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Morocco: Financial System Stability Assessment—Update

This update to the Financial System Stability Assessment on Morocco was prepared by a staff team of the International Monetary Fund and the World Bank as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on July 8, 2008. The views expressed in this document are those of the staff team and do not necessarily reflect the views of the government of Morocco or the Executive Board of the IMF.

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Financial System Stability Assessment—Update

Prepared by the Monetary and Capital Markets Department

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July 8, 2008

This Financial System Stability Assessment (FSSA) is based on a joint World Bank-IMF Financial Sector Assessment Update of Morocco, performed in November 2007. The findings were discussed with the authorities during the May 2008 Article IV mission. The authorities have implemented a large part of the recommendations of the 2002 Financial Sector Assessment Program (FSAP).

Moroccan banks are stable, profitable, adequately capitalized, and resilient to shocks, but the financial system as a whole will need to adapt to the inherent risks of changing macroeconomic policies and conditions. Major reforms have been achieved since the 2002 FSAP within a policy of actively promoting economic and financial sector opening. The 2002 FSAP recommendations have been largely implemented. Although the financial system is stable and considerably more robust than in the past, the liberalization of capital flows and increased exchange rate flexibility present challenges for the monetary authorities, financial regulators, financial institutions and markets. Purely financial spillovers from the global credit turmoil have so far been very limited because Morocco's external debt is low, with long maturities, and macroeconomic policies have been strengthened in recent years. Efforts need to continue to control and further decrease NPLs, in particular in the former specialized public banks, and build capital levels.

The main recommendations include:

- Continue to strengthen banking sector soundness and supervision, including by increasing minimum capital adequacy levels, reducing concentration risk in some banks, issuing new rules on country and transfer risk, as well as ensuring that banks have appropriate risk management tools; continue training of banking supervision staff to match the growing complexity of the regulatory and operational environment.
- Continue to monitor closely, with a view to further decreasing, the levels of non-performing loans;
- Continue to prepare financial institutions for a more open economic and financial system, in particular for risk management in an environment of potentially more pronounced exchange and interest rate movements; carry out more multi-factor and more severe stress tests.
- Maintain effective communication with the financial sector on capital account liberalization, reform of exchange and interest rate policies and their sequencing, to help financial institutions prepare for change;
- Ensure that the prerequisites for further economic and financial sector liberalization are in place, including the preconditions for inflation targeting;
- Continue to develop and further open insurance and capital markets and continue to develop payments and settlement structures, to a level compatible with a modern and growing economy; strengthen the powers of the securities regulator, and identify means to better target and monitor financial access.

The mission was headed by Messrs. Samir El Daher (World Bank) and Jan Willem van der Vossen (IMF) and further comprised Mmes. Laurence Allain and Nada Oulidi, Messrs. Jürgen Dreymann, Peter Kunzel and Ahmed Zoromé (all IMF), and Mmes. Andrea Corcoran and Ilka Funke, and Messrs. Laurent Gonnet and Jean-Francois Viala (all World Bank).

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

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GLOSSARY

AICA	Association Internationale des Compagnies d'Assurance
ALM	Asset and Liability Management
AML-CFT	Anti-Money Laundering and Combating the Financing of Terrorism
API	Arab Payments and Securities Settlement Initiative
AXA	AXA Protection Assurance
BAM	Bank Al-Maghrib
BCP	Basel Core Principles for Effective Banking Supervision
CAM	Crédit Agricole du Maroc
CAMELS	Capital Assets Management Earnings Liquidity Market Sensitivity
CAR	Capital Adequacy Ratio
CCG	Caisse Centrale de Garantie
CDG	Caisse de Dépôts et de Gestion
CDVM	Conseil Déontologique pour les Valeurs Mobilières
CEC	Comité pour les Etablissements de Crédit
CGF	Central Guarantee Fund
CIH	Crédit Immobilier et Hôtelier
CNCE	Caisse Nationale des Caisses d'Épargne
CNSS	Caisse Nationale pour la Sécurité Sociale
DAPS	Direction de l'Assurance et Prévoyance Sociale
DH	Dirham
FATF	Financial Action Task Force
FNAM	Fédération Nationale des Associations de Microfinance
FSAP	Financial Sector Assessment Program
FX	Foreign Exchange
GDP	Gross Domestic Product
BAM	Bank Al-Maghrib
IMF	International Monetary Fund
IAIS	International Association of Insurance Companies
IOSCO	International Organization of Securities Commissions
LOLR	Lender of Last Resort
MADEX	Moroccan Most Active Shares Index
MCA	Microcredit association
MCI	Microcredit institution
MEF	Ministry of the Economy and Finance
MENAFATF	Middle East and Northern Africa Financial Action Task Force
MREs	Moroccan Residents Abroad
NIM	Net Interest Margin
NPL	Non Performing Loan
OMPIC	Office Marocain de la Propriété Industrielle et Commerciale
OPCVM	Mutual Fund (Organisme de Placement Collectif en Valeurs Mobilières)
PNB	Produit Net Bancaire
ROA	Return on Assets
ROE	Return on equity
SCR	Société Centrale de Réassurance
SME	Small and Medium Sized Enterprises
SRBM	Système de Règlement Brut Marocain
WB	World Bank

EXECUTIVE SUMMARY[1]

The Moroccan banking sector is stable, adequately capitalized, profitable, and resilient to shocks. However, although the relatively large share of nonperforming loans in banks' loan portfolios have already significantly decreased (to 7.9 percent end-2007 from 10.9 percent in 2006), further efforts are needed, in particular with regard to the formerly specialized public banks, which still have significantly higher levels of NPLs (21 percent at end-2007). Recent accounting changes and the stress test outcomes show that higher minimum capital adequacy ratios are warranted and the authorities' intentions to increase these minimum ratios are welcomed, although banks compliance with the new standard will need to be monitored.

Morocco has conducted major structural reforms within the framework of a policy of actively seeking economic and financial sector openness and now stands at a decisive juncture in its development, which opens new opportunities and risks. Increased economic and financial openness, notably the liberalization of capital flows, can present major challenges for the authorities, regulators, and financial institutions, which will need to be managed carefully.

The recommendations of the 2002 FSAP have been largely implemented. Reforms included the adoption of more liberal macro economic policies, restructuring and privatization of the former specialized public banks, a more commercial orientation of the Caisse de Dépôts et de Gestion (CDG), reinforcement of the powers of the securities regulator CDVM, adoption of an anti-money laundering and anti terrorist finance law and regulations, the modernization of the payment system. The financial system is now much more ready for a changing macro-economic and competitive environment.

Financial spill-overs from the global credit turmoil has so far been very limited, because Moroccan external debt is low, has long maturities, and macroeconomic policies have been strengthened in recent years. The government, corporates, and banks have minimal financing from external debt markets. Moroccan stock prices have hardly been affected by the global financial turmoil.

Banking supervision complies with the majority of the Basel Core Principles for Effective Banking Supervision (BCP). This is a significant improvement over the 2002 assessment. Since June 2007, the central bank, Bank Al-Maghrib (BAM) applies the standardized approach to credit risk under Basel II, and tentatively intends to move to the advanced internal ratings based (IRB) approach around 2010. BAM will need to work closely with the banks to prepare them for safe and sound implementation of the IRB. The supervision of insurance companies is also largely compliant with the IAIS principles. In addition, there have been significant advances in capital market supervision.

BAM and other supervisory bodies require the necessary operational independence and resources, supported by accountability structures, to conduct an

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[1] See Table 1.

autonomous monetary policy and effective supervision. The authorities have taken welcome steps in this context, and promulgated the new articles of incorporation of BAM confirming its autonomy, a new banking law, a new anti-money laundering law, and a large number of secondary regulations. BAM has also been equipped with modern surveillance mechanisms. International practice supports setting a fixed term of office and explicit legal grounds for dismissal for central bank governors.

Supervisors must ensure that financial institutions also continue to strengthen their capacity to manage the risks associated with the changes in the macroeconomic environment, in particular, exchange rate, interest rate, and credit risks. The importance of these risks will increase with a potential upsurge in capital flows stimulated by increased openness and Morocco's investment opportunities.

The timing of the introduction of a more flexible exchange policy must be chosen judiciously, and the preconditions for an inflation targeting regime must be in place. Greater exchange rate flexibility could reinforce incentives for financial intermediaries to expand risk management capacity. Continued efforts to improve the effectiveness of liquidity management should facilitate the orderly transition towards increased exchange rate flexibility. It is also important to ensure that financial intermediaries have adequate tools to manage the macroeconomic and real sector risks resulting from an increasingly open economy.

Much progress has been made to deepen financial intermediation, as shown by the rise in the bank penetration rate. However, only 37 percent of the population has a bank account, fewer than 50,000 persons hold shares, and insurance premia are less than 65 USD per capita. These data seem to indicate that the market could bear a greater number of operators and that market entry conditions need to remain efficient and transparent.

Table 1. Morocco: Main Recommendations[2]

Recommendation	Government Counterparts	Suggested Timing
Banking Sector Soundness and Vulnerability		
Carry out more regular multi-factor, and more extreme stress tests; base risk hypotheses on relevant macroeconomic scenarios	BAM	Short-term
Continue to closely monitor banks' on and off balance sheet foreign exchange (FX) risk, counterparty risk, as well as compliance with exposure limits, hedging and other risk management techniques.		Short-term
Capital Account Liberalization, Monetary Policy, and Liquidity Management		
Maintain transparency and disclosure of capital account liberalization, as well as exchange rate and interest rate policy reforms and their sequencing, to enable financial institutions to prepare adequately.	BAM	Medium-term
Insurance Sector		
Consider review of the by-laws of the insurance supervisor by designating it an independent authority or entity analogous to an independent public entity, in order to increase its independence.	MEF	Medium-term
Access to Finance		
Ensure open entry to the financial sector, to deepen financial intermediation and stimulate competition.	BAM/MEF	On-going
Include clients of non-bank financial institutions and utilities in Credit Bureau coverage.	BAM	Medium-term
Through household and enterprise surveys, identify unserved segments of the population to better target and monitor financial access programs.	BAM / MEF	Short- to medium-term
Banking Supervision		
Continue to improve knowledge levels of off-site and on-site supervision staff, to match growing sophistication of the regulatory and operational environment (e.g., Basel II, IFRS, market risk).	BAM	On-going
Issue a new regulation on country and transfer risks and ensure that banks have country and transfer risk management tools	BAM	Ongoing
Continue to monitor closely and reduce NPL levels in former public banks	BAM	Short-term
Monitor banks' management of exchange risk and interest rate risk	BAM	Short-term

[2] See Annex I for the full set of recommendations.

I. MACROECONOMIC ENVIRONMENT[3]

1. **Morocco's recent economic performance has been favorable.** Real GDP growth averaged 5.4 percent per annum since 2001, against an average of 3.4 percent over the previous decade. Real per capita income is rising and unemployment has begun to decline. While the economy continues to be adversely affected by climatic conditions, as shown by the slowdown in real GDP growth to 2.7 percent in 2007 due to a sharp fall in cereal production, greater diversification of the economy has made growth less vulnerable to these types of shocks.

2. **The external position is comfortable.** Following six consecutive surpluses, the current account registered a small deficit in 2007. Strong import demand for capital and consumer goods, greater food imports to offset the drop in cereal production and the rise in world prices of petroleum and food products contributed to a widening of the trade deficit. This was, however, mostly offset by robust tourism receipts and remittances. Strong capital flows brought foreign exchange reserves to US$24 billion (6.5 months of imports) at end-2007, far exceeding the public external debt of 24.6 percent of GDP (end 2007) which is already well below emerging market country averages. These trends are expected to broadly continue in 2008.

3. **The fiscal situation improved significantly through 2007, but the recent surge in subsidies related expenditure poses a major challenge to fiscal policy.** The budget deficit (excluding privatization) fell to nearly zero in 2007, mostly reflecting the strong revenue performance. However, the decision to not pass on increases in world commodity prices has significantly increased the fiscal cost of consumer subsidies which are expected to reach 5 percent of GDP in 2008, and could lead to a widening of the fiscal deficit to 3.5 percent of GDP. Over the medium term, curbing the growth of subsidy spending will be key to preserve the fiscal consolidation of recent years and keep the public debt-to-GDP ratio on its downward trend.

4. **Monetary aggregates are rising rapidly, reflecting robust domestic demand.** Broad money growth reached 15 percent year-on-year, at end-April 2008, while credit to the private sector rose by 28 percent, driven by increases in business and real estate lending.

5. **Consumer price inflation was 2 percent in December 2007 but pressures are rising.** Despite an upward trend since early 2008, with prices 3.7 percent higher at end-April 2008 (y-o-y), inflation remains relatively low, in part because administered prices have not been adjusted since the beginning of 2007. Looking forward, possible adjustments to administered prices, as well as high credit growth and net capital inflows, are likely to put further upward pressure on inflation.

6. **The Moroccan exchange rate regime is a conventional peg, based on a basket of currencies consisting of the euro and the US dollar,** with weights of 80 and 20 percent respectively, broadly reflecting Morocco's trade flows**.**

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[3] See Figure 1.

7. **The Moroccan authorities have announced a policy of continued gradual liberalization of the capital account and increased flexibility of the exchange rate in the medium term.** In August 2007, the authorities lifted certain restrictions on transactions by residents, and increased the scope for financial institutions, banks and enterprises to invest abroad.[4]

II. Structure of the Financial System [5]

8. **With bank assets equivalent to 109 percent of GDP in 2007 (81 percent in 2003), banks play a central role in the Moroccan financial sector.** The banking sector comprises 16 banks (11 private and 5 public). Additionally, six offshore banks are active, holding less than 2 percent of system assets. The system remains dominated by the six largest banks (Figure 2), which hold 85 percent of system assets. Bank credit to the private sector grew by 18 percent per year since 2005, and was equivalent to 66 percent of GDP at end-2007 (compared to 12 percent in Algeria, 61 percent in Tunisia, and 75 percent in Lebanon). Furthermore, the financial system comprises 13 microfinance associations, and several consumer credit financing, leasing, mortgage, factoring, money transfer and guarantee companies.

9. **Six banks are majority domestically privately owned; five are majority foreign owned; five are majority publicly owned.** Majority foreign owned banks hold 14 percent of financial sector assets and 21 percent of banking system assets at end-2006. The government continues to directly or indirectly control about 23 percent of the banking sector, down from 40 percent in 2002. Banks' balance sheets consist mostly of loans (over 50 percent medium-to-long-term), funded mainly by short-term deposits (82 percent of liabilities), mostly unremunerated (Figure 2). Moroccans residing abroad hold 21 percent of deposits. In 2007, government securities accounted for 15 percent of bank assets (25 percent in 2002).

10. **As shown below, the former specialized public banks have been restructured and opened to private capital but are not fully up to the capital and asset quality levels as the privately held banks.** This requires continued monitoring and guidance by BAM, especially since it is not clear that these banks could receive support from within their groups should they approach minimum thresholds for capital or liquidity. The former specialized public banks account for only 7 percent of total bank assets.

11. **Capital markets are increasingly contributing to financial deepening, with stock market capitalization growing to almost 100 percent of GDP in 2007 (up from 85 percent in 2006 and 28 percent in 2002).** Trading remains concentrated in a few stocks, with six stocks accounting for 61 percent of trades in 2007, down from 73 percent in 2006. Financial intermediation through the stock market still has considerable scope for growth, nevertheless. The debt market is dominated by public sector bond issues, while private sector corporate issues remain marginal. Mutual funds hold assets of DH 144 billion (16 percent) of the financial system.

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[4] Transactions by nonresidents have already been liberalized.

[5] See Table 2; data as available at end-June 2007.

12. **Although it is the largest market in the Maghreb, Morocco's insurance sector is relatively small by emerging country standards.** There are 17 insurance and one reinsurance (SCR) companies, which account for 16 percent of the assets of the financial system, with about DH 14.7 billion in premiums in 2006 (around 3 percent of GDP). These institutions are not affiliated with banks.

III. Banking Sector Performance, Soundness, and Vulnerability

13. **With an average risk weighted capital adequacy ratio (CAR) for banks of 10.6 percent (minimum 8 percent), financial soundness indicators overall show that banks are mostly adequately capitalized.**[6] After significant operational and financial restructuring, the two former specialized public banks have CARs of 7.3 percent and 10.8 percent respectively (Table 3). The overall leverage ratio of the system is over 7 percent.[7] Higher capital buffers are needed to ensure banks' capability to adjust to the prospect of further liberalization, increased competition, diversification abroad and prospective capital inflows. In this context, and given the decrease in capital levels since the update mission in November 2007, BAM decided to raise the minimum CAR to 10 percent by end-2008 and intends to raise it further to 12 percent by end-2009 depending on the risk profile of banks.

14. **Banks remain highly profitable, as a result of: (i) still high interest rate margins, (ii) moderation of operating expenses (2 percent of assets); and (iii) an increase in fees and commissions.** However, a shift from unremunerated or low yield retail deposits to more highly remunerated liabilities, and intensified competition of new foreign banks, could increase the cost of funds. Moreover, while banks' direct exposure to equity prices at 4 percent of assets may not be excessive, banks' borrowers could be vulnerable to a correction of the stock market, which has risen significantly over the past years. In case of a stock market correction, banks could see fee income decline and some borrowers may not be able to meet the required margin calls. This is an area that may need to be explored more in detail by BAM. Data to assess the volume of banks lending to customers for the purchase of securities was not available to the mission.

15. **Banks' liquidity ratios are tight, with liquid assets only covering 31 percent of short-term liabilities in 2007.** The ratio would be higher if account were taken of the permanent nature of a part of the short term deposits. Foreign owned banks show even lower liquidity ratios but may be able to obtain refinancing from their parent banks when needed.

16. **Return on equity (ROE) continued to increase to 17.4 percent at end-2006, and 20.6 percent at end-2007.** Interest income has been mainly generated by core banking activities, i.e., loans, primarily to the corporate sector, with a small proportion still generated by investments in government securities.

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[6] For one of the former specialized public banks the capital adequacy ratio is still below the minimum.

[7] Capital to non-risk weighted assets.

17. **Overall asset quality in the sector has improved, with declining NPLs (10.9 percent at end-2006 and 7.9 percent at end-2007) (Table 3).** Former specialized public banks still show a high percentage of 21 percent at end-2007 (27 percent at end-2006), which needs to decrease further. Private banks showed NPLs of 5.3 percent at end-2007 (7.4 percent end-2006). The authorities report that NPLs still largely consist of old loans. Provisioning for the sector overall is adequate, with coverage at some 75 percent, but the former specialized public banks have a coverage percentage of 63 percent.

18. **Diversification of credit risk can be improved, although aggregate large exposures relative to Tier I capital (429 percent) remains well below international good practice (800 percent of regulatory capital).** The loan portfolio appears well diversified among economic sectors, with 20 percent to industry, 14 percent to financial institutions, and almost 29 percent to private individuals (mainly housing and consumer credit).

19. **The overall foreign exchange (FX) net-open position of the banking system is within prudential limits set by BAM, and does not represent a vulnerability.** In addition, FX-denominated loans are provided only to clients with FX-earnings and constitute a marginal 2.3 percent of total loans.

20. **A comparison of financial soundness indicators for the Moroccan banking sector with emerging countries in Europe shows an adequate level of capitalization and solvency, an average level of profitability, but a higher ratio of nonperforming loans**. However, on the latter, the Moroccan banking sector compares favorably with other Maghreb countries (Figure 2).

21. **The restructuring of the former specialized state-owned banking sector is now largely complete.** This makes the banking system as a whole more sound and resilient. The Crédit Agricole du Maroc (CAM) has floated 22 percent of its stock for purchase by private and public investors.

IV. Banking Supervision, Corrective Measures, and Deposit Guarantee

22. **BAM exercises banking supervision on the basis of the provisions of the 2006 banking law.** Banking supervision applies equally to all banks, bank groups, formerly specialized banks, and majority foreign as well as majority domestically owned banks. Also the CDG is now under supervision of the BAM. Banking system regulation and supervision is compliant or largely compliant with 21 out of the 25 BCP principles. This represents a substantial strengthening since the 2002 assessment. BAM's decision to increase the minimum capital adequacy levels to 10 percent by end-2008 and its intention to increase it further to 12 percent by end-2009 is also a welcome development.

23. **The authorities have made great progress in their supervisory techniques.** The central bank has an effective tool for rating credit institutions (CAMELS-type). Significant actions have been undertaken by the authorities to upgrade legislation, regulation and supervision. New rules and international standards (Basel II, IFRS, market risk) will require continued effort to train supervisory staff. Morocco is implementing the standardized approach for credit risk under Basel II starting June 2007, and is tentatively considering to

introduce the Advanced Internal Ratings Based Approach to credit risk in 2010. The latter will require highly skilled staff resources and budget, careful preparation, and extensive guidance to the banks.

24. **Under the banking law, BAM and its Governor are operationally independent in making decisions on banking supervision.** The Governor serves at the discretion of the Sovereign. Accepted international practice typically tends to reinforce the autonomy of the head of the central bank by setting a fixed term of office and establishing limited grounds for dismissal.

25. **BAM has an adequate range of tools for intervention in noncompliant banks or those engaging in unsafe or unsound practices that put the interests of depositors and creditors at risk.** Since December 2006, BAM has an explicit internal policy on when it may intervene to address problem banks, although this policy has not been explicitly tested yet.

26. **The Governor has the authority to appoint a provisional administrator in a problem bank, and may determine the mandate of that administrator and its duration.** Decisions to withdraw an institution's license and to proceed to liquidation also rest with the Governor. The procedure for liquidation itself must follow the commercial code.

27. **Since 1996, Morocco has had a deposit guarantee fund financed by the banks (with the exception of the offshore banks) to indemnify depositors should a bank be unable to repay deposits.** The fund is approximately USD 1 billion large, and covers approximately 1.4 percent of eligible deposits. Banks' contributions represent a percentage of total deposits, which, under the banking law may not exceed 0.25 percent (the banks contributed 0.2 percent in 2006). The banks should be invited to inform the public more systematically (at the time they open new accounts, for example) of the protection offered by the deposit insurance fund. This could contribute to broader participation in the financial system.

28. **Under Article 105 of the banking law, the deposit guarantee fund may compensate depositors for lost funds** (up to a maximum amount of DH 80,000, approximately $11,000 per customer, including corporate customers). If the fund is insufficient to pay out all eligible deposits, pro rata haircuts are applied to depositors claims, according to the BAM circular 22G. On a highly exceptional basis and subject to the Governor's approval, it may also be used to provide repayable emergency credit to troubled banks. Decisions on this are taken by the Governor, after consulting the CEC which includes representatives of the banking sector. The fund has in practice never been used for this purpose.

29. **Nevertheless, in theory, this double use of the guarantee fund could potentially be a source of conflict between the stability function and the deposit protection function of BAM.** BAM may call on shareholders or partners that directly or indirectly hold interests equal to or greater than 5 percent of the institution's capital to provide the financial support it needs.

V. Stress Tests

30. **Credit risk, foreign exchange risk, interest rate risk and liquidity risk stress tests, as well as a multi-factor test, were performed by the mission, in close collaboration with the BAM team.** [8],[9] Stress test parameters were set in consultation with the authorities' stress testing team. The tests were performed on each of the nine largest banks covering 98 percent of the banking system's total assets, on the banking sector as a whole, as well as on four groups of banks: (i) majority domestically-owned, (ii) majority foreign-owned, (iii) commercial banks, and (iv) former specialized state-owned banks.

31. **The stress tests showed that the banking sector as a whole is largely resistant to credit risk shocks (Table 4); however there are signs of vulnerabilities to concentration risk and real estate exposures, with differences in impact from bank to bank**. The exchange rate tests had a marginal impact, also because net open FX positions are subject to prudential limits (total open positions must be less than 20 percent of Tier 1 capital). The banking sector appears well hedged against interest rate risk. Liquidity stress tests, which assumed a five-day run on deposits,[10] showed that banks could withstand four days of runs, without interbank or LOLR recourse (Table 5). The multi-factor tests also did not lead to inadequate CARs for the sector as a whole, although majority foreign owned banks fell slightly below the required minimum.[11]

32. **BAM staff has made significant strides in its stress testing capabilities although it may wish to consider more frequent stress tests, also with more severe parameters.** Banks' compliance with FX open position limits should continue to be watched carefully, while ensuring proper hedging and monitoring of counterparty risk. Given further capital account liberalization, interest rate and liquidity risk should be closely monitored.

VI. Capital Account Liberalization

33. **In order to further integrate the Moroccan economy into the global economy, the authorities are continuing their policies to liberalize the capital account and intend to adopt a flexible exchange rate regime over the medium term**. Accordingly, the authorities have in recent years taken a number of measures to further open the capital account.[12]

34. **In August 2007, a number of additional measures were taken to liberalize the capital account.** These include: (i) increasing the share of export receipts that can be

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[8] Based on BAM data per end-2006. At the time of the mission, 2007 official data were not available, however, as a robustness check, the team ran a few stress tests based on the then available and comparable mid-2007 data. The results generally corroborated the conclusions of the stress tests conducted on the submitted end-2006 official financial statements.

[9] See Appendix I, the FSI manual and the Technical Note on Stress Tests for more details.

[10] Assuming a daily withdrawal of 8 percent of sight deposits and 10 percent of term deposits.

11 The multifactor tests did not include results of a deterioration of the large exposures, and the market risk components of the multifactor test tended to compensate for the results of the credit risk components.

[12] The capital account is already largely open; the restrictions apply mainly to capital flows from Moroccan residents abroad.

maintained in foreign exchange or convertible dirham accounts from 20 percent to 50 percent; (ii) allowing broader opportunities for direct investment abroad; (iii) partial liberalization of foreign currency investments abroad by banks, insurance and reinsurance companies (capped at 5 percent of their assets), pension funds (up to 5 percent of their reserves) and mutual funds (up to 10 percent of their assets); (iv) liberalization of credit provided by Moroccan banks and exporters to their non-resident clients; and (v) expansion of the transactions covered by hedging instruments, and the extension of the duration of these hedges from two to five years.

VII. Increased Openness of the Economy: Implications for Liquidity and Macroeconomic Risk Management

Liquidity management

35. **To provide an alternative anchor for prices in the context of a more flexible exchange rate regime, BAM is preparing to move to inflation targeting.** In order to conduct an independent monetary and exchange rate policy, the autonomy of BAM has been significantly enhanced.[13] It has also considerably strengthened the analytical and operational framework for monetary policy, including its liquidity forecasts.

36. **The central bank has also reformed its communications and transparency strategy to make monetary policy more effective, anchor inflation expectations, and enable financial institutions to better manage risk**. BAM now discloses the schedule of its board meetings, issues a communiqué after the meetings, and publishes a periodic report on monetary policy.

37. **To improve liquidity management, BAM has reconfigured its operational framework.** It has reduced the number of monetary policy instruments and has given priority to its limited frequency seven-day auctions, has introduced a corridor within the overnight deposit and lending facilities, and is engaging in repo operations (Box 1).

38. **The surge in banking activity as well as the impact of the application of the BAM reserve requirements to Crédit Immobilier et Hôtelier (CIH), Crédit Agricole du Maroc (CAM), and CDG-Capital led to a significant decrease of funds available to the interbank market since August 2007.** Continued adaptation of monetary operations to market conditions is therefore needed.[14] More generally, increased use of indirect monetary policy instruments, as opposed to reliance on reserve requirements, could help stimulate market development.

[13] Specific measures taken over the past few years to reinforce the authority of BAM include internal reforms at the central bank, strengthening the analytical framework and monetary policy implementation capacity, developing BAM's forecasting ability, and improving the understanding of the functioning of credit markets and the monetary policy transmission mechanism.

[14] In light of liquidity shortages that developed, BAM decided to reduce reserve requirements from 16.5 percent to 15 percent as of January 1, 2008.

Box 1. Operational Framework of Bank Al-Maghrib

Monetary policy is implemented through the following categories of instruments:

- *Main operations:* Weekly auctions for seven-day advances and deposits, at the main policy rate. The rate for seven-day credit to banks currently stands at 3.25 percent.
- *Permanent facilities:* A deposit facility, used to inject or withdraw liquidity on a daily basis. Floor rate for the deposit facility: 2.25 percent; ceiling: rate on overnight advances: 4.25 percent;
- *Fine tuning operations:* Generally as temporary purchases or sales of T- bills (repos). Also currency swaps are used for fine tuning operations.
- *Structural operations:* outright sales or purchases of Treasury bills;
- *Required reserves:* Banks' average daily balances at BAM must be at least 15 percent of banks' demand deposits in non-convertible dirhams. These reserves are remunerated at 0.75 percent.

Source: Bank Al-Maghrib.

39. **The government bond market has deepened, and the Treasury has issued securities with maturities of up to 30 years**. Recent fiscal consolidation efforts have reduced the Treasury's need to borrow in the market, and thereby diminished the issuance volume.[15] It is nevertheless essential for the further development of the market that the Treasury maintains a presence at key benchmark points on the yield curve.

40. **The creation of a Money Market Committee, which sets the amounts to which BAM will intervene through its weekly auctions, improved transparency and forecasting models, as well as improved communication with the Treasury have helped strengthen liquidity management.** More actions can be taken to strengthen forecasting, including: (i) more accurate forecasts on the Treasury position with the central bank; (ii) remuneration of the Treasury account at BAM, which would stimulate effective cash management; and (iii) coordination between Treasury and BAM money market operations.

Exchange rate and interest rate risk management

41. **The calm macroeconomic situation of recent years, together with the stability of exchange and interest rates, mean that the capacity of financial intermediaries to manage risks in a more challenging environment has yet to be tested**.[16] However, the increased openness of the Moroccan economy implies an increase in risk. In particular, an explicit exchange rate guarantee in the context of a more open capital account can lead to underestimation of FX risk in investment decisions. Increased capital flows can also put pressure on the peg and lead to decreased control over monetary conditions. In order to successfully manage the exchange rate in the context of a further opening of the capital account, the authorities will need to closely monitor market signals with regard to the rate of the dirham. Financial intermediaries also must have adequate tools to manage risks associated with an increasingly open economy.

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[15] Despite the diminished volume on the primary market in 2007, secondary market activity contimued to increase driven by an active repo market, whereas outright transactions declined.

[16] Banks run daily VaR tests to monitor FX risk. Also, they actively use hedging instruments to mitigate risk including foreign exchange swaps, forward outright transactions and FX options. Moreover, prudential limits and restrictions are applied to the FX positions. Interest rate risk is hedged through swaps.

42. **The introduction of a more flexible exchange policy must be carefully timed also taking into account the need to put in place the preconditions for an inflation targeting regime.** It is essential that the authorities, markets and institutions prepare carefully, by continuing efforts towards: (i) ensuring a sound public finance position; (ii) strengthening liquidity management; (iii) developing the interbank and government bond markets; (iv) ensuring consistency between monetary policy signals and domestic liquidity conditions, and (v) ensuring transparency of the authorities' policy intentions, notably with regard to inflation control and the capital account liberalization strategy.

VIII. Nonbank Financial Institutions

43. **The non-bank financial institutions hold broadly one third of the financial system's assets, and with 5.3 percent of the financial system's assets, equivalent to about 10 percent of GDP at end-2006, the Caisse de Dépôt et de Gestion (CDG) remains the largest nonbank financial institution.** It continues to be a key instrument of the government's financial policy. The CDG has a significant presence in the different financial markets in 2006. It is currently the most important player on the primary market and is the second largest on the secondary market for Treasury securities.

44. **The CDG's transparency and market orientation should remain a prime objective.** The CDG's high profile in the public securities market should not lead to any distortion of prices in the fixed-income markets. It plays a key role in managing contractual savings, which could generate hidden costs for the management of pension systems. The opening of the capital account would allow a share of pension fund assets to be invested abroad, thus creating competition in a core CDG business activity.

45. **Expanded prudential supervision of the CDG represents a major step forward.** The authorities should ensure that the recent trend towards transparency and market orientation is irreversible.

46. **The Poste du Maroc plays a key role as a provider of depository, payments and other retail banking services for small savers.** With over 1600 branches, 850 of which are authorized to perform financial transactions, the postal service takes demand and time deposits from about 13 percent of the population (though it still represents only 2 percent of total financial sector assets) .[17] The amounts placed in saving accounts are transferred to the CDG to be invested in the financial markets. Since the introduction of the new banking law, and the adoption of the implementation decree in May 2007, the Poste du Maroc is subject to BAM supervision. The Poste du Maroc submits periodic reports to BAM, which can exercise on-site and off-site supervision.[18] The on-site program should commence. With the assistance of an international consulting group, Poste du Maroc is considering transforming itself into a

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[17] This ratio is obtained by adding the number of term and demand accounts and dividing it by the population. The existence of accounts held by Moroccans resident abroad as well as the possibility that a single individual may hold several accounts would decrease this ratio.

[18] According to the law, BAM must in particular: (i) ensure that the accounting and organizational structures are adequate and that the internal control systems are in place; and (ii) that the financial statements are of good quality.

more commercially oriented entity, which would require it to obtain a full banking license in due course.

47. **The microcredit sector has developed into a vibrant sector, providing credit to 1.1 million creditors (3.7 percent of the population)**. The total amount of loans has more than quintupled since 2003, amounting to DH 5 billion in 2007. The volume of the unmet demand for credit, coupled with the fact that microcredit associations (MCAs) facilitate access to bank financing, are the source of this robust growth. Through the microcredit associations, the MCAs can obtain commercial funding to finance this growth. Driven by this upswing, the MCAs now represent 0.5 percent of financial sector assets, a sharp increase since 2003. The MCAs are supervised by BAM, since the introduction of the new banking law in 2006, and are required to report to BAM on a quarterly basis on compliance with prudential ratios. A special chart of accounts for MCAs has been adopted.

48. **Authorizing the MCAs to take retail deposits from the general public would eventually require that an appropriate form of prudential supervision be exercised over their activities.** International experience has demonstrated the importance that the development of MCAs not be hindered by an unduly heavy regulatory and supervisory burden.

49. **The Caisse Centrale de Garantie (CCG: Central Guarantee Fund) currently operates 14 guarantee and co-financing operations on behalf of, and with the backing of the government**. Its operations, like those of the postal service, are subject to the banking law. The 14 programs cover a range of sectors from support for young entrepreneurs to property ownership programs.

IX. Insurance Sector

Market structure and development

50. **The insurance market appears to be both concentrated and stable and has grown steadily over the past years (by 12 percent in 2006 and 20 percent in 2007)**. Turnover of the direct insurance market amounted to DH 17.7 billion in 2007. Of the 17 direct insurance companies, ten are significant and the largest three account for 53 percent of the market. The sector also comprises one domestic re-insurer, the Central Reinsurance Company (SCR).

51. **The Moroccan insurance market is the second largest in Africa, after South Africa. It is the leading market in the Maghreb and in the Arab world**. Nevertheless, premia amount to only 3 percent of GDP, and insurance consumption amounts to about $65 per capita per year, indicating considerable potential for expansion of the market. Conditions for new entrants should therefore be clear and transparent.

52. **The state-owned Central Reinsurance Company (SCR) is the only Moroccan re-insurer.** It is now largely funded by transfers, guaranteed by the government, of 10 percent of the premia collected in the Moroccan insurance market. However, these legal transfers are

to be phased out by 2013. In 2006, the turnover of SCR acceptances amounted to DH 1.7 billion, and its capital was increased from DH 300 million to DH 1 billion.

53. **The sector showed a small deficit in 2002, but returned to overall profitability in 2006, with an overall profit of DH 1.3 billion (9.1 percent of turnover), as a result of better management**. The market's solvency margin (equity) appears solid over the period 2002-2006, with 5.12 times the minimum requirement in 2006. The representation of regulated liabilities by assets under the insurance code was maintained at a high level over the period, in the order of 106 percent in 2006.

54. **Much progress has been made since 2002, in terms of both form and content of insurance sector supervision, exercised by the Insurance and Social Welfare Directorate of the Ministry of Finance (DAPS).** Regulations are complete, and are based on the EU insurance directives, including advanced provisions on corporate governance and internal controls. The main deficiencies found were in the licensing procedure and the incomplete separation in distinct legal entities of life and annuity insurance on the one hand, and non-life insurance on the other. Further enhancement of the independence of the regulator is needed.

X. Capital Markets

55. **Capital markets represent a growing share of the financial sector with stock market capitalization at 73 percent of GDP in 2006 and 98 percent of GDP in 2007**. Nevertheless, a move by corporates from bank credit toward the capital markets is still limited in scope, and the domestic equity market, notwithstanding its volume in absolute terms, has yet to play an economic role commensurate with its volume. The number of traded stocks is still limited (63 in 2006, 73 in 2007) and trades are concentrated in relatively few stocks (6 stocks accounted for 71 percent of trades in 2007). Banks therefore continue to be the main source of private sector financing, while in the non-bank debt market, government securities still dominate.

56. **Developing the capital market further would require participation of larger and more diverse listed firms, improvements in corporate governance of issuers, more efficient market access and exit, and the presence of investment advice, market making, and liquidity providing institutions.** Moreover, to meet the needs of a developing and increasingly sophisticated capital market, political will is needed, in order to build a stronger legal base for the authority, credibility and powers of the regulator.

57. **Good progress has been made to achieve these objectives.** Since the 2002 FSAP, Morocco has further strengthened the legal and regulatory framework. It also has undertaken steps to increase the depth and liquidity of markets. The resulting structure observes international standards and is consistent with the policies of greater economic and financial openness, also for institutional investors with a longer term perspective. Generally, the participation of the latter group of investors provides critical mass to financial markets.

58. **Of particular interest are the strengthening of the powers and accountability of the Conseil Déontologique des Valeurs Mobilières (CDVM; the securities regulatory authority).** This has largely been done through clarification of the powers of the head of the

CDVM, by decree of 2004, and the recent adoption of the Règlement Général (general statute) on the operations of the CDVM. Moreover, the Board of the CDVM has been expanded to nine members, including three government representatives and one BAM representative. Powers of inspection and oversight with respect to the Bourse de Casablanca, Maroclear,[19] brokers, and various other market operators have been enhanced and the mission of the CDVM clarified. Nevertheless, some issues remain outstanding, e.g., achieving the right balance between accountability and independence of the CDVM. Many of the powers granted are relatively new or are not fully operational. Hence, more time is needed to observe whether the new powers are actually being used effectively.

XI. Expansion of the Banking System and Access to Financial Services

59. **Access to banking services has greatly improved since the assessment in 2002**. The percentage of the population holding bank accounts has increased from 15 percent in 2002 to 27 percent in 2007 (40 percent if one includes the accounts opened with the Moroccan Postal Service)[20] and the volume of credit has more than doubled since 2001, This progress was due to increased competition, the need to diversify risks in the context of adopting the Basel principles, and the favorable economic environment. The number of bank branches has increased by 12 percent in 2007 alone, and the number of ATMs has tripled over the past five years.

60. **Despite this progress, access to bank credit is limited to a small segment of the economy, notably larger enterprises and an estimated 10 percent of the population with a fixed income or property to give as collateral**. The rest of the population has access to financing mainly through microcredit associations. The penetration rate of banking and microfinance services remains low in rural areas. Over 75 percent if all bank credits go to Casablanca and Rabat. Casablanca alone absorbs 62 percent of all private sector credit, with an increasing trend since 2002, while the five major cities in Morocco account for more than half of all bank branches.

61. **BAM's actions to improve access to bank financing by SMEs include:** (i) standardization of the minimum information required by banks from borrowers; (ii) a project to create a credit bureau, based on its access to the database of the Office Marocain pour la Propriété Industrielle et Commerciale (OMPIC); (iii) encouragement of development of internal rating systems by banks; (iv) reduction of lag time and transaction costs in the payment system; and (v) establishment of the principles of a less costly rate schedule.

62. **The plans to establish a credit bureau to improve reliability of financial information are already fairly advanced, and it is expected to become operational during 2009.** The credit bureau will collect both positive and negative information on borrowers from credit institutions and microcredit associations. In the medium term, the government should consider expanding its coverage to other collectors of credit information

[19] Central registry and depository for securities traded on the Casablanca stock market.

[20] This ratio is clearly overestimated. A large portion of these accounts is held by Moroccan residents abroad (MRAs). The deposits of MRAs represent one fourth of total bank deposits.

such as other NBFIs (particularly, leasing and consumer finance companies), utilities, social security, and tax authorities.

63. **In recent years, the interest rates on lending to SMEs have considerably declined (from over 12 percent in 2003 to less than 10 percent today).** Thus, interest rates are probably not a major obstacle to access to credit by SMEs. However, transaction costs for current bank operations remain high despite progress in the payments system. The legal regime remains complex and has gaps that could hinder the process of credit collection.

XII. Payment Systems

64. **Implementation of the authorities' 2004-2006 strategic plan for the payment system has led to substantial modernization of the payment system.**[21] Since end-2007, all payment instruments—including checks, drafts, and bills of exchange—are paperless. Dematerialization has reduced the settlement periods for checks by 15 to 30 days nationwide. BAM exercises oversight over the payment system.

65. **A new law on the payment system and means of payment is being drafted.** Following the recommendations of donors and the Arab Payment s and Settlement Initiative (API), a National Payments Council has been created. The platform for on-line payments has also been established. In close cooperation with the local market, a large value settlement system in real time (Morocco Gross Settlements System, SRBM) has come on stream. BAM has also conducted a training program for payment system operators, attended by 160 local specialists.

XIII. Anti-Money Laundering and Combating the Financing of Terrorism (AML/CFT)

66. **The main recommendations of the 2007 MENAFATF report on AML/CFT compliance call for a more accurate and comprehensive description of money-laundering as an offense, the confiscation and freezing of illegal gains, and the commencement of operation in short order of a Financial Information Unit (FIU).** [22] Moreover, clarification was suggested of the scope of application of AML/CFT legislation, as well as strengthened monitoring of transactions with high-risk countries or individuals, and industry-wide rules on reporting suspicious transactions.

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[21] The team did not conduct an assessment of the compliance of payments and settlement systems with the Basel principles, since Morocco was recently the subject of an evaluation by the Arab Payments and Securities Settlements Initiative (API), whose report was completed in March 2007 and broadly concluded that the system still relied heavily on cash transactions, and required a more complete legal framework. A second evaluation on the basis of the Basel principles is scheduled for 2008.

[22] The team did not assess compliance with FATF principles since Morocco had been subject to an AML/CFT evaluation by the Middle East and North Africa FATF (MENAFATF) in 2007. The evaluation identified a number of areas where the authorities could strengthen their efforts. After the discussions at the MENAFATF meeting in Damascus in early November 2007, the evaluation report has been amended to take into account comments of the Moroccan authorities.

67. **For some years now, the Moroccan authorities have embarked on an ambitious project to complete the AML/CFT system**. More recently, efforts have focused on the establishment of the FIU, and a decree to create an FIU has been adopted. A new law against money laundering was promulgated on April 17, 2007, and its implementing regulations are in the process of being adopted. As a testimony to their determination to combat potential money-laundering and terrorism financing operations, the authorities recently launched a broad public education and awareness campaign in 2007, with participation of the judiciary, various involved professions and the financial sector.

Table 2. Morocco: Structure of the Financial System, 2004-2007

	Dec-2004				Dec-2005				Dec-2006				Dec-2007			
	Number	Total assets (Millions Dhs)	% total assets	% GDP	Number	Total assets (Millions Dhs)	% total assets	% GDP	Number	Total assets (Millions Dhs)	% total assets	% GDP	Number	Total assets (Millions Dhs)	% total assets	% GDP
I. Banks	**23**	**418,345**	**54**	**84**	**22**	**463,469**	**54**	**89**	**22**	**550,202**	**53**	**96**	**22**	**667,830**	**55**	109
Private	11	349,943	45	71	11	391,907	46	76	11	464,498	45	80	11	558,795	46	91
Domestic	6	264,631	34	53	6	293,915	34	56	6	347,966	34	60	6	416,511	34	68
Foreign	5	85,312	11	17	5	97,992	11	19	5	116,532	11	20	5	142,284	12	23
Public	6	61,545	8	12	5	63,850	7	12	5	73,733	7	13	5	95,870	8	16
Commercial	4	54,359	7	11	3	53,774	6	10	2	64,137	6	11	2	83,546	7	14
Specialized	2	7,186	1	1	2	10,076	1	2	3	9,596	1	2	3	12,324	1	2
Off-shore	6	6,857	1	1	6	7,712	1	1	6	11,971	1	2	6	13,165	1	2
II. Non Bank Financial Institutions	**254**	**350,382**	**46**	**70**	**254**	**395,115**	**46**	**76**	**270**	**474,960**	**46**	**83**	**311**	**537,340**	**44**	**87**
Insurance Companies	18	79,134	10	16	18	84,945	10	16	18	91,518	9	16	18	109,501	9	18
Pension funds	4	84,243	11	17	4	101,836	12	19	4	112,209	11	20	4	129,045	11	21
Leasing	8	14,415	2	3	7	16,962	2	3	7	21,227	2	4	7	26,497	2	4
Factoring	2	789	0	0	2	980	0	0	2	1,125	0	0	2	1,494	0	0
Consumer finance companies	22	21,118	3	4	19	23,293	3	4	19	26,620	3	5	20	33,473	3	5
Brokerage companies	13	3,871	1	1	13	6,062	1	1	14	15,554	2	3	16	21,689	2	4
Mutual funds	181	81,040	11	16	185	86,470	10	17	200	129,090	13	22	238	132,138	11	21
Mortgage lending institutions	2	629	0	0	2	727	0	0	2	758	0	0	2	853	0	0
Caisse d'épargne (Savings)*	1	9,348	1	2	1	10,721	1	2	1	11,699	1	2	1	13,163	1	2
Chèques postaux*	1	9,038	1	2	1	11,891	1	2	1	10,113	1	2	1	9,934	1	2
Caisse de Dépôt et de Gestion	1	46,162	6	9	1	50,798	6	10	1	54,717	5	10	1	59,224	5	10
Caisse Centrale de Garantie	1	595	0	0	1	430	0	0	1	330	0	0	1	329	0	0
III. Microfinance Institutions	**12**	**1,075**	**0**	**0**	**12**	**1,704**	**0**	**0**	**13**	**3,986**	**0**	**1**	**13**	**6,464**	**1**	**1**
IV. Total Financial System Assets (I+II+II	**289**	**769,802**	**100**	**154**	**288**	**860,288**	**100**	**165**	**305**	**1,029,148**	**100**	**179**	**346**	**1,211,634**	**100**	**197**

(*) Caisse d'épargne and chèques postaux constitute the financial services provided by Barid Al-Maghrib (post office). The amounts in total assets correspond to total deposits.

Table 3. Morocco: Financial Soundness Indicators of the Banking Sector, 2003-2007
(In percent, unless indicated otherwise)

	Commercial Banks					Total Banks				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Regulatory Capital 1/										
Regulatory capital to risk-weighted assets 2/	13.0	13.9	14.2	13.2	10.1	9.6	10.5	11.5	12.3	10.6
Tier 1 capital to risk weighted assets	12.5	13.1	12.5	11.8	8.8	11.1	11.5	10.0	11.0	9.2
Capital to assets	8.5	8.8	8.7	7.8	7.4	7.6	7.6	7.7	7.4	6.9
Asset Quality										
Sectoral distribution of loans to total loans										
Industry	25.9	23.6	24.2	21.9	21.0	21.1	19.8	21.9	19.9	19.6
of which: agro-business	6.4	5.7	7.1	6.2	4.8	5.8	5.3	6.6	5.9	4.9
of which: textile	4.8	4.1	3.2	2.3	2.6	4.0	3.5	2.7	2.0	2.3
of which: gas and electricity	2.6	3.0	2.6	3.2	3.6	2.0	2.1	3.0	3.3	3.7
Agriculture	4.8	2.8	2.3	1.9	2.5	9.0	8.2	5.4	4.8	4.8
Commerce	10.1	9.2	8.6	7.6	7.2	8.3	7.7	7.5	6.7	6.4
Construction	6.2	5.9	5.7	7.3	9.7	6.9	7.0	6.2	7.4	10.1
Tourism	3.8	2.4	2.3	1.7	2.2	4.8	3.7	2.9	2.3	2.5
Finance	11.0	13.5	12.6	13.5	16.1	8.3	10.7	10.2	11.4	14.0
Public administration	1.4	2.1	1.8	1.7	1.5	3.5	3.9	3.4	3.1	2.8
Transportation and communication	4.0	4.0	5.6	6.3	5.9	3.2	3.3	5.4	5.9	5.2
Households	25.9	27.2	25.4	27.8	27.3	24.9	26.7	26.0	28.6	28.4
Other	6.9	9.3	11.5	10.3	6.6	10.0	9.0	11.1	9.9	6.2
FX-loans to total loans	2.1	3.1	2.5	3.2	2.6	1.5	2.4	1.9	2.7	2.3
Credit to the private sector to total loans	97.4	97.4	93.9	94.7	95.2	95.6	95.4	92.7	93.1	94.0
Non Performing Loans (NPLs) to total loans	12.3	12.4	9.6	7.4	5.3	18.7	19.4	15.7	10.9	7.9
Specific provisions to NPLs	71.5	72.2	74.0	77.7	84.3	54.9	59.3	67.1	71.2	75.2
NPLs, net of provisions, to Tier 1 capital	27.5	26.8	21.0	14.4	8.3	81.8	75.3	57.2	30.3	20.1
Large exposures to Tier 1 capital	...	...	317.0	356.0	…	...	...	388.0	381.0	363.0
Loans to subsidiaries to total loans	…	…	…	7.3	…	…	…	…	6.5	…
Loans to shareholders to total loans	…	…	…	1.1	…	…	…	…	1.3	…
Interest rate average spread (b/w loans and deposits)	5.5	5.3	4.9	4.6	4.3	5.4	5.0	4.8	4.7	4.4
Specific provisions to total loans	8.8	8.9	7.1	5.8	4.5	10.3	11.5	10.5	7.8	5.9
General provisions to total loans	1.9	1.4	1.3	0.9	0.8	1.7	1.4	1.2	0.9	0.9
Profitability										
Return on Assets (ROA)	0.5	1.0	1.2	1.4	1.3	-0.2	0.8	0.5	1.3	1.5
Return on Equity (ROE)	6.4	10.8	14.1	16.2	17.4	-2.0	10.9	6.3	17.4	20.6
Net interest margin to net banking product (PNB) 3/	81.4	78.6	78.8	74.9	74.1	82.4	79.8	80.1	75.8	75.9
Operating expenses to PNB	51.8	50.4	49.8	48.8	46.8	53.4	94.7	50.0	48.4	46.5
Operating expenses to total assets	2.5	2.4	2.3	2.2	1.9	2.4	2.4	2.3	2.2	2.0
Personnel expenses to non-interest expenses	52.9	51.7	52.2	49.9	52.2	53.7	52.5	53.1	50.7	52.3
Trading and other non-interest income to PNB	19.3	22.1	21.0	24.8	25.9	18.2	20.8	19.6	23.9	24.1
Liquidity										
Liquid assets to total assets	31.2	32.9	32.0	29.0	21.8	28.1	29.6	29.0	27.0	23.6
Liquid assets to short-term liabilities	40.0	42.3	39.5	36.2	29.3	42.6	42.4	40.2	36.8	30.7
Deposits to loans	172.0	173.2	169.1	160.5	147.2	138.5	142.9	144.9	146.0	135.2
Deposits of state-owned enterprises to total deposits	2.5	2.2	2.6	3.4	2.6	2.6	2.2	3.7	4.6	3.9
Sensitivity to market risk										
FX net open position to Tier 1 Capital	…	…	14.9	8.6		…	…	18.1	8.0	

Source: Bank Al-Maghrib

1/ Financial Soundness Indicators (FSIs) calculated according to guidelines of the IMF FSIs compilation guide, 2004.

2/ For 2007, the ratio is computed following Basel II standards. According to Basel I, the ratio would have been 12% for the banking system as a whole.

3/ Net Banking Product (PNB)=net interest margin-commissions paid+commissions received.

Table 4. Morocco: Summary Results of the Stress Tests
(Based on data as of December 31, 2006)

	Number of banks				CAR										Recapitalization needs 3/	
	CAR <0	CAR 0-8%	Worst	best	Commercial banks		Specialized banks 2/		Domestic banks		Foreign banks		Total			
					CAR	change (b.p.s)	CAR	change (b.p.s)	CAR	change (b.p.s)	CAR	change (b.p.s)	CAR	change (b.p.s)	in Dhs millions	in % of GDP
A. Baseline (before shocks)	**1**	**1**	**-0.2**	**61.0**	**13.2**		**6.8**		**12.8**		**10.7**		**12.3**		**2,364**	0.4
B. Single Factor																
Credit Risk																
Deterioration of collateral value (20%)	1	1	-3.5	60.2	12.2	-1.0	2.5	-4.2	11.3	-1.6	9.4	-1.2	10.8	-1.5	4,369	0.8
Step-wise migration of loan portfolio (20% and 50%)	1	5	-3.5	54.0	9.6	-3.6	2.6	-4.1	9.2	-3.7	6.8	-3.8	8.6	-3.7	6,485	1.1
Deterioration of loans to agriculture sector (20%)	1	1	-4.6	61.0	12.5	-0.7	4.2	-2.6	11.8	-1.0	10.0	-0.7	11.3	-0.9	3,603	0.6
Deterioration of loans to real estate sector (20%)	2	2	-4.2	61.0	10.9	-2.3	3.0	-3.8	10.1	-2.7	8.6	-2.1	9.7	-2.5	4,982	0.9
deterioration of loans to textile sector (20%)	1	1	-0.3	61.0	13.0	-0.2	6.7	-0.1	12.7	-0.2	10.5	-0.2	12.1	-0.2	2,394	0.4
Default of large exposures	6	1	-13.6	13.3	6.6	-6.6	6.3	-0.5	7.2	-5.6	4.7	-6.0	6.5	-5.7	25,148	4.4
Exchange Rate Risk																
Depreciation of Dhs against Euro (20%)	1	1	-0.2	61.0	13.3	0.1	6.8	0.0	12.9	0.1	10.8	0.1	12.4	0.1	2,350	0.4
Appreciation of Dhs against Euro (20%)	1	1	-0.3	61.0	13.1	-0.1	6.8	0.0	12.7	-0.1	10.6	-0.1	12.1	-0.1	2,379	0.4
Interest Rate Risk 4/																
Net Interest Margin																
Parallel shift of yield curve (+), 200 b.p.s	0	0	9.4	21.1	13.4	0.2	…	…	13.0	0.1	10.8	0.1	12.4	0.1	0	0.0
Parallel shift of yield curve (-), 200 b.p.s	0	0	9.2	21.7	13.0	-0.2	…	…	12.7	-0.1	10.5	-0.1	12.1	-0.1	0	0.0
Economic Value	0	2	7.3	9.7	11.5	-1.7	…	…	7.7	-5.1	9.1	-1.5	11.5	-0.8	n.a	n.a
C. Multi-factors scenarios																
Scenario 1 5/	0	4	6.5	19.0	10.5	-2.7	…	…	10.0	-2.8	7.5	-3.2	9.4	-2.9	1,253	0.2
Scenario 2 6/	0	3	5.9	20.2	9.7	-3.5	…	…	8.6	-4.2	7.4	-3.3	8.3	-4.0	2,523	0.4

1/ Worst/Best correspond to the highest/lowest CAR of individual banks before and after the shocks.

2/ Former specialized state-owned banks.

3/ Total Recapitalization need to restore the CAR of the banks covered by the stress tests to 8 percent.

4/ Interest rate stress tests include only the 6 largest private commercial banks for which the data are available (former specialized banks not included). Economic value was performed by BAM.

5/ and 6/ Scenarios do not include former specialized banks given lack of data on interest rate risk. Results of market risk in some cases compensate for losses from credit risk.

5/ Deterioration of the loan portfolio, depreciation of Dhs versus Euro, and increase in interest rates. This scenario does not include the default of the large exposures in credit risk above.

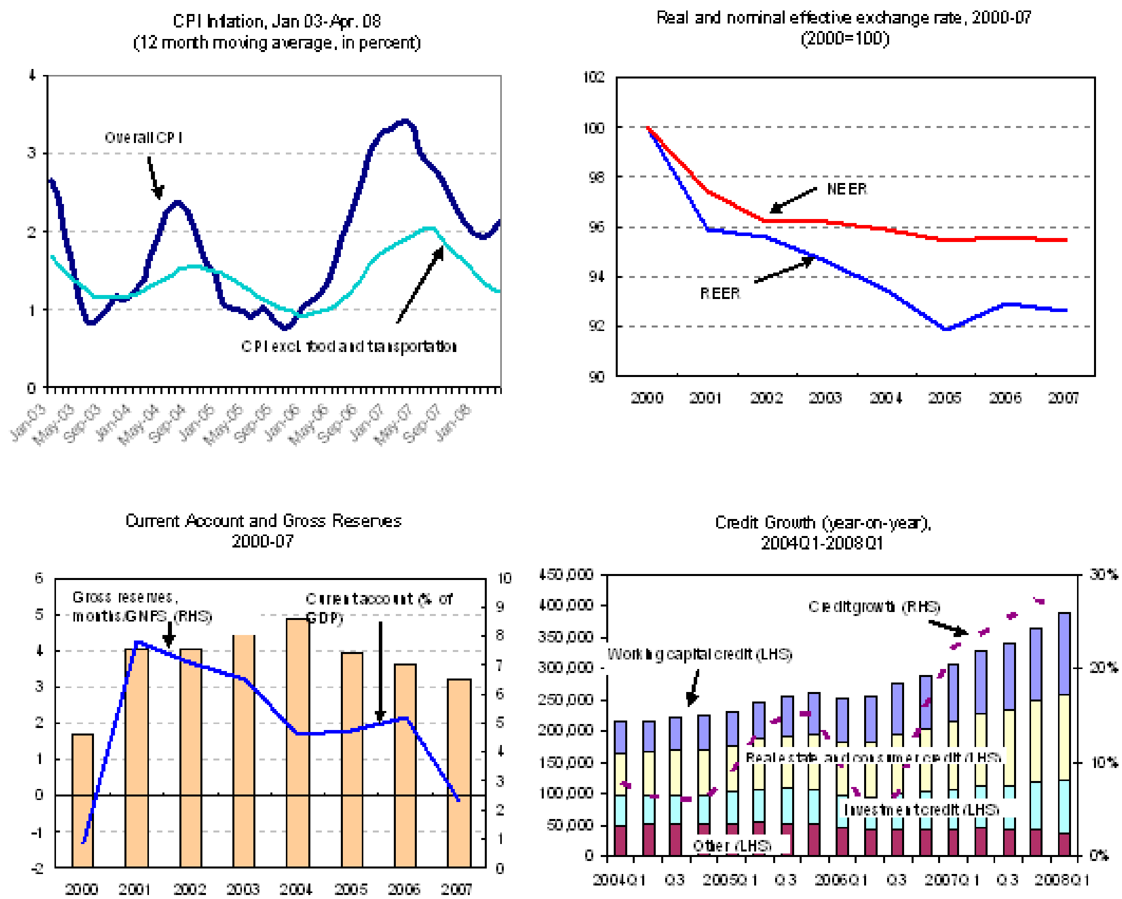
6/ Deterioration of loans to key sectors, appreciation of Dhs versus Euro, and decrease in interest rates.

Table 5. Morocco: Summary Results of Liquidity Stress Tests
(Based on December 2006 data)

	Number of banks	in % of total pre-shock total assets
Illiquid banks		
After day 1	0	0.0
After day 2	0	0.0
After day 3	0	0.0
After day 4	3	20.7
After day 5	5	38.3
Systemic Illiquidity after day 5 ?		
Total specialized banks	no	
Total commercial banks	no	
Total domestic banks	no	
Total foreign banks	yes	
Total banking sector	yes	
Net cash outflow of illiquid banks		
Bank 1	-	4
Bank 2	-	6
Bank 3	-	4
Bank 4	-	5
Bank 5	-	2

1/ Deposit run based on a daily withdrawal of 8 percent of sight deposits and 10 percent of term deposits for five consecutive days, assuming that 90 percent of liquid assets and 1 percent of illiquid assets can be converted into cash daily.

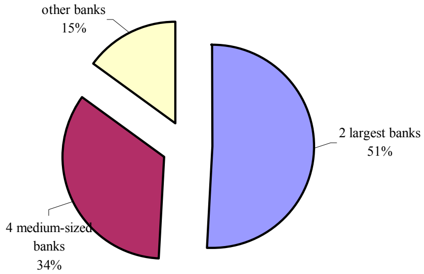
Figure 1. Morocco: Macroeconomic Indicators, 2000-2007



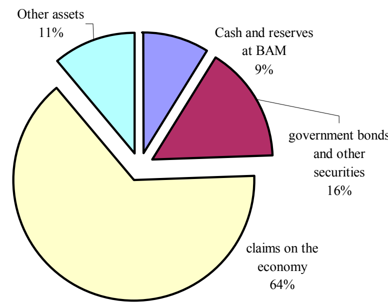
Sources: Moroccan authorities and staff estimates

Figure 2. Morocco: Characteristics of the Banking Sector, 2006

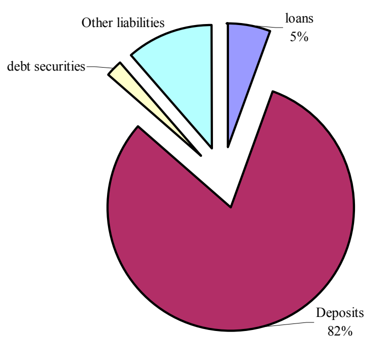
The six largest banks dominate the banking sector's assets...



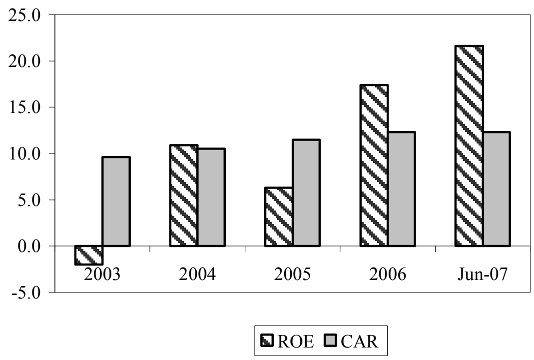
...which are mainly composed of loans on the asset side ...



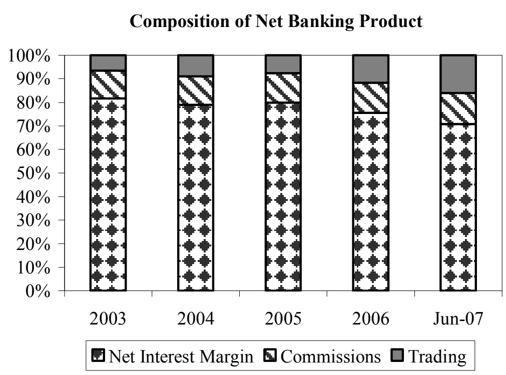
...and deposits, mainly unremunerated sight,deposits on the liability side...



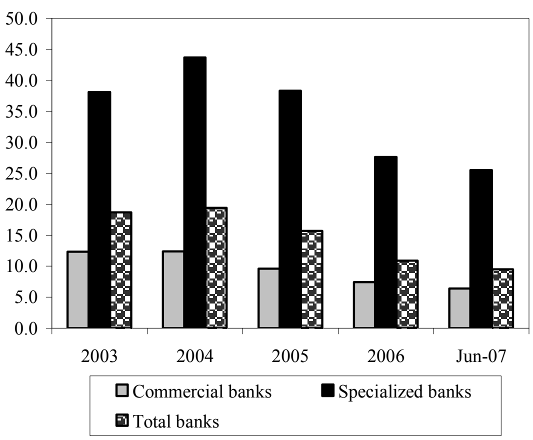
...this has contributed to banks' large margins which maintained banks' capital adequacy and profitability...



...thanks to increasing net banking product which remains essentially composed of net interest margins on loans...

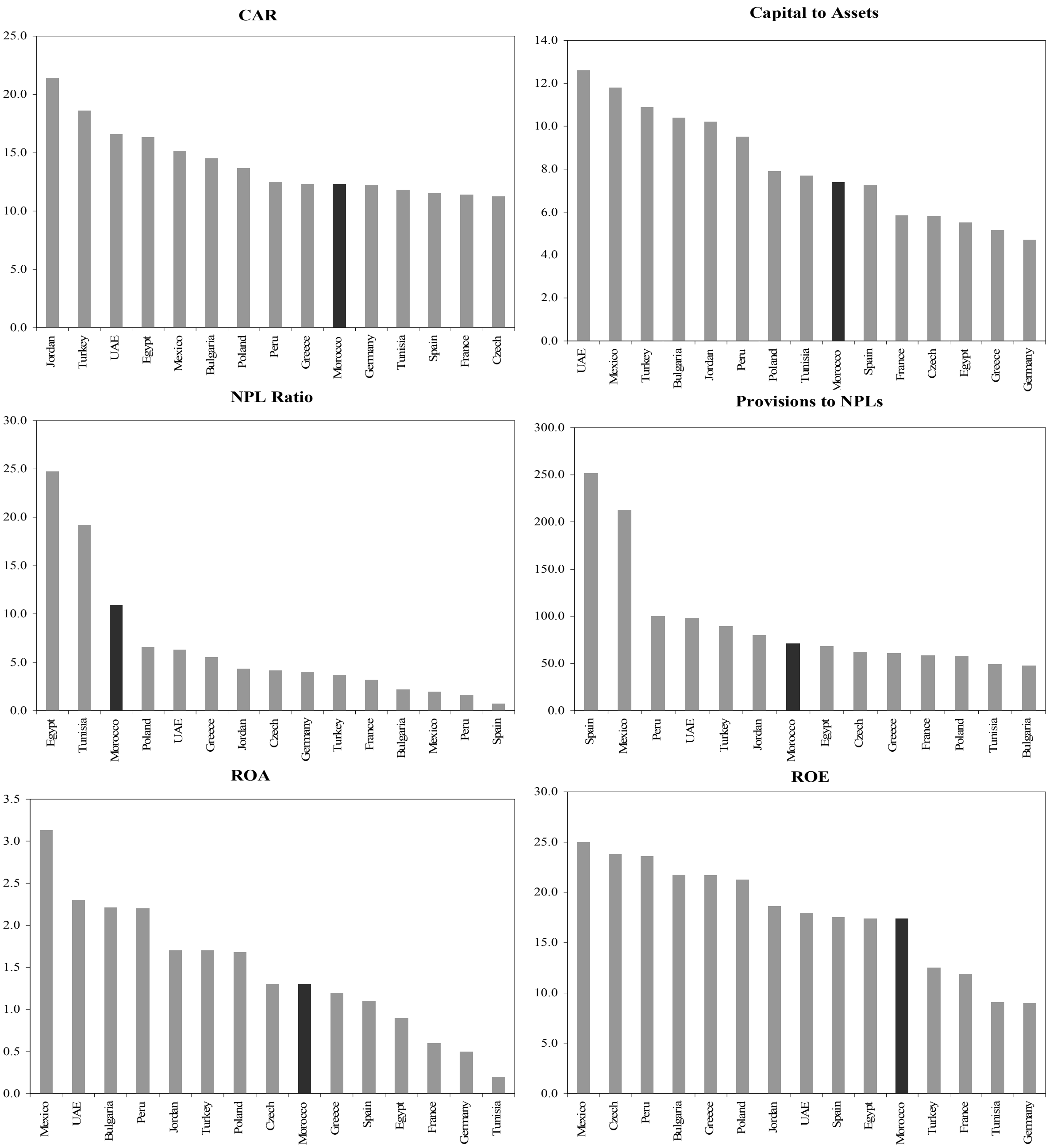


...these still register high levels of NPLs, concentrated mainly in public banks.



Source: Bank Al-Maghrib et IMF estimations.

Figure 3. Morocco: Indicators of the Financial Soundness of the Banking Sectors of Emerging and Industrialized Countries (2005-2006)



Source: Bank Al-Maghrib, IMF.

Annex I. Recommendations and Action Plan

Recommendation	Government Counterparts	Suggested Timing
Banking Sector Soundness and Vulnerability		
Carry out more regular multi-factor, and more extreme stress tests; base risk hypotheses on macroeconomic conditions, in consultation with relevant departments at BAM.	BAM	Short-term
Continue to closely monitor banks' on and off balance sheet FX risk, as well as counterparty risk, as well as compliance with exposure limits, hedging and other risk management techniques.		Short-term
Commence preparation of program of on-site inspections of the Poste du Maroc	BAM	Short-term
Continue to closely monitor interest rate and liquidity risk, e.g. monitoring of the stability of short-term deposits; adjust accordingly the hypotheses of interest rate sensitivity (in particular as regards the allocation of short-term liabilities to maturity buckets).	BAM	Short-term
Validate banks' risk management practices, to ensure banks' preparedness for further capital account liberalization, greater flexibility of the exchange rate, and adoption of advanced variants of Basel II.	BAM	Short-term
Capital Account Liberalization, Monetary Policy, and Liquidity Management		
Maintain transparency and disclosure of capital account liberalization, exchange rate and interest rate policy reforms and sequencing of change, to enable financial institutions to prepare adequately.	BAM	Medium-term
Improve information on Treasury's operations with a view to strengthen central bank liquidity management	MEF/BAM	Medium-term
Ensure consistency between monetary policy signals and domestic liquidity conditions.	BAM	On-going
Increase recourse to indirect monetary policy instruments	BAM	Medium-term
Ensure Treasury presence at key benchmark points on the yield curve.	MEF	On-going
Insurance Sector		
Amend the Insurance Code to set a time limit to respond to licensing applications, notifying the applicant of the decision, and to mention the possibility of appeals.	MEF	Short-term
Consider review of the by-laws of DAPS to increase its independence by designating it an independent authority or entity analogous to an independent public entity.	MEF	Medium-term
Capital Markets		
Set fixed term of appointment of the Director of the CDVM, reconsider the level of government participation, in particular limiting representation by the MEF with respect to sanctions; provide more clarity as to the terms for awarding and withdrawing licenses, and conform budget practice to new law	MEF/CDVM	Short-term
Make managers of intermediaries accountable for compliance and assure that all entities/persons who deal with the retail public through sales or provision of advice are appropriately authorized.	CDVM	Short-term
Assure that the CDVM coordinator actually shares information among national authorities for effective surveillance over financial conglomerates; observe and test effectiveness of implementation of new oversight powers and authorities, to enforce CDVM guidance.	CDVM; IFIs	Ongoing
Continue to improve protection of minority shareholders; transparency of large shareholdings, and the protection of customer funds; and assure that the intra-settlement period trading of securities does not diminish the strength of protection accorded to the settlement process	CDVM with Maroclear and La Bourse de Casablanca	As soon as practicable

Formulate policies to support market efficiency and stimulate longer term investments; obtain necessary expertise to assure that the development of listed derivatives, short sales and other expansions of permitted transactions on the market are subject to appropriate and sufficiently rigorous risk management and that the prices obtained in the market have integrity.	CDVM	Short- to Medium-term
Access to Finance		
Ensure open entry to the financial sector, to deepen financial intermediation and stimulate competition	BAM	On-going
Include clients of non-bank financial institutions and utilities in Credit Bureau coverage.	BAM	Short- to medium-term
Through household and enterprise surveys, identify unserved segments of the population to better target and monitor financial access programs.	BAM / MEF	Short- to medium-term
Consolidate government SME and housing development programs to highlight their transitory nature; improve baseline information and reporting on outreach indicators. Monitor regularly costs and risks of programs.	MEF	Short- to medium-term
Shift government focus from direct intervention in the form of guarantees or co-financing, to support development of enabling technologies and joint platforms, such as i.e. reverse factoring, mobile banking, etc. Also, consider government support for sharing of outreach models such as branchless banking models, to stimulate innovation.	MEF	Long-term
Continue to adapt supervision of microfinance institutions to latest developments without unduly slowing their growth	BAM	On-going
Banking Supervision		
Continue to improve knowledge levels of off-site and on-site supervision staff, to match growing sophistication of the regulatory and operational environment (Basel II, IFRS, market risk).	BAM	On-going
Issue a new regulation on country and transfer risks and ensure that banks have country and transfer risk management tools	BAM	Ongoing
Modify the banking act so that BAM can engage with host countries in MoUs without requiring that all cross border on site examinations be conducted jointly.	BAM	Short- to medium-term
Consider further measures to mitigate concentration risk.	BAM	Short- to medium-term
Continue to monitor closely NPL levels in former public banks	BAM	Short-term
Continue to monitor closely banks' management of exchange risk and interest rate risk	BAM	Short-term
Payment systems		
Promulgate a legal framework governing payments and supervision of the payment system, including the establishment of a National Payment Council.	BAM	Short-term
Actively continue the campaign to recruit and train specialists in payment system supervision.	BAM	Short-term
Anti-Money Laundering		
Continue work within the Interministerial Group to implement the MENAFATF action plan.	MEF, Ministry of Justice, BAM	Short-term

ANNEX II—OBSERVANCE OF FINANCIAL SECTOR STANDARDS AND CODES—SUMMARY ASSESSMENT OF COMPLIANCE WITH THE BASEL CORE PRINCIPLES

68. **Since the 2002 FSAP the authorities have made great progress in upgrading their banking regulation and supervision system.** Morocco is now compliant or largely compliant with 21 of the 25 Basel Core Principles (BCPs) and materially non-compliant with four. Points for material improvement include supervisory approval of major acquisitions by banks, country and transfer risk, prevention of abuse of the financial system and relations between home and host supervisors. In the coming time banking supervision will need to consolidate past gains, and continue to adapt to a more sophisticated regulatory and operational environment (Basel II, IFRS, Market risk supervision). It will also need to closely monitor banks' risk management responses, in particular to the opening of the capital account and the introduction of a more flexible exchange rate regime.

69. **The 2002 BCP assessment was updated in November 2007, based on the 2006 revised Basle Core Principles and methodology.** The assessment was performed by Juergen Dreymann, (Director, International Policy Affairs of Bafin), IMF, and Laurent Gonnet (Financial Sector Specialist), World Bank.

Information and methodology used for the assessment

70. Assessors had access to a thorough self-assessment, questionnaires, extensive data on banks and texts of the regulations. The assessment was carried out mainly through interviews with BAM supervisory staff on the basis of the "essential criteria" in the Methodology. The team also studied selected inspection reports, as well as supervisory follow-up letters. Remedial actions were illustrated through correspondence or minutes of meetings. Additionally, meetings were held with senior banking supervisors and representatives of commercial banks.

Macroeconomic setting and market structure—overview

71. **Morocco's economic performance is strong and growth is now more stable. Annual** GDP growth averaged 5.4 percent since 2001 (average 3.4 percent over the past decade). The external position is comfortable, with a current account deficit of less than 1 percent of GDP (the current account recorded a surplus in the six preceding years). Reserves stand at US$24 billion (6.5 months of imports) in 2007. The fiscal deficit fell to nearly zero percent of GDP in 2007, and is expected to stay well below 3 percent in the medium term. The stock of public debt is once again trending downward. After rising to 3.3 percent year-on-year in December 2006, CPI inflation fell to 2 percent by end-2007 (twelve month rate). However, recent developments, i.e., increases in oil and food prices as well as high credit growth and net capital inflows can put pressure on inflation levels.

72. The Moroccan authorities have announced a policy of continued gradual liberalization of the capital account and increased flexibility of the exchange rate in the medium term. In August 2007, the authorities lifted certain restrictions on transactions by

residents, and increased the scope for financial institutions, banks and enterprises to invest abroad.[23]

73. **With bank assets equivalent to 109 percent of GDP in 2007 (81 percent in 2003), banks play a central role in the Moroccan financial sector.** The banking sector comprises 16 banks (of which 11 private, and 5 public). The system remains dominated by the six largest banks (85 percent of system assets; Figure 2). Credit to the private sector accounts for 66 percent of GDP. Capital markets are increasingly contributing to financial deepening, with stock market capitalization at 98 percent of GDP in 2007 (73 percent in 2006). Morocco's insurance sector is the largest in the Maghreb, but is still relatively small by emerging country standards, with about DH 17.7 billion in premiums in 2007 (around 3 percent of GDP.

74. **With an average risk weighted capital adequacy ratio of 12.3 percent (8 percent minimum), banks are adequately capitalized, notwithstanding** some remaining vulnerabilities in the former specialized public banks. The leverage ratio has also reached a comfortable level of 7.4 percent.

75. **BAM exercises banking regulation and supervision, and has operational autonomy.** It has broad powers, in particular to issue licenses, exercise on-site and off-site supervision, impose remedial measures, including fines against managers and license withdrawal.

Preconditions for effective banking supervision

76. ***Soundness and sustainability of macroeconomic policies.*** The authorities are liberalizing the capital account and intend to adopt a flexible exchange rate regime over the medium term, as well as an inflation targeting regime. These changes, while desirable, pose major challenges for the monetary authorities, regulators, as well as financial institutions.

77. ***A well developed public infrastructure****:* Loan collection and collateral enforcement have improved. Specialized courts have been established to settle business disputes. A centralized registration under the Bankers' Association will permit banks to check borrower information. The Bankers' Association is also setting up a mediation system between banks and borrowers. A Credit Bureau will be created, providing negative and positive information on banks' borrowers.

78. ***Effective market discipline****:* financial statements are prepared and audited in accordance with international standards. The IFRS format will be implemented in the coming months.

79. ***Systemic protection***: A deposit guarantee fund financed by the banks protects depositors, and may compensate depositors to a maximum of DH 80,000 per customer. In highly exceptional cases it can also be authorized to provide emergency credit to banks, subject to acceptance of a rehabilitation plan.

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[23] Transactions by nonresidents have already been liberalized.

Main Findings

80. **Objectives, independence, powers, transparency, and cooperation (CP 1).** With a clear mandate, reinforced independence and an adequate budget and staff, BAM is well placed to exercise its supervisory mandate. An adequate budget provides the means to recruit and retain good staff. Training accounts for about 6 percent of the institution's human resources budget.

81. **Licensing and structure (CP 2-5).** The existing regulatory framework is appropriate for ensuring firm control over the operations of the sector from the capital point of view. It could, however, be considered to require banks to obtain approval before acquiring shares in nonfinancial institutions.

82. **Prudential regulations and requirements (CP 6-18).** Morocco has made very substantial progress in the prudential area. However, shortcomings were noted with respect to anti-money laundering activities (the FIU was not yet in operation at the time of the mission), country and transfer risk, and cooperation with foreign supervisors.

83. **Supervisory techniques for continuous supervision of banks (CP 19-21).** In this area, the authorities have made much progress. The central bank has an effective system for rating the safety and soundness of credit institutions (CAMELS type). Moreover, close collaboration has been established between the on-site examination and off-site supervision functions. Contacts of banking supervision staff with banks are more "risk"-oriented, by contrast with the earlier "compliance" approach.

84. **Corrective and remedial powers of supervisors (CP 23).** BAM has an adequate set of powers to require banks to take corrective and to impose disciplinary measures. An internal BAM memorandum provides guidance on the prerequisites for BAM interventions against credit institutions.

85. **Consolidated supervision and supervision of cross-border banking (CP 24-25).** Morocco is building a network of bilateral Memoranda of Understanding on the conduct of cross border supervision. However, a Moroccan legal requirement that cross border on-site examinations can only be carried out jointly can be an impediment for both the home and the host authorities and can therefore hinder effective cross border cooperation.

Table 6. Morocco: Summary Compliance with the Basel Core Principles

Core Principle	Comments
1. Objectives, independence, powers, transparency, and cooperation	
1.1 Responsibilities and objectives	The legal framework provides BAM with sufficient powers to exercise supervision; the laws and regulations are publicly disclosed.
1.2 Independence, accountability and transparency	The autonomy of BAM to exercise supervision independently has been strengthened. BAM discloses reports on its supervisory activity.
1.3 Legal framework	BAM has the authority to license and de-license banks and issue regulations, after consultation with professional groups. BAM can require banks to submit periodic and ad hoc reports and is authorized to exercise on-site and off-site supervision.
1.4 Legal powers	The Law provides BAM an adequate range of sanctions, including powers to impose stricter standards on higher risk banks.
1.5 Legal protection	Individual staff of BAM cannot be held personally liable for actions taken in the discharge of their duties, except in case of personal fault.
1.6 Cooperation	The Law sets a framework for cooperation with other supervisors, domestic as well as foreign. BAM has concluded MoUs with foreign counterparts. A commission has been created for coordination among the financial sector supervisors. Cross border on-site work can only be performed in joint home-host teams.
2. Permissible activities	Only registered banks may take retail deposits. Unauthorized use of the word “bank” is reserved for licensed institutions.
3. Licensing criteria	The licensing requirements meet good international practice.
4. Transfer of significant ownership	Mergers and takeovers of banks must meet similar criteria as for licensing. Banks are required to report annually the identity of their shareholders.
5. Major acquisitions	Within legal thresholds, no approval by BAM is required for major acquisitions by banks. Introduction of this requirement is recommended.
6. Capital adequacy	A risk weighted minimum capital adequacy ratio of 8 percent is required. Moroccan banks apply the Basel II standardized approach.
7. Risk management process	Banks must have Board-approved risk management systems. A more explicit requirement for banks’ governance bodies to understand a bank’s risks and more detailed supervisory manuals would ensure that rules and practices meet international standards.
8. Credit risk	Internal control regulations require banks to have policies and practices for risk acceptance. On-site supervision covers these areas as well as connected lending.
9. Problem assets, provisions, and reserves	Provisioning percentages broadly meet international practice. Off balance sheet exposures are also covered by the provisioning rules. BAM can impose higher provisions if needed.
10. Large exposure limits	Banks are subject to single borrower limits of 20 percent. BAM monitors all exposures above 5 percent of regulatory capital. On site review follows large exposures by region, sector, category of borrower, loan performance.

11. Exposure to related parties	Related party lending is limited to 20 percent. Banks' Boards are informed about related exposures. However, write-offs of related exposures do not need to be notified, nor is Board approval required. Board approval of such write-offs should be required.
12. Country and transfer risks	At the time of the assessment no rules were in place to regulate country and transfer risk, though progress is ongoing.
13. Market risks	Banks are required to have market risk policies, approved by the Board of the bank. Banks must perform stress tests and back-testing, although BAM does not verify whether banks actually use the outcomes. A methodology for on-site review of market risk would also be useful.
14. Liquidity risk	Banks are required to calculate liquidity on a daily basis, using a maturity bucket system. Liquidity risk management systems must be approved by the Boards of the banks. Banks are recommended to have liquidity contingency plans.
15. Operational risk	Banks' operational risk systems are monitored by BAM. Banks' Boards and management must oversee compliance. Banks must have a business continuity plan.
16. Interest rate risk in the banking book	Governance bodies must approve interest rate policies and exercise oversight. Limits must be in place. The large banks conduct interest rate stress tests.
17. Internal control and audit	Laws and regulations lay down the responsibilities of the governance bodies for internal supervision and risk management. The regulation on internal control should give more detailed guidance.
18. Abuse of financial services	The FATF for Northern Africa and the Middle East has given a number of recommendations for strengthening the AML/CFT framework. At the time of the update mission, an operational Financial Intelligence Unit had not yet become operational. Banks are not required to vet relations with high-risk customers at management level.
19. Supervisory approach	BAM's reporting framework requires that banks provide information on prudential ratios, balance sheet and P&L statements, and statistical data. BAM intends to strengthen its use of macro-prudential indicators. BAM rates the banks using a CAMELS based system , as an input into its supervisory programs and risk based bank soundness analysis.
20. Supervisory techniques	Banks are inspected on-site every one to five years, depending on size and risk profile of the bank. BAM intends to increase this frequency. After an on-site visit BAM sends a letter to the bank. BAM's bank rating system ensures a systematic review of activities and condition of banks. BAM meets regularly with bank management and the Board chairmen, as well as with the external auditors.
21. Supervisory reporting	Banks are required to submit periodic prudential reports, both on a solo and consolidated basis. BAM can also require ad hoc information. External auditors must report unusual developments in the banks' financial condition.
22. Accounting and disclosure	Banks must prepare annual audited financial statements and a management report. An external auditor must certify compliance, accuracy, and reliability of the statements, and of the bank's publicly disclosed information.
23. Corrective and remedial powers of supervisors	BAM may take remedial action against banks. Fines can be levied against the bank or its managers or Board members in person.

24. Consolidated supervision	Banks must report to BAM on a solo as well as consolidated basis. On site examination of overseas operations is possible but is required to be undertaken by joint home-host teams. A commission has been created for coordination among the financial supervisors.
25. Home-host relationships	BAM may conclude agreements with foreign supervisors. The requirement that on-site inspections abroad must be conducted in joint home-host teams could be an impediment to effective cross border supervision.

Recommended action plan and authorities' response

Recommended action plan

Table 7. Morocco: Recommended Action Plan to Improve Compliance with the Basel Core Principles

Reference Principle	Recommended Action
CP 5 Major acquisitions	Introduce a prior approval requirement for acquisitions by banks of non-financial interests in other companies.
CP 12 Country and transfer risk	Introduce regulations on country and transfer risk
CP 18 Abuse of financial services	Require that banks define policies against high risk customers, quickly operationalize the FIU, require that banks know their correspondent banks, and require screening of bank staff.
CP 25 Home-host relationships	Eliminate the requirement that cross-border examinations be conducted jointly with the foreign supervisor.

Authorities' response to the assessment[24]

The authorities broadly agree with the assessment.

[24] If no such response is provided within a reasonable time frame, the assessors should note this explicitly and provide a brief summary of the authorities' initial response provided during the discussion between the authorities and the assessors at the end of the assessment mission ("wrap-up meeting").

APPENDIX I—STRESS TESTS [25]

86. **Stress tests were performed on each of the nine largest banks covering 98 percent of the banking system's total assets, the banking sector as a whole, as well as on four groups of banks**: (i) majority domestically-owned; (ii) majority foreign-owned; (iii) commercial banks, and former specialized state-owned banks.[26] The stress tests were conducted in close collaboration with the BAM stress test teams. The shocks were calibrated based on historical time series when relevant, and expert judgment of the authorities and the team. Stress tests were also run by the authorities separately using their own in-house models. The results obtained by the FSAP team were largely consistent with those of BAM.

87. **Four credit risk stress tests were performed**[27]

1. A loss of value of loan collateral reflected by an increase of 20 percent of provisions.[28]

2. A migration analysis of NPLs, assuming (i) 20 percent migration of performing loans to substandard, (ii) 20 percent migration of substandard loans to doubtful, and (iii) 50 percent migration from doubtful to loss.[29]

3. A downgrade from "performing" to "nonperforming" of 20 percent of loans to key economic sectors, i.e., agriculture and agro-business, textile, and real estate, given the strong expansion of credit to these sectors in recent years.[30]

4. A default of the three largest exposures, to test banks' sensitivity to concentration risk.

88. **The banking sector as a whole is largely resistant to credit risk shocks; however there are signs of vulnerabilities to concentration risk and real estate exposures, with differences in impact from bank to bank**. The capital adequacy ratio (CAR) of some banks falls below the minimum required following a deterioration of their large exposures and real estate credit, but the capital injection needed to restore capital adequacy in the worst-case

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[25] Based on BAM data per end 2006; See Tables 3, 4, and 5. At the time of the mission, 2007 official data was not available, however, as a robustness check, the team run a few stress tests based on the then available and comparable mid 2007 data. The results generally corroborated the conclusions of the stress tests conducted on the submitted end-2006 official financial statements.

[26] More details on the stress testing methodology can be found in the financial soundness and stress testing technical note (Volume II of FSAP report).

[27] The calibration of credit risk stress tests was discussed and agreed on with the authorities, and based on hypothetical scenarios mirroring previous macro-recessions based on discussions with the authorities, and expert judgment based on discussions with on-site supervisors. Historical data series on bank by bank NPLs were not available.

[28] Data on collateral are not available. An increase in provisions was used as a proxy for a deterioration in the value of collateral.

[29] A higher migration percentage from doubtful loans to loan losses is assumed, given the higher probability of doubtful loans becoming losses, according to the experience of the authorities.

[30] Test 3 includes three sub-tests.

scenario does not exceed 4.4 percent of GDP. As in other countries with similar income levels, credit risk appears to be the most important risk, followed by liquidity risk. The two former specialized public banks are vulnerable to all shocks. Two of the three largest banks, however, weather all credit risk shocks. The majority domestically-owned banks remain solvent, but the former specialized banks show signs of vulnerability given their continued high levels of nonperforming loans and their equity levels as explained in the FSIs section. As of June 2007, the former specialized public banks reinforced their capital base.

89. **The banks most vulnerable to the loss of value of loan collateral test are the former specialized public banks.** Also, some majority foreign-owned banks fall below the minimum CAR after credit risk shocks (Table 2). Tests on the migration analysis of NPLs affects mainly the former specialized public banks, the majority foreign-owned banks, and one major domestic bank; however the latter is affected mainly because its capital is barely above the minimum CAR before the shock.

90. **The majority domestically-owned banks and the banking sector as a whole withstand test 2).** The results of test 3) reflect the vulnerability of one former specialized bank to the agricultural sector, and the vulnerability of one major domestic bank, one foreign bank and one former specialized bank to the real estate sector. Textile and tourism sector shocks appear to have minor impact. The total sector is resistant to all shocks stemming from a deterioration in loans to key economic sectors. Under the test for the effect of concentration risk, all but two of the largest banks fall below the minimum CAR after the shock, and some lose their capital.

91. **In light of the authorities' intention to move toward greater exchange rate flexibility, four exchange rate stress tests were carried out**. Net open foreign exchange (FX) positions are subject to prudential limits (restricting total open positions to less than 20 percent of Tier 1 capital). As of end 2006, net open FX-positions stood at 8 percent of Tier 1 capital.[31] The shocks assumed both an appreciation and depreciation of the dirham against euro and USD of 20 percent. The direct impact of these shocks was minimal. The indirect impact of FX credit exposure to unhedged borrowers is also limited, as FX lending stands at only 2.3 percent of loans (Table 1). Given their long euro and USD positions, banks gain slightly from a depreciation, and lose slightly from an appreciation.

92. **The interest rate risk tests assumed a parallel shift of the yield curve of 200 basis[32] points and estimated the impact on net interest margins (NIM) and on the economic value of banks' balance sheets, using duration analysis**. Despite a structural maturity mismatch, Moroccan banks appear well hedged against NIM risk. This is mainly a result of the predominance of (i) relatively elastic unremunerated deposits,[33] and (ii) floating rates for most medium- and long-term loans. Banks' cumulative short-term maturity gap is long; therefore, interest rate risk lies more in the downside, mitigated by the fact that interest rates are already low in Morocco. The impact on economic value was relatively high for two large domestic banks which lost 21 and 24 percent of their shareholder equity with a drop in

[31] The dirham is pegged to a currency basket (80/20 euro/USD).
[32] Based on historical time series (tails of distribution).
[33] Hence classified in longer-term maturity buckets by authorities given their historical stability.

interest rates, and on another major domestic bank which lost 16 percent with an increase in interest rates. However, the banking sector as a whole loses only 6 percent of shareholder equity in the case of a 2 percent drop in interest rates.[34] The impact on foreign banks was less apparent possibly due to better asset-liability management tools from parent banks.

93. **Liquidity stress tests[35] assumed a deposit run (mainly Moroccan residents abroad and large depositors) for five consecutive days**. The test also assumed that 10 percent of otherwise liquid assets could in fact not be liquidated. Such circumstances could be triggered by a loss of confidence and/or a flight to more attractive investments abroad. All banks appear to withstand this shock during the first four days without interbank or LOLR recourse. However, at the end of the fourth day, some medium-sized foreign banks become illiquid. At the end of the fifth day, five banks become illiquid. Foreign banks appear more vulnerable, but are considered to have access to liquidity from their parent-institutions.

94. **The multi-factor macroeconomic scenarios assume general and sector-specific downturns of the economy, and highlight the prominent impact of credit risk**. In two scenarios, market and credit shocks were combined with (i) a 200 basis point increase in interest rates, a 20 percent depreciation of the dirham against the euro, a 20 percent deterioration in the loan portfolio (increase in NPLs) and (ii) a decline in interest rates by 200 basis points, a 20 percent appreciation of the dirham vis-à-vis the euro, and a decline in key sectors of the economy. The banking sector as a whole appears to retain adequate CARs, but majority foreign-owned banks fall slightly below the minimum capital requirement.

95. **BAM staff has made significant strides in its stress testing ability, although it may want to consider carrying out all stress tests more regularly and with more severe shocks**.[36] Banks' compliance with FX-limits should continue to be watched carefully, while ensuring proper hedging and monitoring of counter party risk. Given further capital account liberalization, interest rate and liquidity risks should be closely monitored. In particular, the stability of short-term deposits should continue to be watched and interest rate sensitivity assumptions adjusted accordingly. In addition, banks' risk management practices should continue to be supervised to ensure their preparedness for further capital account liberalization, greater flexibility of the exchange rate, and adoption of more advanced approaches of Basel II. BAM could also consider incorporating macroeconomic risk factors into the stress tests.

[34] The results of interest rate stress tests are based on the maturity buckets of interest sensitive assets and liabilities provided by the authorities. Part of the short-term deposits are considered by the authorities as long term resources and are allocated to longer maturity buckets given their stability. This is reportedly based on periodic studies conducted by BAM and as permitted by the Basel Committee.

[35] See Table 5.

[36] Currently, stress tests are conducted by BAM only occasionally.