a stressed loan-to-value (LTV) limit, which similarly assumes certain depreciation for unhedged FX loans, can be imposed to ensure that banks have enough collateral to cover the repayment of the loans if the borrower defaults in a depreciation scenario. The distribution of LTV should be analyzed to determine the threshold.

31. The two prudential liquidity ratios adopted as a follow up to the 2012 FSAP recommendations are not adequate to mitigate liquidity and funding needs in foreign currency. The *total liquidity ratio* (high liquid assets to total assets); and the current liquidity ratio (high liquid assets to demand liabilities) should be satisfied on aggregate and for individual currencies. However, the requirements for foreign currency are lower[8] and neither measure captures stressed assumptions. The Basel III liquidity ratios (LCR and NSFR) have been monitored since 2015 for all banks but are not yet implemented.

32. The CBA should ensure that banks keep not only enough high-quality liquid assets in FX to cover the liquidity risk but also encourage a prudent pricing of FX intermediation:

- The FX reserve requirement should cover enough of the deposit base, e.g., at least 20 percent (it is 18 percent at present) to ensure that banks keep at the CBA assets of certain quality and liquidity. It would also limit banks' leverage in term of the loan to deposit ratio.

- The LCR and NSFR in USD, in addition to those for all currencies should be adopted and set a higher requirement for the LCR in USD than in AMD in the medium term to promote de-dollarization.

- More generally, the CBA should enhance its methodology for implementing regular liquidity stress tests by using a cash-flow methodology, maturities beyond 30 days, and behavioral components, both in aggregate and in foreign currency.

C. Microprudential Oversight

33. The CBA has made significant progress in its approach to banking supervision by adopting the risk-based supervision (RBS) framework and addressing regulatory gaps identified in the 2012 Basel Core Principles (BCP) assessment. The RBS framework provides a forward-looking assessment of the risk profile of banks and assigns resources more proportionately to risk. The use of risk teams across the banking system also contributes to identification and monitoring of risks arising across the system. In addition, improvements have been made regarding risk management, stress testing, corporate governance, country risk and consolidated supervision.

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[8] Ratios are 15 and 60 percent for the aggregate and 4 and 10 percent in FX.

34. The CBA's programs still need enhancement in several areas. The RBS program should be refined for more granular assessments of banks' capital needs. Stress testing and the internal capital adequacy assessment process (ICAAP) conducted by banks are important elements of the RBS program for risk management; however, standardized criteria for their review and evaluation should be developed. Moreover, stress testing and ICAAP processes in banks have not led to a differentiation in capital levels based on risk. This limitation should be addressed.

35. Supervisory resources of the CBA to conduct a RBS program should be re-evaluated annually. Though there is currently no apparent staffing shortage, the CBA should annually conduct resource planning exercises. The number of staff has not changed in five years, while the RBS program has clearly raised expectations regarding the analytical skill sets of the staff. CBA should be commended for its specialized training curriculum and the use of intra-departmental support to fill gaps for stress testing, business plan reviews, and cyber risk reviews; however, resource sharing does not substitute for an adequately trained core group of supervisors. Consideration should also be given to hiring individuals with previous experience/training in risk analytics, stress testing, and risk management.

36. The use of discretionary enforcement powers to address risk management concerns has not been consistent. There has been a pattern since 2013 where several banks have breached large exposure limits regularly. Although sanctions/fines have been levied in some cases, these have apparently not been sufficient to prevent further violations. A plan should be developed to bring down current exposures exceeding limits under the regulatory framework.

37. The definition of nonperforming and restructured loans need to be amended to reflect international best practices. The CBA uses a non-standard definition of NPLs (one day past due); reported NPL ratios are also influenced by the mandatory write-off of loans past due 270 days or more. The definition of restructured loans is not well supported by examples or detailed supervisory explanations. Also, the CBA does not provide detailed guidance on evaluating performance periods for restoring restructured loans to performing status, and instead assesses the adequacy of banks' internal regulations, where these periods are established, on a case by case basis The CBA should align its definitions for non-performing and forborne (restructured) loans with the BCBS guidance issued in April 2017. More detailed reporting and monitoring of restructured loans by banks should also be initiated.

38. The CBA assessment of credit risk management should incorporate a review of International Financial Reporting Standard (IFRS 9) expected loss estimation practices required for all banks in 2018. As Armenian banks are adapting to the new IFRS 9 methodologies, they will be basing more of their credit risk management activities regarding measuring, monitoring and reporting risk on IFRS 9 techniques. Supervisors will need to enhance their review and understanding of IFRS 9 methodologies if they are to make accurate assessments of a bank's credit risk management capabilities.

39. The CBA needs to develop a non-discretionary regime of supervisory actions in response to a bank's deteriorating capital or liquidity position. Such responses may include submission of remediation plans, ceasing dividends and discretionary compensation, and limits on growth, types of activities, or funding sources. Although the CBA has the authority to use these supervisory limits at its discretion, a clearer framework for banks outlining the use of these limits incrementally is missing.

D. Financial Integrity

40. Armenia's 2015 AML/CFT assessment against the 2012 Financial Action Task Force standard found a broadly sound legal and institutional framework, albeit with some deficiencies. The assessment noted a low level of effectiveness of measures related to criminal sanctions against money launderers and to the confiscation of proceeds of crime. In addition, it recommended to enhance the understanding of money laundering (ML) risks and vulnerabilities with respect to corruption, abuse of legal persons, the shadow economy and the extensive use of cash. It noted that risk-based approach to AML/CFT supervision should be further developed and that domestic politically-exposed persons should be subject to relevant AML/CFT requirements. It also found that the requirements for targeted financial sanctions in relation to proliferation financing needs to be brought more explicitly into the AML/CFT law to avoid legal challenges to sanctions.

41. While improvements have been made since the 2015 AML/CFT assessment, deficiencies remain to be addressed. Armenia has taken steps to address some of its deficiencies, notably by revising some sections of its ML/TF national risks assessment, introducing a risk-based approach to AML/CFT supervision, and amending the AML/CFT law to clarify requirements for targeted financial sanctions in relation to proliferation financing. While these efforts are welcome, further steps should be taken to deepen the understanding of risks and disseminate findings to the private sector and continue to improve risk-based supervision. In addition, measures to detect the laundering of proceeds of corruption should be strengthened, by enacting and implementing enhanced due diligence requirements for domestic politically-exposed persons, and by ensuring that financial institutions and other obliged entities report suspicious transactions

FINANCIAL SAFETY NET AND CRISIS MANAGEMENT

42. The banking law should be amended to establish a special bank resolution regime (SRR). Although the CBA is the sole authority that can recommend license revocation, there is still the opportunity for the court to reverse the resolution action. The new framework should provide, inter alia, authority for CBA to perform irreversible resolution actions, as well as introduce expanded resolution tools in like with the Key Attributes of Effective Resolution Regimes.

43. The deposit insurance law should also be amended to reflect best practices, in spite of recent enhancements. The timeframe for reimbursing insured depositors has been improved by recent amendments to the Deposit Guarantee Fund (DGF) Law, which specify a gradual reduction to meet international best practices of 7 days by January 1, 2023 (current payout timeframe is 15 days). However, Armenia's DGF is a pure paybox and doesn't pay a role in the resolution process. DGF's mandate should be expanded to permit use of its funds in resolution transactions such as a Purchase and Assumption (P&A). The decision to use funds for resolution transactions will be made by the resolution authority—i.e., the mandate expansion should not confer additional powers to the DGF. The DGF law allows active bankers or members of the banking union (Armenia's bankers association) to be members of the DGF board, which is not in line with best international practices.[9] The DGF covers only individual deposits; however, there is an international trend toward also covering deposits of legal entities (at the same limited level as for individuals), which is recommended, as this may protect spillovers to the broader economy.

44. The Financial Stability and Special Regulation Committee (FSSRC) is an effective coordination platform; however, there should be a true interagency high-level crisis management committee (CMC) comprised of the CBA Governor, Minister of Finance and Director of DGF. The FSSRC is contained within the CBA and representatives from MOF and DGF can attend by invitation only. It is important to formally include the other safety net members in a high-level CMC, which would not be a decision-making body as each member would still retain its statutory responsibilities and obligations: the DGF, since prompt and effective resolution including swift repayment to insured depositors can help prevent contagion and avoid that resolution of a non-systemic bank create a systemic crisis; and MOF, since any systemic crisis will likely require outlays of public funding for recapitalization or guaranteeing certain depositors and creditors. CBA has drafted a Crisis Management Guide, which represents a good start on crisis preparedness and management. Since the 2012 FSAP, the safety net members have conducted several simulations on various subjects, primarily with DGF regarding resolution of a non-systemic bank. The authorities—especially including MOF—are recommended to continue this effort.

45. Recovery and Resolution Planning (RRP) should be implemented. Not all banks have completed their Recovery Plans and those that have are often deficient. CBA has not prepared Resolution Plans for any bank. Every bank should be required to complete adequate and reasonable Recovery Plans, based on proportionality; while CBA should develop Resolution Plans for all systemic banks. RRPs should be updated at least annually.

46. CBA has supervisory MOUs with home regulators for every foreign subsidiary except for the United Kingdom (reportedly there is an informal agreement for coordination and information sharing with U.K. supervisors); however, the extant supervisory MOUs are thin and should be improved. Additionally, Armenia participates in two supervisory colleges. Armenia is not a member of any Crisis Management Group (CMG) for any of the foreign subsidiaries since the foreign subsidiaries are not material for the parent banks.

47. Resolution planning of foreign subsidiaries should be included in the home-host relationship framework. CBA should be proactive in: (i) requesting Resolution Plans from the home supervisory/resolution authority; and (ii) ensuring that the Armenian subsidiary is included and

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[9] An MOU between DGF, CBA and MOF prohibits active bankers or members of the banking union from being on DGF's management board; however, this should be included in amendments to the DGF Law.

treated equitably in the plan. Moreover, since the parent is the first line of defense for banking problems, the CBA should request letters from foreign parent banks that will commit them to supporting their Armenian subsidiaries, including, but not limited to capital and liquidity support. If the Resolution Plan for entities systemic in Armenia is judged inadequate to preserve financial stability in Armenia (e.g., if it discriminates to the favor of home country creditors), or no Resolution Plan is forthcoming, then the authorities should develop national recovery and resolution plans to deal with stress in foreign subsidiaries.

FINANCIAL DEVELOPMENT

48. Since the last FSAP, there have been substantial improvements notably in the legal and regulatory frameworks that matter for financial development. Armenia has reformed its credit infrastructure, resulting in the establishment and operation of a movable collateral registry, and introduced a new secured transactions regime. Progress has been also made in improving the bankruptcy law. Measures are being taken to address cyber risks in payment systems. The well-designed new pension system has mobilized a growing supply of long-term domestic capital that can be channeled through the local capital market to fund the economy. Support for the pension reform should continue.

49. To fully reap the benefits of these reforms certain shortcomings in the new frameworks need to be addressed:

- The regime on insolvency of corporate and individual debtors, and related institutional framework need to be strengthened further to create a better balance of creditors rights and strengthen secured creditors rights in the context of insolvency. Further reforms should be aimed at increasing the numbers of successful rehabilitation cases and maximizing creditors recovery within liquidation. Allowing secured creditors to vote on restructuring plans and introducing a time limit for relief from the automatic stay on enforcement for secured creditors, revising the tax authorities' position in insolvency cases by allowing them to compromise debt and vote on restructuring plans, and extending post-commencement financing beyond approved restructuring plans, are some of recommended steps to achieve this. Reform measures should also be directed toward resorting to insolvency only as a collective proceeding, among multiple creditors, rather than a collection tool by individual creditors against delinquent debtors, as is currently the case. In addition to reforming the insolvency regime, improvements to the effectiveness of the systems of civil enforcement of individual debts, both through formal processes and potentially through the increased use of alternative dispute resolution (ADR) mechanisms should be considered.

- Corporate transparency, financial capability and the efficiency of government support programs need to be strengthened to provide MSMEs with affordable access to finance. Informality and unreliable financial reporting reduce banks' ability to overcome information asymmetries and ascertain a company's ability to generate revenues. As a result, collateral requirements and lending rates for MSMEs are very high. Product diversification is also poor. In a country in which most lending is collateral based, products such factoring, invoice financing, leasing, are key so SMEs can have access to working capital. The introduction of targeted financial capability programs focused on improving MSMEs' financial reporting and management, as well as the promotion of cash-less payments could help to alleviate some of the demand side constraints. Additionally, the efficiency of the fragmented government support programs should be enhanced by consolidation and improved targeting and a better coordination among the various stakeholders. CBA should also consider creating a new unit to take over tasks related to financial inclusion.

- A high-level commitment from government is required to create a pipeline of capital markets issuance and demonstration projects. Projects are needed to absorb the inflow of pension contributions. The CBA has been proactive in introducing frameworks for new instruments, and the overall regulatory framework for capital markets is sound. The key constraint to its development is on the supply side due to limited issuance pipeline across issuers and products. Government action is needed promoting municipal, SOE and infrastructure projects.

50. Sustained financial sector development requires improvements in transparency across all sectors of the economy. The lack of transparency in reporting and accounting by corporations, sub-national entities and SOEs hampers not only possible issuances on the capital markets but also inhibits growth of products such as factoring and invoice financing that facilitate trade finance and are key for MSME access to finance. A failure to improve these standards will jeopardize the progress made so far and limit the ability of the financial sector to play an effective role in the economy.

Table 6. Armenia: Baseline and Adverse Scenarios

	2017	2018	2019	2020	2021	2022
	(In percent unless otherwise noted)					
Output gap						
WEO baseline scenario	-0.04	-0.02	0.00	0.02	0.04	0.04
Adverse scenario, deviations from baseline	0.00	-1.53	-4.27	-3.31	-1.35	-0.32
Adverse scenario variable path	-0.04	-1.55	-4.27	-3.29	-1.31	-0.28
GDP growth, year-on-year seasonally adjusted						
WEO baseline scenario	7.48	3.40	3.50	3.50	3.70	4.00
Adverse scenario, deviations from baseline	0.00	-2.97	-8.74	-0.83	1.42	0.59
Adverse scenario variable path, year-on-year	7.48	0.43	-5.24	2.67	5.12	4.59
Russian real GDP growth, year-on-year						
WEO baseline scenario	1.55	1.71	1.49	1.50	1.50	1.50
Adverse scenario, deviations from baseline	0.00	-10.08	3.05	3.34	1.08	0.25
Adverse scenario variable path, year-on-year	1.55	-8.37	4.53	4.84	2.58	1.75
Policy rate						
WEO baseline scenario	5.79	5.79	5.79	5.79	5.79	5.79
Adverse scenario, deviations from baseline	0.00	5.85	5.05	2.12	0.52	0.13
Adverse scenario variable path	5.79	11.64	10.84	7.91	6.31	5.92
Effective long-term rate						
WEO baseline scenario	11.54	12.29	12.29	12.29	12.29	12.29
Adverse scenario, deviations from baseline	0.00	4.72	3.46	1.55	0.52	0.20
Adverse scenario variable path	11.54	17.01	15.75	13.84	12.81	12.49
Country spread (premium)						
WEO baseline scenario	2.38	2.38	2.38	2.38	2.38	2.38
Adverse scenario, deviations from baseline	0.00	3.58	1.87	0.98	0.51	0.27
Adverse scenario variable path	2.38	5.97	4.26	3.36	2.89	2.65
CPI inflation, period average, year-on-year						
WEO baseline scenario	0.91	3.50	4.00	4.00	4.00	4.00
Adverse scenario, deviations from baseline	0.00	1.48	3.71	1.71	0.36	-0.11
Adverse scenario variable path, year-on-year	0.91	4.98	7.71	5.71	4.36	3.89
Rate of change in nominal exchange rate, year-on-year 1/						
WEO baseline scenario	0.03	4.01	2.00	2.20	1.17	1.17
Adverse scenario, deviations from baseline	0.00	18.29	-2.59	-2.84	-1.42	-1.02
Adverse scenario variable path, year-on-year	0.03	22.29	-0.59	-0.64	-0.24	0.15
Price of Oil, USD per barrel						
WEO baseline scenario	52.81	62.31	58.24	55.55	54.08	53.55
Adverse scenario, deviations from baseline	0.00	-34.32	-21.44	-19.38	-18.91	-18.75
Adverse scenario variable path	52.81	27.99	36.80	36.17	35.17	34.80
Rate of change in Price of Oil, year-on-year						
WEO baseline scenario	23.29	17.99	-6.54	-4.62	-2.65	-0.97
Adverse scenario, deviations from baseline	0.00	-64.98	37.99	2.92	-0.12	-0.07
Adverse scenario variable path, year-on-year	23.29	-47.00	31.45	-1.70	-2.77	-1.04
Copper prices, US dollar per metric ton						
WEO baseline scenario	6169.94	7131.67	7228.02	7242.00	7237.25	7232.00
Adverse scenario, deviations from baseline	0.00	-2631.95	-1830.18	-1750.78	-1753.05	-1753.91
Adverse scenario variable path	6169.94	4499.72	5397.84	5491.22	5484.20	5478.09
Copper prices, year-on-year						
WEO baseline scenario	26.75	15.59	1.35	0.19	-0.07	-0.07
Adverse scenario, deviations from baseline	0.00	-42.66	18.61	1.54	-0.06	-0.04
Adverse scenario variable path	26.75	-27.07	19.96	1.73	-0.13	-0.11
Rate of change in remittances, year-on-year						
WEO baseline scenario	1.80	1.60	1.50	1.50	1.50	1.50
Adverse scenario, deviations from baseline	0.00	-25.43	4.76	13.75	5.46	1.13
Adverse scenario variable path, year-on-year	1.80	-23.83	6.26	15.25	6.96	2.63
Remittances, millions of US dollars						
WEO baseline scenario	1765.50	1736.72	1728.21	1718.04	1714.97	1720.48
Adverse scenario, deviations from baseline	0.00	-392.00	-299.26	-71.19	46.45	87.35
Adverse scenario variable path, year-on-year	1765.50	1344.72	1428.94	1646.85	1761.42	1807.83

Sources: Central Bank of Armenia; Haver Analytics; and World Economic Outlook database.
1/ Increase equals depreciation.

Table 7. Armenia: Selected Economic Indicators, 2015–21

	2015 Act.	2016 Act.	2017 Act.	2018	2019 Proj.	2020	2021
National income and prices:							
Real GDP (percent change)	3.2	0.3	7.5	6.0	4.8	4.5	4.5
Final consumption expenditure, Contrib. to Growth	-5.2	-0.3	7.5	4.5	2.6	2.8	3.2
Gross fixed capital formation, Contrib. to Growth	0.5	-2.4	1.5	3.6	2.9	2.7	1.7
Changes in inventories, Contrib. to Growth	-0.8	0.7	1.1	-0.9	0.0	0.0	0.0
Net exports of goods and services, Contrib. to Growth	6.1	3.1	-1.1	-1.3	-0.7	-1.0	-0.4
Statistical Discrepancy in GDP, Contrib. to Growth	2.6	-0.7	-1.5	0.0	0.0	0.0	0.0
Gross domestic product (in billions of drams)	5,044	5,067	5,569	6,143	6,683	7,249	7,868
Gross domestic product per capita (in U.S. dollars)	3,529	3,526	3,847	4,190	4,447	4,705	4,982
CPI (period average; percent change)	3.7	-1.4	0.9	3.1	4.4	3.8	3.9
CPI (end of period; percent change)	-0.1	-1.1	2.7	4.7	4.0	4.0	4.0
GDP deflator (percent change)	1.2	0.2	2.3	4.1	3.8	3.8	3.9
Investment and saving (in percent of GDP)							
Investment	20.9	18.9	20.7	22.5	23.3	23.8	24.2
National savings	18.4	16.6	17.8	18.4	19.6	19.8	20.2
Money and credit (end of period)							
Reserve money (percent change)	3.9	13.1	-1.0	14.2	10.0	10.4	10.0
Broad money (percent change)	10.7	16.6	17.7	13.0	10.0	10.0	10.0
Private sector credit growth (percent change)	-3.6	14.4	16.9	21.9	16.0	14.5	13.0
Central government operations (in percent of GDP)							
Revenue and grants 1/	21.5	21.4	21.2	21.8	22.2	22.5	22.7
Of which: tax revenue 1/	20.1	20.1	20.2	20.5	20.9	21.4	21.9
Expenditure 1/	26.3	27.0	26.0	24.5	24.4	24.5	24.6
Overall balance on a cash basis 1/	-4.8	-5.6	-4.8	-2.7	-2.2	-2.0	-1.9
Public and publicly-guaranteed debt (in percent of GDP)	48.7	56.7	58.7	57.1	56.2	54.4	53.3
Share of foreign currency debt (in percent)	86.9	82.3	83.2	81.8	81.4	81.8	79.8
External sector							
Exports of goods and services (in millions of U.S. dollars)	3,136	3,500	4,268	4,830	5,140	5,333	5,557
Imports of goods and services (in millions of U.S. dollars)	-4,418	-4,516	-5,720	-6,425	-6,772	-7,058	-7,311
Exports of goods and services (percent change)	-5.5	11.6	21.9	13.2	6.4	3.7	4.2
Imports of goods and services (percent change)	-19.5	2.2	26.7	12.3	5.4	4.2	3.6
Current account balance (in percent of GDP)	-2.6	-2.3	-2.8	-4.1	-3.7	-4.0	-4.0
FDI (net, in millions of U.S. dollars)	162	272	228	206	266	303	357
Debt service ratio (in percent of exp. of goods and serv.) 2/	12.5	6.6	6.8	7.5	7.7	17.3	7.4
Gross international reserves (in millions of U.S. dollars)	1,771	2,204	2,314	2,212	2,311	2,361	2,385
Import cover 3/	4.7	4.6	4.3	3.9	3.9	4.0	3.7
End-of-period exchange rate (dram per U.S. dollar)	484	484	484	...	...	...	...
Average exchange rate (dram per U.S. dollar)	478	480	483	...	...	...	...
Memorandum item:							
Population (in millions)	3.0	3.0	3.0	...	...	...	...

Sources: Armenian authorities; and Fund staff estimates and projections.
1/ For 2018, the authorities' budget.
2/ Based on public and publicly-guaranteed debt.
3/ Gross international reserves in months of next year's imports of goods and services, including the SDR holdings.

Table 8. Armenia: Financial Soundness Indicators for the Banking System
(In percent, unless otherwise indicated)

	2014	2015	2016				2017				2018	
	Dec.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.
Capital adequacy												
Total regulatory capital to risk-weighted assets	14.5	16.2	17.3	17.4	18.4	20.0	20.0	19.5	19.1	18.6	18.7	18.2
Capital (net worth) to assets	14.0	14.7	15.0	15.7	15.9	16.2	16.3	16.1	16.1	15.7	16.0	16.0
Asset composition												
Sectoral distribution of loans (in billions of drams)												
Industry (excluding energy sector)	266.3	225.9	219.7	228.2	228.5	227.1	229.6	230.8	244.9	256.3	270.3	322.3
Energy sector	112.4	111.2	101.3	112.2	104.3	162.2	194.7	210.9	203.0	191.4	207.2	212.9
Agriculture	150.2	148.9	150.2	153.1	148.2	140.1	143.9	152.4	144.3	144.2	152.9	157.7
Construction	124.2	106.6	122.7	113.5	111.8	102.8	108.3	118.7	125.5	143.8	149.9	144.1
Transport and communication	52.0	77.1	77.1	72.0	71.7	79.7	68.9	70.0	75.8	73.8	76.4	78.3
Trade/commerce	386.3	345.5	373.0	369.2	376.4	335.8	343.9	355.6	390.4	419.6	419.9	432.3
Consumer credits	451.5	423.1	429.2	426.1	419.6	434.2	451.2	466.6	472.6	511.4	548.6	585.7
Mortgage loans	172.4	179.0	177.3	178.6	181.1	183.7	182.4	186.2	191.3	209.0	210.5	219.9
Sectoral distribution of loans to total loans (percent of total)												
Industry (excluding energy sector)	12.0	10.5	9.9	10.2	10.1	10.6	10.4	10.0	10.1	8.8	10.2	11.5
Energy sector	5.1	5.2	4.6	5.0	4.6	6.5	6.5	9.1	8.4	7.4	7.9	7.6
Agriculture	6.8	6.9	6.8	6.8	6.6	8.7	8.9	6.6	6.0	5.6	5.8	5.6
Construction	5.6	4.9	5.1	5.1	5.0	4.8	4.9	5.1	5.2	5.6	5.7	5.2
Transport and communication	2.3	3.6	3.5	3.2	3.2	3.7	3.1	3.0	3.1	2.9	2.9	2.8
Trade/commerce	17.4	16.0	16.8	16.5	16.7	15.7	15.6	15.4	16.1	16.3	15.9	15.7
Consumer credits	20.3	19.6	19.4	19.0	18.6	8.6	8.3	8.0	7.9	8.1	8.0	7.9
Mortgage loans	7.8	8.3	8.0	8.0	8.0	20.3	20.5	20.2	19.5	19.9	20.8	21.0
Other sectors	22.8	25.0	26.0	26.3	27.3	21.1	21.7	22.6	23.7	25.3	22.9	22.7
Foreign exchange loans to total loans	64.7	66.7	67.9	67.1	67.3	64.6	64.1	64.4	64.6	63.5	63.3	62.1
Asset quality												
Nonperforming loans (in billions of drams)	149.9	166.0	218.1	202.7	213.1	162.2	166.0	155.6	184.7	146.7	146.7	181.8
Watch (up to 90 days past due)	72.7	75.0	97.4	59.7	67.6	50.8	53.4	46.4	52.7	40.7	44.1	72.7
Substandard (91-180 days past due)	44.3	48.0	57.4	71.3	57.0	45.0	42.4	43.7	53.8	58.3	46.7	48.4
Doubtful (181-270 days past due)	32.9	43.0	63.3	71.6	88.5	66.4	70.1	65.6	78.3	47.7	56.0	60.7
Loss (>270 days past due, in billions of drams)	173.4	288.4	292.5	312.3	331.4	354.3	372.4	390.8	404.1	442.5	448.2	453.0
Nonperforming loans to gross loans	6.8	7.8	10.0	9.2	9.7	6.7	6.8	6.3	7.3	5.5	5.4	6.3
Provisions to nonperforming loans	41.3	42.9	40.6	46.0	47.5	52.0	52.5	54.6	51.3	51.5	53.9	47.6
Spread between highest and lowest rates of interbank borrowing in AMD	4.0	1.8	0.4	4.5	0.3	0.8	0.3	0.5	0.3	0.8	0.0	0.3
Spread between highest and lowest rates of interbank borrowing in FX	3.5	5.0	1.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.5	5.0
Earnings and profitability												
ROA (profits to period average assets)	1.0	-0.5	0.2	0.5	0.5	1.1	1.1	1.3	1.2	1.2	1.4	1.5
ROE (profits to period average equity)	6.4	-3.5	1.0	3.3	3.2	7.0	6.4	7.9	7.6	7.7	8.7	9.6
Interest margin to gross income	35.7	28.9	28.8	29.4	29.6	29.2	29.9	30.2	30.7	30.6	32.0	32.1
Interest income to gross income	77.3	76.5	78.4	78.0	77.5	76.7	78.9	78.9	78.5	77.2	76.9	76.0
Noninterest expenses to gross income	31.7	29.4	28.6	28.9	28.7	29.1	26.7	28.1	28.7	29.9	41.0	35.4
Liquidity												
Liquid assets to total assets	25.1	28.0	29.2	28.0	29.9	32.5	32.0	32.2	32.2	32.1	30.8	27.0
Liquid assets to total short-term liabilities	129.4	142.4	157.7	153.5	159.7	170.8	164.6	157.1	144.5	141.7	148.7	132.1
Customer deposits to total (non-interbank) loans	98.0	112.5	112.9	110.1	113.2	115.0	115.6	115.0	117.5	117.0	118.3	107.3
Foreign exchange liabilities to total liabilities	63.5	65.7	65.6	63.2	63.9	62.6	61.3	61.1	61.2	60.0	60.2	59.5
Sensitivity to market risk												
Gross open positions in foreign exchange to capital	14.6	6.5	5.2	5.6	5.6	6.9	4.9	4.2	3.8	4.0	2.7	2.7
Net open position in FX to capital	-11.1	-2.8	-2.3	0.0	-3.3	-3.3	-1.2	-2.5	-1.8	-1.4	-0.4	0.8

Source: Central Bank of Armenia

Table 9. Armenia: Risk Assessment Matrix

Sources of risks	Relative likelihood	Impact and transmission channels
Weaker economic growth due to internal and external factors This risk could materialize due to: • Significant economic downturn in the key trading partner, Russia, through remittances and exports. • Lower commodity (especially copper and oil) prices. • Regional conflict, given sharp, renewed Nagorno-Karabakh-related tensions. • Intensification of sanctions to Russia and conflicts in the Middle East. • Higher risk premia.	Medium Medium Medium High High	**High** These factors could lead to: • Substantial pressure on the exchange rate to devalue, accentuated by the high degree of financial dollarization, as the private sector seeks the safety from hard currencies. Absent any constrain, depositors would try to convert their domestic currency into foreign currency deposits, widening banks' net FX open position. Under this scenario, a marked devaluation of the Dram could negatively impact banks' profits in a material way. • If depositors lose confidence on the soundness of the banking sector and massively run to convert their deposits into hard currency in cash, that could impose substantial liquidity shortage in the banks. • To respond to the exchange rate devaluation pressures, interest rates would increase, leading to higher NPLs, higher additional provisioning, lower (if not negative) profits, and reduced capital. A sharp increase in interest rates would also provoke losses associated with duration mismatches and lower marked-to-mark valuation of financial assets. • Funding costs would increase (for the sovereign, banks, and private sector) as risk premia increase. Under this scenario, banks' liquidity and profits would reduce further and credit growth could decelerate abruptly. • Lower demand for new credit, potentially affecting net interest income, although banks could also reduce deposit rates to minimize the impact on net interest income. This could also stimulate lead some banks to engage in riskier lending and investment, to make up for the loss in net interest income.
Tighter global financial conditions This risk could materialize due to: • A rise in global interest rates and term premia associated with Fed normalization and tapering by the ECB.	High	**Medium** A stronger U.S. dollar could harm Armenia's highly dollarized banking system, leading to: • Higher NPLs in the U.S. dollar-denominated loans from unhedged borrowers. • Elevated volatility in the FX and financial markets. • Higher risk premia, increase in funding costs, and subsequent lower credit growth. Weaker banks could also lose access to market funding.

Table 9. Armenia: Risk Assessment Matrix

Sources of risks	Relative likelihood	Impact and transmission channels
		• Liquidity problems as customers try to exchange their DC deposits for FX deposits and impact on profit, related to banks' NOP. • Lower profitability, as provisions rise in tandem with NPLs increase, demand for credit abate, and NOP losses materialize.
Significant financial stress triggered by external shocks This risk could materialize due to: • Capital outflows from large EMs and/or reemergence of financial stresses in Euro Area • Cyber-attacks on interconnected financial systems with subsidiaries in Armenia	Medium Medium	**Low** • Direct impact on subsidiaries of foreign banks under financial stress in the Euro area • Reduced access to international capital markets, particularly given the expected $500 million Eurobond roll-over in 2020. • Liquidity pressures, if depositors feel threatened by cyber-attacks.

Appendix I. Implementation of 2012 FSAP Recommendations

Recommendations	Implementation Status
Introduce liquidity coverage ratio for foreign currency	**Partially implemented**. In 2013, the CBA introduced prudential FX liquidity ratios based on liquidity assets as a percentage of both total assets and demand liabilities. However, Basel III LCR ratio was introduced only for monitoring purpose pending resolution of the shortage of HQLA in foreign currency.
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.	**Implemented.** The government representative is subject to the confidentiality requirements of the Central Bank. He/she signs the obligation not to disclose the information, received during the Board meetings.
Prioritize the draft legislation dealing with this issue of legal protection for staff.	**Implemented.** An amendment is done in Article 24 of LCB. The Parliament passed the law on 13/12/2017. The amendment stipulates that the CBA, its governing bodies, employees or any other person who represents the CBA or is authorized to act on its behalf, cannot be held accountable (including for the compensation of losses) for a decision, action or inaction regarding the supervision of financial organizations if they act in accordance with the laws (bona fide).
Relax the Law on Banks by allowing the exchange of information without an MOU, subject to specific due diligence requirements (secrecy provisions etc.)	**Implemented.** An amendment is done in Article 8 of LCB. The Parliament passed the law on 13/12/2017. The amendment empowers the CBA to cooperate and share information (including confidential) with relevant foreign supervisors without requiring an international agreement and subject to appropriate confidentiality safeguards.
Consider aligning minimum capital requirements for all banks, irrespective of the credit quality of the shareholder.	**Implemented.** The minimum capital requirements were aligned for all banks by the CBA board Resolution No. 257-N of 24/11/2017.
Include a specific requirement in the Law on Banks that the acquisition may not expose the bank to undue risk or that the bank has adequate financial and organizational resources to handle the acquisition.	**Implemented.** The amendment is done in Regulation 1, point 232.
Avoid the use of prudential regulation to promote development objectives.	**Implemented.** The minimum capital requirements were aligned for all banks by the CBA Board Resolution No. 257-N of 24/11/2017.

Recommendations	Implementation Status
Set up more frequent (i.e. annual) structured dialogue with banks' Board or Senior Management on their capital adequacy assessments.	**Implemented.** The provision is included in the RBS manual (Approved by CBA Chairman Resolution No. 1/1001L of 19.12.2017)
Prepare more guidance for banks and supervisors alike to ensure a sound Pillar 2 implementation. 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 in Pillar 2	**In progress.** Regulation 4 provides guidance for banks to deal with the risks, not covered in Pillar 1. Besides, the risk-based supervision manual provides guidance for supervisors to apply Pillar 2. In addition, it was decided to require banks to do self-assessments based on the risk management principles issued by BCBS. The need of issuing additional guidelines will be clear after the evaluation of banks' self-assessments. Currently Regulation 4 requires banks to have risk management function that should take into consideration those risks as well. Also, from 01.01.2017 the minimum capital requirement for banks was increased. This can be used as a buffer to mitigate those risks.
Develop a supervisory methodology for a more granular assessment of capital add-ons and/or stricter risk management requirements for Pillar 2 risks and the integrating of Pillar 2 in the supervisory methodology (i.e., 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).	**Implemented.** The provision is included in the RBS manual (Approved by CBA Chairman Resolution No. 1/1001L of 19.12.2017). Also, from 01/01/2017 the minimum capital requirement for banks was increased. This can be used as a buffer to mitigate those risks.
Modernize and update the regulations with a greater focus on risks management instead of control. Perform a re-assessment of the distribution of provisions between mandatory regulations and "comply or explain" guidance.	**Implemented.** Regulation 4 is developed according to such principle.
Issue guidelines for the internal validation of internal risk management models.	**Implemented.** Amendments are adopted to Regulation 4 requiring the banks to conduct an independent validation of internal risk models before their approval.

Recommendations	Implementation Status
Make the requirement for an independent risk management division headed by a Chief Risk Officer mandatory for the larger and more risky banks.	**Implemented.** Both the LBB and Regulation 4 define a requirement to have a separate independent Risk management function for all banks.
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) in the regulations. Issue good risk-management practices in the area of indirect foreign exchange risk, beyond higher provisioning and capital requirements.	**Implemented.** Amendments to Regulation 4 are approved. The amendments define indirect FX risk and require banks to identify and monitor it. Additionally, CBA supervisors assess the bank evaluations in this regard.
Align the calculation of the large exposures with the Basel methodology	**Partially implemented.** In 2017, LBB was amended, which provided legal base for the alignment of the methodology. The CBA is now in the process of internal discussions to address deviations.
Obtain regular offsite reports on a banks country risk and transfer risk.	**Implemented.** The CBA has developed a reporting system that enables receiving information on all types of exposures to non-resident counterparties on a monthly basis. Within the reporting system the CBA receives very detailed description of non-resident counterparties, including the name of the country the resident of which the counterparty is considered.
Introduce more explicit regulatory requirements to ensure that the market data used to value positions is independently tested	**Implemented.** The banks in Armenia do not heavily rely on internal models while assessing their market risk. Thus, the issue is not critical for Armenian banking system. At the same time, the responsibility is adequately shared between the oversight functions of the bank: the risk management function and the internal audit function. In addition, point 58 of Regulation 4 defines that risk management processes should be periodically revised to ensure promptness and validity of the process. The main areas, subject to revision, should include validity and completeness of input data, used during the assessment of the bank's level of risk, as well as testing and analysis of the assumptions and used input data.
Specific regulatory requirements with regard to the frequency of revaluation, independent review of	**Implemented.** The banks act, prepare and publish their financial statements in accordance with IFRS, which regulates also the requirements with regard to the frequency of revaluation and other issues. Moreover, banks are required to

Recommendations	Implementation Status
the processes, the verification of the consistency, timeliness and reliability of the data sources should be introduced.	undergo external auditing that, in addition to other aspects, also examines the adequacy of data sources. CBA considers those requirements to be adequate. In addition, banks report to the Central Bank, according to the supervisory reporting rules, in case of which the CBA does not solely rely on the IFRS.
Modernize and update the regulations and put 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.	**Implemented.** Regulation 4 is principle-based and focuses on risk management.
Implement a requirement to inform the CBA of developments affecting operational risk (broader than fraud) in banks.	**Implemented.** According to Regulation 3 (form 28), banks are required to submit reports to the CBA on fraud and attempts of fraud. In addition, according to form 35 of Regulation 3, the bank is required to inform the CBA if it has incurred or expects to incur material losses due to operational risk and other risks. The information, submitted to the bank, should include (i) the causes of losses, their description and impact, (ii) the measures to be taken by the bank to make the appropriate corrections, (iii) other necessary information in bank's opinion, and (iv) contact information of the person in charge.
Separate compliance function and the internal audit function, whose function it should be, inter alia, to audit the compliance function.	**Implemented.** Both the LBB and Regulation 4 clearly separate the compliance function from the internal audit function.
Amend Article 21 of the LBB so that some other officer in the bank assumes responsibility for compliance, for instance, a member of management or the head of Legal.	**Implemented.** Both the LBB and Regulation 4 define that each bank should have an independent compliance function. According to Regulation 4 the person, responsible for implementation of compliance function, should be independent, have full access to the Board, etc.
Introduce as a matter of urgency legislation to address the weaknesses identified in the IMF/MONEYVAL Mutual assessment of 2009.	**Implemented.** On June 21, 2014, the National Assembly of the Republic of Armenia passed a legislative package, which enacted on October 28, 2014, introducing changes and amendments 15 laws which had all been drafted by the FMC and other AML/CFT competent authorities. The legislative package included: • AML/CFT Law; • Criminal Code; • Criminal Procedure Code; • Administrative Code;

Recommendations	Implementation Status
	• Law on Advertisement; • Law on Advocacy; • Law on Auditing; • Law on Bank Secrecy; • Law on Games of Chance; • Law on Inspections; • Law on Insurance; • Law on Licensing; • Law on Lotteries; • Law on Notaries. In December 2015, the 49th plenary session of the MONEYVAL Committee adopted the Fifth Round Mutual Evaluation Report on the Armenian AML/CTF system. The report concludes that, in terms of technical compliance, Armenia is fully or largely compliant with 35 out of 40 FATF Recommendations and, in terms of effectiveness, Armenia demonstrates a substantial level of effectiveness for 6, a moderate level of effectiveness for 3 and a low level of effectiveness for 2 Immediate Outcomes.
Amend the law to require banks to immediately report changes to operations that would have a material adverse impact on the bank	**Implemented**. Regulation 3, as amended in 2012, requires banks to submit a quarterly report that includes, inter alia, information on material losses born or to be likely born by the bank stemming from credit, market, operational, liquidity, reputation or other risks.
Adopt a more formal structure to contacts with the banks. It is suggested that in addition to ad-hoc contact, as is the case at present, a formal meeting would be held, say annually, with the senior management of the banks to discuss issues of common interest to both.	**Implemented**. The provision is included in the RBS manual (Approved by CBA Chairman Resolution No. 1/1001L of 19.12.2017)
Seek the enactment of the legislation on consolidated supervision as a matter of urgency.	**Implemented**. The LCB was amended in 2015. Regulations covering identification procedure, prudential, reporting and disclosure requirements of financial groups were issued in 2016. The design of consolidated supervisory framework was included in the list of the third and fourth development policy operations (DPO) and the legal acts were developed with the technical assistance from World Bank.
Develop a program to gather information and monitor the hedging ability of borrowers	**Partially implemented**. A consistent definition of unhedged FX credit risk was established in June 2018, and banks are required to identify and monitor such risk. However, information collections are done only ad hoc in 2014, 2015 and 2017.

Recommendations	Implementation Status
Introduce use of Pillar 2 supervisory techniques	**Partially implemented**. Certain Pillar 2 techniques are introduced through the implementation of the risk-based supervision program.
Amend legislation to establish clearer and earlier triggers for a provisional administrator to conduct resolution operations	**Partially implemented**. The triggers are clarified. However, there is no special resolution regime and license revocation requires application to the court, which can refuse and reverse CBA's resolution action(s).
Amend Deposit Guarantee Fund legislation to allow funds to be used in resolution operations and to shorten the depositor pay-out period.	Partially implemented. Amendments to the RA Law on ''Guarantee of remuneration of bank deposits of physical persons'' have been done. The Parliament passed the law on 21/12/2015. While the DGF funds cannot still be used for resolution; the procedure of remuneration of guaranteed deposits has been improved. According to the time schedule stipulated in the Law for gradually shortening the pay-out period since 2023 the remuneration of guaranteed deposits shall be carried out by the Deposit guarantee fund after 7 days of bank insolvency, within 3 days upon receipt of the depositor's claim.
Revise Deposit Guarantee Fund governance structure to limit the participation of active bankers	**Partially Implemented.** An MOU between MOF, DGF and CBA has addressed this issue. However, this has not been included in the law. It is recommended that the issue be finally cured by amending the DGF Law.
Develop sound framework for the investment policy and asset manager regulations for pension funds	**Implemented** in 2014. The investment policy is sound and there are well performing asset managers operating in the country.
Develop pension regulation capacity at CBA	**Implemented** in 2015. The CBA has developed inhouse capacity to adequately regulate the sector.
Assess reform transition cost of pension reform	**Implemented** in 2015. The transition went smoothly, and the system operates well.
Amend the Civil Code and other relevant laws to simplify and accelerate registration and execution of collateral	**Largely implemented** in 2015. A new secured transaction regime was implemented. It is performing well with further modifications underway.

Appendix II. Banking Sector Stress Testing Matrix (STeM)

Banking Sector: Solvency Stress Test		
Domain		**Top-down bank solvency stress test by FSAP team**
1. Institutional perimeter	Institutions included	All 17 individual banks
	Market share	100 percent of all banks' assets
2. Channels of risk propagation	Methodology and risk factors modeled	Credit risk: Statistical models are used to relate loan losses to the macroeconomic scenarios. Risk-weighted assets (i.e., capital requirements) are recalculated under the adverse scenario. Market risk: Unexpected movements in interest rates are allowed to revalue securities on the balance sheet that are classified to be reported at fair value. Net interest income: Extrapolated from recent effective interest rates earned on interest-bearing assets and paid on interest-bearing liabilities. Profits: projected based on net interest income, loan losses, valuation changes and recent experience of net non-interest income. Risk Horizon: 5 years. Last historical information: December 2017
	Behavioral assumptions	Dynamic balance sheets are generated by using an iterated static balance sheet approach with assets growing in line with nominal GDP. No rebalancing of portfolio is allowed. Credit supply effects are disallowed. Maturing assets are replaced by exposures of the same type and risk. Banks do not pay dividends. The effective tax rate does not change. Losses are recognized in the same year that loans are impaired. If banks' capital ratio falls below regulatory minimum during the stress test horizon, no corrective action is assumed.
3. Tail shocks	Scenario analysis	There is only one adverse scenario combining two large shocks, both of which can be motivated by a fall in Russian GDP: a decline in demand for Armenian exports and a fall in Armenian remittance inflows. The fall in demand for Armenian exports leads to a fall in the prices of

Banking Sector: Solvency Stress Test		
Domain		**Top-down bank solvency stress test by FSAP team**
		Armenian exports (copper) and a fall in the quantity exported. As remittances drop, so too does the disposable income of Armenian households. These two effects depress domestic aggregate demand and the domestic currency depreciates in real and nominal terms. To fight against strong currency substitution and inflationary pass-through, given the dollarized economy, local currency monetary policy is tightened, which limits some of the nominal depreciation.
	Sensitivity analysis	The impacts of individual risks are delineated. Additional losses from potential low credit quality of restructured loans: Assessed by ad hoc magnification of projected loan losses.
4. Adjustments		None.
5. Regulatory and market-based standards and parameters	Calibration of risk parameters	Default rates ('PDs') and rates of loan loss given default ('LGDs') are both modelled statistically. PDs are modelled according to their historical relationship with past macroeconomic variables. This statistical relationship and the evolution of macroeconomic variables under the scenarios are combined to produce projections of PDs under the scenarios. LGDs are modelled according to their historical relationship with PDs. Funding costs are modelled statistically according to their historical relationship with past macroeconomic variables and bank-specific solvency and asset quality.
	Regulatory standards	Eligible capital and the Capital Adequacy Ratio (CAR) are defined according to the CBA rulebook. The hurdle rate for assessing numbers of failures and the size of recapitalization needs is the regulatory minimum CAR of 12 percent of risk-weighted assets.
6. Reporting format of the results	Output presentation	Evolution of CAR for the aggregate banking system. Contribution of key drivers to aggregate net profits and aggregate CAR. Capital shortfall, if any, in terms of nominal GDP. Key vulnerabilities that are responsible for outcome

Banking Sector: Liquidity Stress Test		
Domain		**Top-down bank liquidity stress tests by FSAP team**
1. Institutional perimeter	Institutions included	17 banking institutions.
	Market share	Captures entire domestic banking sector in Armenia
	Data	- Latest data as of March 2018. - Data has been collected from supervisory reporting and bank internal assumptions mapped into a cash-flow template provided by the IMF. - Data based on contractual cash-flows over 10 maturity buckets (Day 1, Day 30, Day 60, Day 120, Day 180, Year 1, year 3, year 3+) in different currency breakdowns (DRAM, USD, EUR, other). - Bank internal assumptions regarding expected deposit outflows, loan generation and drawdown on contingent liabilities under business as usual assumption.
2. Channels of risk propagation	Methodology	- Set of cash-flow based scenarios using stressed roll-over rates, inflow rates and haircut assumptions for the counterbalancing capacity in different maturity buckets. - Impact of solvency on liquidity via three channels: NPL impact on cash inflows, capital ratios on cash outflows, asset quality on counterbalancing capacity.
3. Tail shocks	Size of the shock	- Bank run and dry up of wholesale funding markets over a set of scenarios in increasing severity. - Stress scenarios are grouped into mild market stress, medium market stress, severe market stress and a combined scenario (including market and idiosyncratic shocks).
4. Risk and buffers	Risks	- Funding liquidity shock. - Market liquidity shock.
	Buffers	- Counterbalancing capacity after considering haircuts to liquid assets.
5. Regulatory and market-based standards and parameters	Regulatory standards	Local regulatory prudential requirements: - minimum ratio of liquid assets to total assets on overall currency basis (15%) and in FX (4%); - minimum ratio of liquid assets to current liabilities on overall currency basis (60%) and in FX (10%).

Banking Sector: Liquidity Stress Test		
Domain		**Top-down bank liquidity stress tests by FSAP team**
6. Reporting format of the results	Output presentation	- Hurdle metrics: remaining counterbalancing capacity at the end of the respective scenario horizon. - Impact of scenarios measured in absolute terms and normalized to total assets, liquidity gaps by individual currency and survival periods expressed in days.

Banking Sector: Contagion Stress Test Analysis

Domain		Version	
		Domestic interbank contagion analysis	International inter-banking system contagion
1. Institutional perimeter	Institutions included	All 17 individual banks, at the level of individual banks.	The banking systems of 31 countries, at the level of individual banking systems.
	Market share	100 percent of all banks' assets	Unknown.
2. Channels of risk propagation	Methodology and risk factors modeled	Methodology follows Espinosa-Vega and Sole (2010). This is a static balance sheet test. Computation involves iteration, but the steps in this iteration do not simulate the actual evolution of time. Channels of propagation include: — credit losses from counterparty default on claims receivable — losses due to immediate need to repay an amount previously borrowed — losses due to the forced sale of assets — cascading distress due to insolvency	
	Behavioral assumptions	Contagion happens instantaneously, so there is no time for the constituent banks to respond to the propagation of contagion. Banks are assumed to be able to recover all collateralized obligations like repurchase agreements and swaps.	Contagion happens instantaneously, so there is no time for the constituent banking systems to respond to the propagation of contagion.
3. Tail shocks	Scenario analysis	For each bank, 16 scenarios are considered, each of which corresponds to the insolvency of one counterparty bank. Furthermore, for each bank, 240 scenarios are considered, which correspond to the joint insolvency of every pair of counterparty banks.	30 scenarios are considered, each of which corresponds to the insolvency of one (non-Armenian) counterparty banking system.

Banking Sector: Contagion Stress Test Analysis			
Domain		**Version**	
		Domestic interbank contagion analysis	**International inter-banking system contagion**
	Sensitivity analysis	For each such initialization of the scenario, a range of parametrizations are considered, as reported in the text.	For each such initialization of the scenario, a range of parametrizations are considered, as reported in the text. The cross-border claims between banking systems are measured in four different ways to check for robustness.
4. Adjustments		None.	None.
5. Regulatory and market-based standards and parameters	Calibration of risk parameters	Baseline parameters match those used in Espinosa-Vega and Sole (2010), but all plausible parametrizations are considered as well.	
	Regulatory standards	Eligible capital and the Capital Adequacy Ratio (CAR) are defined according to the CBA rulebook. Insolvency in these tests corresponds to eligible regulatory capital falling below zero.	Capital is defined as total eligible regulatory capital on a consolidated basis. Insolvency in these tests corresponds to eligible regulatory capital falling below zero.
6. Reporting format of the results	Output presentation	Maximum single-counterparty loss to all individual banks. Maximum two-counterparty loss to all individual banks.	Maximum single-counterparty loss to the Armenian banking system, by cross-border claim calibration system and by parametrization.

Annex I. Report on the Observance of Standards and Codes—Basel Core Principles for Effective Banking Supervision

A. Introduction

1. **This assessment of the implementation of the BCP in Armenia has been completed as part of the Financial Sector Assessment Program (FSAP), jointly undertaken by the IMF and the World Bank in 2018.** The assessment reflects the regulatory and supervisory framework in place as of the completion of the assessment. It requires a review not only of the legal framework, but also a detailed examination of the policies and practices of the institutions responsible for banking regulation and supervision. It is not intended to analyze the state of the banking sector or crisis management framework, which are addressed by other assessments conducted in this FSAP.

B. Information and Methodology Used for Assessment

2. **This assessment was conducted against the standard issued by the Basel Committee on Banking Supervision (BCBS) in 2012**. Since the past BCP assessment, which was carried out in 2012 against the 2006 version of Core Principles, the BCP standards have been revised. The revised Core Principles (CPs) strengthen the requirements for supervisors, the approaches to supervision, and the supervisors' expectations of banks through a greater focus on effective risk-based supervision and the need for early intervention and timely supervisory actions. Furthermore, the 2012 revision placed increased emphasis on corporate governance and supervisors' conducting sufficient reviews to determine compliance with regulatory requirements and thoroughly understanding the risk profile of banks and the banking system. This assessment was thus performed according to a significantly revised content and methodological basis compared to the previous BCP assessment.

3. **The Armenian authorities opted to be assessed against both the essential criteria (EC) and the additional criteria (AC) but graded on the basis of EC only.** To assess compliance, the BCP Methodology uses a set of EC and AC for each principle. The EC set out minimum baseline requirements for sound supervisory practices. The AC are recommended as the best practices against which the authorities of some more complex financial systems may agree to be assessed and graded. Armenian authorities chose to be graded against the EC only.

4. **Grading is not an exact science and the CPs can be met in different ways.** The assessment of compliance with each principle is made on a qualitative basis. Compliance with some criteria may be more critical for effectiveness of supervision, depending on the situation and circumstances in a given jurisdiction. Emphasis should be placed on the comments that accompany each CP's grading, rather than on the grading itself.

5. **The assessors held extensive meetings with CBA staff, commercial banks and other relevant counterparts who shared their views with the assessors.** The team also reviewed the framework of laws, regulations, and supervisory guidelines. The CBA provided a self-assessment of the CPs and answered comprehensively to preparatory questionnaires. The assessment team

appreciated the excellent cooperation and would like to thank the CBA staff for their preparation and responsiveness during the assessment period.

C. Preconditions for Effective Bank Supervision

6. Effective supervision is dependent on having the necessary preconditions in place. These include: (i) sound and sustainable macroeconomic policies; (ii) a framework for financial stability including policy formulation, mechanisms for inter-agency coordination, resolution and safety-nets; (iii) a well-developed public infrastructure including a system of business laws, the accounting, auditing and legal professions, judiciary and clearing, payment and settlement systems; and (iv) transparency and market discipline.

D. Main Findings[1]

Responsibilities, Powers, Independence, Resources, Accountability and Cooperation (Principles 1–3)

7. The CBA's supervisory responsibilities and powers are well established. Banking supervision in Armenia falls exclusively within the responsibility of the central bank. Accountability could be improved through public reporting of performance of the supervision function relative to its specific objectives. Further, MOUs with foreign supervisors should be revisited to address resolution strategies for large banks.

Ownership, Licensing, and Structure (CPs 4–7)

8. Armenia has a generally high level of compliance with these principles, with appropriate legal requirements and review processes in place. Current laws and regulations cover all the key elements of an effective licensing framework and the approach to assessing the fitness and propriety of major shareholders and senior management of an applicant bank is appropriate. During the interview process, Chief Risk Officers and Heads of the compliance functions are not yet included, but CBA has prepared a draft amendment to be able to do so.

Ongoing Supervision (CPs 8–10)

9. The CBA has made a significant improvement in its approach to banking supervision with adoption of the Risk-Based Supervision framework. The Risk-Based Supervision Framework (RBS) formally adopted in 2017 is designed to provide a more forward-looking assessment of risks and their impact on capital and liquidity; enable supervisory planning to focus resources more proportionately on emerging risks and on firms with more systemic impact; integrate a macroeconomic perspective into supervisory assessments, and strengthen the CBAs understanding of risk management practices. Of particular note is the institution of risk teams in the Supervision Department and focus on conducting thematic inspections and reviews by the latter, which aids

[1] The Detailed Assessment Report has been prepared by Jack Jennings (IMF), and Philippe Aguera (World Bank).

better systemic view and risk-based resource allocation. The program is still in its first full cycle of implementation, and while it has identified knowledge gaps to be closed, initial results are promising. Supervisory activities planned for 2018 based on the risk assessment results appear more balanced between off-site analysis and on-site validation activities. Supervisory reporting for off-site analysis and monitoring is a strong point of the CBA regime. In addition to standard financial reports, CBA has access to transactional information on borrowers through a credit registry and a database of all bank internal policies.

10. The CBA is to be commended for implementing this RBS and is encouraged to further enhance its supervisory approach. Areas for further development in supervisory approaches relate to the need for a non-discretionary framework for dealing with weak banks (PCA) and assessing resolvability in larger firms.

Corrective and Sanctioning Powers (Principle 11)

11. The CBA has a wide range of corrective and sanctioning powers, and while there is evidence that they have been effective, there were observed weaknesses in taking enforcement action to address a pattern of large exposure breaches. There were observed inconsistencies in the application of sanctions for all large exposure breaches. The CBA should review its enforcement practices with regard to large exposure limits with an aim towards consistently applying sanctions and having banks operate within prescribed limits. Further, the CBA should consider designing and implementing a Prompt Corrective Action regime to guide decision-making in dealing with banks under stress. The CBA has yet to implement a requirement that larger banks have recovery plans, or to initiate resolution planning in line with the best practices documented in the Financial Stability Board Key Attributes of Effective Resolution Regimes for Financial Institutions.

Consolidated and Cross-Border Supervision (Principles 12, 13)

12. Laws and regulations were enacted to identify affiliated entities as "financial groups" and subject them to consolidated supervision. The regulations give CBA discretion to distinguish its supervisory approaches among complex/not low-risk groups and low-risk groups. All groups are required to file consolidated returns and reports on inter-group transactions, while not low-risk groups are also subject to prudential standards on a consolidated basis. Low-risk groups are supervised on a solo basis, as currently there are no complex/not low-risk groups.

No Armenian banks currently have foreign operations. Subsidiaries of four foreign banks operate locally. Supervisors attend supervisory colleges for two of these foreign banks. For foreign owned large banks, the CBA should contact home supervisors to gain an understanding of their recovery/resolution frameworks. MOUs should be updated as necessary to accommodate sharing of resolution related information.

Corporate Governance Prudential Requirements, Regulatory Framework, Accounting and Disclosure (Principles 14–29)

13. The Corporate Governance regulations for banks are generally adequate; and significant supervisory work has been conducted in this area, in particular with regard to the review of bank strategic planning and role of the risk management function in banks. However, there is a need for more work on the part of supervisors to understand and validate governance practices across firms.

The CBA's prudential standards and supervisory review of specific risks are generally sound.

- Capital adequacy requirements are based on Basel II definitions and risk-weightings, while the quality requirements for elements included in regulatory capital are consistent with the Basel III requirements,
- There have been significant changes in laws and regulations that provide flexibility for the CBA to require good risk management systems in banks. Regulations require banks to have the essential elements for comprehensively identifying and managing risk, including stress testing capabilities and ICAAP processes. Supervisory work to validate risk management systems and fill knowledge gaps is ongoing.
- Credit risk is monitored closely via on-site reviews and off-site access to borrower information in the credit registry. Unhedged FX borrowers represent significant risk in the loan portfolio and enhancements to credit risk management requirements (e.g., more stringent and targeted DTIs and LTVs) are suggested. Steps were taken recently to provide banks with a common supervisory definition of the risk from unhedged FX borrowers for monitoring purposes.
- Problem assets are also monitored closely via monthly classification reports and activity observed in the credit registry. The CBA has historically maintained a conservative philosophy with regard to provisioning and charge-offs. Definitions of NPLs and restructured loans are not aligned with BCBS guidance from 2017; it is recommended that these new definitions be adopted to provide investors and other supervisors with data that is comparable with other jurisdictions.
- The CBA began LCR and NSFR monitoring in 2015 and is intending to adopt these measures pending resolution of a policy matter regarding FX reserve requirements that has resulted in a misbalance between AMD and FX HQLA. The CBA is reviewing options to address this issue and intends to adopt the Basel III standards once this obstacle is addressed.
- The CBAs regulations provide that only audit firms with broad based experience are eligible to audit banks. IFRS is the accounting standard. Disclosure practices are considered adequate based on IFRS and CBA requirements. Supervisors are in close contact with both internal and external auditors.
- Measures to detect the laundering of proceeds of corruption should be strengthened. The law should explicitly require the implementation of AML/CFT requirements for domestic politically-exposed persons.

Annex Table 1. Summary of Compliance with Basel Core Principles

Core Principle	Comments
1. Responsibilities, objectives and powers	The banking supervisory responsibilities and objectives of the CBA are clearly enshrined in legislation. There is no evidence to suggest that the dual mandates of financial stability and price stability are compromising the setting of prudential standards. Clarity regarding the roles of the two deputy chairmen regarding bank supervision can be improved.
2. Independence, accountability, resourcing and legal protection for supervisors	It is recommended that the CBA enhance its disclosure of specific supervisory objectives and the outcomes of activities designed to meet those objectives. In addition to providing training to existing staff, as additional staffing needs are identified consideration should be given to hiring individuals with prior experience/training in risk analytics, stress testing, and risk management.
3. Cooperation and collaboration	The authorities should consider publishing the MOU with the MOF and DGF to ensure information sharing, coordination, cooperation and also promote greater accountability and transparency. The MOUs with the foreign supervisors should be revisited to refer to handling problem financial institutions and to the resolution of failing banks, as prescribed by the latest recommendations of the Basel Committee and the Financial Stability Board (FSB). Formal procedures or processes should be agreed between the CBA and relevant supervisors on how a bank would be resolved in practice.
4. Permissible activities	Only banks can accept deposits and can provide banking activities defined as both accepting deposit and extending credit. Non-banking financial institutions are not allowed to take deposits.
5. Licensing criteria	Current laws and regulations cover all the key elements of an effective licensing framework and the approach to assessing the fitness and propriety of major shareholders and senior management of an applicant bank is appropriate. During the interview process, Chief Risk Officer and Head of the compliance functions are not yet included, but CBA has prepared a draft amendment to be able to do so.
6. Transfer of significant ownership	The CBA has the appropriate powers to approve and reject applications by prospective owners to become substantial shareholders of a bank on both a consolidated and solo bank basis.
7. Major acquisitions	The CBA has the legal powers to approve or reject acquisitions or investments by a bank. As part of the consolidation of the Armenian banking system, the CBA reviewed and approved four requests for acquisitions linked to mergers of banks since the last assessment.
8. Supervisory approach	The CBA formally adopted a risk-based supervision program (RBS) in December 2017 after a three-year pilot. The RBS requires an annual comprehensive risk assessment of each bank that includes: identification of material operations and evaluation of inherent risks and mitigating management controls. The "net risk" is assessed against the adequacy of capital and liquidity. Supervisory activities are planned out annually based on needs for validating risks and controls. The program design appears comprehensive and provides for forward looking assessments, proportionate allocation of resources, assessments of risks for both individual firms and across the system, and incorporation of macroeconomic factors. The program is now in its first cycle and while gaps in supervisory information were identified, plans are directed towards addressing those areas. Shortcomings in the EC included no assessments of resolvability and lack of a specific framework for weak banks (PCA).

Annex Table 1. Summary of Compliance with Basel Core Principles (continued)

Core Principle	Comments
9. Supervisory techniques and tools	The extent of onsite validation inspections vs off-site analysis activities needs better balance. Prudential inspections have been limited the past two years due in part to training and process development for RBS. The 2018 plan appears to have better balance and should reduce information gaps evident in the existing risk assessments. Also, risk teams are increasing their activities in response to needs for improved structural (system-wide) in assessing risk in material operations and providing additional guidance to general examiners.
10. Supervisory reporting	Reporting is extensive and based on IFRS, although the CBA imposes a separate supervisory regime for asset classifications that determine provisioning, reserves and write-offs. Reports enable monitoring of prudential standards for capital, liquidity, asset quality, large exposures and FX positions. The CBA has access to a credit registry which enables near real-time monitoring of loan portfolios, including individual borrowers.
11. Corrective actions and sanctioning powers of supervisors	The laws and regulations provide the CBA with sufficient tools to address unsafe and unsound practices within a bank or banking group in a timely fashion. CBA should develop a Prompt Corrective Action framework and disclose it to all stakeholders. A Prompt Corrective Action requirement should prescribe mandatory and discretionary supervisory actions to be taken when an institution breaches specified capital thresholds and triggers. Also, the current resolution framework should be revisited to allow the CBA to develop a regime specifically dedicated to banks in line with the Key attributes of the FSB.
12. Consolidated supervision	Laws and regulations were enacted to classify affiliated entities as “financial groups”. The regulations give CBA discretion to distinguish its supervisory approaches among complex/not low-risk groups and low-risk groups. All banking groups, irrespective of their risk classification, are required to submit: consolidated financial statements, consolidated comprehensive income statements, report on foreign exchange positions, and report on intra-group transactions. In addition to these reports, if classified not low risky, they also submit reports on prudential standards. Low-risk groups are supervised on a solo basis, although all groups are subject to reporting inter-group transactions. Currently there are no complex/not low-risk groups.
13. Home-host relationships	No Armenian banks currently have foreign operations. Subsidiaries of four foreign banks operate locally. Supervisors attend supervisory colleges when invited. It is recommended that for foreign owned large banks the CBA reach out to home supervisors to gain an understanding of their recovery/resolution frameworks. MOUs should be updated as necessary to accommodate sharing of resolution related information.
14. Corporate governance	Regulations and guidelines generally provide an adequate framework; however, there is a need to build out more structured (system-wide) understanding of practices across firms.
15. Risk management process	There have been significant changes in laws and regulation that provide flexibility for the CBA to conduct and enforce the RBS. Regulations require banks to have the essential elements for comprehensively identifying and managing risk, including stress testing capabilities and ICAAP processes. CBA is undertaking a review of its regulations with industry input to align them with better practices in the industry. Supervisory field work to validate risk management systems and fill information gaps is ongoing, but more needs to be done to assess the supervisor’s knowledge as fully sufficient. As stress testing is an

	increasingly important component of the assessment process, it is recommended that written guidance be articulated for reviewing methodologies and results.

Annex Table 1. Summary of Compliance with Basel Core Principles (continued)

Core Principle	Comments
16. Capital adequacy	The current capital adequacy requirement applied to all banks in Armenia is mostly based on the components of the standardized approach of Basel II (while the quality requirements for elements included in regulatory capital are consistent with the Basel III requirements). The CBA is implementing a Basel III plan, which should lead to Basel III full compliance in the next 5 years. As a practical matter, almost all capital of Armenian banks is CET1 as there is only a small market for subordinated or hybrid instruments. Armenian banks are already required to maintain a total capital of 12 percent and in most cases report significantly higher capital, so there should be no practical difficulty meeting Basel III capital requirements over such period. CBA has adopted and is in the process of adopting other elements of Basel III (capital buffers and potentially a leverage ratio). Capital is calculated on a consolidated and solo basis for all banks and CBA has the authority to impose additional capital requirements on individual banks, as deemed necessary, but it has not yet set minimum capital ratios for banks based on their risk profile. Also, CBA has not introduced a leverage ratio as previous simulation had shown a sector level of 13 percent in 2011, and 12.4 in 2017 (calculated based on Basel methodology), but it has started discussing the introduction of such a ratio, because recent analysis as shown greater divergence between banks. However, the lowest level of the leverage ratio in the banking system (5.3 percent) is quite above the Basel minimum level (3 percent), not making the introduction of the ratio as high priority. No draft regulation has been prepared yet. Banks are required to use their own ICAAP results to detect whether their existing capital is enough to withstand the bank's risks, but CBA does not receive nor challenge the outcome of these exercises.
17. Credit risk	Credit risk is monitored through the on-site inspection process as well as off-site via reports and access to data in the credit registry. Supervisors sample credit files for review during inspections. Monthly, banks are required to submit classifications of loans based the supervisors five grade scale. Supervisors have been known to challenge classifications and the adequacy of reserves. Practices and procedures for assessing credit risk are generally adequate. However, unhedged FX loans represent substantial risk to the banking system. The CBA should closely monitor the implementation of its new regulation requiring banks to identify and track unhedged borrowers based on a common supervisory definition and consider developing more formal reports from banks.
18. Problem assets, provisions, and reserves	The CBA has a longstanding practice of requiring classifications of credits within a five-grade system based on delinquency and with a qualitative adjustment for borrowers experiencing financial distress. Provisions and reserves are largely driven in a formulaic manner from those classifications, although qualitative adjustments are also made. With the adoption of IFRS 9 by all banks this year, it is recommended that CBA evaluate whether there are opportunities to leverage from IFRS reporting systems for assessing loan quality and reserves. At a minimum, supervisors should be assessing IFRS 9 methodologies for managing credit risk. CBA also uses a non-standard (more conservative) definition for NPLs (1-day delinquent) and renegotiated loans. BCBS guidance released April 2017 provides standardized regulatory definitions that should be adopted to provide users of

	bank financial data a clearer picture of the condition of the banking system. The CBA should also collect information on restructured loans as part of its regular reporting.

Annex Table 1. Summary of Compliance with Basel Core Principles (continued)

Core Principle	Comments
19. Concentration risk and large exposure limits	A number of banks have been identified as breaching the large exposure limits. Although sanctions/fines have been levied in some cases, these have apparently not been sufficient to prevent further violations. The inconsistency in the application of sanctions for all breaches is problematic. The CBA should review its enforcement practices with regard to large exposure limits with an aim towards consistently applying sanctions and having banks operate within prescribed limits.
20. Transactions with related parties	As only very few full scope on-site examinations have been performed in the last 5 years, the CBA should consider undertaking further review of related party lending reporting to ensure that banks and banking groups are capturing all connected loans under the current legislation.
21. Country and transfer risks	Based on its monitoring, the CBA considers country risk to be relatively low for the Armenian banking system, therefore it has not been of high priority for the authorities. CBA has however introduced a range of general requirements to the risk management function of banks in assessing, monitoring and managing different types of risk, not included in Pillar 1, including country risk.
22. Market risk	Supervisors have inspection activities planned to establish a system-wide assessment of the level of bank compliance with BCBS recommended practices. Compliance with recently introduced regulations regarding the use of internal models also needs to be evaluated. CBA should evaluate the January 2016 BCBS Standards, “Minimum Capital Requirements for Market Risk” and the June 2017 consultative document “Simplified alternative to the standardized approach to market risk capital requirements.” While CBA is considered in compliance with 2006 Basel II standardized approaches, there is some concern that those standards may not be sufficiently dynamic to address the growth in interest-rate risk. In addition to evaluating the 2016 changes, the CBA should better integrate IRR stress testing into Pillar 2 capital requirements.
23. Interest rate risk in the banking book	IRRBB is generally evaluated against older Basel guidance. CBA should evaluate the need to incorporate, as appropriate to their jurisdiction, the recommendations in the 2016 Basel Standards for IRRBB. Adoption of the 2016 guidance would introduce: more extensive guidance on the expectations for a bank's IRRBB management process in areas such as the development of interest rate shock scenarios, as well as key behavioral and modelling assumptions; disclosure requirements to promote greater consistency, transparency and comparability; an updated standardized framework; and a stricter threshold for identifying outlier banks.
24. Liquidity risk	Although the CBA’s approach to supervising liquidity risk is rated compliant with requirements of the Core Principles, it is recommended that the CBA adopt the LCR and NSFR ratios.
25. Operational risk	Recently reinforced with the creation of a Risk team dedicated to Operational risk, the activities of FSD in this domain indicate extensive focus on operational risk and risk management in the last two years (survey of top 10 risks in the banks in 2017, thematic examination on data bases, on-site examination in 9 banks in 2018). Greater prudential focus is the main outcome compared to the previous procedures focused on topics such as physical security and branch inspections, that are better addressed by the banks’ own internal audit functions. This allows dedicate examiners resources to the risks more likely to threaten the soundness of the bank. FSD has a clear view of the operational risks in the system and in each individual bank, though this knowledge must still be confirmed through the coming on-site focused examinations

	scheduled under the RBS framework. It remains for CBA to formally issue its draft regulation on outsourcing activities.

Annex Table 1. Summary of Compliance with Basel Core Principles (concluded)

Core Principle	Comments
26. Internal control and audit	Policies and procedures for evaluating internal control, compliance and internal audit functions appear adequate.
27. Financial reporting and external audit	Banks are required to be audited annually by a firm applying international auditing standards. In practice, only internationally recognized big firms (EY, PWC, KPMG, Deloitte, Grant Thornton Armenia) are permitted to audit banks. All public reporting is under IFRS.
28. Disclosure and transparency	All banks are audited annually under IFRS and make required disclosures.
29. Abuse of financial services	A robust legal and regulatory framework is in place following several changes in the laws and regulations. Armenia has introduced a risk-based approach to AML/CFT supervision in the banking sector and implementation is in progress. The FMC is considered to be provided with skilled human resources and technical tools and procedures. However, there continues to be no legal requirements to implement enhanced due diligence measures on domestic politically-exposed persons (PEPs).

Annex Table 2. Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks

Core Principle	Recommendation
2. Central Bank independence	• It is advised that the CBA Law be revised so that the statutory requirements that the reasons for removal of the Governor or a Board member be publicly disclosed are contained in the CBA Law itself
3. Cooperation and collaboration	• Consider publishing the MOU signed by CBA with the MOF and DGF to ensure information sharing, coordination, cooperation, and also promote greater accountability and transparency. • Revisit MOUs with foreign supervisors to refer to handling problem financial institutions and to the resolution of failing banks, as prescribed by the latest recommendations of the Basel Committee and the Financial Stability Forum.
8. Supervisory approach	• Continue refining the risk-based supervisory approach for more granular assessments of each firm capital needs. Build-out more structural (system-wide) assessments of significant risk areas and mitigating controls. • Conduct resolvability reviews of larger banks. • See Principle 11 regarding adoption of an early intervention Prompt Corrective Action framework.
9. Supervisory techniques and tools	Annual supervisory plans should be reviewed to ensure that 1) a better balance between off-site analysis and on-site validation is achieved, and 2) a priority is placed on addressing knowledge gaps identified in the planning process.
11. Corrective and sanctioning powers of supervisors	Develop a non-discretionary Prompt Corrective Action framework of supervisory actions taken in response to a bank's deteriorating capital or liquidity position. Such responses may include submission of remediation plans, ceasing dividends and discretionary compensation, and limits on growth, types of activities, or funding sources.
13. Home-host relationships	Broaden home/host communications to encompass resolution strategies and risk management activities conducted at the parent for the local subsidiary. MOUs should be updated as necessary to accommodate sharing of such information.
14. Corporate governance	Continued emphasis should be placed on implementation of supervisory guidance and building out more structural (system-wide) understanding of practices across all banks.
15. Risk management process	• Review/update regulations considering developments in the banking system and new BCBS guidance (IRRBB, problem asset definitions, Basel III). • Recommend standardizing criteria for assessing bank-run stress test methodologies and results.
16. Capital adequacy	• The CBA should complete adoption of Basel III capital buffers. • CBA should enhance its review of bank ICAAP processes and more comprehensively implement its Pillar 2 approach, though implementation of the risk-based approach is a significant step forward.
17. Credit risk	• Review banks implementation of controls for identifying and monitoring unhedged FX borrowers using the new supervisory definition; develop formal reporting for unhedged FX exposures.
18. Problem assets, provisions and reserves	• Address use of non-standard definitions for NPL and restructured loans based on 2017 Basel guidance. • Institute formal reporting on restructured loans. • Evaluate whether greater convergence can be achieved between IFRS and supervisory reporting; have supervisors focus on evaluating credit risk management systems required under IFRS 9.

Annex Table 2. Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (concluded)

Core Principle	Recommendation
19. Concentration risk and large exposure limits	The CBA should review its enforcement practices with regard to large exposure limits with an aim towards consistently applying sanctions and having banks operate within prescribed limits.
20. Transactions with related parties	• Consider undertaking a thematic review of related party lending reporting to confirm current work that banks and banking groups are capturing all connected loans under the current legislation. • Avoid warning bank owners with several days (5 days under Article 27.2 and 3 days under Article 29.1), of pending liquidation, a period in which, if CBA supervisors are not on-site monitoring transactions and granted authorization to block transactions (especially insider and related party), insiders have a golden opportunity for asset-stripping.
21. Country and transfer risks	Assess implementation by banks of the new requirements and, in the absence of specific regulatory requirement, adequacy of banks policy in managing and setting limits for country risks.
22. Market risk	• CBA should evaluate the January 2016 BCBS Standards, "Minimum Capital Requirements for Market Risk" and the June 2017 consultative document "Simplified alternative to the standardized approach to market risk capital requirements" for application locally. • CBA should consider better integrating IRR stress testing into Pillar 2 capital requirements. • Continued emphasis should be placed on development of supervisory guidance and building out system-wide understanding of practices across all banks. • On-site validation work should assess compliance with new requirements for use of internal models (Regulation 4).
23. IRRBB	Evaluate the need to incorporate, as appropriate to their jurisdiction, the recommendations in the 2016 Basel Standards for IRRBB that expands on risk management, stress scenarios, identification of outliers and disclosures.
25. Operational risk	Issue the draft regulation on outsourcing activities.
29. Abuse of financial services	There continues to be no legal requirement to implement enhanced due diligence measures on domestic politically-exposed persons (PEPs). Amendments to the AML/CFT law should be made to introduce the definition of domestic PEPs and explicitly require their identification and the implementation of that enhanced due diligence measures in case of high-risk business relationships. The FMC should develop a specific AML/CFT risk-based supervision manual. The frequency of on-site examinations should also be increased compared to the current situation (only one targeted examination during the 2018 first semester in one of the banks where inherent risk is high).

Authorities' Response to the Assessment

The Central Bank of Armenia (CBA) would like to express its appreciation to the International Monetary Fund (IMF), the World Bank (WB), and the Financial Sector Assessment Program (FSAP Program) mission team for the comprehensive and detailed assessment under the FSAP. We believe the latter will promote soundness of the financial system of Armenia and contribute to improving supervisory practices, as was the case with previous Programs.

The CBA would like to specifically acknowledge professionalism shown and hard work performed by the FSAP mission team, which ensured successful completion of the assessment. It is also encouraging to read in the Report that the FSAP mission team emphasizes accomplishments of the CBA in enforcement of compliance with Basel Core Principles and highly evaluates the achievements of the Central Bank in developing and implementing the Risk Based Supervision Framework.

We note that, the FSAP mission team made highly valuable recommendations, which would be addressed in the near future. The Central Bank confirms its strong commitment to undertaking adequate measures for continuous improvement and strengthening of the regulatory and supervisory frameworks of the Armenian banking system.

Statement by Vladyslav Rashkovan, Alternate Executive Director for the Armenia, and Shahane H. Harutyunyan, Advisor to the Executive Director
November 30, 2018

The Armenian authorities would like to express their sincere appreciation to the joint IMF-World Bank FSAP mission team for the constructive and candid engagements since June 2018. They welcome the comprehensive and in-depth Financial System Stability Assessment (FSSA) report and broadly agree with staff's assessment and recommendations.

Armenia has made considerable progress since the last FSSA in 2012. The Armenian financial system remains sound and resilient. The banking system is well capitalized, and while the NPL ratio and banks' profitability remain a challenge, both have been improving over the recent period. The authorities have significantly upgraded the legislative, regulatory and supervisory frameworks since 2012. The CBA has largely complied with 2012 FSAP recommendations and Basel Core Principles (BCP). The most notable amendments include the revamping of the Risk Based Supervision (RBS) framework in 2017, the enactment of legislation on consolidated supervision of financial groups and the alignment of minimum capital requirements among all banks. The CBA has strengthened the regulatory framework requirements for corporate governance, country risk and stress testing. The AML/CFT framework, the Bankruptcy Law and the Deposit Guarantee Fund (DGF) legislation have been further enhanced.

The CBA continues to adhere to the full adoption of the BASEL III Standards to address the existing gaps in the regulatory and supervisory frameworks. The CBA has set up a clear Basel III plan and is pursuing to fully comply with the Basel III standards by 2024. The regulation on the new capital requirements, including the conservative, countercyclical and systematic capital buffers, is in the process of validation. In addition, the CBA has been monitoring the LCR and NSFR Basel III liquidity ratios since 2015 and the exact phase-in schedule is currently being discussed. While the current capital adequacy requirements are largely based on the Basel II approach, the regulatory capital elements are consistent with the Basel III requirements, and the CET1 capital has a dominant share in the total capital. Also, the capital requirements are tighter than the Basel III minimum, and the current average capital adequacy ratio is above the regulatory 12% minimum. In this context, the CBA ensures that the Armenian banking system has all necessary preconditions in place to easily meet the Basel III capital requirements over the planned time-period.

The Armenian authorities remain strongly committed to addressing the risks related to the financial dollarization, low profitability and large exposures. The CBA is aware of the challenges related to the high level of dollarization, and while a wide range of prudential measures have been implemented over the last years, additional measures are planned to be taken, in line with staff's recommendations, to mitigate and prevent the future FX-related risks. The feasible timing for the adoption of the stressed loan-to-value (LTM) limit is in the process of active discussions, while the debt service to income (DSTI) limit requires more time to be introduced related to the data shortcomings. The adoption of the LCR and NSFR ratios may mitigate the risks further. The CBA has also initiated some preparatory work aimed at reforming the current reserve requirement regime to address the shortage of high quality liquid assets (HQLA) in foreign currency. Regarding the large exposures, given the decisive and strict view on the prudential limits, the CBA has undertaken decisive measures over the last two months to address the violations. In this regard, the CBAs' actions have proven to be quite effective resulting in positive outcomes. The CBA is determined to continue with the enforcement of the adopted measures to set the operational standards for banks.

The CBA closely monitors the vulnerabilities revealed by the FSAP stress tests and stands ready to undertake adequate measures to address the weaknesses. The "top-down" solvency and liquidity stress tests have provided a helpful addition to the CBA's own regular test with similar results. Although spillover risks appear not to be a threat to financial solvency and the Armenian banking system shows resilience against market-wide shocks, the tests reveal important vulnerabilities that need to be carefully addressed. In this regard, the plans are underway towards implementing a comprehensive set of measures over the next two years to further strengthen the prudential requirements and supervision process, to enhance liquidity reporting and monitoring by banks in every significant currency as well as to expand liquidity stress testing methods through the inclusion of risks from currency mismatch.

The authorities will push forward to improve the financial safety net and crisis management frameworks as well as to safeguard financial integrity. As staff noted, significant progress has been achieved in the crisis preparedness planning since 2012. The CBA has established a Financial Stability and Special Regulatory Committee (FSSRC) with the purpose of assessing the key issues and risks related to the financial system stability. In addition, the CBA has prepared a detailed Crisis Management Guide to deal with emergency situations which currently is in the validation phase. In this context, the FSSRC has been effectively providing both financial stability and crisis management functions since its establishment, and the MOU signed between the CBA, the MOF and the DGF has outlined a multi-stakeholder decision-making process in case of crisis. Furthermore, the CBA is determined to discuss the appropriateness of the expansion of the DGF's mandate to "paybox plus" in the future. However, the DGF is still in its early years of operation, and more time and efforts are needed to evaluate and reassess its functions in a paybox plus model. The staff's recommendations on the adoption of the Special Bank Resolution regimes and on the Recovery and Resolution Planning are well taken. Regarding financial integrity, our authorities remain committed to further enhance the AML/CFT framework and address the shortcomings identified in the 2015 mutual evaluation report.

On the macroprudential oversight, the authorities put addressing the challenges that lie ahead high on their agenda. They welcome the acknowledgement in the FSSA report of the considerable progress achieved by the CBA with enhancing the banking supervision, notably by adopting the RBS framework. However, the authorities agree that the framework is still in an early stage and needs enhancement in several aspects. In this regard, the authorities are determined to carefully consider the staffs' recommendations to further refine the robust and effective supervisory framework. This generally includes the risk-based differentiation in banks' capital levels with more standardized stress testing and the ICCAAP approaches; the alignment of non-performing and restructured loans with international best practices, and the application of IFRS9 techniques during the risk management process. This may take two to three years until full implementation.

And finally, the CBA remains attached to the objective of further development of the financial sector. The authorities have made substantial improvements in the legal and regulatory frameworks, notably through the reforms in the credit infrastructure, transactions regime, bankruptcy law and payments systems. The pension system reform fully implemented in July 2018 was an important step forward. Amid the current success, the authorities acknowledge that more efforts are needed. They will continue to take decisive measures to refine the insolvency regime, accounting and auditing standards, as well as the corporate transparency and efficiency of government support programs.