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ALGERIA

FINANCIAL SYSTEM STABILITY ASSESSMENT

June 2014

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

- The Financial System Stability Assessment prepared by a staff team of the IMF for the Executive Board's consideration on January 24, 2014. This report is based on the work of a joint IMF-World Bank FSAP mission to Algeria during September 2013. The FSSA was completed on January 9, 2014.

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ALGERIA

FINANCIAL SYSTEM STABILITY ASSESSMENT

January 9, 2014

Approved By
Christopher Towe and Daniela Gressani

Prepared By
Monetary and Capital Markets Department

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited Algeria in September 2013. The FSAP findings were discussed with the authorities during the November 2013 Article IV consultation mission.

- The FSAP team was led by Karl Driessen, IMF and Laurent Gonnet, World Bank, and included Patrick Imam, Suchitra Kumarapathy, Amina Lahreche (all IMF); Teymour Abdel Aziz, Miquel Dijkman, Yejin Carol Lee, Antonia Menezes (all World Bank); Matthieu Leclercq (expert, Banque de France), Marc Peters (expert, National Bank of Belgium), Yann Christin, and Noel Guibert (independent experts). The mission met with the Governor of the Banque d'Algérie (BA), and other senior officials at the central bank, Ministry of Finance (MoF), the Commission d'Organisation et de Surveillance des Opérations de Bourse (COSOB, Securities and Exchange Commission), and other government agencies and departments. The mission also met representatives of banks and nonbank financial institutions, including insurances companies and brokers, and private sector representatives.

- Given the small size of Algeria's financial system, significant state ownership, and its limited integration into international financial markets, there are no pressing financial stability concerns. Instead, the immediate challenge is to harness the financial sector's potential to support diversification and economic growth. This will be helped by a broad range of reforms to promote financial deepening, as well as greater intertemporal smoothing of hydrocarbon revenue, a more strategic role for the state, and careful phasing out of restrictive exchange measures.

- 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.

- This report was prepared by Patrick Imam.

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Glossary

AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
BA	Bank of Algeria
CAMELS	Capital adequacy - Asset quality - Management capability - Earnings – Liquidity - Sensitivity to market risk
CAR	Capital adequacy ratio
COSOB	Commission d'Organisation et de Surveillance des Opérations de Bourse (Securities and Exchange Commission)
CMC	Conseil de la Monnaie et du Crédit (Council of Money and Credit)
ELA	Emergency liquidity assistance
FATF	Financial Action Task Force
FGDB	Fonds de Garantie des Dépôts Bancaires (Deposit Guarantee Fund)
FRR	Fonds de Régulation des Recettes (Oil Savings Fund)
FSAP	Financial Sector Assessment Program
FSR	Financial Stability Report
FX	Foreign exchange
IT	Information technology
MoF	Ministry of Finance
MoJ	Ministry of Justice
MoU	Memorandum of Understanding
MTPL	Motor Third Party Liability (Responsabilité Civile Automobile)
NPL	Nonperforming loan
SOB	State-owned bank
SOE	State-owned enterprise
SME	Small- and medium-sized enterprise
SWF	Sovereign Wealth Fund

EXECUTIVE SUMMARY

The global crisis has had virtually no impact on Algeria's financial system, which remains stable overall but thoroughly underdeveloped. Pervasive exchange controls, widespread public ownership, and an abundance of domestic funding have protected banks from external shocks. Financial sector reforms have been pushed to the backburner by the emergence of global financial and regional political turmoil, with privatization of banks halted and consumer lending suspended.

The authorities have made progress in a number of areas implementing the recommendations of the 2007 FSAP update. Banking supervision was improved by introducing a risk-based bank rating system, and by tightening and adopting internationally accepted prudential standards. In addition, the central bank has taken on additional responsibilities in the area of financial stability, and has published its first financial stability report.

Moreover, the team's stability analysis suggests only moderate vulnerability of the financial system to shocks. Stress tests indicate that credit and specifically loan concentration are the main banking sector risks, and that public banks are most vulnerable. In particular, the public banks are highly exposed to large state-owned enterprises involved in the manufacturing, construction, and commerce sectors, which leaves them exposed to firm- and sector-specific shocks. However, Algeria's external and fiscal buffers are substantial, owing to high oil prices, and past experience has illustrated that the state is able and prepared to provide a backstop to the banks.

However, a number of important recommendations from the 2007 FSAP remain valid. Governance of public banks still needs to be enhanced, and the operations of the judicial system, including for extra-judicial procedures for debt workouts, requires further strengthening. Public banks have not been privatized, and a well-defined yield-curve based on an interest rate-centered monetary policy is still lacking. Even closer coordination between the BA and the MoF is needed to enable better liquidity management.

And besides these measures, a broader reform strategy is needed to better enable the financial system to support economic growth:

- *Modernizing the financial sector:* Measures are needed to facilitate financial deepening, including further improving corporate governance in state banks, implementing the public credit registry modernization plan, improving the collateral regime and strengthening insolvency rights, boosting the financial sector safety net and introducing a dedicated bank resolution regime, enhancing risk-based banking supervision and other financial sector supervision and oversight, strengthening the AML/CFT regime by addressing the strategic deficiencies identified by the FATF, and promoting access to finance.

- *Intertemporal smoothing of hydrocarbon revenues:* In particular, establishing a sovereign wealth fund and a withdrawal rule on the oil fund would reduce the risk of financial instability, ease the depressing effects of Dutch disease on savings and investment, and provide greater scope for developing the government securities market and enhancing monetary policy transmission.

- *Transforming the role of the state in the financial sector:* Government priorities continue to be executed through state-owned enterprises (including banks) that are embedded in a complex regulatory environment ill-suited to financial development. A thorough reform of the business environment—including resolution and collateral frameworks as well as criminal code related to commercial activity—and the abolition of various restrictive measures would create the conditions for stronger creditor rights and financial intermediation, and enhance efficiency in the economy.

- *Phasing out exchange controls:* Extensive exchange controls seem to provide little benefit yet impose high costs, including by enabling negative real interest rates on dinar assets to persist and thus preventing the development of core financial markets. The withdrawal of these controls could begin with a gradual liberalization of the foreign exchange (FX) market, including for forward contracts.

Main Recommendations[1]

Recommendation	Responsible	Term
Leverage hydrocarbon revenue for financial sector development: Improve intergenerational smoothing of hydrocarbon revenue (full-fledged fiscal rule, sovereign wealth fund (SWF)).	BA/MoF	MT–LT
Exchange controls: Gradually reduce restrictive measures on foreign exchange transactions.	BA/MoF	MT–LT
FX market: Allow non-hydrocarbon exporters to sell directly into the foreign exchange market, to stimulate its development, including for forward contracts.	BA	ST
Liquidity management: Create a structural liquidity shortage to facilitate monetary policy implementation.	BA	ST
SOB reform: Complete corporate governance reform agenda.	MoF	ST–MT
Consumer lending: Replace consumer lending restrictions with prudential measures; introduce an effective public credit registry for households, and personal bankruptcy framework.	BA	MT
Banking Supervision: Facilitate the write-off of NPLs; improve operational framework for supervision; continue towards Basel II/III; develop stress-test expertise.	BA	ST–MT
Small- and medium-sized enterprise (SME) lending: Revisit existing government support programs for microenterprises and SMEs, including partial credit guarantee funds.	MoF	MT
Insurance: Adapt MTPL premiums and reduce compulsory reinsurance.	Insurance Dir.	MT
Insolvency Regime: Modernize the insolvency regime to mitigate risk and strengthen the credit environment.	MoJ, MoF	MT
Collateral Regime: Improve debt enforcement procedures.	MoJ, MoF	ST–MT
Criminal Sanctions: Clarify Criminal Code sanctions on mismanagement of funds in state-owned enterprises (SOEs), with judicial training on implementation.	MoJ	ST
Payment Systems: Set-up a payment system council to monitor the modernization of payment systems and formalize a plan to decrease the proportion of fiduciary money in M2.	BA	MT
Capital market development: Finance budget deficits through the issuance of T-bonds along the yield curve and revisit the issuance policy at the MoF to foster liquidity.	MoF	LT
Stock exchange: Implement the 2012 COSOB modernization program.	COSOB/MoF	LT
Crisis management: Establish (i) special resolution regime for failing financial institutions; (ii) memorandum of understanding (MoU) outlining principles for financial crisis management; and (iii) MoU between safety net participants on information exchange and decision-making processes.	BA, MoF	LT ST
AML/CFT: Implement action plan established with the FATF International Cooperative Review Group.	BA, MoF, MoJ	ST

[1] ST – Short term: within one year; MT – Medium term: 1–3 years; LT – Long term: longer than 3 years.

INTRODUCTION

A. Context

1. The challenge facing Algeria is to grow the financial system in a safe and responsible way in support of economic growth and private sector development. The role of the state in the economy—historically large—is increasing further in response to regional political instability and a continued distrust of the private sector's role in the economy. The economy's low productivity growth and lack of diversification—associated with Dutch disease—remain important challenges. Non-hydrocarbon exports represent a mere 2 percent of total exports.

2. The Algerian financial system has not been affected much by the global financial crisis owing to its limited international exposure. [2] There are sufficient domestic deposits to finance the limited levels of bank credit. Restrictive capital account measures limit outward investment by Algerian institutions, and in contrast to some other emerging markets, parent banks of foreign subsidiaries were not under major pressure.

3. Preventively, the authorities put in place a set of measures that strengthened buffers. Amendments introduced in 2008 boosted minimum capital for banks from DA 2.5 billion to DA 10 billion; minimum capital for nonbank credit institutions was also increased. Public banks were further recapitalized, including through nonperforming loan (NPL) purchases. New accounting standards were introduced, and supervisory practices improved. In addition, the authorities imposed a consumer lending moratorium, to nip an incipient consumer credit boom in the bud and contain consumer debt.

4. A number of structural reforms (including in tax and customs administration) have been undertaken, but Algeria continues to be ranked low in terms of business climate. In the 2014 Doing Business survey published by the World Bank, it now ranks 153nd out of 185, down from 151th in 2013, suggesting that reform is lagging. Tax compliance is rated even lower, implying that private sector borrowers would face obstacles in using financial statements to obtain bank credit. The preponderance of cash use in the economy is also indicative of the degree of informality in the economy.

5. The challenges posed by large and variable hydrocarbon revenues remain important. Excess liquidity makes monetary policy implementation more difficult, and increases risks of credit booms and inflation. The absence of a fiscal withdrawal rule can further exacerbate these risks. In addition, exchange controls allow negative interest rates on dinar assets to persist (annual average of CPI-adjusted return on BA liquidity facility during 2003-2012 was almost -3 percent). Enhanced intertemporal smoothing, including the introduction of a sovereign wealth fund, would offset these challenges and provide additional benefits for developing financial markets.

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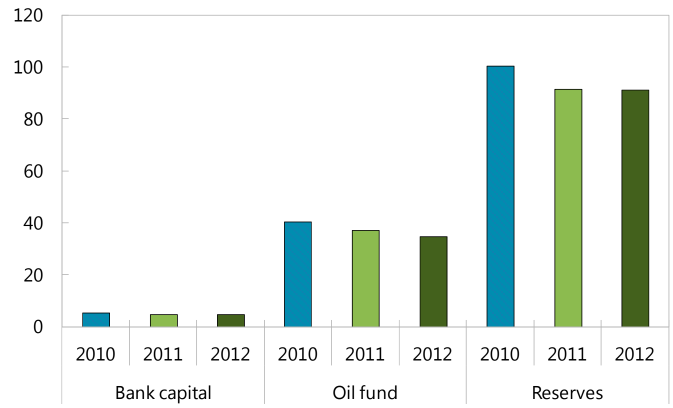
[2] See also Global-VAR analysis in the 2012 Article IV Staff Report for Algeria, which confirms limited spillover effects.

B. Recent Macroeconomic Developments

6. In the past decade, the economy has benefitted from historically high oil prices. Diversification proceeded apace, with rapid growth in non-hydrocarbon activity offsetting falling hydrocarbon production, resulting in average growth of 2½ percent over 2008–2012, though part of the impetus for non-hydrocarbon sector growth came from hydro-carbon expenditure. The current account posted continuous surpluses (8½ percent of GDP on average over 2008–2012), supporting the Algerian Dinar, which follows a real effective exchange rate target. Nevertheless, there is a significant parallel market premium (of around 40 percent), reflecting among other factors the effects of exchange controls.

Financial Sector Capital and Macroeconomic Buffers
(In percent of GDP)



Sources: Algerian authorities; and IMF staff calculations.

7. Algeria's external and fiscal buffers are high, and provide a sizeable cushion should a shock to the financial sector materialize. Buoyant hydrocarbon revenues allowed accumulation of large FX reserves (to more than 90 percent of GDP, or 35 months of imports in 2012), and large fiscal savings in the oil fund (FRR), reaching 36 percent of GDP in 2012. At the same time, public external debt has been largely repaid, declining from 4¾ percent to 2 percent of GDP between 2006 and 2012.

OVERVIEW OF THE FINANCIAL SYSTEM

8. The financial system remains predominantly bank-based and characterized by low levels of intermediation. Total credit to the economy stands at a mere 27 percent of GDP at end-2012—split evenly between SOEs and the private sector. Insurance and capital market segments are nascent (see Table 1 on the overview of the financial sector). Credit to the private sector remains relatively low by international comparison, despite recent government subsidies targeted to stimulate bank lending. This reflects the combined effect of slow structural reforms that create obstacles to private sector growth, a still evolving financial sector regulatory environment, poorly developed infrastructure, including a public credit registry with limited coverage, and the prevalence of state-directed lending and other support measures

Table 1. Algeria: Financial Sector Overview

	December 2011			December 2012			June 2013		
	Number	Total Assets	In percent total assets	Number	Total Assets	In percent total assets	Number	Total Assets	In percent total assets
	(Billions DA)			(Billions DA)			(Billions DA)		
I. Banks	20	8,541		20	9,359		20	9,667	
Private	14	1,047	12.3	14	1,291	13.8	14	1,347	13.9
Domestic	-	-	0.0	-	-	0.0	-	-	0.0
Foreign	14	1,047	12.3	14	1,291	13.8	14	1,347	13.9
Public	6	7,494	87.7	6	8,068	86.2	6	8,319	86.1
II. Other Financial Institutions	31	341		33	359		33	64	
Insurance	23	271		23	295		23	N/A	
Leasing	3	22		5	30		5	31	
Finance companies	3	43		3	29		3	26	
Stock Market	1	N/A		1	N/A		1	N/A	
Housing finance companies	1	6		1	6		1	8	
III. Total (I+II)	51	8,882		53	9,717		53	9,731	
Memorandum Items									
Postal Bank	1	515		1	590		1	598	
Other	1	519		1	759		1	874	

Source: Bank of Algeria.

A. Banking System

9. State banks continue to play an important role in the financial sector. There are six state-owned banks (SOBs) that accounted for 86 percent of banking system assets at end-2012, and that continue to play a key role of financing government-prioritized projects. Private banks are all foreign-owned and focus more on international trade finance, though the introduction of ceiling on trade credit fees, coupled with the introduction of SME interest subsidies may encourage private banks to increasingly reorient their activities towards the emerging SME sector. One public bank has recently been put forward to be listed on the stock exchange (see Figure 1).

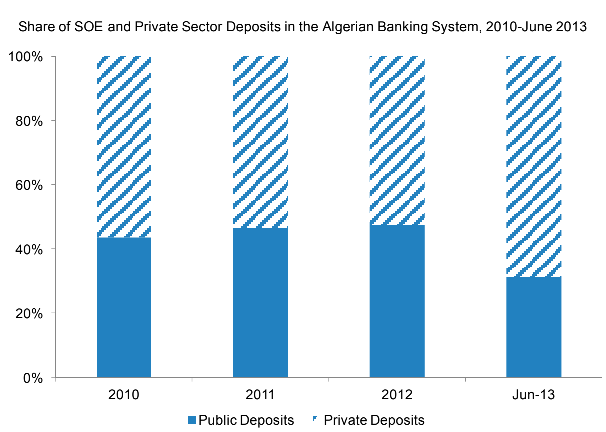
10. Banks appear to be well capitalized, profitable, and liquid, partly as a result of recurrent state support.

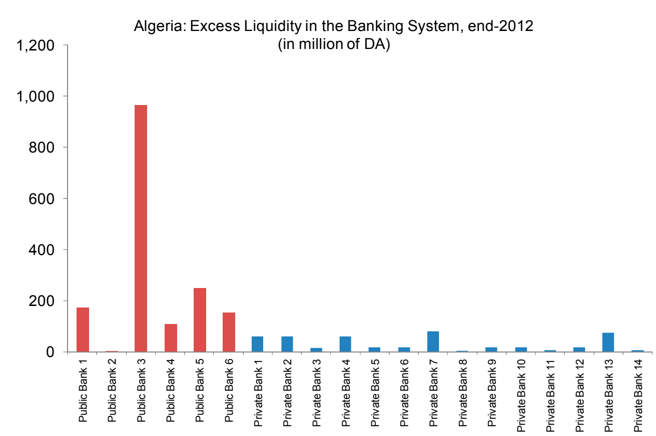
- *Capital:* The quality of capital is high - common equity accounts for 73 percent of regulatory capital, although leverage is rising. For private banks, high capital levels are related to the recent increase in minimum capital. State bank balance sheets have benefitted from capital support from the state, which has contributed to the decline in NPLs from 21 percent in 2009 to 11½ percent in 2012.

- *Asset quality:* The level of provisions appear to be adequate, covering 70 percent of NPLs, even if a provisioning scheme based on a more forward-looking assessment of ability to repay might provide a different picture.

- *Earnings:* Returns on equity and assets are high compared to other countries in the region, in part because NPLs are often brought down not through write-offs, but rather through transfer of the original loans in the context of the recurrent government recapitalizations (see Box 1). Interest margins are the most important source of revenues, accounting for 67 percent of operating income.

- *Liquidity:* On average, banks are highly liquid with little maturity mismatch: 46 percent of total assets at end-2012 are liquid, broadly offsetting retail deposits, which account for 52 percent of liabilities; liquidity at one bank is particularly high given its traditional role in hydrocarbon exports.





Box 1. Write-Off of Nonperforming Loans

Neither private nor public banks are writing off NPLs. The current stock of NPLs (4.7 percent for private banks and 12.7 percent for public banks) is only adjusted through swaps for T-bonds (in public sector banks) or rescheduling of NPLs. NPLs are not written off, with the consequence that they remain for several years on banks' balance sheets, muddying the analytical value of financial statements, and delaying the resolution of bad credits and their underlying collateral.

Uncertainty on the interpretation of prudential guidelines appears to prevent private banks from writing off NPLs. Private banks have expressed a concern that BA's prudential guidelines require "every possible means of recovery" to be exhausted before NPLs can be written off. There is insufficient clarity as to what this means, i.e. whether it is sufficient for banks to try and enforce their debt in the First Instance Court, or whether they require a judgment from the Court of Appeal or Supreme Court. Moreover, after debt enforcement procedures fail, the bank needs to decide whether to commence bankruptcy proceedings to put the borrower in liquidation. All of these legal processes take several years, often with delays, and are costly. Overall, this significantly impedes the write-off period.[1]

Provisions applying to managers in the public sector seem to result in overly cautious behavior regarding NPL write-offs. There is a fear that if a NPL is written off, it will be deemed "mismanagement" under the Algerian Criminal Code provisions leaving bank management subject to criminal sanctions, including imprisonment. This has resulted in overly-cautious, risk averse banking practices, where no NPL is written off for fear it will be subject to challenge. The practice by which the Treasury regularly bails out public bank NPLs—either by buying back the loans or providing for a restructuring of debts—further prevents any incentive to clean up balance sheets, and has the effect of encouraging managers to lend to public (rather than private) enterprises, secure in the knowledge that the Government will intervene if necessary.

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[1] This also impacts how provisions are valued. If banks do not seize and dispose of collateral in volume (given that NPLs are routinely purchased by the state), this practice may distort collateral values, which may otherwise be lower if the collateral was brought to market. It may mean that collateral values simply do not support the loan book value amount.

11. **Banking sector competition remains low due to excessive market concentration, frequent bailouts, and insufficient corporate governance for state banks.** While the public sector credit and deposits are highly concentrated in a few banks, there is more competition in private sector banks.[3] The increase in minimum required capital and the introduction of limits on foreign investment also directly impact banking sector contestability, as does the lack of financing alternatives (e.g., through capital market).[4] In addition, the periodic SOB recapitalizations as well as weak corporate governance rules tend to lower the incentives of boards and management to act competitively.

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[3] After the bankruptcy of Khalifa bank, a domestic private bank, in 2003, the Government made it mandatory for SOEs to work exclusively with SOBs. Despite the fact that this ban was lifted, SOEs continue working predominantly with SOBs, giving private banks little footprint in the market for loans to and deposits from SOEs.

[4] The foreign direct investment (FDI) regime requires that foreign ownership not exceed 49 percent of capital, limiting entry, including in the financial sector.

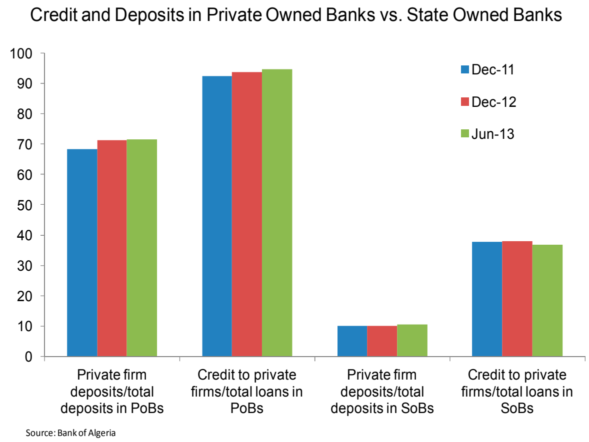
B. Nonbank Financial Institutions

12. The nonbank system, mainly insurance and leasing, occupies a small but growing part of the financial system (see Figure 2). There is a small stock market with only four listed companies and almost no trading volume.[5] Derivative markets and securitization are nonexistent. The corporate bond market, which had started to develop, has recently dried up, and as a result the fixed-income market is currently dominated by government securities. The insurance sector is composed of 23 companies, 10 of which publicly-owned with a 66 percent market share. Since the 2007 FSAP, six new companies entered the market, mainly due to the obligation to separate life (and other personal products) from non-life business lines. Insurance sector turnover has increased from DA 53.8 billion in 2007 to almost DA 100 billion in 2012, with profitability increasing from 5 percent to 6 percent over the period. Third-party automobile liability insurance is the dominant activity (51 percent of the premiums), followed by property and casualty insurance (34 percent).

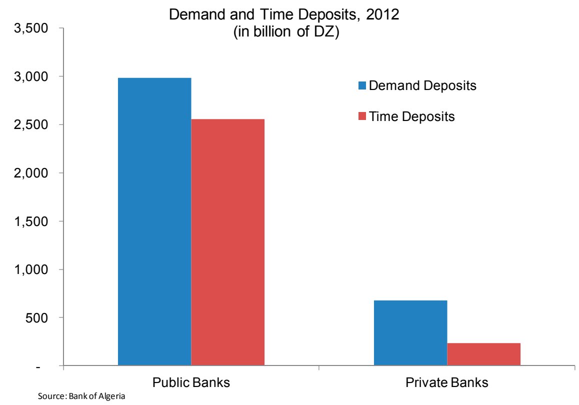
[5] The Algerian authorities published a list of 8 SOEs eligible for a stock-exchange listing; the list includes one bank.

Figure 1. Algeria: Evolution of Banking Sector

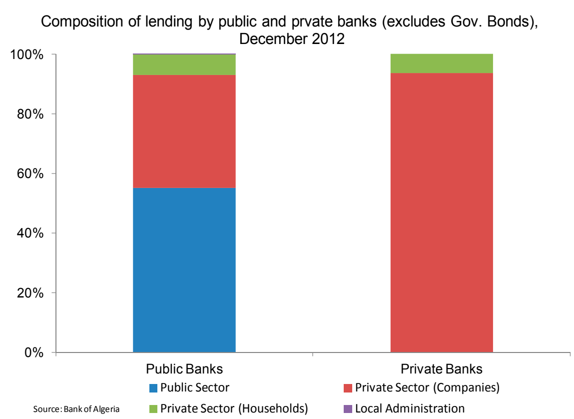
Credit to the economy …



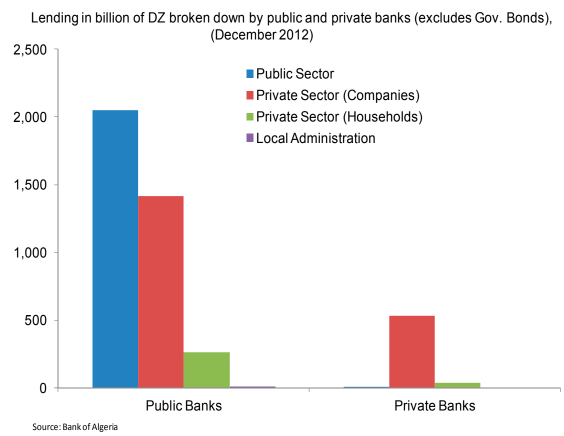
… as well as deposits are dominated by the public banks.



Public banks lend significantly to the public sector in relative …



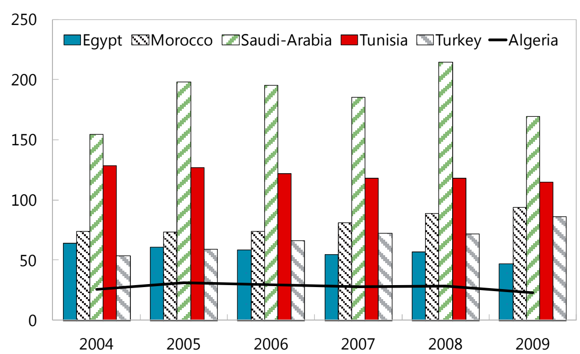
… and absolute terms, while private banks lend to the private sector only.



Loan-to-deposit ratios are low …

Bank Credit to Bank Deposits

(Percent, 2004-10)



Source: World Bank, Global Development Finance.

… with credit dominated by construction, manufacturing and trade.

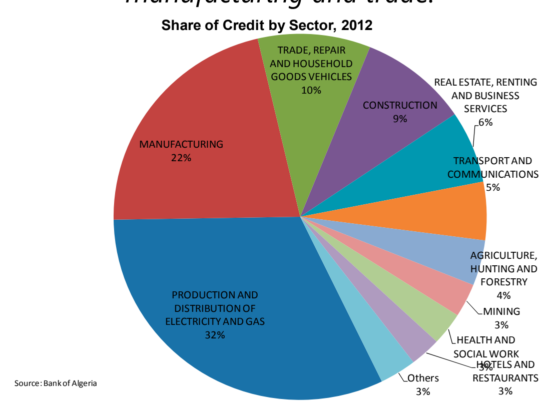
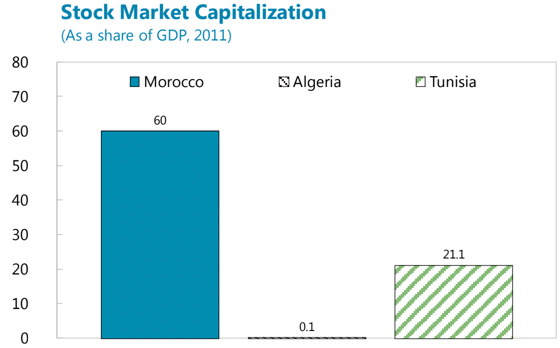


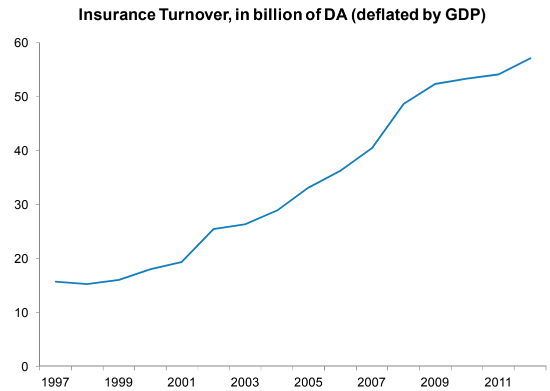
Figure 2. Algeria: Evolution of Nonbanking Sector

The stock market is among the smallest in the region …

… but insurance has grown steadily.



Sources: Algerian authorities; and World Bank, Global Development Finance.



FINANCIAL STABILITY ISSUES

A. Key Banking Sector Risks

13. There do not appear to be major financial stability concerns in Algeria, although this is premised on continued government support, as underlying profitability is weaker than implied by financial soundness indicators. A range of risks—including oil price volatility and credit risk—should be monitored carefully. Neither the first- nor the second-round effects from the global crisis had a significant impact on the financial system. As noted above, ample government buffers are available to strengthen state banks in times of need. The private segment of the banking sector has been restructured and now consists solely of foreign banks, the majority of which are subsidiaries of rated international institutions.

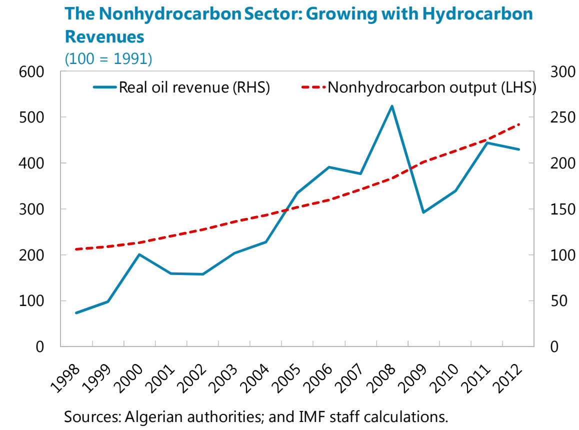
14. The following vulnerabilities require special attention (see Table 2, and also Appendix I—Risk Assessment Matrix (RAM) which enumerates a number of country-specific risks):

- *Credit risk:* This remains the most important risk for the financial sector. The corporate sector, comprising mostly SOEs, has reduced debt levels and hence leverage in recent years, as a result of capital injections by the sovereign to finance investment. Repeated government interventions in the banking system have shifted losses from public banks to the government balance sheet. Household debt is largely restricted to mortgages, which are subject to tight prudential norms—loan-to-value ratios are capped at 70 percent and debt-to-income ratios at 40 percent—and the ban on consumption credit keeps credit risk contained.

Table 2. Algeria: Financial Stability Indicators

	2009	2010	2011	2012
		(In percent)		
Capital Adequacy Ratio	**26.2**	**23.6**	**23.7**	**23.4**
Public Banks	23.9	21.7	21.9	21.6
Private Banks	35.2	31.6	31.2	31.9
Tier I Capital Ratio	**19.1**	**17.7**	**16.9**	**17.3**
Public Banks	15.6	14.8	14.1	14.7
Private Banks	32.9	29.3	28.8	29.5
NPLs/Regulatory Capital	**33.9**	**21.1**	**19.4**	**16.2**
Public Banks	46.0	27.5	25.1	20.4
Private Banks	1.5	3.0	2.3	3.4
NPL Ratio	**21.1**	**18.3**	**14.5**	**11.5**
Public Banks	23.6	20.5	16.1	12.4
Private Banks	3.8	4.1	4.0	5.2
Net NPL Ratio	**7.3**	**4.9**	**4.4**	**3.5**
Public Banks	8.3	5.4	4.9	3.8
Private Banks	0.7	1.4	1.0	1.5
Provisioning Rates for NPLs	**65.4**	**73.5**	**69.9**	**69.5**
Public Banks	65.0	73.7	69.6	69.4
Private Banks	82.0	66.7	75.9	71.7
Return on Equity	**26.0**	**26.7**	**24.7**	**23.3**
Public Banks	27.9	29.8	26.1	22.7
Private Banks	20.9	20.3	21.4	24.8
Return on Assets	**1.8**	**2.2**	**2.1**	**2.0**
Public Banks	1.5	1.8	1.8	1.6
Private Banks	3.7	4.6	4.5	4.6
Interest Margin/Gross Income	**58.4**	**63.8**	**64.9**	**67.2**
Public Banks	60.4	71.6	73.6	78.1
Private Banks	52.5	44.2	44.4	41.6
Non-interest expenses/Gross Income	**32.2**	**21.4**	**33.6**	**33.2**
Public Banks	32.7	31.6	34.8	34.7
Private Banks	31.0	31.0	30.8	29.5
Liquid Assets/Total Assets	**51.8**	**53.0**	**50.2**	**45.9**
Public Banks	52.7	54.2	51.1	45.1
Private Banks	44.7	43.7	43.2	50.9
Short-term Assets/Short-term Liabilities	**114.5**	**114.3**	**103.7**	**107.5**
Public Banks	118.4	118.1	106.6	110.5
Private Banks	89.0	88.5	84.6	93.5

Source: Bank of Algeria.



- *Hydrocarbon risk:* The low degree of trade and financial integration with the world economy insulates Algeria from most external shocks. However, with hydrocarbon exports accounting for virtually all exports, and over two-thirds of direct government revenues originating from that sector, the banking system is highly sensitive to hydrocarbon shocks. By extension, hydrocarbon risk also becomes a concentration risk for the sovereign, given its dependence on oil revenues. During the boom years, easy credit conditions lay the seeds for higher credit risk during downturns.

- *Liquidity risk:* In case of liquidity shocks, risk is mitigated by banks' recourse to central bank funding facilities. Additionally, since there are no foreign inflows into the financial system, the risks associated with sudden outflows are currently absent.

- *FX risk:* The banking sector is largely insulated from FX risks. Lending in FX is prohibited, while a number of exchange controls require exporters to repatriate all export proceeds, with 50 percent converted into local currency. As a result, FX balance sheet risks are negligible. In addition, banks have a limited international footprint, limiting the impact of direct foreign shocks.

- *Interest rate risk:* Interest rate risk is currently limited: bonds are held to maturity, duration mismatch appears low, and policy rates have not changed for years. However, it will have to be monitored more closely going forward as capital markets develop and the interest rate is given a more prominent role in monetary policy—most credit contracts include a variable interest rate clause.

- *Governance risks:* Governance of SOBs, as highlighted in the assessment of the banking supervision practices, is a source of concern. The high NPLs in public banks reflects in part weak governance, and the associated weak risk-management and information technology (IT) systems in place, as well as incentive schemes that are not properly aligned. Banks' move into new business areas, notably housing and SMEs, might surface new governance risks.

B. Stress Testing

15. A series of stress tests were conducted to assess banking sector sensitivity to various risks. In light of the relatively short period for which NPL data was available, sensitivity tests were used to explore bank vulnerabilities, instead of a macro scenario solvency-based tests. The exercise included a top-down analysis covering 20 banks, as well as a bottom-up stress test that focused on 6 public banks, using bank-by-bank data for end-2012. The scenarios were premised on a global oil shock,[6] a protracted European economic slowdown, and used the latest available IMF World Economic Outlook projections. The magnitude of each shock was calibrated from NPL historical highs, expert judgment, and cross-country experience.

16. The analysis was constrained by the paucity of available historical and granular data. In particular, there is no information on maturity distribution of assets and liabilities, and the lack of a longer time series of historical and accurate NPLs makes it difficult to determine a relationship between a macroeconomic scenario and financial risks. In addition, a large fraction of the NPLs on banks' books await for periodic government debt buy-backs. Lastly, there continue to be inconsistencies in NPL information and reported financial soundness indicators.

17. Stress tests indicate that credit and specifically loan concentration are the main banking sector risks, and that public banks are most vulnerable (see Table 3). Under the credit risk scenario—based on a 10 percentage point increase in NPLs—three public banks (27 percent of the banking total assets) fall below the regulatory capital adequacy ratio (CAR) requirement of 8 percent, but remain solvent (see Appendix V for a summary of the assumptions). Since the government is the owner, the cost of recapitalization (0.5 percent of non-hydrocarbon GDP) would fall to the budget, as has been the case in the past. The large exposures of public banks to large SOEs in industries such as manufacturing, construction and commerce increase their sensitivity to sector-specific shocks. The top three public sector borrowers account for 38 percent of the total loans. A scenario in which the top three borrowers default would cause six banks to become insolvent, of which five are public banks, illustrating that concentration risks are high.

18. Most banks have sufficient liquidity buffers to withstand sizeable liquidity shocks, while interest and exchange rate shocks have limited impact on the banking sector. A liquidity stress test was carried out to assess bank's ability to withstand a daily withdrawal of deposits of 5 to 10 percent per day over a period of five days. The results showed that banks could withstand a substantial deposit run for five days, as most banks have high stock of liquid assets. Total liquid assets were 108 percent of total short-term liabilities in 2012, providing buffers in case of a sudden withdrawal of deposits or a general worsening of funding conditions. Banks have little exposure to interest rate risk. Under an interest rate risk scenario, the stress test results show that banks are not sensitive to a parallel upward movement of interest rates by 400 basis points, in light of the paucity of longer-dated financial instruments. Exchange rate shocks have negligible impact, as banks can only have small open FX positions, and indirect effects are muted given the still limited non-hydrocarbon export sector. Finally, private banks are more resilient than public banks under various multi-sector shocks.

[6] A global oil shock with oil prices expected to fall by $25 (to about US$80 per barrel). This scenario would result in a 10 percentage point increase in NPLs.

Table 3. Algeria: Summary Results of the Stress Tests with Adjusted Data 1/

	Number of banks with CAR:		CAR			Recapitalization needs 2/	
	<0	0-8%	Private banks	Public Banks	Total	in DA billions	in percent of NHGDP
A. Baseline (before shocks)	**0**	**1**	**17.2**	**31.9**	**19.5**	**...**	**...**
B. Sensitivity Stress Tests (Single Factor)							
Credit Risk 3/							
All performing loans	0	3	11.9	27.6	14.5	55	0.5
Top 3 industries performing loans 4/	0	2	15.2	28.9	17.4	23	0.2
Public sector performing loans	0	2	13.9	31.2	16.8	14	0.1
Private sector performing loans	0	2	15.4	27.8	17.3	16	0.1
Concentration Risk							
Largest borrower defaults	4	1	-16.9	24.8	-8.5	936	8.7
Top three borrowers default	6	2	-34.9	16.5	-24.2	1,266	11.8
Exchange Rate Risk							
40% depreciation of dinars against all currencies	0	1	17.4	32.0	19.7	1.4	0.0
40% appreciation of dinars against all currencies	0	1	16.9	31.7	19.3	0.1	0.0
Interest Rate Risk							
Upward parallel shift of yield curve by 200 bps	0	0	18.2	...	...	0	0.0
Upward parallel shift of yield curve by 400 bps	0	0	19.2	...	...	0	0.0
C. Scenario Stress Tests (Multi-Factor)							
Scenario 1 5/	3	0	8.7	27.6	11.8	137	1.3
Scenario 2 6/	0	3	14.2	31.7	17.1	18	0.2

1/ Adjusted data assumes that provisions are net of realizable collateral and government guarantees.

2/ Recapitalization needs to restore CAR to 8 percent.

3/ The credit risk scenarios assume a 10 percentage points increase in the respective nonperforming loan ratios.

4/ Top three industries are manufacturing, construction, and commerce.

5/ Includes a 10 percentage points increase in nonperforming loan ratios, DA depreciation of 10 percent against all currencies, and an increase in interest rates (200 bps).

6/ Includes an oil shock with oil prices falling by US$25, 10 percent deterioration in oil and gas loans, DA depreciation of 10 percent against the euro, and an increase in interest rates (200 bps).

FINANCIAL STABILITY FRAMEWORK

A. Regulatory and Supervisory Issues

Banking supervision

19. There has been progress in improving banking supervision, though significant challenges remain. While some aspects of the Algerian banking legal framework still need follow-up actions from the relevant authorities,[7] prudential authorities have adequate authority and regulatory powers for establishing a sound framework for banking activities. The prudential framework has been strengthened in 2011 by new regulations on internal control and risk management as well as on liquidity risk. Nevertheless, certain aspects remain underdeveloped, especially the corporate governance framework, consolidated supervision, and interest rate risk management.

20. A risk-based methodology was developed in 2012, but its implementation is not yet complete. A new CAMELS-based supervisory approach was introduced at the BA, supported by technical assistance, and was tested in two pilot onsite examinations (one public, and one private bank); a full roll-out can now take place. To reduce NPLs and avoid repeated government support, improving bank supervision to identify shortcomings in processes that repeatedly led to high NPLs is required.[8] There is a need to better analyze the credit granting process and the related tools banks are using to ensure a more forward-looking perspective on risks by the supervisor. Furthermore, the BA should hire specialized professionals, for instance in the field of IT audit, in order to assess the operational risks in the banking sector that are known to be high.

21. The operational framework for supervision should be further sharpened. The supervisory approach of the BA could become more efficient by: (i) improving the supervisory resource allocation framework; (ii) clarifying the tasks between off-site and on-site activities, and between BA and the General Secretariat of the Banking Commission; and (iii) strengthening its macro-prudential toolkit with, inter alia, horizontal risk analyses and stress testing. MoUs also need to be signed between the BA and foreign supervisors to secure BA access to critical information from abroad, while considerations should be given for Algerian supervisors to take part in supervisory colleges. The BA should strive to strengthen the different layers of banks' internal control (ongoing surveillance, internal audit, compliance, external audit). Lastly, the current level of institutions' financial information and transparency practices leave only a minor role for market discipline to fully contribute to effective banking supervision. Prudential norms are still based on the

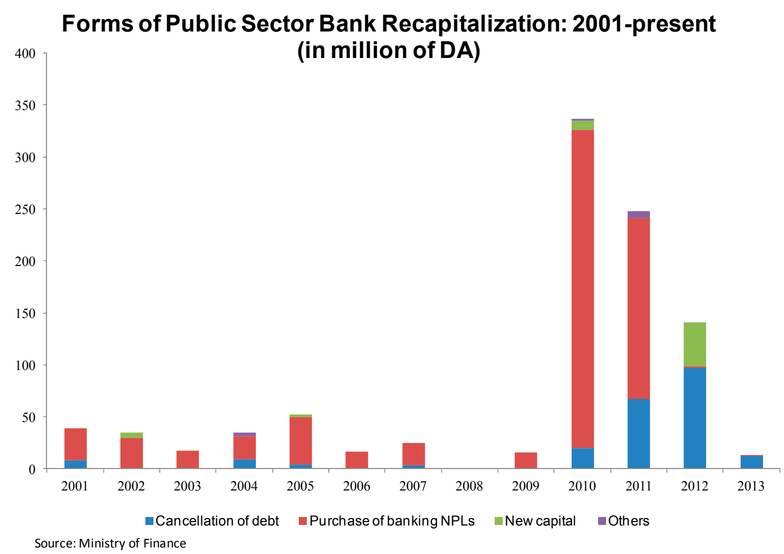
[7] This refers in particular to the missing nomination of certain members of the Monetary and Credit Council and the Banking Commission, as well as the absence of publication of certain implementation decrees.

[8] In particular, enhanced credit analysis and loan classification training for onsite supervisors is required, given the apparent weaknesses in loan underwriting as is reflected in the repeated nature of high NPLs; this would also help banks apply better standards.

Basel I framework, but authorities have started preparing the move towards Basel II and certain elements of Basel III, including through the recent adoption of a regulation on liquidity risk.

22. Rather than subsidizing public banks through the acquisition of bad loans, it would be more transparent to write off losses that have been fully provisioned for and recapitalize. The most common form of public sector bank recapitalization has been through the purchase of nonperforming claims by the Treasury (see Box 2). This releases the provisions that were set aside and leads to a commensurate increase in capital. Instead, it would be preferable from a transparency point of view to write off the NPLs, and to recapitalize the public banks only if needed.

Box 2. Moral Hazard in Buy-back Operations: Can it be Avoided?



One particularity of the banking system is the repeated recapitalization of public banks. Rather than writing off losses on loans (see Box 1), SOBs are regularly recapitalized via several venues: mechanisms include outright cancelling the debt of banks, injecting new capital, and purchasing the NPLs of banks directly.

This creates a soft budget constraint for SOBs, with attendant moral hazard risks. The assistance also distorts competition and fosters inefficiency by allowing banks to engage in lending that does not meet commercial criteria, either directed to help ailing businesses, or to finance projects not just on economic merits.

Hardening the budget constrains for SOBs would replace the ex post subsidies on the public purse by explicit ex ante budget subsidies for projects deemed socially useful. The advantage of such a scheme would be that bankers would be more accountable for their lending decisions that would be based on sound risk management principles, and thus contain moral hazard. An alternative is for the state to disengage gradually from the financial system, transforming SOBs into development banks, and improving the bank guarantee framework.

Insurance supervision

23. Since the 2007 FSAP, insurance regulation has improved. New decrees that bring useful clarifications on technical provisions, eligible assets and solvency margin have been issued. The regulator should consider lowering the limits regarding investment in government securities to reduce captive demand for such securities that are in very limited supply and thus lead to very low risk-free interest rates (see below). Also, it would be prudent to set a maximum limit to real estate investment to avoid concentration risk. Insurance sector supervision still suffers from a lack of independence: the Commission relies on the resources of the Insurance Directorate, several employees of which are also board members of publicly owned insurers; this creates a potential conflict of interest.

Macroprudential oversight

24. Progress has been made toward establishing a stronger institutional framework for overseeing systemic risk. A mandate for financial stability was introduced in the 2010 update of the Law on Money and Credit, complementing the existing mandate for price stability.[9] The BA has recently published its first Financial Stability Report, which it intends to update annually. The FSR was prepared by an ad hoc working group; it would be useful if a more permanent small organizational unit could be tasked with the financial stability monitoring function. Work on filling data gaps, including by establishing a real estate price index and increasing data coverage on the household and corporate sectors, are a priority, as are setting up a basic early warning system that would assess the sustainability of credit growth and the presence of asset price bubbles.

B. Financial Sector Safety Net

25. Recent experience highlights the importance of adequate tools and institutional arrangements to respond to episodes of financial distress. Periodic episodes of systemic distress have been a recurrent feature of modern financial systems. In the case of Algeria, a wave of (private) bank failures occurred between 2003 and 2007, while public banks have been kept afloat at considerable cost to the taxpayer. Experiences in Algeria and elsewhere underscore the importance of a well-crafted public sector response.

Crisis preparedness framework and systemic liquidity

26. Currently, the principal agencies in the financial sector safety net coordinate on an as-needed basis. To a significant degree, intra- and interagency coordination takes place through a variety of committees with overlapping memberships, including the Council of Money and Credit (CMC) and the Banking Commission, both presided by the BA governor. There is currently no body that considers the financial system as a whole, nor is there a contingency manual describing responsibilities and tasks of the involved agencies in times of crisis. The lack of such a handbook, as well as overarching principles for financial crisis management (e.g., financial stability at lowest overall cost for the taxpayer), was highlighted as a key weakness in the 2010 crisis simulation exercise conducted by the World Bank, and remains to be addressed. These aspects can be described in

[9] See Ordonnance No 10-04, modifying Ordonnance No 03-11, Article 35. This article states that the BA's mission is to ensure price stability as an objective of monetary policy, to create and maintain, in the fields of monetary, credit and FX, the most favorable conditions for sustained development of the economy, while ensuring monetary and financial stability.

detail in an interagency MoU, covering "normal" and "crisis" times, establishing data exchange between the regulatory agencies, and modalities of crisis management.

27. Hydrocarbon revenue volatility continues to pose challenges for liquidity management, although these can be mitigated by maintaining a structural liquidity deficit for banks. When hydrocarbon revenues increase, bank liquidity expands in several state banks, which may not be immediately sterilized (either through the recently created oil fund or by the central bank; see Box 3 on how to manage liquidity shocks coming from the hydrocarbon sector).[10] Putting in place a structural liquidity shortage in banks would reactivate the interbank market, and facilitate the implementation of an interest-rate based monetary policy framework. Although absorption instruments are in place, there seems to be some reluctance to use these, including the already high required reserve rate (12 percent). This is reflected in the persistent negative real interest rates on Dinar liquidity.

28. To boost the development of the FX market, reforms should enable exporters—starting with non-hydrocarbon exporters—to gradually sell directly into the interbank market. The BA would be present in the market to smooth large fluctuations. At the same time, bank clients would be allowed to buy FX forward. Liberalization of forward contracts should be gradual and initially should be limited to underlying trade liabilities and receivables and selected capital transactions (mainly FDI). This could potentially establish a more market-based interbank interest rate.

29. In times of crisis, banks' emergency liquidity needs would be met through the discount window or outright loans, but clarification of the emergency liquidity assistance (ELA) framework is needed. Regular monetary policy instruments are off-limits to distressed banks, but BA's discount operations and outright loans are available. Discount operations can be provided on the basis of a wider range of collateral, with haircuts proportional to the quality of the collateral, with a six-month maturity, renewable up to three years. The operational framework requires clarification for these facilities to function as an effective ELA framework, such as mentioning of penalty interest rates, reference to the exceptional basis of such operations, or explicit discretion of the BA to decide on individual requests on a case-by-case basis.

30. The Fonds de Garantie de Dépôts Bancaires (FGDB) was established in the aftermath of the Khalifa bank failure in 2003, as a paybox without resolution powers, but its effectiveness is compromised in practice by lengthy payout periods. The CMC is the oversight body, setting annual premia, while the FGDB reports the collected amounts and makes payouts once instructed by the Banking Commission; back-up funding is not explicitly arranged. Although the legal framework prescribes repayment within six months, payouts of insured deposits in failed banks Khalifa (2003),

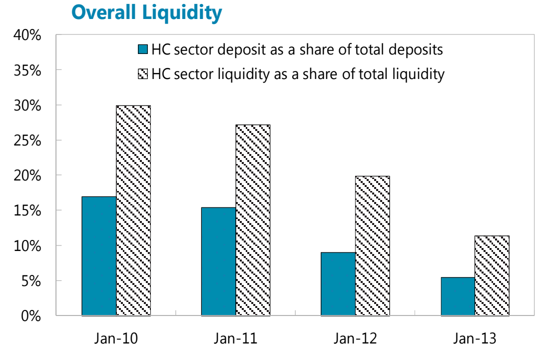
[10] Excess liquidity is concentrated in one state bank (BEA), which manages the deposits of the national oil company of Algeria, Sonatrach. The law requires that these funds be repatriated into Algeria, and converted into DA. Therefore, any increase in oil revenues automatically leads to an increase in deposits within the banking system. Note that dollarization is not an issue, as borrowing in FX is not permitted.

BCIA (2003) and CAB (2005) are still ongoing. The FGDB can only fund pay-outs in liquidation, and can only initiate payouts once it receives a verified list of depositors from the liquidators. Pervasive weaknesses in failed banks' information systems necessitate account-by-account audits, severely delaying the verification process.

Box 3. Managing Excess Liquidity from the Hydrocarbon Sector—the Role of Reducing Restrictive Exchange Rate Measures

Excess liquidity related to hydrocarbon revenue has long been a challenge for the development of the financial sector. There are a number of options available that would resolve this problem and thus facilitate the implementation of monetary policy; these would need to be embedded in a strategy of phasing out various exchange controls.

Contribution of the Hydrocarbon Sector to Overall Liquidity

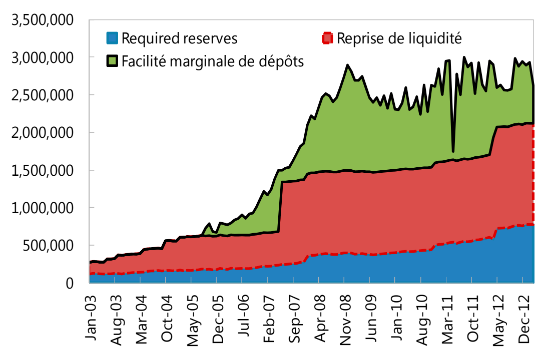


Sources: Algerian authorities; and IMF staff calculations.
Total Liquidity defined as bank deposits at the central bank plus deposit auctions.

- Previous Fund FSAPs have suggested that Sonatrach deposits could be held in FX directly at the BA. While this option is currently not allowed (according to the law, such deposits must be held in local currency), it would have the advantage of fully sterilizing these deposits.

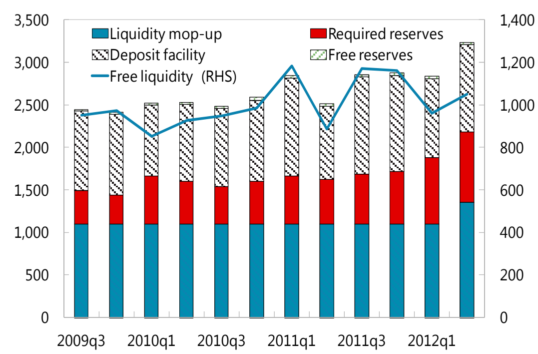
- Alternatively, these FX deposits could be held directly in commercial banks, which in turn hold foreign currency deposits at the central bank. Eventually, commercial banks would hold foreign assets at correspondent banks abroad to facilitate international transactions.

Liquidity Absorption
(In DZD thousands)



Sources: Algerian authorities.

Bank Liquidity
In DZD billions



Sources: Algerian authorities; and IMF staff calculations.

Bank resolution framework

31. The legal framework provides broad discretionary powers to enforce corrective actions, and also can exert moral suasion to recapitalize ailing banks, but these powers have not been used consistently in the past. Ongoing supervision is the responsibility of the BA, while sanctions are the domain of the Banking Commission. The layered structure between BA Supervision Directorate and the Commission appears to be working well in practice: the Commission can initiate a broad range of remedial actions, including written warnings, "cease and desist" orders, removal of management, and appointment of a temporary administrator. However, in the absence of explicit trigger points for supervisory intervention measures, decisions are taken on a case-by-case basis, potentially leading to inconsistencies in the application. In addition, the BA can demand existing shareholders to recapitalize, or request—in past crises unsuccessfully—one or more banks to take over the troubled financial institution.

32. The range of available resolution options is limited, and the liquidation process under the general insolvency regime is fraught with difficulties, underscoring the importance of establishing a Special Resolution Regime. Bank failures in Algeria are handled under the general insolvency framework, and in practice the choice is between liquidating the entire bank (the de facto preferred model for private bank failures) and public-sector support. Once a bank's license is revoked, a liquidator is appointed, which in practice has been painstakingly slow and disruptive to both debtors and creditors (e.g., all debts fall due upon liquidation, which renders the process severely disruptive for borrowers). A separate bank resolution framework exempting banks from the corporate insolvency framework would allow for continuity of essential functions, while facilitating market-based solutions, such as a rapid transfer of all or part of a failed institution's business.[11] [12]

Anti-money laundering and combating the financing of terrorism

33. Algeria is scheduled to undergo a reassessment of its anti-money laundering and combating the financing of terrorism (AML/CFT) framework. The authorities are currently discussing with the World Bank and the Middle East and North Africa Financial Action Task Force (the Financial Action Task Force (FATF)-style regional body of which Algeria is a member) the dates of that assessment. In line with the FSAP policy, such an assessment should be undertaken approximately every five years and to the extent possible within 18 months before or after the FSAP mission.[13]

34. Algeria has been under the monitoring of the FATF since 2011. It is currently identified by the FATF—as reemphasized in October 2013 FATF statement— as not making sufficient progress in addressing the strategic deficiencies in its AML/CFT framework. Several measures have been

[11] See the FSB's Key Attributes of Effective Resolution Regimes for Financial Institutions for a detailed discussion.

[12] It is also suggested to establish a protocol written in law with overarching principles for financial crisis management. The overarching framework could be phrased in terms of the public's interest in financial stability at lowest overall costs for the taxpayer. In times of crisis, this requires the authorities to (i) assess the systemic threat that emanates from the triggering event (e.g. a banking crisis); (ii) a methodology for estimating the costs of each of the resolution options; and (iii) a requirement to go with the lowest cost available unless systemic concerns warrant to do so based on a demonstrated justification on basis of the systemic impact assessment.

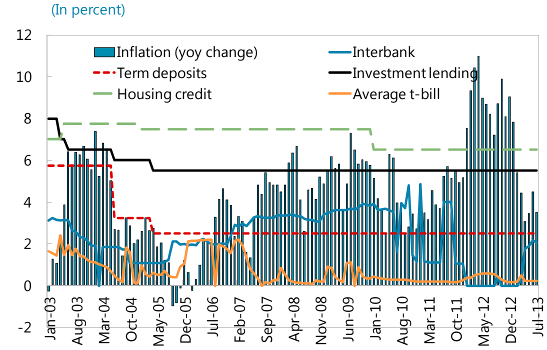
[13] Although Algeria's previous assessment was conducted less than five years ago (namely in 2010), a reassessment is nevertheless deemed necessary due to changes in the AML/CFT standard (in February 2012) and methodology for assessing compliance with the standard (in February 2013).

undertaken to comply with the FATF standard: Algeria became a member of the Egmont Group[14] in July 2013, signed 17 MoU and exchange of information agreements with counterparts in Africa, the Middle East and Europe and prepared draft amendments to the Criminal Code to bring the terrorist financing offense in line with the standard, broadened customer due diligence obligations and expanded preventive measures to all financial institutions. In its October 2013 public statement, the FATF considered that shortcomings nevertheless remained, and called upon its members to take into consideration the risks associated with these shortcomings. It encouraged Algeria to take further action, including by: (i) adequately criminalizing terrorist financing; and (ii) establishing and implementing an adequate legal framework for identifying, tracing and freezing terrorist assets. The authorities should swiftly bring its AML/CFT framework in line with the standard with a view to protecting Algeria's financial sector from misuse and exiting the monitoring process.

FINANCIAL SECTOR DEVELOPMENT

35. Reforms in a number of areas have the potential to significantly boost the role of the financial sector in promoting growth and employment. These include the management of hydrocarbon revenue, the role of the state in the economy, and the limited integration into international financial markets. Specifically:

Interest Rates and Inflation
(In percent)



Sources: Algerian authorities.

- *Leverage hydrocarbon wealth to develop financial sector:* Greater intertemporal smoothing of hydrocarbon revenues would reduce volatility in the financial sector, reduce the Dutch disease effect (in which an appreciated exchange rate reduces competitiveness), and carve out a greater role for government securities in deepening financial markets. Long-term smoothing can be achieved through a sovereign wealth fund; a withdrawal rule on the oil savings fund FRR would provide a medium-term buffer that would put greater reliance on issuing public debt to accommodate fluctuations in the fiscal balance (see Box 4).

- *Phase out exchange controls and base monetary policy on interest rates:* At present, financial repression, expressed as negative real interest rates on dinar assets (including on government securities and time deposits), is held in place by extensive exchange controls that have limited economic rationale yet impose high cost. These include preventing the development of core financial markets, excluding the possibility of earning higher returns, including by holding foreign currency assets, and the emergence of a parallel market premium. A possible focal point for reform could be to identify the appropriate monetary and FX frameworks around which a

[14] The Egmont Group is a forum for Financial Intelligence Units around the world aiming at facilitating coordination, international cooperation and exchange of information.

coherent operational framework could be established, and starting to gradually liberalize the FX market, including for forward contracts.[15] Liberalization of forward contracts should be gradual and initially should be limited to underlying trade liabilities and receivables and selected capital transactions (mainly FDI).

- *Transform role of state into facilitator:* Government priorities continue to be executed through state banks that are embedded in a complex regulatory environment ill-suited to foster financial development. A thorough reform of the business environment—including resolution and collateral frameworks as well as criminal code related to economic activity—and the abolition of various restrictions on economic activity would create the conditions for stronger creditor rights and financial intermediation, and enhance efficiency in the economy. The strategic positioning of the SOBs should be revisited, moving them away from implementing government objectives, instead channeling institutions' activities either towards non-commercial development activities or direct competition with private banks on similar terms. This would make the cost of development activities more transparent, ensure a more level playing field and strengthen competition. To be efficient, this reform should come with a change in corporate governance practices.

36. The government continues to play conflicting roles with respect to SOBs that weaken the banking sector's role in effectively intermediating credit. In particular, the government is the largest bank owner; it acts as regulator; and it is the main client (through the SOEs). Despite some improvements in the governance of the SOBs, important weaknesses remain. First, SOBs lack independent and seasoned experts on their boards. Second, the government lacks an ownership function to effectively manage the state's assets, e.g., policies and processes for setting performance contracts, tracking key performance indicators, nominating board members and voting shares are poorly defined or absent. Third, most SOBs have rudimentary incentive schemes linked to short-term indicators. Finally, in all SOBs, the chairman of the board is also the Managing Director of the bank, creating potential conflicts of interest between oversight and management functions.

37. Mindful of these weaknesses, the MoF has begun reforms of the SOB sector, although progress has been slow. The authorities approved a comprehensive action plan of nine measures elaborated with the technical support of the World Bank in 2012. The plan—which remains to be implemented—provides, among other measures, the appointment of two independent members at the board of the SOBs, a strengthening of the unit in charge of monitoring these banks, and the IPO of at least one SOB—one SOB appears on the recently issued list of SOEs to be (partially) privatized.

38. Looking ahead, the team urged the authorities to clarify the role of the state in the banking sector, and to complete the corporate governance reform agenda. The strategy regarding public banks, including further privatization and operational objectives of any remaining

[15] The latest Annual Report on the Exchange Rate Arrangement and Exchange Restriction notes that Algeria has a "composite monetary framework" and "and other managed exchange rate arrangement" confirming that the policy framework requires further clarification.

public banks (e.g., specialized vs. universal, profit maximizing vs. required to meet specific social objectives, etc.), should be clarified. If some of these banks are asked to meet social policy objectives, these activities should be funded and remunerated through clearly specified budget allocations. These reforms will enable the banking system to act as a catalytic force in supporting private sector development and economic growth.

39. Credit to private enterprises has grown significantly over the past three years, driven by government initiatives. While there is no data on the share of lending to SMEs, credit registry information indicates that they benefitted proportionally. This growth was facilitated by abundant liquidity in the banking sector, limited alternative investment opportunities, and a number of incentives provided by the authorities, including an interest rate subsidy of up to two percentage points for investment loans with interest rates not exceeding 5.5 percent as well as two partial guarantee funds focusing on SMEs. While the partial credit guarantee funds are likely to boost SME lending, the effect of the interest rate subsidy is less clear given the low interest rate cap that may price out younger, less-established SMEs with less collateral. Assuming that loans in the DA 40-400m range reflect lending to SMEs—and bearing in mind that private banks do not lend to public entities—roughly half of new lending to private sector SMEs is provided by private banks (Table 4).

Table 4. Distribution of Loans to Enterprises (by loan size)

Loan size (million DA)	Public Banks		Private Banks	
	Number	In percent of bracket	Number	In percent of bracket
0 - 40	39,962	89	5,120	11
40 - 80	624	55	520	45
80 - 400	972	58	710	42
> 400	601	73	224	27
Total	42,159		6,574	

Source: Bank of Algeria.

40. Measures to encourage financial deepening will also increase access to finance—particularly for smaller firms. Only a small fraction of enterprises have a loan from a financial institution, with a particularly pronounced gap between small, medium and large firms. Banks require relatively high levels of collateral to obtain a loan, with an emphasis on real estate and personal guarantees. In addition, public sector banks are not commercially oriented and have limited incentives to lend to SMEs beyond directed lending programs, while private banks have had comfortable profit margins through trade finance and corporate banking, with little incentives to go downstream to focus on SMEs. The following avenues should be explored to raise financial deepening:

- **Strengthening creditor rights:** Moving away from the current liquidation culture is expected to increase recovery rates and a better lending environment. The absence of pre-insolvency procedures in the insolvency law makes it difficult to rescue financially distressed but viable entities. A framework for conciliation could help encourage business rescue and ultimately increase creditor returns (see also Box 1 on the problem of write-offs). Creditors' rights can be further improved through a centralized collateral registry for immovable collateral and a unified registry for movable collateral (e.g., there are 48 land registries in Algeria with no centralized hub). Strengthening the quality, information, and notice function of the collateral registries will ultimately reduce bank risk. Streamlining debt enforcement procedures will also mitigate risk for creditors and encourage lending.[16]

- **Modernizing the bankruptcy framework:** Algeria's insolvency law lacks provisions for effective debt recovery. The scope of the law should be broadened;[17] creditor recovery is limited by the privilege of the Treasury and employees; insolvency practitioner regulation is scarce; and there are no cross-border insolvency provisions. Moreover, there is no law for the personal bankruptcy of consumers, something that will be needed if the restrictions relating to consumer credit are lifted, increasing the likelihood of bankruptcies.

- **Broadening the role of the stock market:** With a capitalization at less than 0.1 percent of GDP, four equity issuers, two bonds issuers listed and a few thousand investors, the Algerian Stock Exchange is far from reaching its potential for financing the economy. Even if there is little fiscal need to issue government debt, the capital market is dominated by government securities, concentrated on the very short-end of the yield curve. Market regulator COSOB launched a reform program in 2011 to boost the development of the stock exchange, focusing on improving the legal framework, modernizing market infrastructures and professionalizing market participants.

- **Relaxing insurance investment options:** Insurance companies are required to detain 50 percent of technical provisions in government securities. In a situation where sovereign bonds are scarce, insurance companies are having difficulty in complying with the regulation. It would be possible to reduce the level of the requirement and to include other securities (such as SOEs' bonds) to satisfy the liquidity requirement, which would promote the development of such instruments.

[16] In response to the weaknesses in creditor rights, leasing has been booming, supported by a sound legal and regulatory framework with an effective repossession process. Although still in its infancy, the success of leasing is mainly due to three factors: (i) guarantees can be exercised more easily than for standard credit products; (ii) leasing applications are generally approved rapidly; (ii) in the absence of Islamic finance options, leasing is the only product that meets religious requirements.

[17] Currently the law only applies to "commercants et personnes morales de droit privé". It should be broadened to include "personnes libérales, agriculteurs et artisans" who also play an important economic function.

- **Promoting modern payment technologies:** Cash use remains prevalent, despite earlier attempts to introduce modern payment means (network reliability issues contributed to limited acceptance). With communication technologies advancing further and widespread use of mobile phones, there is potential for rapid growth in expanding the use of modern payment methods, as long as the current regulatory framework is adapted.

Box 4. Financial System Development—Can Intertemporal Smoothing Help?

Countries that are large producers of commodities have frequently been subject to the resource curse—meaning lower growth than resource-poor countries (see Das and others, 2010). Several explanations exists: (i) *Dutch disease:* export revenues cause an appreciation in the real exchange rate, making the tradable sector less competitive in world markets; (ii) *government revenue volatility:* volatility in world prices can disrupt government planning, encouraging investment in inferior projects during good times and causing pro-cyclical budget adjustments during bad times; and (iii) *problematic institutional development:* it is often easier to allocate resources to favored constituents than through growth-oriented economic policies and a level, well-regulated playing field, and there is less need to build up the institutional infrastructure to regulate and tax a productive economy.

Financial development is also often held back, and risks to the financial system increase: (i) greater availability of funding reduces demand for finance, starting with the sovereign; (ii) entrepreneurs are driven towards rent seeking, and less to starting new productive firms that would require capital; (iii) the reduced investment in institutional frameworks that support private property rights, enforcement of contracts and transparency, has negative long-term consequences for the institutional set-up needed to encourage finance in the longer-run; and (iv) lending may become riskier, as resource booms are typically followed by busts.

Algeria has so far tried to deal with oil fluctuations through fiscal rules, with limited success. There is currently an oil savings fund (FRR) designed to save for future generations and smooth short-term volatility, but the design is flawed as the savings are not ring-fenced by a withdrawal rule or (equivalently) by a limit on the primary structural deficit. Under the current system, government deposits in the Fund equal the hydrocarbon proceeds beyond a unit price of US$37 per barrel; withdrawals are left to the discretion of the authorities, which may lead to boom-bust cycles that have repercussions on the financial sector.

A more fully-fledged oil saving scheme that would include a binding rule for draw-downs would help disconnect the macroeconomic and oil cycles, and assign a greater role to public debt management, potentially boosting the fixed-income market. While the FRR allows for budget smoothing, a fully-fledged SWF would structurally insulate the economy from the hydrocarbon-induced volatility shocks and possibly provide a higher rate of return on investment.

A Sovereign Wealth Fund—a government investment vehicle that invests long-term and overseas—have helped in other countries in a number of ways : (i) the Dutch disease effect is reduced, as less resources are spent domestically; (ii) transfers to the SWF reduces the revenue available for immediate consumption, and boosts savings with long-term and higher returns; (iii) SWF resources can be used to fund counter-cyclical policy to smooth the resource cycles; (iv) monetary policy is facilitated by lower volatility in liquidity related to resource revenue. The effects would also improve conditions for the development of capital markets, and lending in general.

Source: Das, Udaibir, Adnan Mazarei, and Han van der Hoorn, 2010, "Economics of Sovereign Wealth Funds: Issues for Policymakers" (Washington: International Monetary Fund)

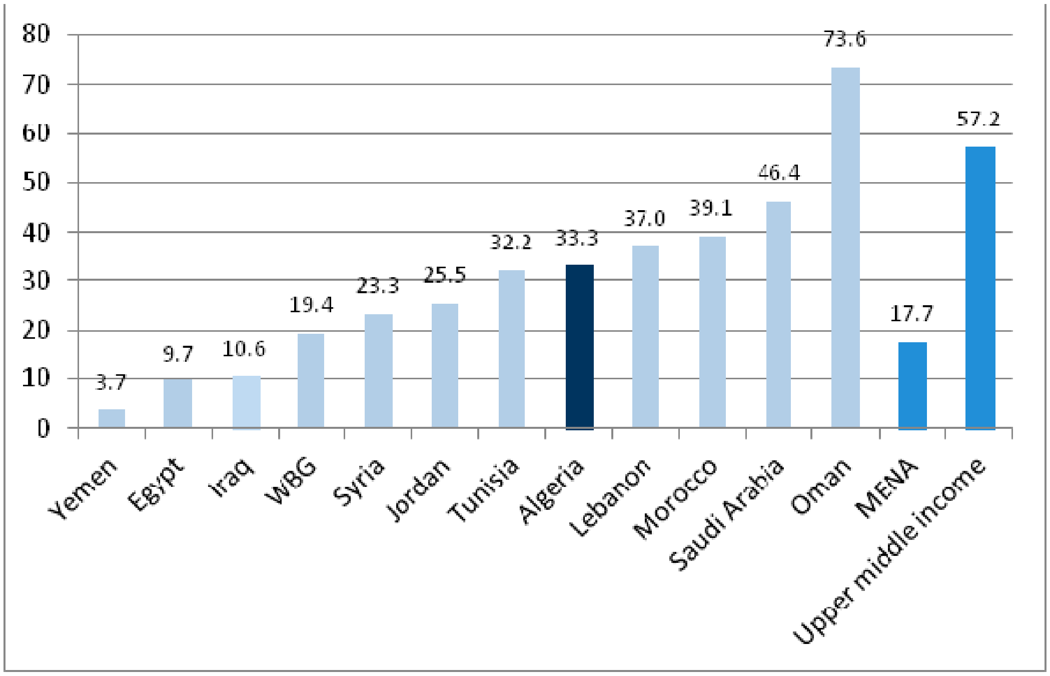
- **Supporting the nascent Early Stage Financing / Venture Capital industry:** There are only a few private equity-houses serving the needs of higher-end market. The authorities have committed approximately DA 50 billion to finance SMEs by setting up 48 regional funds (most of which are managed by public banks), one state-owned specialized financial institution and one government-owned specialized private-equity firm.

- **Modernizing the public credit registry:** the BA, with the support of the World Bank and the IFC, has adopted a detailed modernization plan to overhaul the existing credit registry, and launched a procurement process to implement the plan. Currently, the publicly operated system does not provide banks with sufficient information to conduct a comprehensive credit risk assessment or conduct monitoring, suffering from limited coverage, insufficient data quality, limited historical track record and an obsolete IT system.

41. The ban on consumer lending put in place in 2009—to contain indebtedness of consumers—has been harmful for financial deepening (see Figure 3). The ban has a number of adverse effects: it deprives small firms—many of which are operating in the informal sector—from an important source of credit, obstructs households' consumption smoothing and does not allow individuals to build up credit history. It encourages informal lending (for emergencies) and borrowing from friends and families. The authorities and banks should be able to prevent excess indebtedness through better monitoring—supported by an improved public credit registry which collects and disseminates reliable data on individuals—and appropriate prudential rules. It is also important to introduce a personal bankruptcy framework—protecting both creditors and consumer debtors in the event of a personal bankruptcy.

42. Algeria does not have a conventional microcredit sector comparable to its regional peers. There are a number of government programs that are targeting microenterprises (ANGEM), young self-employed individuals (ANSEJ) and unemployed adults (CNAC), all heavily subsidized and partially implemented in cooperation with public banks, leaving little space for conventional microfinance providers or private banks (Table 5). These lending and business training programs have scaled up significantly since 2011, but a number of challenges have emerged: their rapid growth has brought to light managerial strains, and the heavily subsidized interest rates and reduced personal contribution of beneficiaries have raised concerns about the quality of the portfolio. While there are no contingent liabilities a priori from these policies—the sovereign explicitly only pays the subsidy—it is important that the authorities monitor this type of lending, which could potentially be riskier than other forms of lending.

Figure 3. Percentage of Adult Population with Access to an Account with a Financial Institution



Source: Findex Database (2011).

Table 5. Public Support Programs (Subsidies) for Microenterprises (in million of dinars)

	2009	2010	2011	2012
Young Entrepreneurs (ANSEJ)	131,491	176,866	297,253	426,795
Unemployed Adults (CNAC)	19,406	32,558	88,747	154,928
Microenterprises (ANGEM)	6,381	8,510	11,087	16,054
Total	157,278	217,934	397,087	597,777

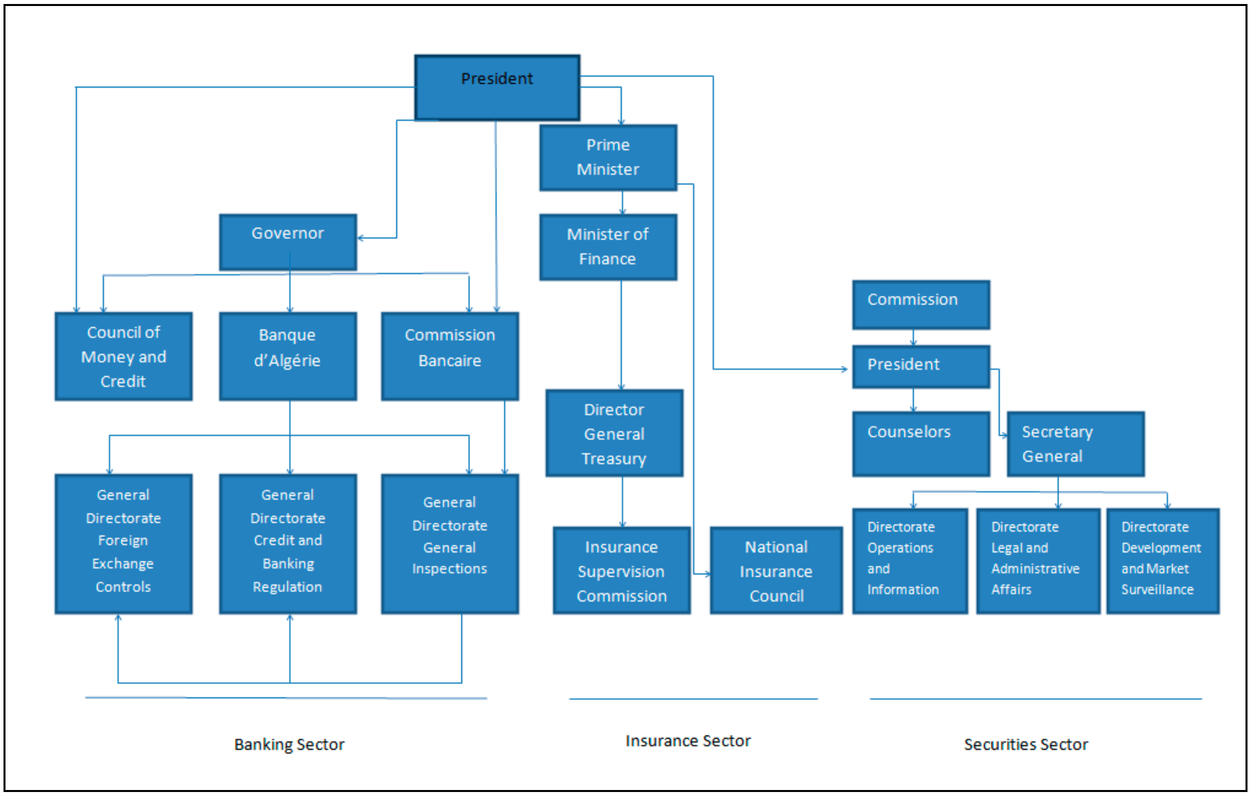
Source: Ministry of Finance.

Appendix I. Algeria FSAP—Risk Assessment Matrix

Nature/Source of Main Threats	Overall Level of Concern	
	Likelihood of Severe Realization of Threat in the Next 1–3 Years *(high, medium or low)*	**Expected Impact on Financial Stability if Threat is Realized** *(high, medium or low)*
1. *Risk to Growth* ***Euro-Zone***	***Staff assessment: Medium*** • Short term: Financial stress in the euro area re-emerges, triggered by stalled or incomplete delivery of national and euro area policy commitments **(medium)** • Medium-term: Protracted period of slower European growth, triggered by larger than expected deleveraging or negative surprise on potential growth) **(high)** • Fiscal policy shock in the United States, triggered by failure to raise debt ceiling **(low)**	***Staff assessment: Medium*** A further slowdown in growth in the euro area (Algeria's main gas export partner) would negatively affect the balance of payments, through both lower hydrocarbon prices and lower demand, and the fiscal balance. A slowdown in growth in the United States or emerging markets/China would also affect the country through lower global demand and its potential impact on oil prices. The financial sector could be affected through a contraction of liquidity from the hydrocarbon sector, and a subsequent rise in NPLs, notably if non-hydrocarbon growth is also affected. State-owned banks could be particularly affected given their large concentration ratios. In all cases, spillovers through capital markets would be limited given Algeria's very limited exposure to international financial markets, and widespread capital restrictions. The impact would also be contained by government buffers. Limited size of the financial system would also contain financial stability threat.
U.S.	• Short term: Protracted economic and financial volatility, especially for emerging markets, triggered by prospective tapering **(high)**	
Emerging markets	• Short/medium term: Lower than anticipated emerging markets growth potential, triggered by earlier maturing of the cycle and incomplete structural reforms with spillovers to low income countries and advanced economies **(medium)**	
China	• Medium term: Sharp slowdown in growth in China, triggered by buildup of excess capacity eventually resulting in large financial and fiscal losses **(medium)**	
2. *Risk to capital markets*	***Staff assessment: Medium*** • Short/medium term: Advanced bond market stress, triggered by lack of fiscal sustainability leading to a sharp rise in sovereign risk premium in advanced economies **(medium/low)** • Medium term: Risks to financial stability from incomplete regulatory reforms,	***Staff assessment: Low*** Algeria's capital account is not very open, and risks related to both capital outflows and inflows are marginal. Algeria is a net creditor, and its large international reserves are mainly invested in high-grade sovereign bonds. A stress on international bond market would complicate the reserve investment strategy.

Nature/Source of Main Threats	Overall Level of Concern	
	Likelihood of Severe Realization of Threat in the Next 1–3 Years *(high, medium or low)*	**Expected Impact on Financial Stability if Threat is Realized** *(high, medium or low)*
	triggered by delays, dilution of reform, or inconsistent approaches **(medium)**	The financial sector is little exposed to the international environment, and risks to financial stability are unlikely to affect the country, although second-round effects on the real sector would be possible. Fiscal buffers and small size of the financial system would also limit financial stability threat.
3. Other risks	***Staff assessment: Low*** • Short term: Global oil shock, triggered by deceleration of global demand and coming-on-stream of many global excess capacity new projects while global demand remains weak	***Staff assessment: High*** Algeria's fiscal sector is heavily reliant on oil revenues. A lasting decline in oil prices would worsen the fiscal balance absent significant efforts to curb current spending and increase non-hydrocarbon revenues. As in the case of a shock to global or European growth, the financial sector would be affected through reduced liquidity, and through a rise in NPLs. The fiscal backstop for the financial system would also be under threat in that case, though the small size of the financial system would limit the damage to financial instability.
4. Algeria-specific risks	***Staff assessment: Medium*** • Medium term: Shock to food prices (notably wheat), raising pressure on fiscal expenditure **(low)** • Short/medium term: Further demands on the hydrocarbon rent, raising further pressure on fiscal expenditure **(high)** • Short/medium term: Intensification of regional tensions (notably in Mali and Libya), forcing more expenditure to create jobs and for security **(medium)** • Short/medium term: Domestic political instability, driven by the forthcoming Presidential election **(low)**	***Staff assessment: Low*** Most Algeria-specific risk are likely to lead to rising fiscal expenditure to contain the impact of shocks on the population. More government expenditure is likely to raise excess liquidity in the system further, which may not translate into much credit growth. The fiscal backstop to the financial system would also be weakened, though the small size of the financial system would limit the consequences on the financial system

Appendix II. Financial System Supervisory Structure



Appendix III. Basel Core Principles–Summary Assessment

Information and Methodology Used

1. **An assessment of compliance with the Basel Core Principle for Effective Banking Supervision was carried out for the banking sector.** The banking sector accounts for most of financial system assets, dominated by six public banks, which alone accounted for 81 percent of assets of the banking system at end-2012. It is characterized by a relatively low degree of intermediation, with a total credit flow to the economy of just 15.1 percent of GDP at end-2012 (the same applies for non-oil GDP). The 14 foreign-owned private banks have turned mainly to international activities. This situation seems to be changing following the recent introduction of limits on commissions associated with trade finance and mechanisms to help finance SMEs. Nine financial institutions are also licensed for carrying out leasing activities, which are expanding rapidly. The stock market plays but a minor role in financing the economy.

2. **This assessment is based on the revised September 2012 Core Principles Methodology of the Basel Committee on Banking Supervision.** It was conducted during September 15–28, 2013, in Algiers and follows two assessments completed in 2003 and 2007. The assessment focused on the regulatory and supervisory framework applicable to commercial banks. The assessment drew on (i) a self-assessment and response to a questionnaire by BA; (ii) laws and regulations governing BA, banking activity and supervision; (iii) external auditor reports as well as annual reports on internal control in banks; and (iv) numerous meetings and examination of certain documents provided by the General Secretariat of the Money and Credit Council, General Secretariat of the Banking Commission, and the BA. Numerous interviews were held with senior staff from the General Directorate for General Inspection, working on both off-site and on-site inspections. Several meetings with the Director General himself were arranged as well. Externally, the mission met with the Financial Information Processing Unit, the Association of Banks and Financial Institutions, a number of credit institutions (public and private, local and foreign), two external auditors (one local and another with an international firm), and the Association of Chartered Accountants.

Main Findings

3. **The following summarizes the main findings of the detailed assessment of compliance with the BCPs.**

Objectives, Powers, Independence, Accountability, and Cooperation (CPs 1-3)

4. **The responsibility for supervising the financial system in Algeria belongs to the BA.** Banking supervision is structured around the BA, which is backed by a licensing authority (Money and Credit Council) and a supervisor (Banking Commission), both of which are chaired by the governor. The latter also has own licensing powers and direct authority over the Directorate General for General Inspection, in charge of ongoing supervision and on-site inspection of credit institutions.

5. **The quality of supervision depends not only on the supervisory authority but also on the establishment of certain preconditions.** These include sound and sustainable macroeconomic policies, a well developed public infrastructure, effective market discipline, and mechanisms for providing an appropriate level of systemic protection. While these are largely beyond the control of the supervisor, they significantly affect the supervisor's ability to conduct effective supervision.

6. **Just like the country's entire economy, Algeria's financial sector is exposed to the volatility of oil revenues.** The oil sector accounts for 34 percent of GDP, 65 percent of government revenue, and 98 percent of exports. This might have an impact on current credit support policies and could open the door to more significant credit risks in the future should a reversal in the cycle occur. Algeria's financial system was only minimally affected by the global financial crisis because of limited international exposure and historically high oil prices. Exchange controls placed foreign financial markets virtually out of reach for Algerian institutions. Moreover, a downturn in the oil business in 2009 was largely offset by a recovery in prices in 2010–11.

Review of the Preconditions for Effective Banking Supervision (CPs 8-25)

7. **Banking supervision, structured around the prominent role of the governor of the BA, is gradually converging towards best international practices.** However, as already identified in the previous Basel Core Principle assessment, the organization of banking supervision continues to be marked by too little supervisor cooperation and independence, which may pose a problem given the government's multiple, potentially conflicting roles as shareholder, regulator, and client.

8. **The prudential framework is adapted to the current environment, characterized by a low level of complexity of transactions and limited risk-taking by banks.** There are, however, important entry barriers for potential new players due to both the size of the public sector and the regulatory restrictions, including, first and foremost, rules on foreign investment and minimum capital. The prudential framework was bolstered in 2011 by a new regulation on internal control and risk management, as well as an instrument on liquidity risk. Some aspects continue to be insufficiently addressed, such as development of a consolidated approach to supervision, hedging of market risk, and management of overall interest rate risk. Increased efforts should be directed at strengthening good governance rules further.

9. **Although development of a new risk-based methodology was completed in 2012, its actual implementation is lagging and is still preventing effective allocation of supervisory resources.** In light of the fact that tasks associated with off-site and on-site inspections and the tasks of the Banking Commission Secretariat are poorly defined, the supervisor's action is inconsistent. Tools for crisis management, cross sectional risk analysis, and stress testing are also yet to be rolled out. Cooperation with foreign supervisors is still in its early stages given the lack of a cooperation agreement.

10. **The supervisor managed to stabilize its workforce, but more resources are needed to fully carry out its tasks, and supervision is still based on an approach geared more towards regulatory compliance, rather than the identification of institutional risks.** There is a need to

analyze decisions to grant credit and have a more forward-looking view of risk. Moreover, the supervisor does not have the means to recruit or train some of the specialists it needs, such as IT system auditors, in spite of the significance of operational risks. It therefore sometimes turns to banks, without establishing any specific mandate or terms of reference, to conduct external audits. Financial reporting and institutional transparency are still too underdeveloped to allow market discipline to complement the supervisor's action.

11. **The BA manages a public credit registry of business loans, which requires further upgrading.** It is currently outdated and does not provide much useful information for banks to properly analyze liabilities, both at the loan origination stage and during the risk monitoring phase. A plan to overhaul the system is underway with support from the World Bank. In early 2014, the frequency of credit transactions should change to a monthly basis, thus improving the quality of information supplied. A risk centralization project applicable to individuals is also being considered.

12. **The legal framework for the financial system has undergone major changes in the last decade, but the bankruptcy law has shortcomings in both its design and its application, which hamper the development of credit supply.** Shortcomings in the efficiency of corporate, bankruptcy, contract and private property laws, consistency in law enforcement, can undermine the quality and effectiveness of banking supervision. According to the World Bank Doing Business indicators, Algeria has ample room to improve in these areas. When it comes to restructuring entities, the liquidation of struggling enterprises, rather than the prevention of such situations, is too often the norm. Moreover, there is no collective procedure for individuals, artisans, farmers, or liberal professions.

13. **The recovery of collateral is still unpredictable and subject to undue delays (of 2 to 10 years).** The securities law is plagued by barriers to the proper implementation of guarantees owed, in particular, to registries scattered across the nation, and the existence of stalling tactics allows debtors to evade some of their obligations. This causes banks to concentrate on mortgage collateral (the least likely to lose value in the long term) and neglect the other forms that are nonetheless authorized by the legal framework.

Accounting and Disclosure (CPs 26-28)

14. **In spite of a revision of accounting standards in 2010 to bring them closer in line with international standards, financial reporting on enterprises continues to be insufficient.** Thus, the establishment of consolidated statements is still an exception. Likewise, disclosure obligations lack rigor, especially for public enterprises. Lastly, the non-computerization of the trade register complicates banks' analysis of their risks. Financial reporting on risks (breakdown of amounts outstanding by risk class, maturity, region, type of client, organization of internal control and risk management, etc.) is lacking.

15. **Failure by the banking sector to use financial markets and disclosure obligations that are already too lax are weighing on banks and financial institutions, thereby preventing market discipline from fully playing its role.** Worthy of note is the failure to publish consolidated

statements and intermediate results as well as the very lax obligations requiring publication of qualitative information on institutional exposures to risk. Moreover, the annual reports of public banks are not generally available on their websites, forcing the public to seek the information from legal notice systems. In addition, supervision of institutions' financial publications continues to be insufficient.

16. **The BA publishes an annual report containing information on its banking supervision.** However, the report prepared by the Banking Commission for the President of the Republic remains confidential. Publicity surrounding the supervisor's actions should be stepped up, particularly as concerns communication of the risk prevention policy or sanctions for impairments.

Mechanisms for Providing an Appropriate Level of Systemic Protection (Public Safety Net)

17. **In the event of a liquidity crisis, the central bank would need to provide liquidity needs without necessarily being able to rely on its usual tools.** This is due largely to lacking collateral given poor government and public-sector issuances. At the same time, the BA has the authority to implement exceptional facilities based on a broad definition of collateral, including certain categories of medium-term loans with maturities of up to three years. However, the operational framework for the implementation of such unconventional measures needs to be clarified.

18. **The FGDB, created as a result of the bankruptcy of Khalifa Bank in 2003, does not have full resolution powers and should be modernized.** Its effectiveness is questionable in view of the excessively lengthy repayments made following the bank failures that occurred from 2003 to 2005; these repayments are still ongoing. Moreover, all the players involved essentially operate in isolation, preventing effective supervision of the mechanism, which can undermine its credibility.

19. **Algeria's financial sector still does not have an adequate crisis management framework.** Coordination between the various authorities involved continues to be mostly informal. The responsibilities of each authority are not clearly defined in such situations, and cooperation agreements have yet to be developed in this regard.

Summary Assessment of the Basel Core Principles

Core Principle	Comments
1. Responsibilities, objectives and powers	
Better coordination and communication among the various stakeholders needed, including keeping a good balance between the objectives of prudential supervision and other tasks of the central bank.	
2. Independence, accountability, resourcing and legal protection for supervisors	
Independence of the Governor and supervisors needs to be strengthened further.	
3. Cooperation and collaboration	
Need to put in place cooperation agreements with foreign supervisors.	
4. Permissible activities	
Permissible activities for banks are clearly defined but regulatory perimeter should be expanded.	
5. Licensing criteria	
Licensing processes is satisfactory, but restrictions—including on foreign participation— could be modified.	
6. Transfer of significant ownership	
Strict framework in place to address changes in ownership, but possibly inefficient. Need a more transparent definition of causes for objection of transfer of ownership.	
7. Major acquisitions	
All cross-border acquisitions take place within a strict framework; there is no framework for the acquisition of non-financial firms in Algeria.	
8. Supervisory approach	
Move to risk based supervision has made headways, but its implementation remains a challenge. Also need to implement stress tests and improve crisis management framework.	
9. Supervisory techniques and tools	
Need to clarify role of off-site and on-site supervision to provide better guidance to supervisory action; insufficient coverage of potentially important risks (e.g. operational).	
10. Supervisory reporting	
Reporting requirements satisfactory, but need to introduce consolidated supervision to better follow banking groups.	
11. Corrective and sanctioning powers of supervisors	
Satisfactory accounting and auditing practices in place, but should attempt to better anticipate risks. Sanctions should also be used less sparingly.	
12. Consolidated supervision	
Regulatory framework and supervisory practices insufficiently developed for consolidated supervision.	
13. Home-host relationships	
Absence of bilateral MoUs with foreign supervisory authorities needs to be rectified.	
14. Corporate governance	
Need to clarify and strengthen recently introduced internal governance rules.	
15. Risk management process	
Comprehensive risk management framework in place. Issue of moral hazard and conflicts of interest in approval of new financial products.	
16. Capital adequacy	
Should include market and operational risks in the calculation of capital requirement. Also should raise risk-weight for exposure to the domestic banking system.	
17. Credit risk	
Credit risk in loan portfolio is not supervised sufficiently.	
18. Problem assets, provisions, and reserves	
Oversight and provisioning for loan portfolio problems appear adequate, but must better understand risks related to recovery.	

Core Principle	Comments
19. Concentration risk and large exposure limits	
Framework satisfactory, but not always enforced in practice, and related party definition insufficiently precise.	
20. Transactions with related parties	
Tight framework for related party lending in place; however, other exposures to related parties are not receiving adequate attention.	
21. Country and transfer risks	
Neither the regulation nor the supervisory processes address these risks specifically.	
22. Market risk	
Regulation and supervisory processes insufficiently address this incipient but growing risk.	
23. Interest rate risk in the banking book	
This risk is currently poorly tracked.	
24. Liquidity risk	
Framework for liquidity risk adopted in line with Basel III, but implementation pending.	
25. Operational risk	
Lacunas in the regulation and supervisory processes to address this risk specifically.	
26. Internal control and audit	
Important advancements made in this area. Some weaknesses in the compliance function remain.	
27. Financial reporting and external audit	
In compliance with IAS/IFRS, though insufficient number of trained auditors is a concern.	
28. Disclosure and transparency	
Requirements to publish financial information too weak and do not meet international standards.	
29. Abuse of financial services	
Broadly in line with FATF requirements, though rules on Combating of the Financing of Terrorism must still be implemented.	

Recommended Action Plan to Improve Compliance of the Basel Core Principles

Reference Principle	Recommended Actions
1. Responsibilities, objectives and powers	
Strengthen the coordination and communication between the different prudential supervisors (i.e., Council, Commission Bancaire (CB) and Bank of Algeria). Ensure independence of supervisory tasks relative to other tasks of the BA (e.g., exchange controls and foreign trade). More systematic consultations with key stakeholders when developing new regulations, instructions, etc.	
2. Independence, accountability, resourcing and legal protection for supervisors	
Ensure composition of the Council and the Commission Bancaire in compliance with Ordinance 03-11. Establish a fixed term, renewable mandate for Governor of the Bank of Algeria and CMC members. Create a legislative basis establishing criteria and procedures for dismissal of the Governor, members of the CMC and members of the CB. Publish diagrams of CMC and Central Bank. Establish and ensure adherence by the Council and the Commission Bancaire to codes of conduct including in the rules on conflicts of interest and impediments. Strengthen the role of the CB control teams on prudential supervision of the BA. Establish a solid legislative basis for the protection of staff assigned to the BA supervision.	
3. Cooperation and collaboration	
Develop a framework for cooperation between the Algerian supervisors (prudential supervision, insurance supervision, control of markets and Ministry of Finance). Develop bilateral cooperation and exchange of information with foreign supervisory authorities, especially in context of a possible framework for resolution. Specify by law the modalities for communication of confidential information and determine their conditions of use.	
4. Permissible activities	
Implement a perimeter of control.	
5. Licensing criteria	
Ensure better coordination between the various stakeholders, potentially strengthening the role of the existing internal committee Ask for the systematic review by the Banking Commission. Explicitly allow authorities issuing approvals to set additional conditions other than those mentioned in the authorization of the CMC. Adapt the accreditation criteria also in cases of individual shareholders. Ensure the collegiality of decisions granting and withdrawal of authorizations for bank managers or financial institution. Update the criteria for authorization and approval under the new regulations, such as liquidity and internal control.	
6. Transfer of significant ownership	
Establish by law the definition of "meaningful participation" in a prudential context. Explicitly extend legal concepts of beneficial ownership, modification powers for controls and the voting rights, and consider the fact that such changes can also be performed individually or as part of groups. Fix a minimum period of processing of applications by the supervisory authority. Fix by law the conditions and criteria on the basis of which the Governor may have to oppose such operations.	
7. Major acquisitions	
Determine the limits laid down in Article 74 of Ordinance 03-11 and extend its application to financial institutions. Determine criteria for judging acquisition projects. Establish a framework for investments in non-financial companies.	
8. Supervisory approach	
Deploy new methodology taking into account possible risks inherent in institutions. Reconsider the role of on-site supervision and establish a first risk assessment on the basis of this analysis (and translated into a form of risk analysis). Deploy new methodology to ensure that program of prudential supervision remains compatible with the fulfillment of other tasks that may be assigned as part of responsibilities of BA as the monetary authority. Make the link with the macroeconomic context. Develop a methodology for stress testing. Establishing resolution plans for major banks and financial institutions.	

Reference Principle	Recommended Actions
9. Supervisory techniques and tools	
Deploy the new methodology, taking into account possible risks inherent in institutions. Strengthen the interactions between CB and DG in charge of prudential supervision, including the periodic analysis of the conditions in the sectors or the results of cross-sectional surveys. Establish control program based on the risk profile of institutions and justify deviations. Develop the analysis of business models. Establish systematic annual interviews with internal audit. Strengthen and document meetings with key functions of institutions. Clarify expectations following significant breaches. Use specialized third parties where resources are lacking at the DG in charge of prudential supervision.	
10. Supervisory reporting	
Establish a reporting format for interest rate risk. Develop periodic reports on a consolidated basis Consider a monthly basis to report on liquidity in case the situation of excess liquidity is reduced. Define and enable an analysis based on homogeneous groups. Strengthen accountability of officers and directors for the accuracy and reliability of periodic statements.	
11. Corrective and sanctioning powers of supervisors	
Deploy a new methodology, taking into account possible risks inherent in institutions. Strengthen the role of onsite supervision to monitor the implementation of corrective measures. Consider possibility for the CB to set additional capital requirements based on risk profile of institutions. Consider raising prudential information requirements with a frequency sufficient to enable the BA to have a proper view of the risks of the banking sector and to take the necessary preventive measures. Develop the ability by law to impose administrative penalties for officers and directors.	
12. Consolidated supervision	
Develop consolidated supervision.	
13. Home-host relationships	
Develop a framework of cooperation and collaboration with foreign supervisors. Sign bilateral agreements with foreign authorities.	
14. Corporate governance	
Supplement the regulation on internal control by an instruction manual that clarifies the expectations of the supervisory authority on best governance practices. Develop control parts and on-site aspects of corporate governance, in particular aspects relating to the appointment and remuneration of directors and presidents of the Board of Directors. Develop the role of independent members of boards and committees. Impose by regulation the creation of an audit committee and a risk committee for major banks. Develop a business strategy and business model for the institutions.	
15. Risk management process	
Require institutions to define a framework of their risk tolerance. Enforce the provisions of the regulation on internal control, in particular the development of a risk map. Enforce the provisions of the regulation on liquidity, particularly aspects related to stress tests. Specify by regulation the prudential expectations regarding operational risk and interest rate risk . Develop sufficient expertise in information system. Clarify regulation and expectations on internal controls for risk management relating to changes to business model, development of new activities and expected role of the board of directors or a committee.	
16. Capital adequacy	
Implement regulation provided under section 89 of Ordinance 03-11. Review the consistency between the weighting of mortgage loans to customers and processing mortgage guarantees under the funding rules. Clarify the definition of «assimilated to the State» under the weighting of securities and receivables, publish a list of such entities or organizations. Review the weighting of 5 percent of exposures to banks and local financial institutions and set the weighting to be applied to risks not specifically mentioned in the regulations. Include operational risk and market risk capital requirements and track changes in the leverage of banks.	

Reference Principle	Recommended Actions
Provide in the legislation the possibility for the supervisory authority to impose additional capital requirements or limits on the level of risk. Develop issuance of capital contingency plan, in case of market stress.	
17. Credit risk	
Strengthen the capacity analysis and the willingness of borrowers to make repayments in accordance with the terms of the contract. Ensure the proper determination of connected clients. Develop stress tests.	
18. Problem assets, provisions and reserves	
Ensure proper classification and provisioning of restructured loans. Take greater account of the real prospects of recovery compared to a purely mechanical approach. Pay particular attention to the treatment of overdrafts. Develop link between macro-prudential/cross-sectional analyses of portfolios and microprudential supervision.	
19. Concentration risk and large exposure limits	
Clarify the concept of "related party" within Regulation 74-94. Establish the threshold of large exposures to 10 percent instead of 15 percent. Include risk concentration in crisis simulation exercises.	
20. Transactions with related parties	
Expand definition of « related party» within section 104 of the Ordinance 03-11. Extend the limitations of section 104 signature commitments.	
21. Country and transfer risks	
N/A	
22. Market risks	
Develop minimum regulatory framework in this area. Define concept of prudential trading. Consider developing a framework of possible derivative positions taken by banks.	
23. Interest rate risk in the banking book	
Specify prudential expectations in this area, particularly in terms of interest rate gaps, sensitivity analysis of interest rate margins, analyzing deposit flow assumptions, etc. Develop crisis scenarios.	
24. Liquidity risk	
Analyze the adequacy of scenarios and action plans proposed by the institutions. If the liquidity situation would materially change in Algeria, revise reporting frequency, e.g., monthly.	
25. Operational risk	
Specify the types of operational risks. Develop, where appropriate through external expertise, technical skills required to ensure operational continuity.	
26. Internal control and audit	
Specify criteria for smaller institutions requiring simplified internal criteria. Ensure timely implementation of relevant regulations and internal control by the institutions.	
27. Financial reporting and external audit	
Clarify expectations with respect to the work of auditor under the prudential supervision. Establish and make public selection criteria for auditors by the CB including terms/conditions of its control. Systematic annual interviews with auditors	
28. Disclosure and transparency	
Develop and impose financial statements for institutions Specify the content of the consolidated financial statements on internal control. Ensure publication of financial information from institutions with an easily accessible way to the public.	
29. Abuse of financial services	
Supplement the provisions in the fight against the financing of terrorism. Intensify the relationship between the supervisor and anti-money laundry unit. Ensure that institutions question the continuation of their relationship with a customer whose transactions they are unable to understand.	

Appendix IV. Implementation of 2007 FSAP Recommendations

Main Objective	Intermediate Objective	Short-Term Actions	Reforms Undertaken
BANKING SECTOR			
Significantly reduce the role of the State in the banking sector	Continue the privatization process	- Finalize privatization of the *Crédit Populaire d'Alger* (CPA) by selling at least 51 percent of its capital to a strategic investor. - Start privatization process of another public bank immediately after the completion of CPA sale.	- The authorities have tried to privatize CPA, but following the global crisis, there were no serious bidders. - Privatization process now on hold.
Ensure level-playing level field among banks	Revoke all existing provisions that hinder competition	- Lift restrictions against public sector enterprises and agencies making deposits in private banks. - Ease the restriction against the free transfer of skilled human resources from the public sector to the private sector. - Promote market mechanisms to finance housing - Limit the scope of application of Article 190 of the Criminal Code on fighting corruption to ensure equal treatment for "public employees" (including bank managers) and employees of private banks.	- Restrictions were lifted - Law has not changed, still a two year cooling period. - State remains dominant actor in housing, and continues to subsidies housing, but encourages private sector participation. - Not changed, but currently under discussion.

Main Objective	Intermediate Objective	Short-Term Actions	Reforms Undertaken
Improve the management and governance of public banks	Implement a governance structure consistent with best practices and capable of responding to a competitive environment	- Complete the final rehabilitation plan regarding the repurchasing of nonperforming loans from the public sector. - Strengthen internal procedures to assess credit risk and improve quantity and quality of collected credit monitoring information, including data submitted to credit registries. - Clarify and strengthen the role of board members and management, particularly relative to role of shareholder.	- State in the final phase of repurchasing NPLs from public banks. - Introduced a new regulation that obliges all banks to impose internal control, and improved data collection is ongoing. - Introduced performance criteria for board members, and minimum qualification standards for board members. - However, several measures have been taken in the past few years to restrict fair competition between private and public banks notably under the cover of promoting SMEs and private retail loans: (i) forbidding consumer loans since 2009 which disproportionately impacted private banks (ii) limitation on commissions for international trade activities.
Strengthen bank supervision	Respect all Basel Core Principles for Effective Banking Supervision	- Continue to strengthen licensing criteria (pledges of support from shareholders, source of funds, internal control and AML/CFT procedures) - Improve the identification and management of risk concentration	- Strengthened regulation on licensing criteria, with tougher criteria on beneficial owners. Algeria has been identified by the FATF as having strategic AML/CFT deficiencies. Insufficient progress in implementing its AML/CFT action plan negotiated with the FATF led the FATF to call on its members to consider the risks arising from these deficiencies. - Has been achieved through tougher regulation.

Main Objective	Intermediate Objective	Short-Term Actions	Reforms Undertaken
		- Improve the role of Banking Commission, including through more effective off-site supervision and greater use of its sanctioning powers - Clarify intervention (type of claims) and investment strategies (in terms of liquidity, risk, and profitability for the bank FGD.	- Off-site supervision has been improved, especially in terms of methodology (new approach and manuals for on-site and off-site supervision), increased staffing and training, and increasing use of sanctioning power. - No change made to type of claims covered under the deposit insurance. Change to investment strategy is minimal since it only places money in term-deposits at banks. However, with the change of SGDB to FGDB (legal person) in 2011, it now has a Treasury Committee, reportedly looking into investing in government bonds.
Protect the financial system from oil price fluctuations	-Fully insulate oil-related liquidity from banking system	Keep oil export proceeds off-shore (first-best option) or lock Sonatrach's money locked at the BA, either directly or indirectly through the Banque Extérieure d'Algérie - Once the oil-related liquidity issue is resolved, • Strengthen BA /MOF coordination to manage PIP-induced liquidity; • Securitize BA advance to the Treasury into existing lines of Treasury bonds and allow BA to use these bonds for open monetary operations	Existing law does not allow oil export proceeds to be kept off-shore. In practice, Sonatrach's deposits are kept isolated in Banque Extérieure d'Algérie - The main impact on liquidity occurs via proceeds that Sonatrach pays to the government, which is spent. Therefore, the financial system is still not protected from oil price fluctuations.
Allow long-term financing by businesses and households	-Finance large infrastructure projects with due concern for effectiveness	- Review the functioning of the SME guarantee fund to avoid moral hazard.	- The SME guarantee fund was increased from 20bn to 40bn, and raised the level of guarantees. Functioning of the SME guarantee fund has not changed much.

Main Objective	Intermediate Objective	Short-Term Actions	Reforms Undertaken
	- Substantially increase new home construction	- Promote the transfer of know-how by hiring international operators - Foster the development of the private rental market by creating new products. - Review the mechanisms for State intervention in the housing sector to promote a market-oriented sector.	- International operators were hired on a large scale in the construction sector. - Not yet done, as construction mainly for buying, not for renting to households. - More transparency, provide more land for construction to increase supply, facilitate the accessibility of permits for construction, facilitate access to credit for housing. - The authorities also set up the CNED (Caisse nationale d'equipement pour le developpement) which, under the authority of the MoF, is in charge of assessing the relevance, preparation and execution of big infrastructure projects.
INSURANCE SECTOR			
Reduce the role of the State in the insurance sector	Open the market to a leading foreign insurance company by privatizing one of the large public insurance companies	- Begin the privatization process by selling more than 51 percent of a large public insurance company to private sector.	- Privatization process on hold. - One large European insurer has set subsidiaries in the present regime (share of 49 percent)
Improve the management of insurance companies	Boost the profitability of the insurance sector	- Increase the rates for mandatory auto liability insurance. - Implement the IDA agreement. - Expand the use of the bonus-malus system.	- The mandatory auto liability insurance was increased by 20 percent between 2007 and 2009 - IDA agreement is in place, but is not working properly - The lack of a centralized file on drivers prevents the system to work
Enhance insurance oversight	Create an independent body to oversee and control insurance	- Substantially improve the quantity and expertise of staff in the Insurance Directorate. - Assess the assets and	- The expertise appears to have been enhanced. On-site inspection has been developed. - No insolvency appeared during

Main Objective	Intermediate Objective	Short-Term Actions	Reforms Undertaken
	companies	liabilities of insurance companies to accurately ascertain their solvency and restructure insolvent ones.	the period.
MARKET INFRASTRUCTURE			
Strengthen the legal and judicial framework for banking operations	Reduce legal uncertainty and expedite dispute settlement.	- Clarify the priority rules for creditors. - Improve the auction system for seized assets. - Review the role of notaries and officers of the court Improve training related to financial sector issues for judges. - Promote amicable dispute settlements.	An amicable dispute framework (mediation framework) was put in place in the Commercial Section in 2008. However, as it is not mandatory, it is not currently used. The other recommendations have not been put in place, although there are attempts to promote judicial training.
Improve the transparency and reliability of financial statements	Implement IFRS-accounting standards to financial reporting and the certification of small and medium-sized business accounts	- Apply the new IFRS to all banks, insurance companies, and publicly listed companies. - Substantially strengthen the professional capacities of accountants and auditors by a better recruitment and training	- Moved towards IFRS in 2010 for all entities, with banks providing accounts on a quarterly basis. However, there is no consolidation of accounts despite the law (ordonnance 11-03), notably because the CMC should still issue regulation on this. P&L accounts (situation 6001) are on a biannual basis. In addition, they have implemented the IFRS 2004 rules. It might have to consider recent evolutions, notably regarding loan loss provisioning, of IAS 39 as they stood in 2004. Finally, it must be noted that in the Algerian context, the Fair Value is a largely irrelevant concept, as few financial assets are traded. - Capacity of auditors was strengthened, following a decree. However, the exam for chartered accountants has not been organized since 2002. - Was strengthened at the same time as the move towards IFRS.

Main Objective	Intermediate Objective	Short-Term Actions	Reforms Undertaken
		- Strengthen role of the National Accounting Commission to allow effective implementation of the new financial reporting framework. - Expand the possibilities of foreign investment in Algerian auditing firms. - Implement a quality assurance system to guarantee audit quality of Algerian firms.	- While there are 6 foreign firms, the level playing field in terms of auditing mandates is still uneven, as external auditors must be Algerian. Some have associated themselves to international firms, especially for specialized audits such as in banks, but certainly not the majority (especially for public banks). The application of international auditing standards remain for this reason quite weak in practice. - Not done.
Increase access to financing	Pursue the modernization of systems, payment methods, and information centers.	- Set up the ACTI (remote clearing system) guarantee fund. - Expedite the BA's on-site inspections to verify whether banks have upgraded to the new payment systems. - Encourage the use of new payment methods (bank cards, direct payroll deposit). - Strengthen financial information centers by modernizing the existing corporate sector central credit register and extending it to individuals.	- While ACTI was put in place in 2006, there is no guarantee fund in place yet. As sums are small, has not been a high priority. - Has not yet taken place. - E-banking is developing, notably by private banks. Private banks are also offering internet banking but with a limited offer because of the limited possibilities in terms of secured payment infrastructure. - Currently, credit registry in place (not credit bureau yet), to be developed for individuals, and consolidated afterwards with existing one for SME and corporate registry.

Main Objective	Intermediate Objective	Short-Term Actions	Reforms Undertaken
SOURCES OF NONBANK FINANCING			
Promote the direct financing of businesses	Increase sources of nonbank financing to diversify business financing.	- Increase the volume of Treasury securities issued to encourage the emergence of a "risk-free" rate curve that will be used as a pricing reference for bond issues.	- Not done, as government only focused on financial needs, not sufficiently oriented towards helping develop the financial system.
		- Implement a legal framework for commercial paper.	- Not done.
		- Promote investment funds to assist companies to prepare for listing on the stock exchange over time.	- Not done.
		- Review the tax system for real property finance leases and venture capital operations to make these more attractive, and review Article 104 of the Decree on Money and Credit for intra-group loans to allow financing between related parties	- Double-taxation has been solved.
		- Review the legal framework for factoring to allow assignment of receivables.	- Still no legal framework for factoring in place.

Appendix V. Stress Testing Matrix

Domain		Assumptions	
		Bottom-Up by Banks (if applicable)	Top-down by FSAP Team (if applicable)
BANKING SECTOR: SOLVENCY RISK			
1.Institutional Perimeter	Institutions included	• 6 Largest banks	• All 20 commercial banks.
	Market share	• 86 percent of total assets	• 100 percent of total assets.
	Data and baseline date	• December 2012 supervisory data.	• December 2012 supervisory data.
2. Channels of Risk Propagation	Methodology	• The FSAP team used the Cihak model (2007), IMF WP/07/59, for the solvency stress tests which is mostly limited to Excel based sensitivity analysis. The FSAP team did the bottom-up tests of 6 public banks.	• The FSAP team used the Cihak model (2007), IMF WP/07/59, for the solvency stress tests which is mostly limited to Excel based sensitivity analysis. The FSAP team did the Top-down tests.
	Satellite Models for Macro-Financial linkages	• N/A	• Due to data limitations, expert judgment based on cross country examples were used.
	Stress test horizon	• Point in time using December 2012 data.	• Point in time using December 2012 data.
3. Tail shocks	Scenario analysis	• N/A	• A 'static scenario' used because of the inability to construct meaningful macro-stress tests due to data limitations. • Expert judgment based on historical events and cross country experiences: Simultaneous shock to loan portfolio, interest rates and depreciation of the Dinar.
	Sensitivity analysis	• Similar shocks were provided to the six largest banks by the mission: i. Credit Risk: deterioration in aggregate loan portfolio by 10 percent, 20 percent, and 30 percent, ii. Sectoral concentration by 10 percent, 20 percent, and 30 percent iii. One notch shift in all categories and restructured loans default by 50 percent	• Single factor shocks include; i. Credit risk (deterioration in aggregate loan portfolio, sectoral concentration by 10 percent, 20 percent, and 30 percent, category shift -one notch shift in all categories, and restructured loans to loss by 50 percent. ii. Concentration risk: Largest 1, and top 3 borrowers default iii. Direct interest rate risk. Parallel upward shift of local yield curve by 200 bps and 400 bps. iv. Exchange rate risk: Shock on net open position. Appreciation and depreciation of local currency

Domain		Assumptions	
		Bottom-Up by Banks (if applicable)	Top-down by FSAP Team (if applicable)
		iv. Concentration risk: Largest 1, 3, 5, and 10 borrowers default. v. Reverse stress testing vi. Interest rate risk: Parallel upward shift in yield curve by 200 and 400 bps vii. Exchange rate risk: appreciation/depreciation of currency by 10 percent, 20 percent, and 40 percent. viii. Multi-factor shock: Combination of credit, interest and exchange rate risk	by 10 percent, 20 percent, and 40 percent v. Multi-factor shock: Combination of credit, interest and exchange rate risk
4. Risks and Buffers	Risks/factors assessed (How each element is derived, assumptions.)	• For each risk, the banks' internal models determine the impact on income and capital	• Credit losses: losses are provisioned at the average provisioning ratio and net income loss is estimated. Both are deducted from regulatory capital and Tier I • Interest rate risks: positive or negative changes. Used 2007 methodology on estimating maturity buckets and repricing. Impact on profit and regulatory capital and Tier I • Exchange rate risk: changes due to appreciation/depreciation of local currency. Impact on profit and from regulatory capital and Tier I
	Behavioral adjustments	• Bank determined	• Static balance sheet assumption. • No profits during stress point in time • No dividends distributed
5. Regulatory and Market-Based Standards and Parameters	Calibration of risk parameters	• Point in time for both credit and market risks	• Based on actual point in time (historical highs) or proxies and expert judgment due to data limitations for macro modeling of risk factors.
	Regulatory/Accounting and Market-Based Standards	• Basel I (current standard) Regulatory requirement CAR of 8 percent • Tier I / RWA • Tier I / Total Assets	• Basel I (current standard). • Regulatory requirement CAR of 8 percent. • Tier I / RWA • Tier I / Total Assets

Domain		Assumptions	
		Bottom-Up by Banks (if applicable)	Top-down by FSAP Team (if applicable)
6. Reporting Format for Results	Output presentation	• Capital shortfall below regulatory requirement	• Capital shortfall, system wide and by bank type. • CAR system wide and by bank type. • Number of banks (system wide and by type) with a CAR below the regulatory 8 percent.
BANKING SECTOR: LIQUIDITY RISK			
1. Institutional Perimeter	Institutions included	• 6 Largest Banks	• All 20 banks
	Market share	• 86 percent	• 100 percent of total assets.
	Data and baseline date	• December 2012 supervisory data	• December 2012 supervisory data.
2. Channels of Risk Propagation	Methodology	• Internal models	• Top down individual bank model based on Cihak (2007), IMF WP/07/59.
3.Risks and Buffers	Risks	• Funding risk, • Concentration of funding	• Funding risk, • Concentration of funding
	Buffers	• Bank determined	• Counterbalancing capacity (fire sale of assets)
4. Tail shocks	Size of the shock	• 5-day withdraw of deposits 5 & 10 percent • Large depositor(s) withdraw all their funds in 1 day	• 5-day withdraw of deposits (5,5,10,10, & 10 percent) • Asset daily disposal rate of 80 percent for liquid assets and 1 percent for illiquid assets. • Large depositor(s) withdraw all their funds in 1 day
5. Regulatory and Market-Based Standards and Parameters	Regulatory standards	• Note that the Algerian banking sector inter-bank market is inactive due to excess liquidity. • Liquidity of banks	• Note that the Algerian banking sector inter-bank market is inactive due to excess liquidity. • Liquidity of banks
6. Reporting Format for Results	Output presentation	• Banks that remain liquid	• Number of institutions (system wide and by type of bank) which remain 'liquid' after a 5-day period of stress.