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Financial Sector Reforms in Algeria, Morocco, and Tunisia: A Preliminary Assessment

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Abstract

This paper reviews and assesses the financial sector reforms in Algeria, Morocco and Tunisia. After a description of the financial sector before reforms, it explains the main features of the comprehensive reform process in each country. It also reviews the sequencing of reforms and discusses econometric evidence of the impact of the reforms on saving in each of the three countries. Subsequently, the paper sets out remaining issues to be addressed in the three countries, including a further strengthening of the banking system and development of financial instruments and markets.

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SUMMARY

The objective of this paper is to review and assess the reforms of the financial sector underway in Algeria, Morocco, and Tunisia since the mid-1980s. As in many developing countries, these reforms were part of an overall strategy toward establishing a more market-based, open, and private-sector led economy.

Key conclusions of the paper are that: (i) the policy reform agenda has been wide-ranging; (ii) the sequencing of reforms has been broadly appropriate, which helped avoid financial instability and disruption; (iii) the reforms helped to strengthen savings in the three countries, thereby enhancing the sustainability of growth; and (iv) the process, while still incomplete, is gaining in depth and credibility. Differences in the experiences of the individual countries largely mirror differences in the initial stage of development of their banking and financial systems, but also in their macroeconomic policies.

While much progress has been made in recent years in financial sector reform in all three Maghreb countries, the reform agenda needs to be accelerated in order to support increased investment and high growth rates. In all three countries, competition among banks needs to be enhanced and the role of the private sector in financial intermediation strengthened. A deepening of secondary markets for government paper will be required to establish meaningful yield curves to better guide intertemporal investment decisions and provide the central banks with a basis for open-market operations, complemented by well-functioning equity markets. Moreover, enhancing the mobilization of long-term contractual savings (insurance companies, pension funds) would help promote investment and growth. Strengthening of the financial system, combined with a further consolidation of macroeconomic stability, would allow further liberalization of capital account transactions and thus help integrate the Maghreb economies into world financial markets.

I. INTRODUCTION

Reforms of the financial sector have been pursued over the past two decades in many developing countries as part of broader structural adjustment programs that included fiscal consolidation, reforms of the trade and exchange systems, and wide-ranging measures to enhance the supply responsiveness of the economy (notably through price liberalization, deregulation of activities, and other reforms of the incentive system). The reform of the financial sector was expected to bring about significant economic benefits, in particular through a more effective mobilization of domestic savings and a more efficient allocation of resources. Reforms of the domestic financial system aimed at strengthening the role of market forces and competition in financial markets through liberalization of interest rates and the introduction of indirect monetary policy instruments, by enhancing banks' financial soundness, and by promoting equity markets. Liberalization of current and capital accounts transactions aimed at better integrating the domestic financial system into world financial markets.

Reforms in the three Maghreb countries generally started later than in many East Asian and Latin American countries but were at the forefront of reforms in the Middle East and North Africa.[2] During the 1970s and the first half of the 1980s, economic policy-makers in the Maghreb were mainly preoccupied with putting in place the necessary infrastructure to support a development strategy largely led by the public sector, which accounted for a large share of investment and absorbed a high level of domestic savings. This trend was most pronounced in Algeria, which had a central planning system and where abundant hydrocarbon resources accrued to the public sector. During this period, the financial sectors in the three countries mainly accommodated the financing needs of the government, of public enterprises, and of priority sectors. Its role in financing private sector investment remained modest, and efforts to mobilize savings lacked the dynamism of a competitive financial system. Financial intermediaries were insulated from competition in the domestic market through oligopolistic practices and barriers to entry in the sector, and from outside competition through tight restrictions on current and capital account transactions.

In such an environment, which was typical of many pre-reform situations throughout the developing world during that period, distortions were widespread: interest rates were generally negative in real terms, taxing savers and providing incentives to inefficient investment; credit was rationed based on government-determined priorities; and excessive regulation hindered the activity of financial intermediaries. Consequently, economic efficiency remained low, and growth suffered from relatively low saving and investment rates, notably in the private sector.

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[2]Chalk, et. al. (1996).

Since the second half of the 1980s, financial sector reforms undertaken by the three Maghreb countries have established more market-based systems of bank intermediation and government financing; allowed a more efficient conduct of monetary policy through greater reliance on indirect instruments; and (except in Algeria) contributed to the rapid development of stock markets. The pace of the reforms was largely determined by concomitant progress in fiscal adjustment and other structural reforms, the speed and depth of which varied among the three countries.

The paper is organized as follows: Section II provides a brief review of the literature on the effects of financial sector reforms. Section III, after a brief description of the main features of financial sectors in all three countries before the reforms, describes the main changes introduced since the mid-1980s and discusses the sequencing of the reforms. Section IV provides a quantitative assessment of the effect of the reforms on nongovernment saving, investment, and economic growth. Section V discusses the main outstanding issues in the reform agenda.

II. LINKS BETWEEN FINANCIAL REFORMS, SAVINGS, AND GROWTH

A. Financial Reforms, Savings, and Growth

There is a large body of literature on financial intermediation as a determinant of an economy's savings, investment, and real growth rate.[3] Many studies conclude that developing the financial sector may improve the level of savings, by widening the range of available savings instruments and raising the expected return through higher real interest rates and reduced risk, as deeper markets make financial assets more liquid. In turn, higher savings are likely to raise investment levels and growth. It is recognized, however, that financial sector reform may also decrease savings by reducing liquidity constraints, for example by enhancing access to consumer credit and reducing other types of "forced" savings. In addition, financial sector reforms are expected to contribute to higher growth through a better allocation of financial resources; well-functioning financial markets will allocate resources to uses with the highest return and, through the monitoring of creditors' performance, ensure continued efficient use of productive assets.

Obviously, savings, investment, and growth are also determined by nonfinancial variables, such as fiscal policies and structural reforms. For example, Hadjimichael and

[3]McKinnon (1973) and Shaw (1973) highlighted the role of the financial sector in mobilizing savings and hence in contributing to investment and growth. De Gregorio and Guidotti (1992) and King and Levine (1993) concluded that the development of bank credit has an important impact on growth, while Anderson (1987), Gallagher (1991) and Odedokun (1992) found important effects of financial variables on economic efficiency (proxied by the incremental capital-output ratio).

Ghura (1995), examining the effects of government policies on savings in sub-Saharan Africa, came to the conclusion that apart from financial deepening, policies that reduce macroeconomic uncertainty and keep inflation low have a significant role in stimulating private saving. Ogaki, Ostry and Reinhart (1995) find that the responsiveness of saving and growth to the real interest rate tends to rise with the country's income level. Similarly, Lahiri (1988) finds evidence that higher per capita income growth and a lower dependency ratio have positive effects on private savings, and Masson, Bayoumi and Samiei (1995) find that private savings in-low to middle-income countries is affected positively by the per capita income relative to that of the United States. Gurley and Shaw (1960) and Gelb (1989)) have furthermore argued that the causal relationship runs from growth to financial deepening, and undoubtedly the demand for financial services increases with economic development. There is nevertheless a widely shared view that well-developed financial markets characterize rapidly growing economies because they support a higher savings rate and a more efficient use of financial resources.

B. Sequencing of Financial Sector Reforms

Financial sector reforms are usually one component of broader structural adjustment programs and in a synergetic relationship with other elements of the reform program. For example, efforts to restore macroeconomic balance through fiscal adjustment and monetary policy will be less effective, and may have a higher cost in terms of growth foregone, if the financial system lacks the flexibility to respond to the financing needs of newly emerging enterprises. At the same time, the effectiveness of financial sector reform on growth may be undermined if it takes place in an environment of high inflation and unsustainable fiscal balances, if only because such an environment might create pressures to revert to financial repression and undermine the credibility, and thus the impact, of the reforms (time-inconsistency).

The interdependence of financial sector reform with other elements of the reform process raises the question of the most appropriate timing and sequencing of financial sector reforms, in particular: (i) the timing of financial liberalization in the overall process of macroeconomic management; (ii) the timing within the overall process of liberalization and deregulation of the economy; and (iii) the sequencing of specific measures within the financial sector reform itself.

(i) A stable macroeconomic framework characterized by low inflation and fiscal sustainability is generally viewed as a desirable, albeit not an indispensable precondition of financial sector reform. On the one hand, a low inflation rate based on a sustainable fiscal policy clearly increases the likelihood of achieving positive but moderate real interest rates, reduces risk premia on holding financial assets, and increases the information content of financial variables. On the other hand, the presence of an unstable

macroeconomic environment need not rule out indefinitely the launching of financial sector reforms, which could be beneficial even then and may create pressures to stabilize the economy.[4]

(ii) With respect to the sequencing of different elements of structural reforms, the conventional sequence[5] is first, to liberalize the trade and the exchange system for current account transactions, then liberalize the domestic financial system, and finally open up the capital account. In this view, the establishment of a rational system of relative prices reflective of conditions in world goods markets needs to precede financial sector reform. The argument to undertake the liberalization of the capital account as the last step is largely based on the potentially destabilizing effects of reversible capital flows, which may aggravate any adverse effects of domestic financial liberalization. Moreover, financial sector reforms in this view should generally precede the large-scale privatization of state-owned enterprises and the lifting of price controls, as the full success of these measures depends partly on the ability of the financial sector to support the dynamic forces unleashed in the private sector by such reforms.

(iii) A third issue of sequencing concerns the phasing of different elements of financial sector reform. There is a general consensus that effective banking supervision and an appropriate prudential regulatory framework should be phased in concomitant with other financial sector reforms to reduce the risks assumed by financial intermediaries; the pace of financial sector liberalization would thus be determined by the soundness of the banking sector and the speed with which effective prudential supervision can be phased in.[6]

There are a number of studies about the actual and ideal sequencing of financial sector reform in various countries.[7] Usually, reforms begin with interest rate liberalization, the introduction of market-based instruments of monetary policy, such as government or central bank securities with market-determined interest rates, and initial measures to strengthen banking supervision. The types of market-based instruments used for monetary policy control influence—and are influenced by—the development of secondary markets for government securities and the interbank and money markets. During this interactive process of market development, reforms to further strengthen banking soundness and

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[4]In 1975, Brazil liberalized the financial sector ahead of full macroeconomic stabilization.

[5]E.g., McKinnon (1982); Blejer and Sagari (1987); Frenkel (1982).

[6]Sundararajan (1996).

[7]Bisat, et al. (1992).

supervision are introduced. Measures to enhance competition among banks, and the development of equity markets and nonbank financial services, are typically later steps in the reform process.

The experience regarding the timing of the liberalization of the external capital account in relation to domestic financial liberalization is a key issue in the process of integration with the world economy. For example, Indonesia liberalized the capital account at an early stage of its reforms, supported by firm financial policies, and liberalized the domestic financial sector at a later stage. However, recent episodes of surges in capital inflows and the fall-out of the Mexican crisis have highlighted the risks involved for developing countries to open the capital account with macrostability not yet fully achieved and with a relatively fragile domestic financial system.

III. FINANCIAL SECTOR REFORM IN ALGERIA, MOROCCO, AND TUNISIA[8]

A. Financial Sectors Before Reform

Until the early 1980s, Algeria, Morocco, and Tunisia—albeit to different degrees—pursued inward-looking economic development strategies emphasizing a key role of the state in economic activity to accelerate economic development and ensure national control over "strategic"sectors. These objectives were to be achieved through direct government investment in key sectors, the provision of generous incentives—including interest rate subsidies—to private investment in priority sectors, and through a complex system of trade and exchange controls designed to protect "infant industries"and control the allocation of foreign exchange. The strategy resulted inter alia in the build-up of a large public enterprise sector, including bank intermediaries and other financial institutions. In Algeria, where the role of the state was most pronounced, the economy was managed through central planning and public ownership, and the role of the private sector was considerably more limited than in Morocco and Tunisia. Domestic enterprises were given output targets to fulfill under the central plan and their financial needs were met by the state under a corresponding financial plan that allocated credit to enterprises, which in effect did not face a hard budget constraint. Open inflation was suppressed through a complex system of price controls, subsidies, and an overvalued exchange rate. The private sector in Morocco and Tunisia, however, remained predominant in agriculture, in small- and medium-size industries, and in trade and tourism.

In all three countries the financial sector consisted mainly of commercial banks, development banks, postal savings institutions, and insurance companies. Stock markets existed in Morocco and Tunisia, but their role and activity were limited. Most pension

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[8]This paper does not cover the reform of insurance companies, consumer credit institutions, social security and pension funds, and leasing companies.

funds and social security institutions mobilized sizable resources that were managed by the public sector and were typically invested in government paper or priority sectors. One of the key functions of the financial sector was to collect savings at low cost and to channel them to the government and public enterprises as well as to "priority"sectors. Accordingly, financial sectors were tightly regulated through administered interest rates and directed credit, and the role of market mechanisms limited. The banking system was highly segmented, with limited competition and little participation of foreign banks (nonexistent in Algeria). Credit to the private sector consisted mainly of short-term lending extended by the commercial banks, while medium- and long-term credit was mainly in the domain of specialized development banks.

Monetary policy in all three countries was primarily conducted through direct quantity allocation of credit and refinancing. Interest rates were set administratively, and were negative in real terms in all three countries during most of the early 1980s. Excess demand for credit was rationed through bank-by-bank credit ceilings. Although the banking systems in Morocco and Tunisia in the early 1980s featured a relatively large number of bank branches well spread over the country, the provision of banking services was limited. Given a high concentration of deposits and lending, competition remained weak and was further restricted by the segmentation of bank activity. Money markets were underdeveloped and commercial banks were generally dependent on central bank refinancing.

The allocation of resources to government-determined priority sectors was assured by different means in the three countries: in Tunisia, banks were required to hold government bonds and to use a fixed portion of their deposits for lending at preferential interest rates to designated priority activities (export sector, small and medium-size companies, and agriculture). Also, the central bank tightly controlled bank credit through direct approval of large loans and bank-by-bank refinancing quotas. Similarly, in Morocco, lending to the government and to priority sectors was assured by imposing mandatory holdings of Treasury bills and of bonds issued by the development banks, as well as through preferential refinancing. In Algeria, the allocation of resources to preferred sectors was assured through central credit allocation and preferential interest rates.

In the early 1980s, bond and equity markets were virtually absent from the financial systems in Algeria, Morocco, and Tunisia. The stock markets in Morocco and Tunisia—established in 1929 and in 1969, respectively—remained largely inactive until about 1989, with stock market capitalization at less than 1 percent of GDP. This reflected the fact that most large enterprises were publicly owned, while smaller enterprises were mostly family-owned and had little incentive to move away from traditional bank credit toward equity financing of their investments. In Algeria, capital markets were nonexistent given the predominant role of state ownership and the absence of a legal basis for stock market activity.

In all three countries, the development of banking supervision and prudential regulation was limited partly because the central banks' direct control over the direction and the volume of credit limited the scope for prudential banking supervision.[9] Moreover, inefficiencies of direct controls contributed to the build-up of nonperforming loans in many banks, in particular in Algeria where public enterprises accumulated large bank debts, and in Tunisia as the result of inefficiencies of public enterprises in the mining and agricultural sectors.

Capital flows in all three countries were tightly regulated. Beyond exchange restrictions on capital account transactions, foreign investment was restricted and/or subject to approval by the authorities, especially in "strategic sectors", such as financial intermediation. Foreign exchange receipts had to be repatriated and surrendered to the central banks, which retained a virtual monopoly over the holding of foreign exchange.

Reform of the system was triggered in part by the strains created by macroeconomic difficulties. In Morocco, large fiscal deficits emerged in the late 1970s, in the aftermath of the second oil shock, and after high levels of current and capital spending caused by the phosphate boom of 1970–75 were at first maintained despite the fall in phosphate prices. In Tunisia, in the early 1980s, a decline in oil production coupled with the fall in oil prices in world markets substantially reduced fiscal revenues. Large fiscal deficits also emerged in Algeria after the reverse oil shock in 1986. In order to tackle the mounting fiscal and current account deficits, the authorities in all three countries initially tightened trade and payments as well as existing price controls, before embarking on more structured demand management policies and structural reforms under IMF-supported programs.[10] However, controls and distorted market signals were not rapidly removed, and efforts to control monetary expansion were not always successful—in Morocco and Algeria due to pressures to monetize large fiscal deficits, and in Tunisia as a result of excessive lending to preferred sectors. Consequently, inflation rates rose beyond historical levels, although in none of the three economies inflation exceeded an annual rate of 15 percent, and reserves fell by the mid-1980s to about a month of imports in Tunisia and Algeria and to a week of imports in Morocco.

Faced with increasing economic difficulties in the mid-1980s, and also influenced by the worldwide trend toward financial liberalization and deregulation, the three North African countries embarked on wide-ranging structural reform programs that included a liberalization of financial systems. Financial sector reforms were also seen as a means to

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[9]Nonetheless, in Morocco and Tunisia certain prudential rules limiting exposure of a bank to a single borrower, a system for classifying and provisioning of bad loans, and a minimum ratio between liquid assets and liabilities were in place throughout the periods considered.

[10]Nsouli et al. (1993, 1995).

strengthen the supply side of the economy and to support other structural reforms such as trade liberalization, reform of the incentive system, and eventually privatization.

B. Financial Sector Reforms, 1986–96

The financial sector reform strategies in the three countries varied in speed and depth, but had similar objectives and instruments. Key objectives of the reform in all countries were to reduce direct government intervention and strengthen the role of market forces in the allocation of financial resources, improve the capacity of financial institutions to mobilize domestic savings, enhance the effectiveness of monetary policy instruments, promote competition among banks, and strengthen their financial soundness. Reforms initially centered on the banking system and monetary policy; and in Morocco and Tunisia were followed by a reform of bond markets and the stock exchange in parallel with the launching of programs for privatization of public enterprises. In all three countries, banking laws were adapted to grant greater independence to the Central Bank and strengthen its capacity for banking supervision.

Liberalizing interest rates

Raising administered interest rates to achieve positive real interest rates, followed by a gradual liberalization of interest rates, were important initial steps in the reform of the financial sector in each of the three countries.

In Algeria, moves to liberalize interest rates began in 1990, when interest rates for the private and the public sectors were unified and commercial paper from both sectors was made subject to the same eligibility criteria for refinancing. Deposit interest rates were fully liberalized in 1990, ceilings on lending rates were replaced by limits on banking spreads in 1994, and limits on spreads were abolished in December 1995.

In Morocco, administered interest rates were steadily increased starting in the early 1980s, and interest rate subsidies to priority sectors reduced or eliminated. Interest rates on time deposits were further liberalized in 1989–90, and in 1991, ceilings on lending rates for short, medium, and long-term credits (except for credits related to exports and credits to small or medium-size enterprises) were replaced by limits on banking spreads. Controls on lending and deposit rates were completely eliminated by early 1996, except for a ban on remuneration of sight deposits and controls on interest rates for small saving deposits.

Tunisia's early reform efforts included a gradual liberalization of interest rates except for interest rates on lending to priority sectors. In 1987, interest rates on term deposits of at least three months were liberalized and rates on special savings accounts were pegged to the money market rate (TMM) of the preceding month. Lending rates, except those to priority sectors, were allowed to be set freely within a spread of 3 percentage points above the TMM. In 1990, preferential rates were increased for all priority sectors, albeit only moderately for the agricultural sector. In 1994, lending rates for nonpriority sectors were

completely liberalized, and in late 1996 preferential interest rates for priority sectors were abolished. However, deposit rates remain limited to at most 2 percent on sight deposits, and TMM-2 percent for savings deposits.

Abandoning directed credit

In all three countries a gradual relaxation of requirements of banks to lend to the treasury and the public enterprises was initiated in the late 1980s, and was closely associated with the ongoing fiscal consolidation, which created the preconditions for a more market-based financing of the budget. In Algeria, first steps toward the abandonment of credit rationing were the withdrawal of the treasury from direct investment in state enterprises in 1987 and the transfer of monetary policy responsibilities to the Central Bank in 1990. Since 1994, in the context of the recapitalization of commercial banks, banks were provided with increased autonomy with respect to operational decisions, notably the allocation of credit to high-risk enterprises. All mandatory holding of treasury bills was phased out; nonetheless, commercial banks continue to hold substantial amounts of treasury paper from past recapitalization exercises, which effectively are nonmarketable. The Housing Bank (CNEP) continues to use deposits collected from households to finance public housing and some *de facto* compartmentalization of banks still persists.

In Morocco, between 1991 and 1993, the requirements for mandatory holdings by commercial banks of bonds issued by various development banks (BNDE, CIH, and CNCA[11]) were reduced in several steps from a peak of 15 percent of short-term deposits, and in March 1994, mandatory holding ratios applying to BNDE and CIH bonds and the retention coefficients applicable to export credits were abolished. A requirement to hold CNCA bonds equivalent to 2 percent of deposits remains in place. Other incentives to provide credit to smaller enterprises and for export-related purposes—through exemption from overall credit ceilings and, since 1991, through preferential access to refinancing—were also gradually reduced, and by 1996 were virtually eliminated. Obligatory holding of treasury paper was gradually reduced from the equivalent of 35 percent of short-term deposits in 1986; but by end-1996, banks were still required to hold 10 percent of short-term liabilities in government paper at below market interest rates. Tax preferences for interest income on government or government-guaranteed paper were eliminated.

In Tunisia, the requirement for prior authorization of loans by the Central Bank was eliminated in 1988, and in 1990, bank financing for some public enterprises at preferential interest rates was discontinued. In 1991, mandatory holding of treasury debt instruments by banks was relaxed by allowing the placement of treasury bills with the public, and in 1994, the obligation for banks to subscribe to and hold treasury bills was abolished,

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[11]*Banque nationale pour le développement économique; Crédit immobilier et hôtelier;* and *Caisse nationale de crédit agricole*.

although it had already been effectively inoperative since 1990. Obligatory sectoral lending ratios were abolished in late 1996, along with preferential refinancing rates.

Move to more market-based financing of the budget

The reduction in the government's preferential access to financial savings implied by the move away from direct credit controls, called for an overhaul of the mechanisms for mobilizing domestic financing for the budget. In Algeria, the government instituted in late 1995 a formal auction system to sell negotiable treasury bonds on the money market to banks and nonbank institutions, such as insurance companies. In Morocco, a mechanism for issuing treasury bills in the money market was established in 1983, and in 1989 it was transformed into an auction system. Access to these bills was gradually broadened to banks, insurance companies, social security funds, nonbank financial institutions, and eventually the general public (1995). In Tunisia, following the introduction of auctions of treasury bills in 1989, the treasury stopped issuing low-interest and long-maturity development bonds (*bons d'équipement*) in 1991. In order to create instruments with longer maturity that can be traded in the stock market, negotiable treasury bonds (with 5 and 10 years maturity) were introduced in 1993 (*Bons du trésor négociables)*.

Overall, bank financing of government deficits in the three Maghreb countries is now largely undertaken at market conditions, and the remaining schemes of forced lending at below market interest rates are expected to be phased out soon; however, investment rules for insurance and social security funds imply the continued existence of some captive markets for government paper. Government access to central bank credit, another form of nonmarket financing of the budget deficit, is tightly limited in all three countries. For example, in Tunisia, government overdrafts are limited to 5 percent of budgetary receipts, under existing banking rules and the refinancing of government paper is virtually ruled out. Similar rules apply in Morocco, which nonetheless heavily used central bank credit in 1995—during a severe drought year—in the form of a special advance, remunerated at market interest rates.

Monetary policy

In all three countries, the move away from quantity rationing and direct controls was supported by, and in turn required, efforts to develop indirect and market-based instruments of monetary policy. As direct and discretionary forms of credit control became less effective, the monetary authorities started to manage liquidity through a more active use of reserve requirements and a more market-based allocation of refinancing, mainly through regular auctions of repurchase agreements in the interbank money market. However, the scope for full-fledged open-market operations has remained constrained by the lack of deep secondary markets for government debt instruments. Nonetheless, during 1995, transactions between banks on the interbank market became twice as important as refinancing from the Central Bank in Morocco, although the reverse remained true for Tunisia. The transition away from direct credit controls was gradual, typically by

exempting a growing share of credits from ceilings while raising interest rates, with some continued sectoral allocation of refinancing (Tunisia). In Algeria, repurchase auctions at the central bank's initiative have only recently begun to replace refinancing overdrafts and bank-by-bank refinancing ceilings. In neither country is the shift toward market-based monetary policy complete. Money markets are still underdeveloped, and secondary markets for government paper lack depth, thus limiting the flexibility of existing instruments and the scope for developing full-fledged open-market operations.

Deepening financial markets and introducing new instruments

In the course of financial sector reform, new instruments and markets were developed in all countries, in particular through the move to a more market-based financing of the government sector and the deepening of bond and stock markets. In Morocco and Tunisia, the reform of the stock market was an important building block of financial sector reform. Stock market legislation was updated, the bourses were privatized and their management was transferred to the associations of brokerage houses. Independent supervisory commissions were created, the legal basis for brokerage firms and mutual funds was established, and accounting and transparency rules strengthened. As a result of these initiatives, and stimulated by the privatization programs underway, stock market capitalization and turnover have increased markedly since 1993 (Chart 6). Development of bond markets has been rather slow, mainly because of weak settlement mechanisms. However, in Morocco and Tunisia, in addition to redesigning government paper to make it more liquid, the authorities have strengthened the legal framework for new private financial instruments (certificate of deposits and commercial paper, open and closed mutual funds, corporate bonds, and privatization bonds in Morocco), though many of these instruments have yet to gain widespread use.

The above regulatory and technical improvements, along with the acceleration of privatization programs, have helped revitalize the stock markets in Morocco and Tunisia. However, despite the growing attractiveness of equity financing, there remain a number of important obstacles to the development of the stock markets in the two countries; private sector companies, which are mostly family-owned small and medium enterprises, are reluctant to dilute their control and submit to stringent requirements of disclosure of information and transparency.[12] A related obstacle is the lack of liquidity, which stems from the limited number of equities issued as well as outdated settlement mechanisms, which only since late 1996 are being replaced by modern electronic quotation and settlement systems.

[12]In 1995, a number of private companies were removed from the listing on the Casablanca stock exchange because of failure to meet disclosure requirements.

Prudential regulation and banking supervision

Strengthening prudential regulation and bank supervision was crucial to the success of the liberalization and deregulation of financial activities, as market participants were allowed to take greater risks. In all three countries, new banking laws granted increased autonomy to the central bank, and introduced, or strengthened, prudential regulations in line with international standards. The risk weighted capital adequacy ratios recommended by the Basle committee of the G-10 are to be met by all banks in Morocco by 1996, and in Algeria and Tunisia at the latest by 1999. Detailed restructuring plans are being carried out on the basis of external bank audits in Algeria and Tunisia, involving recapitalization of some banks and cleaning up of bad loans, in the context of restructuring plans formalized through the signing of performance contracts between the government and the banks. In both countries, the government took over sizeable nonperforming bank loans to public enterprises.

Bank supervision was also enhanced significantly during the reform period. In Morocco and Tunisia, amendments to the banking law in 1993 and 1994, respectively, laid the ground for the full integration of the specialized institutions in the banking system, and established the legal basis for investment banks, consumer credit institutions, and a deposit insurance fund to guarantee deposits up to a certain amount. Banks were required to have their accounts certified by external auditors. Prudential regulations applicable to brokers and mutual funds were also strengthened.

Enhancing competition among banks

Measures to increase competition among domestic banks included the opening of banks' capital to foreign participation, abolition of sectoral specialization of financial intermediaries, and the granting of greater autonomy in lending decisions. In Algeria, the *domiciliation* requirement for bank clients—requiring that certain transactions be lodged with specific banks—was abandoned and specialized institutions were permitted to extend their activity into sectors that had been formerly closed to them. Since 1994, foreign participation in the capital of domestic banks is allowed.[13]

In Morocco, entry barriers were reduced in 1989 when the "Moroccanization" decree of 1973, which imposed a 49 percent limit on foreign ownership in "strategic sectors," including the banking sector, was voided. A fully owned foreign bank was established in recent years. The new banking law of 1993 aimed at further strengthening competition by breaking down the compartmentalization of activities between development banks and commercial banks, effectively creating a unified legal basis of universal banking. While nonbank financial institutions (leasing and consumer credit) were in operation for some

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[13]In September 1995, a new private bank was chartered (Union Bank), along with the *Caisse nationale de mutualité agricole*, owned by private agricultural cooperatives.

time, new private investment institutions (portfolio investment funds and investment advisory institutions) have emerged recently in connection with the development of the stock market, and privatization of remaining state banks is underway.

In Tunisia, steps to enhance competition accelerated in 1986 with measures to enlarge the scope of activities for foreign banks. Offshore banks were allowed to collect deposits from residents to the extent of the banks' capital subscriptions in resident enterprises and within certain limits. They were also allowed to finance from their own foreign exchange holdings capital subscriptions in certain resident enterprises, extend credits in local currency from deposits collected from residents, and engage in medium- and long-term lending in foreign exchange as well as finance resident import and export operations.[14] Foreign-owned banks were authorized to establish subsidiaries in Tunisia in 1989, and a major international bank established a branch in Tunis. To increase competition among banks, the specialization of commercial and development banks was further reduced in 1994, although deposit taking by development banks and long-term lending by commercial banks continue to be restricted.

While the regulatory environment has become more conducive to promoting greater competition among financial intermediaries, in practice, competition has remained limited. In Tunisia, for example, explicit understandings among banks (*accord de place)* limit competition based on interest rates, while in Morocco, the setting of deposit rates remains influenced by guidelines of the bankers' association. In Algeria, competition is hindered by the small number of banks and the segmentation of their activity.[15]

Capital account liberalization

The reforms of the domestic financial system have been accompanied by a gradual liberalization of capital account transactions, aimed in particular at improving the allocation of foreign exchange resources and attracting foreign direct investment, but also to provide more competition to domestic suppliers of financial services.

Both Morocco and Tunisia achieved current account convertibility in 1993 and have since then liberalized certain capital account transactions, mostly related to inward foreign direct and portfolio investment, and external borrowing by residents. Certain outward flows, mostly related to export activities, are authorized on a case-by-case basis.

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[14] Offshore banks were subject to the same foreign exchange regulations as Tunisian domestic banks for resident operations.

[15] The average return on bank assets, which may be an indicator of an oligopolistic structure is estimated at 1.3 percent for private banks in Tunisia, and 1.7–2.9 percent for major private banks in Morocco in 1995, compared to an average of 0.7 percent in the OECD countries (World Bank (1995)).

Moreover, efforts to tap the international bond and equity markets were indicative of increased integration of the two economies with international financial markets: the Tunisian Government has been issuing long-term bonds on the Japanese capital market since 1994, and received favorable ratings from international rating agencies. In 1996, a Moroccan bank issued equities in international capital markets through the use of Global Depositary Receipts (GDRs), which are attractive instruments for international investors, and a private Moroccan enterprise issued corporate bonds in the European market.[16]

In Algeria, the dismantling of restrictions on the use of foreign exchange resources began in April 1994 with the dissolution of the government's *Comité ad hoc*, which had allocated foreign exchange in response to a major external payments crisis. Since then, nonresidents have been permitted to invest in most sectors, and repatriate invested capital and proceeds. However, capital transfers by residents remain subject to individual license.

The establishment of interbank foreign exchange markets in Tunisia in 1994 and in Algeria and Morocco in 1996 marked an important step toward decentralizing management of foreign exchange, and allowing market forces to play a greater role in the determination of the exchange rate. Under the new system, foreign exchange earnings still have to be repatriated, but may be surrendered to domestic banks rather than to the central bank. Banks are free to trade foreign exchange against local currency, although central bank intervention ensures that trading takes place within a narrow band, and subject to prudential regulations on foreign exchange exposure.

Sequencing of reforms

The timing of financial sector reforms in the overall process of structural reform and macroeconomic stabilization was similar in all countries. Macroeconomic stabilization, involving fiscal consolidation, which reduced the need for financial repression, underpinned financial sector reform in all countries and determined its pace. For example, in Morocco, setbacks in fiscal consolidation, partly related to the recent droughts, have probably delayed the removal of mandatory bank lending to the government. In Algeria, and to a lesser extent Tunisia, financial sector reform remained constrained by large quasi-fiscal losses incurred by state enterprises, and financed by commercial banks, which made the abolition of preferential financing difficult and may also have hindered competition among banks and the liberalization of interest rates. At the same time, financial sector reforms—interest rate liberalization in particular, as well as greater autonomy for banks to harden budget constraints on public enterprises—contributed also to the stabilization progress.

Complementary structural policies included a general movement toward market-based allocation of resources, through trade liberalization and the establishment of more

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[16]The rating of Morocco's sovereign debt is being prepared.

realistic exchange rates, the relaxation of price and marketing controls, and privatization, which, especially in Morocco, reinforced pressure for stock market reform. In line with the experience of other countries, full liberalization of the capital account is envisaged as the last stage in the process, allowing more time to consolidate financial stability, and enhance the soundness of the financial system.

The sequencing of the different elements within the financial sector reform was also similar in all three countries, and broadly in line with the experience of other countries. The process has been gradual, to avoid shocks that could have undermined the stability of the financial system. For example, increases in administered interest rates, followed by greater interest rate liberalization, were undertaken in parallel with the strengthening of the financial situation of banks—including through restructuring and recapitalization in Algeria and Tunisia—and the implementation of enhanced prudential regulations and bank supervision. This has provided the authorities with greater room for maneuver in phasing in other changes without losing control of the reform process. In a few instances where the sequencing of different measures led to difficulties, the authorities reacted quickly to redress the situation. For example, following the abolition of credit controls in Morocco, private credit surged in 1991 reflecting strong pent up demand at prevailing interest rates. The authorities responded quickly by drastically raising reserve requirements, and by 1992, credit growth was brought under control. Similarly, when the abolition of obligatory lending to priority sectors in Tunisia at end-1996 contributed to a surge in base money, the authorities reacted quickly to absorb liquidity by offering banks to place reserves with the Central Bank at market-determined rates.

It is less clear whether moves toward the introduction of indirect monetary policy instruments have been properly sequenced with other measures to improve the functioning of money markets and deepen the financial markets, in particular through establishing efficient clearing and settlement procedures, and institutional arrangements for market making and efficient trading. Delays in the latter reforms have limited the scope for introducing open-market operations so far. Measures to strengthen competition among banks also came late in the reform process and have remained timid, mainly due to the weight of entrenched practices, and because of the need to complete the restructuring of banks, including the working out of bad loans in Algeria and Tunisia.

Overall, the experience of the three Maghreb countries with financial sector reform has been marked by gradualism and caution. While the process has been accelerated during the last two years, the speed and depth of financial sector reform have been consistent with the progress in other areas of reform (fiscal consolidation, trade liberalization, privatization, reform of company law). Economic reforms, including in the financial sector, could probably have proceeded at a faster pace than has been the case. However, it should be noted that in neither of the three countries has financial liberalization caused major shocks to the financial system, nor have any reforms been reversed or rescinded, which in part reflects the efforts to build a broad consensus for reforms before moving ahead.

IV. QUANTITATIVE ASSESSMENT OF THE REFORMS

The quantitative outcome of financial sector reforms is evaluated by comparing relevant indicators before and after the introduction of reform measures and by analyzing the link between those indicators and the nongovernment savings rate. The purpose of this exercise is not to analyze the determinants of the savings rate in each country, which clearly was influenced by factors other than financial reform,[17] but to examine the extent to which nongovernment savings responded positively to the reforms.

A. Theoretical Links Between Financial Indicators and the Savings Rate

Suitable measures of financial sector reform include the cost of capital and the return on savings, the volume of intermediation and the effectiveness of intermediation.[18] In order to quantify these measures, the following proxies are used: (i) the cost of capital is approximated by the real interest rate; in particular, a move from negative to positive real interest rates is indicative of progress in financial sector reform; (ii) the volume of intermediation is measured both by the ratio of M2 to GDP, which is an indicator of the deposit mobilization role of the financial system, as well as by the share of credit to the nongovernment sector in GDP; and (iii) the effectiveness of financial intermediation is proxied by both the ratios of reserve money to total deposits and of reserve money to quasi-money with a decrease in the ratios indicating a growing efficiency of the banking system in mobilizing deposits.

Apart from being proxies of financial sector reform, these variables may also exhibit direct links with savings: for example, there may be causal links between the real interest rate and savings, although they are likely to be ambiguous. On the one hand, a higher real interest rate implies a higher return on savings and thus a higher long-run income (wealth effect), which should increase current consumption. On the other hand, the opportunity cost of current consumption increases as the return on savings increases, which should lead to higher savings (substitution effect). Since the wealth effect may be less important in low-income and middle-income countries, where the social discount rate is likely to be high, à priori one would expect to find a positive relationship between savings and real interest rates in the Maghreb countries.[19] The ratio of M2/GDP should be positively correlated with savings because in the process of financial deepening, opportunities for financial savings become more readily available and a general trend toward monetization

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[17]Per capita income and demographic factors have often been found to be significant determinants of saving in developing countries.

[18]Johnston and Pazarbasioglu (1995) have identified these variables as the main channels through which financial reforms affect savings, investments, and growth.

[19]Ogaki et. al. (1995).

sets in; it may also capture the influence of past savings. Finally, there may also be a direct correlation of credit to the private sector with savings, which may depend on the nature of existing liquidity constraints.

An important caveat is the availability and quality of data. For instance, in all three countries, credit to the nongovernment sector includes credit to public enterprises,[20] a biased indicator of the dynamism of financial sector intermediation as banks may frequently experience direct or indirect pressure to finance public enterprises. Also, private enterprise and household savings, which are included in nongovernment savings in all three countries, are not disaggregated even though public enterprise savings may follow a different pattern of behavior than that of households. For example, if real interest rates rise, public enterprise savings may fall because of higher losses due to rising financial costs, while household savings may increase if the incentive effect more than offsets the income effects.

B. Evolution of Financial Sector Indicators in Each Country

Pre-reform and reform: mean values

The indicators of financial sector reform in Morocco and Tunisia unambiguously improved in the reform period over the preform period: real interest rates rose dramatically, the share of government in total credit fell, and measures of efficiency (reserve money to deposits ratio) and financial deepening (M2/GDP) confirm strong progress in financial development (Table 1, Charts 1–5). The fact that the M2/GDP ratio in Tunisia declined in most recent years is due to the emergence of highly liquid treasury bills, which, because of prevailing banking practices, have become close substitutes for deposits.

However, the behavior of these measures in Algeria was very different, reflecting the special circumstances of the transition from a centrally planned economy with a mono-bank type of financial system, to a more market based economy. For example, the fall in the M2/GDP ratio from unusually high levels reflects the elimination of a monetary overhang after the initiation of reforms. The decline in credit to the nongovernment sector mostly reflects the tightening of budget constraints on the still-dominant public enterprise sector, while a burst of inflation after the liberalization of most price controls and following the steep devaluation kept real interest rates negative until 1995. Nonetheless, the efficiency of intermediation as measured by the ratio of reserve money to deposits and quasi-money increased substantially.

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[20]Even though partial information on credit to public enterprises exists, there is no complete data set on credit to the private sector excluding public enterprises.

In all countries, it seems difficult to link growth performance with progress on financial sector reforms, as growth was dominantly influenced by other factors. In particular, both Algeria and Morocco experienced major exogenous shocks (the drop in oil prices and the transition-related economic dislocations in Algeria, and severe droughts in Morocco) that largely affected growth performance. Nonetheless, other studies have found some evidence that total factor productivity improved during the reform period, consistent with the expectation that financial reform improved allocation and management of resources at least for Morocco and Tunisia.[21] Similarly, and related to these factors, nongovernment investment fell in all countries in the reform period compared to the last 5 years before the reforms, although it rose in Morocco when compared to the average during the 15 years preceding the reforms. In all countries, cuts in relatively inefficient public enterprise investments as well as the dampening effect on private investment of droughts are likely to have contributed to the decline in investment during the reform period.

Accordingly, the quantitative analysis in the sequel is focussed on the links between financial sector reform and savings, although savings too was determined by many other factors including the aforementioned exogenous shocks. Nongovernment savings improved in all countries in the reform period compared to a longer pre-reform period, and for Algeria and Tunisia also compared to the 5-year period preceding the reforms. Although the latter comparison shows basically an unchanged saving rate for Morocco, it probably indicates some underlying improvement, given the exceptionally severe droughts of the early 1990s.

Financial indicators and the savings rate

Correlation coefficients

For the entire period under consideration, the correlation coefficients between the nongovernment savings rate and the indicators of financial sector reform in Table 3 show the expected signs for all countries, and were statistically significant at the 10 percent level, except that for Algeria, credit to the private sector was negatively correlated with nongovernment savings. However, there is evidence of a structural shift in the relation between savings and the various financial reform indicators between the pre-reform and the reform periods.

In the pre-reform period, M2/GDP, the ratio of reserve money to quasi-money, and credit to the nongovernment sector in percent of GDP exhibited the expected sign at the 1 percent significance level in Morocco and Algeria, while none of these variables was correlated as expected in Tunisia. Real interest rates in both Morocco and Tunisia were

[21]Goldsbrough et. al. (1996), Morrisson et. al. (1996).

negatively correlated with nongovernment savings in the pre-reform period, perhaps reflecting that at negative levels, increases in real interest rates hardly affected private sector savings.

In the reform period, the correlation of real interest rates with nongovernment savings turns positive in Morocco and Tunisia, probably reflecting a rising sensitivity of private savings once the real interest rate became positive. Remarkably, in Tunisia, all financial indicators show the expected relationship with nongovernment savings. By contrast, in Morocco and Algeria, the correlation of both credit to the nongovernment sector and M2/GDP with nongovernment saving turns negative. In Morocco, this may have been due to the fact that, while the volume of intermediation as measured by M2/GDP and credit to the nongovernment sector increased significantly at the end of the reform period, nongovernment savings slowed down in the early 1990s as a result of drought-related macroeconomic shocks. In Algeria, it may be due to the peculiar circumstances of reforms in a transition economy, where the elimination of the monetary overhang and the fall of credit to the nongovernment sector was associated with a rise in savings.

Regression results

The nongovernment savings rate was regressed on the real interest rate, the ratio of M2 to GDP, credit to the nongovernment sector in percent of GDP, and the ratio of reserve money to deposits both for the entire period 1970–95 and the period before and after reform (Table 4); as discussed above, these variables were chosen as available quantitative measures of financial sector development. Regressions are estimated separately for the pre-reform and the reform period, in order to examine whether there was a structural break in the relationship between financial sector variables and nongovernment savings. The limited number of observations precluded the inclusion of dummy variables to reflect special factors such as droughts or terms of trade shocks, and other variables typically found to affect nongovernment savings (such as per capita GDP, dependency ratios, etc.). Even though the Durbin-Watson statistics reported in Table 4 do not suggest an omitted variable problem, per capital real nongovernment disposable income was included in alternative specification in the regressions for Morocco and Tunisia. While the latter has a high explanatory power, the coefficients of the financial variables and the explanatory power of the regressions are not very different from the regression estimates reported in Table 4. Moreover, the approach taken in this paper allows to single out the important influence of financial sector reforms on the savings rate, as opposed to other factors.

For the entire period, most financial variables either did not exhibit a statistically significant coefficient or did not influence savings in the expected way, perhaps reflecting the dominance of "forced savings"and rationing, as well as the importance of the public sector during the pre-reform period. In particular, the significant negative impact in both Tunisia and Morocco of the real interest rate may reflect public enterprise saving patterns

and possible effects from the relaxation of liquidity constraints in the reform period. However, the ratio of reserve money to deposits had the expected negative and significant relationship for all three countries over the entire period under consideration.

Estimating the equation separately for the pre-reform and reform periods points to a structural break as expected; thus the results largely reflect the fact that savings during the pre-reform period were little affected by financial sector variables. Indeed, over the pre-reform period, financial indicators in all three countries were all insignificant; and except for the ratios of reserve money to deposits in Morocco and Algeria, and credit to the nongovernment sector in Morocco, also failed to exhibit the expected relationship with nongovernment savings.

By contrast, during the reform period, almost all financial indicators show the expected relationship with nongovernment savings except for M2/GDP in Tunisia and credit to the nongovernment sector in Morocco. The negative coefficient of M2/GDP over the reform period in Tunisia possibly reflects substitution out of M2 into highly liquid treasury bills, which were introduced in 1990.[22] The negative sign of credit to the nongovernment sector in Morocco was possibly due to the impact of the relaxation of liquidity constraints brought about by financial sector reform.

In Algeria, inclusion of most financial indicators resulted in insignificant estimates. The only variable significantly correlated with nongovernment savings, as theoretically expected, was the ratio of reserve money over deposits. Importantly, the explanatory power of the ratio of reserve money to deposits as measured by R^2 increased significantly after the reforms (rising from 0.12 to 0.61), possibly pointing to the significant effect of financial sector reforms on savings in the reform period.

To sum up, the scope for quantitative analysis is severely limited by data constraints. A main problem is the establishment of appropriate quantitative measures for financial market development. For example, a high M2/GDP ratio in the pre-reform period may reflect monetary overhang rather than a high volume of financial intermediation (especially in Algeria). Nonetheless, the quantitative analysis points to a positive impact of the development of financial markets on saving. Once market-based financial systems were established (in the reform period), higher real returns on saving, greater efficiency of the financial system, and a larger share of resources intermediated through financial institutions all have contributed to higher saving, although their positive effect may have been eclipsed by other adverse developments.

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[22] For a discussion of the impact of the introduction of treasury bills on the demand for money in Tunisia, see Treichel (1997). Too few observations are available for the ratio of M4 (which includes treasury bills) to GDP in order to estimate the link with savings.

V. REMAINING AGENDA FOR REFORM

Significant progress has been achieved by the three Maghreb countries over the last decade to establish a sound and market-based system of bank intermediation, deepening financial markets and mobilizing domestic budget financing through more market-based mechanisms, and moving toward the use of indirect and market-based instruments for the conduct of monetary policy. While progress in these areas has been uneven among the three Maghreb countries, the acceleration of reforms in recent years in Algeria has helped narrow the gap with the other countries.

In many respects, however, financial sectors in all three countries still fall short of achieving the dynamism, efficiency and depth of full-fledged market-based financial sectors in industrial countries or in the more advanced developing countries. To some extent, this can be explained by the fact that important steps of financial sector reform have been taken only recently and thus, have yet to bear fruit. Another factor has been the lagging progress in other areas of economic reform. For example, the slow privatization process in Tunisia and Algeria may have limited the development of stock markets; and quasi-fiscal losses from the state enterprise sector continue to dampen banks' profitability in Algeria and, to a lesser extent, Tunisia. Moreover, with the virtual absence of secondary markets for government paper, meaningful market-determined yield curves have not been established in any of the three countries, and insufficient competition among banks and some continued use of moral suasion have hindered the development of a fully modern and market-based financial intermediation. Thus, further progress is needed toward establishing a dynamic and efficient financial system.

Despite the progress achieved in eliminating forced government bank borrowing and in financing the budget deficits at market interest rates, the public sector in all three countries continues to account for a large share of banks' lending, mainly reflecting the continued large public sector financing requirements.[23] Apart from further fiscal adjustment and public enterprise reform, the development of more flexible financing options for the public sector[24] and the removal of remaining vestiges of preferential access to credit for the public sector would help establish a more level playing field between the private and public sectors. Public enterprise reform and continued close monitoring of banks' performance will be needed to establish a sound financial system.

Competition among banks would need to be enhanced by enforcing anti-trust regulations, encouraging the entry of new banks—domestic and foreign owned,

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[23]Even though credit to the government has been very small and falling in Tunisia, credit to public enterprises is still a large component of total credit to the economy.

[24]Tunisia, which has relatively low external debt, now finances a large part of its budget deficit by issuing long-term paper on international financial markets.

privatizing state banks, and continued restructuring of banks to foster their financial soundness. Greater foreign participation in the financial services should enhance competition and contribute to a more rapid acquisition of technology and know-how.

The development of financial markets, through improvements in the design of government paper and streamlining of settlement systems to enhance liquidity (under way in both Morocco and Tunisia), will provide alternative savings instruments; help establish a market-based yield curve; and facilitate the use of open-market operations. To promote long-term bank financing of investments, which traditionally has been provided by the development banks, complementary reforms should help increase the availability of long-term loanable resources through pension and insurance reform, and the development of markets for commercial paper, mortgages, and other long-term instruments, including through the establishment of private rating agencies.

As the stock markets in Morocco and Tunisia have become quite active, important challenges for their future development will be to ensure greater liquidity and transparency, including through an acceleration of the privatization program and regulatory reform that help firms meet the transparency requirements of publicly traded companies. Both in Tunisia and Morocco, an electronic settlement system is being implemented which should further boost efficiency. In Algeria, a stock market has yet to be established in order to promote privatization and create an alternative source of equity financing for enterprises. Recent regulatory reforms in Morocco and Tunisia have also laid the basis for the establishment of investment banks and investment advisory institutions. Those could provide a range of services to private corporations that could help them become familiar with innovative instruments of long-term financing.

An important issue in all three countries is to develop financing of micro and small enterprises. Because of regional differences in financial development and infrastructure, rural areas generally lag behind the urban areas in terms of credit and banking services. Innovative schemes similar to the Grameen Bank in Bangladesh may help promote financing for small and medium-sized enterprises in the more disadvantaged areas.[25] The development of micro-credit institutions in urban areas is currently being explored in all three countries.

Opening the capital account—which would mainly involve liberalizing outward investment by residents—will be crucial to further integrate the financial system of the Maghreb countries into world financial markets. However, to minimize the potential destabilizing effects of volatile short-term capital flows and to enhance the capacity of the domestic financial sector to face foreign competition, further consolidation of macroeconomic stability and a strengthening of the domestic financial sector will be useful.

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[25]See Khandker, Sh., B. Khalily and Z. Khan (1995).

Table 1. Algeria, Morocco, Tunisia: Indicators of Financial Sector Reform (in percent)

	Pre-reform 1/	Reform 2/
M2/GDP		
Algeria	60.6	54.1
Morocco	40.3	53.4
Tunisia	39.9	48.8
Real interest rate		
Algeria	NA	-9.4
Morocco	-2.3	5.5
Tunisia	-4.3	2
Credit to the nongovernment sector (stock in percent of GDP)		
Algeria	46.0	38.0
Morocco	17.5	23.6
Tunisia	40.3	54.1
Reserve money/deposits		
Algeria	67.4	57.6
Morocco	55.6	42.1
Tunisia	36.2	25.0
Reserve money/quasi-money		
Algeria	505.1	149.2
Morocco	342.3	120.1
Tunisia	96.3	40.2

Sources: International Financial Statistics, various staff country reports.

1/ Algeria: 1970-88; Morocco: 1970-85; Tunisia: 1970-86.

2/ Algeria: 1989-95; Morocco: 1986-95; Tunisia: 1987-95.

Table 2. Algeria, Morocco, Tunisia: Indicators of Macroeconomic Performance

	Pre-reform 1/	Pre-reform 2/	Pre-reform 3/
	(In percent of GDP)		
National nongovernment savings			
Algeria	12.5	15.4	22.8
Morocco	19.0	22.0	21.7
Tunisia	14.5	13.2	17.6
Nongovernment investment			
Algeria	...	20.3	18.9
Morocco	15.5	18.9	18.3
Tunisia	21.5	24.3	19.6
Real GDP growth			
Algeria	3.3	2.2	0.8
Morocco	4.8	3.4	3.3
Tunisia	6.0	3.2	4.1

Sources: Various staff country reports, World Economic Outlook.

1/ Algeria: 1970-88; Morocco: 1970-85; Tunisia: 1970-86.

2/ Algeria: 1980-88; Morocco: 1981-85; Tunisia: 1981-86.

3/ Algeria: 1989-95; Morocco: 1986-95; Tunisia: 1987-95.

Table 3. Algeria, Morocco, Tunisia: Correlation of Financial Variables with the Nongovernment Savings Rate 1/

	Entire period 2/	Pre-reform period 3/	Reform period 4/
Algeria			
Savings	1.00	1.00	1.00
M2GDP	0.15	0.74	-0.89
CPG	-0.02	0.53	-0.71
RES1	-0.64	-0.42	-0.85
Morocco			
Savings	1.00	1.00	1.00
RINT	0.04	-0.45	0.01
M2GDP	0.37	0.75	-0.86
RES	-0.76	-0.78	-0.22
CPG	0.18	0.78	-0.88
Tunisia			
Savings	1.00	1.00	1.00
RINT	0.20	-0.76	0.40
M2GDP	0.37	-0.58	0.28
RES	-0.47	0.37	-0.10
CPG	0.23	-0.65	0.74

Sources: International Financial Statistics, various staff country reports, and staff estimates.

1/ At significance levels of 1 percent, 5 percent, and 10 percent, a correlation coefficient is statistically different from zero, if its absolute value exceeds 0.07, 0.05 and 0.04 respectively.

2/ Algeria: 1970-95; Morocco 1970-95; Tunisia: 1977-95

3/ Algeria: 1970-88; Morocco: 1970-85; Tunisia: 1981-86.

4/ Algeria: 1989-93; Morocco: 1986-95; Tunisia: 1987-95.

Symbols:

Savings = Nongovernment national savings in percent of GDP.
RINT = Real interest rate.
M2GDP = Ratio of M2 over GDP.
RES = Reserve money over quasi-money.
RES1 = Reserve money over total deposits.
CPG = Credit to the nongovernment sector in percent of GDP .

Table 4. Algeria, Morocco, Tunisia: Nongovernment Savings and Financial Sector Reform

	Constant	RINT	M2/GDP	RES	RES1	CPG	R^2	D-W
Whole period 1/								
Algeria	4.44	--	--	--	-2.80	--	0.33	1.18
	(8.7)	--	--	--	(3.6)	--		
Morocco	3.29	-0.03	0.01	-0.10	--	-2.13	0.76	1.00
	(13.9)	(3.7)	(1.1)	(6.3)	--	(1.4)		
Tunisia	3.81	-0.03	-0.002	-1.50	--	-0.33	0.40	1.60
	(4.6)	(2.0)	(0.1)	(3.5)	--	(0.2)		
Pre-reform period 2/								
Algeria	3.67	--	--	--	-1.82	--	0.12	1.32
	(5.4)	--	--	--	(1.8)	--		
Morocco	2.02	-0.04	-0.01	-0.08	--	8.90	0.86	2.30
	(2.9)	(4.4)	(0.5)	(2.4)	--	(1.8)		
Tunisia	1.01	-0.01	0.04	1.39	--	-2.50	0.46	1.90
	(0.4)	(0.7)	(0.5)	(1.1)	--	(0.9)		
Reform period 3/								
Algeria	4.30	--	--	--	-2.00	--	0.61	1.28
	(11.7)	--	--	--	(3.2)	--		
Morocco	3.17	0.004	0.01	-0.13	--	-2.50	0.85	2.30
	(23.5)	(0.4)	(0.8)	(1.1)	--	(2.4)		
Tunisia	2.72	0.01	-0.001	-1.93	--	1.00	0.69	1.81
	(2.9)	(0.7)	(1.8)	(2.2)	--	(0.7)		

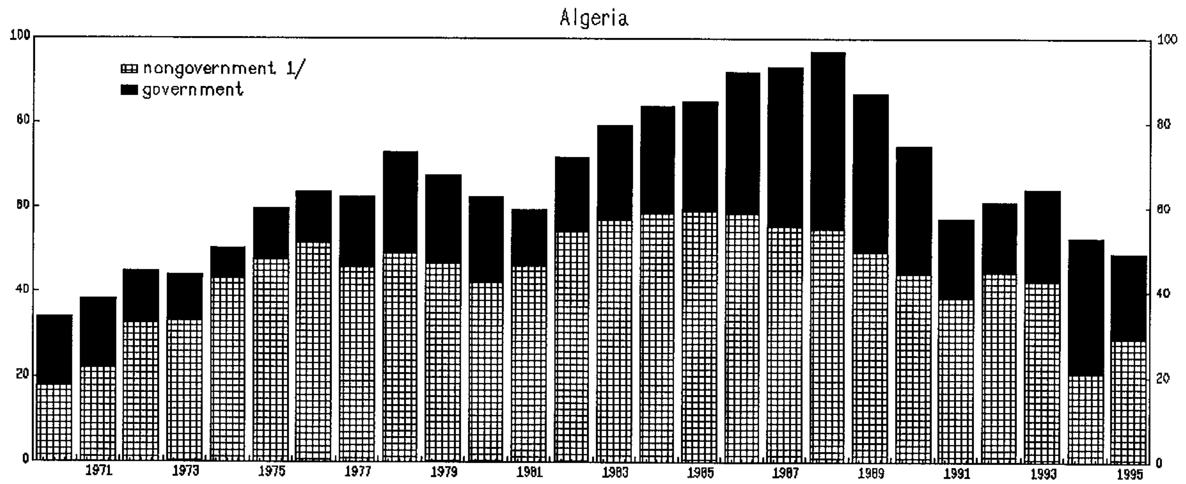
Source: staff estimates.

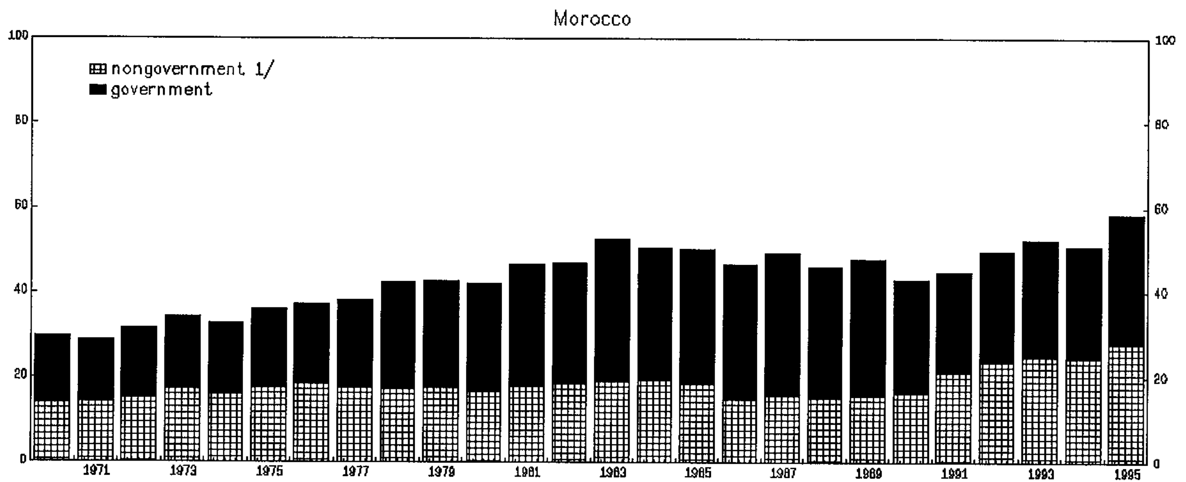
1/ Algeria: 1970-95; Morocco: 1970-95; Tunisia: 1977-95.
2/ Algeria: 1970-88; Morocco: 1970-85; Tunisia: 1977-86.
3/ Algeria: 1989-95; Morocco: 1986-95; Tunisia: 1987-95.

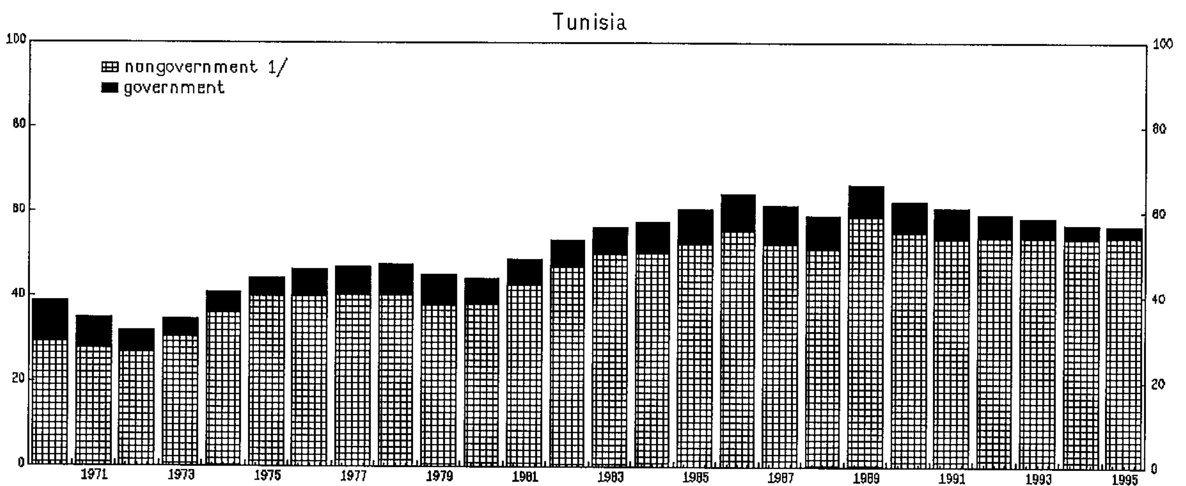
Symbols:

CPG	Credit to private sector, in percent of GDP.
M2GDP	Ratio of M2 over GDP.
RINT	Real interest rate.
RES	Reserve money over quasi-money.
RES1	Reserve money over total deposits.
Savings	Nongovernment national savings in percent of GDP.

Chart 1
Domestic Bank Credit
(End-of-period stocks; in percent of GDP)



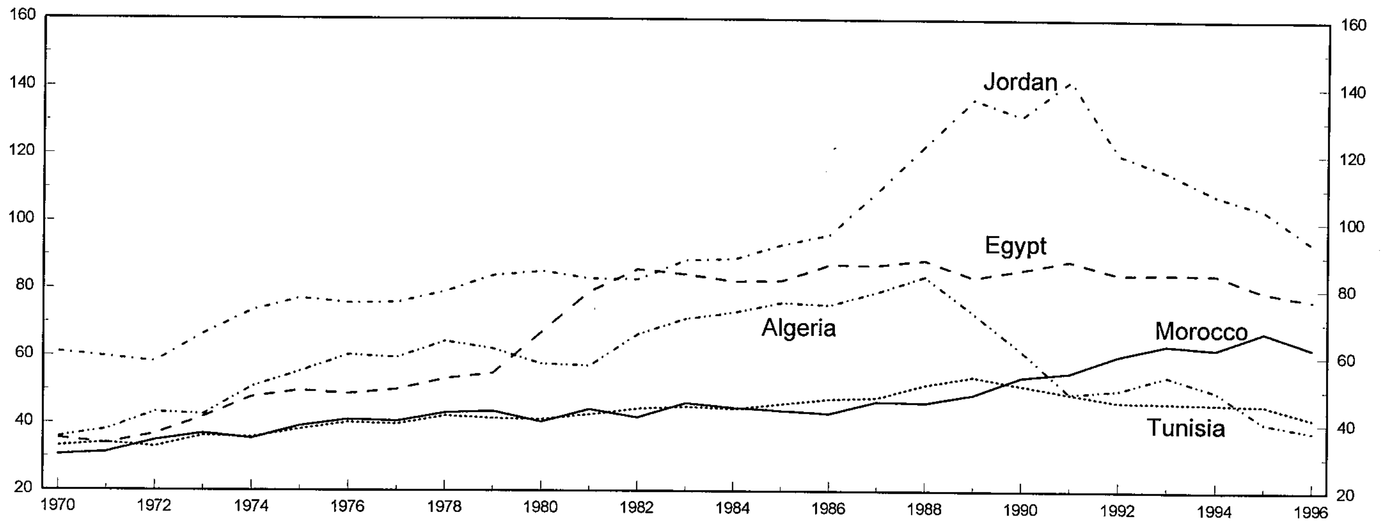


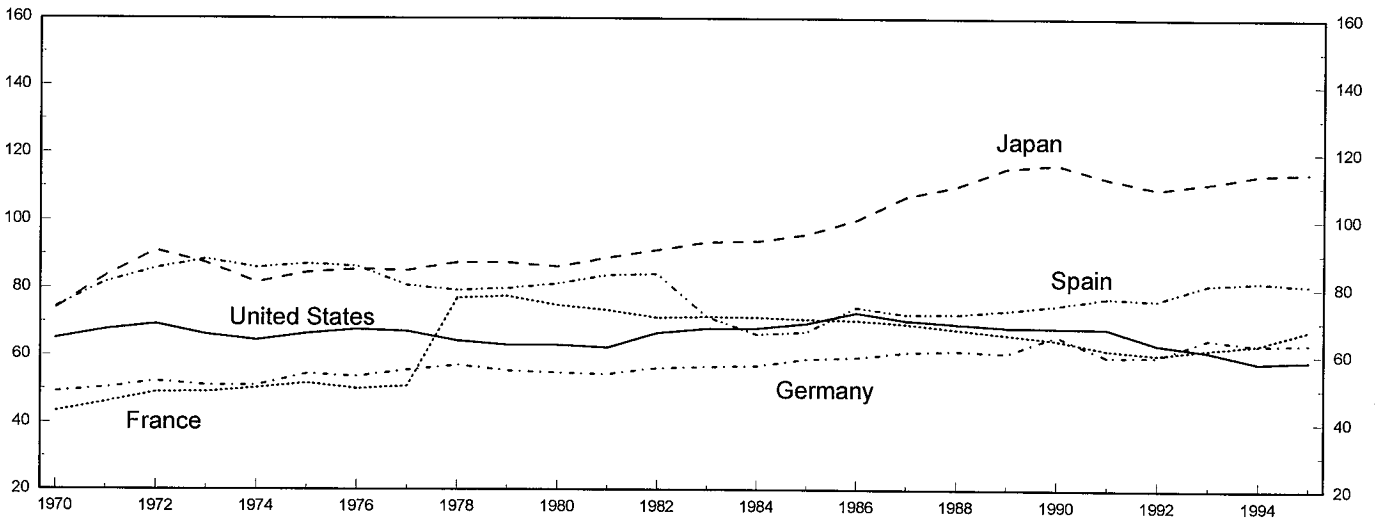


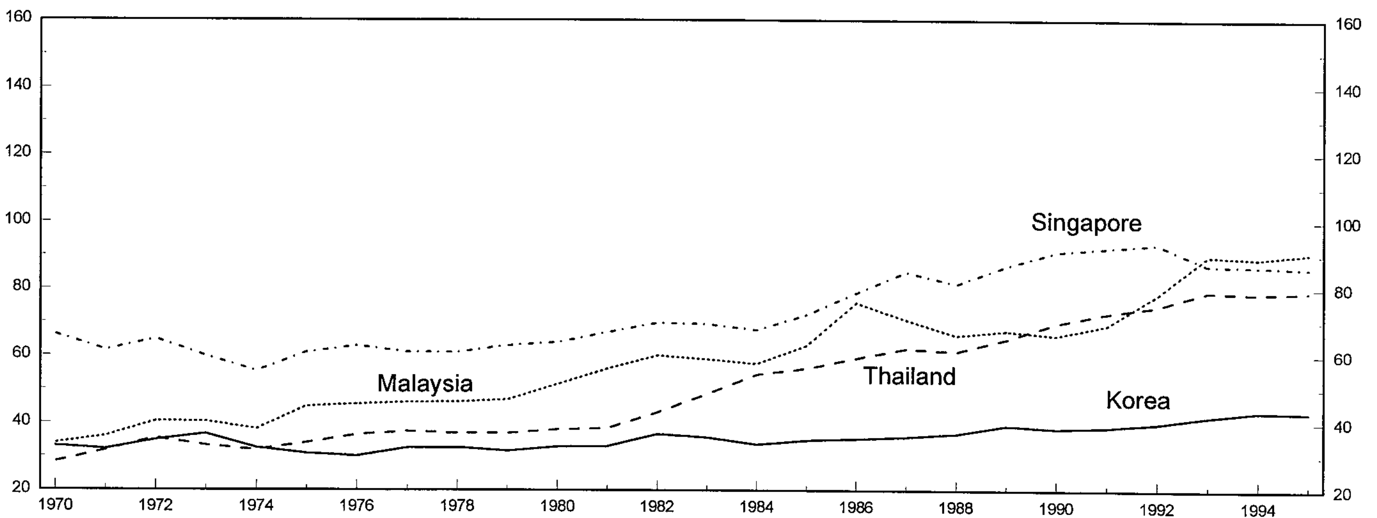
Source: IMF, International Financial Statistics, and World Economic Outlook.

1/ Nongovernment credit includes credit to public enterprises.

Chart 2
M2 to GDP Ratios, 1970-96 1/
(In percent)



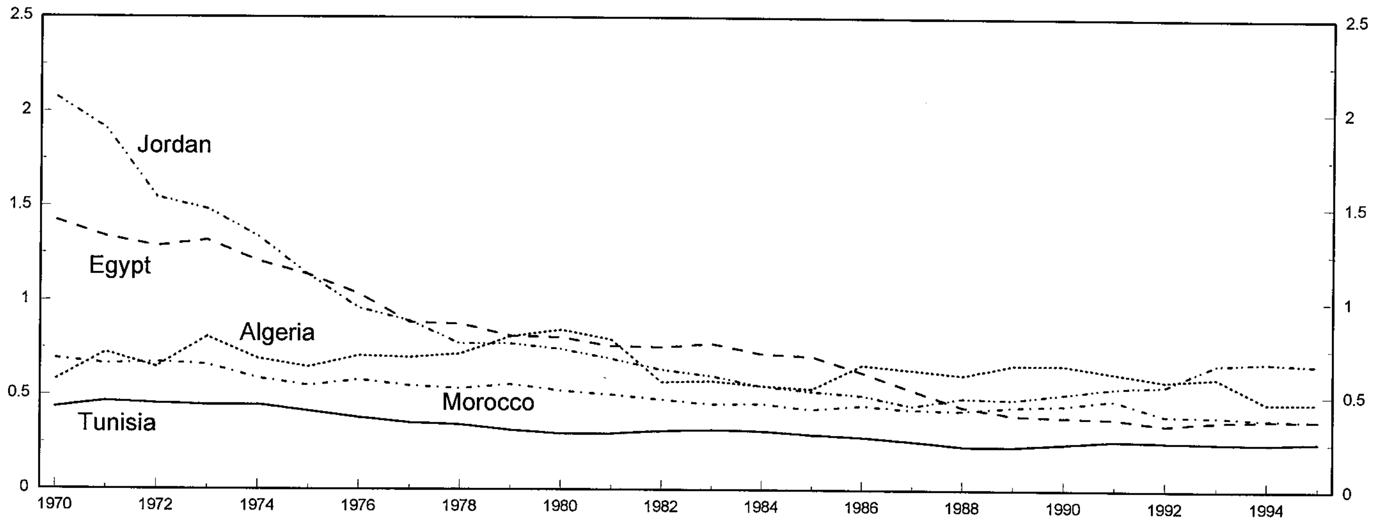


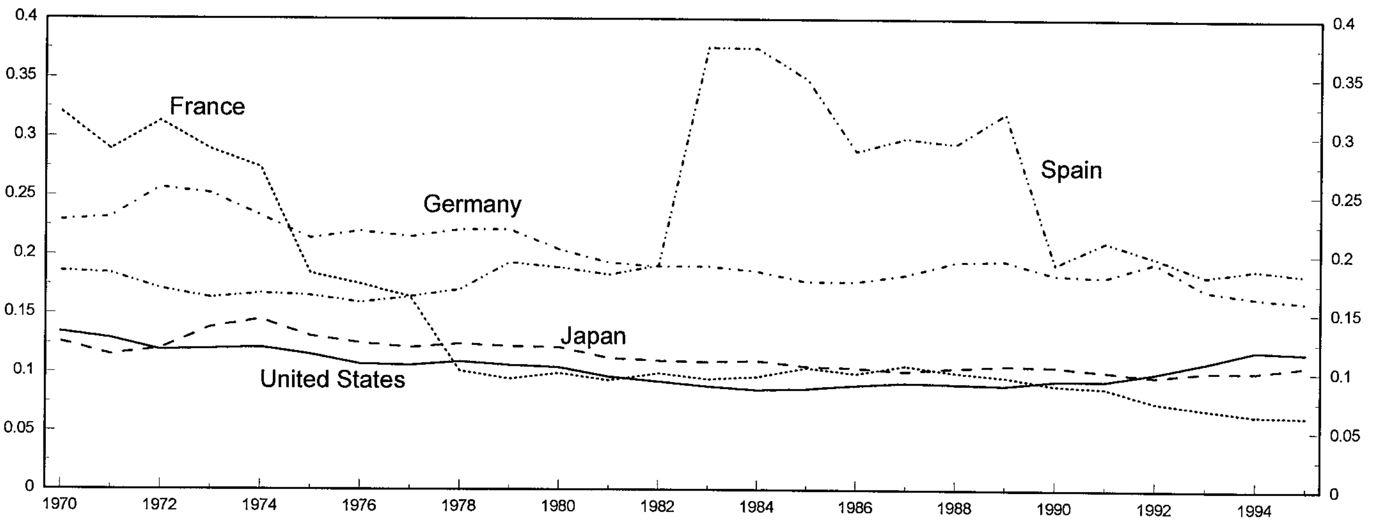


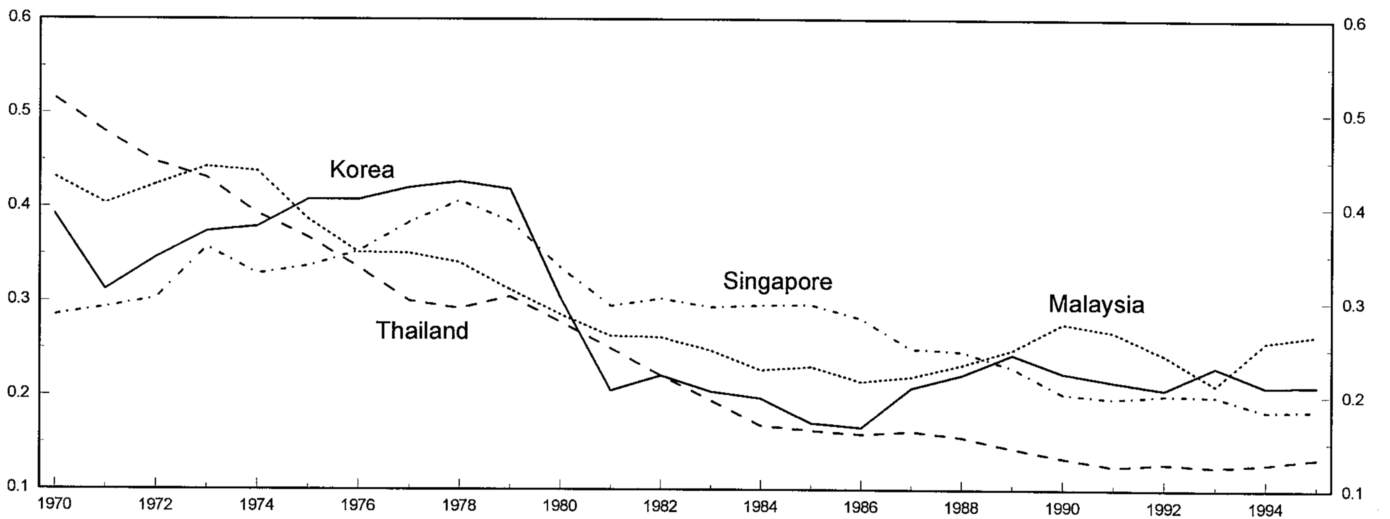
Source: IMF, International Financial Statistics.

1/ 1996 are estimates.

Chart 3
Tunisia: Ratio of Reserve Money to Total Deposits

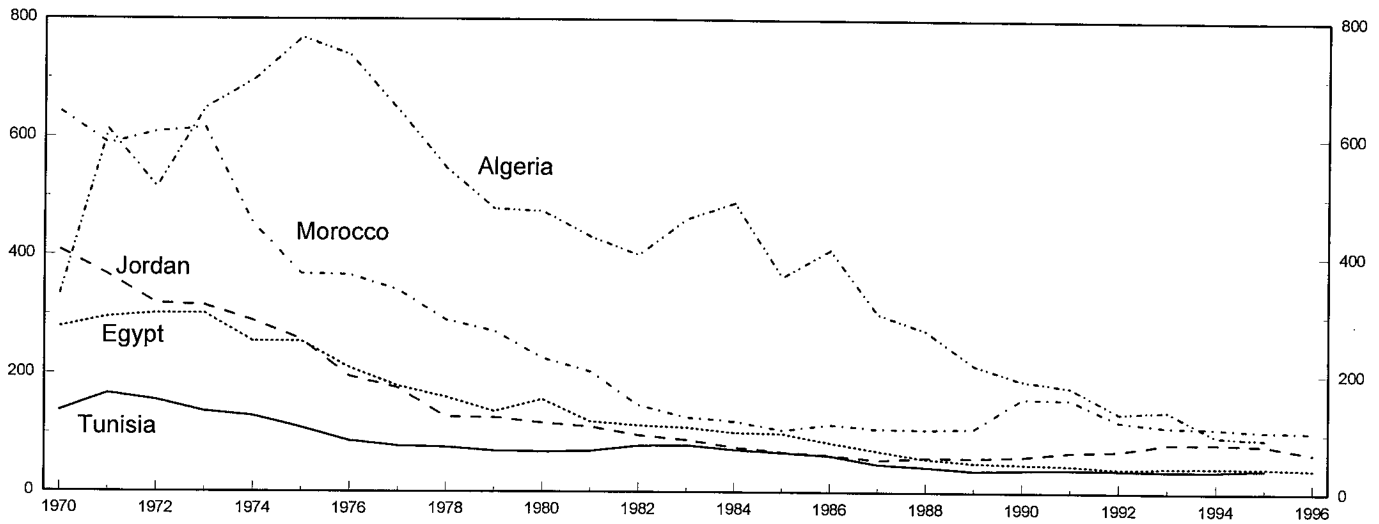


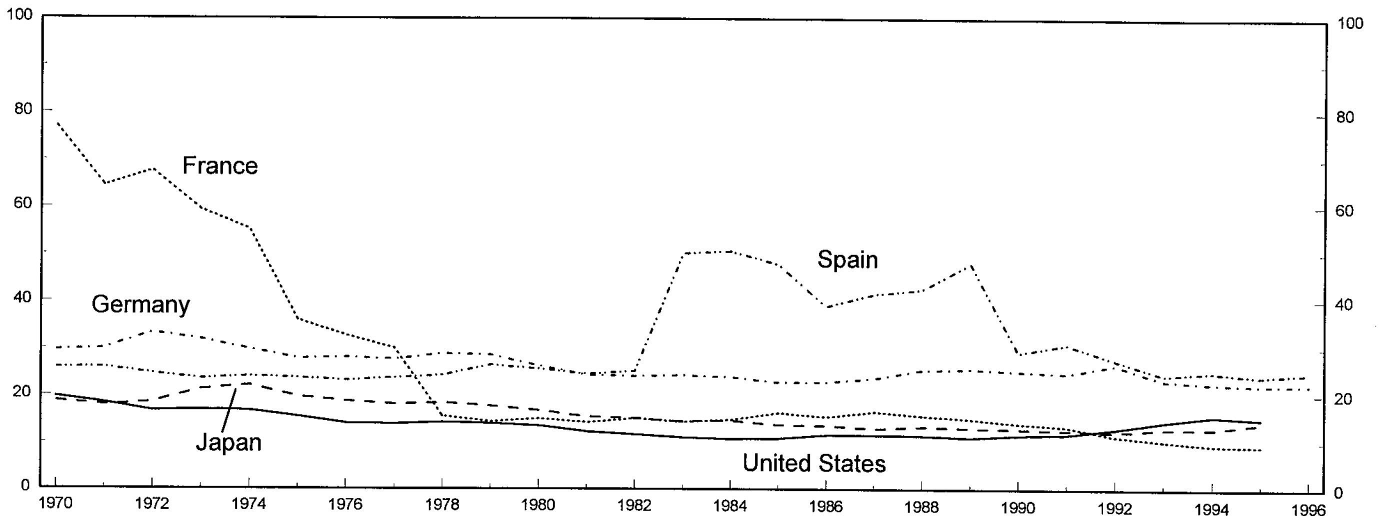


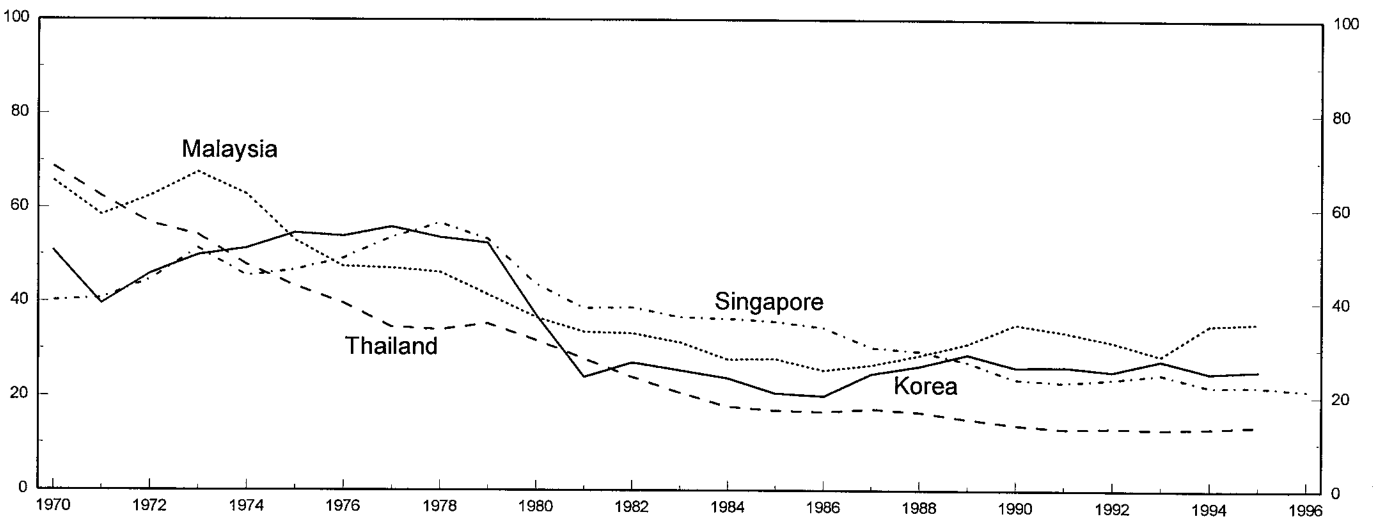


Source: IMF, International Financial Statistics.

Chart 4
Tunisia: Reserve Money, 1970-96
(In percent of quasi money)



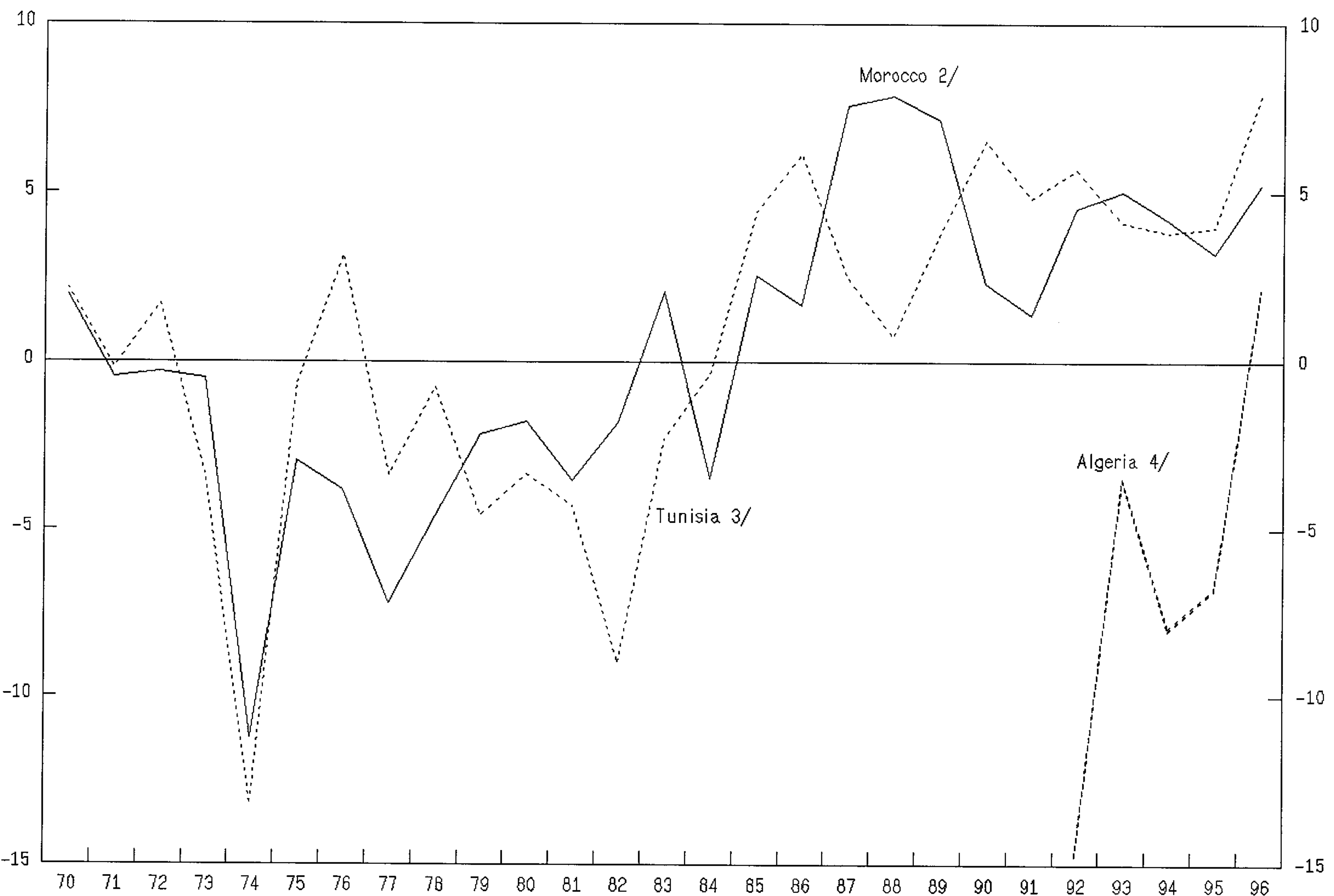




Source: IMF, International Financial Statistics.

Chart 5

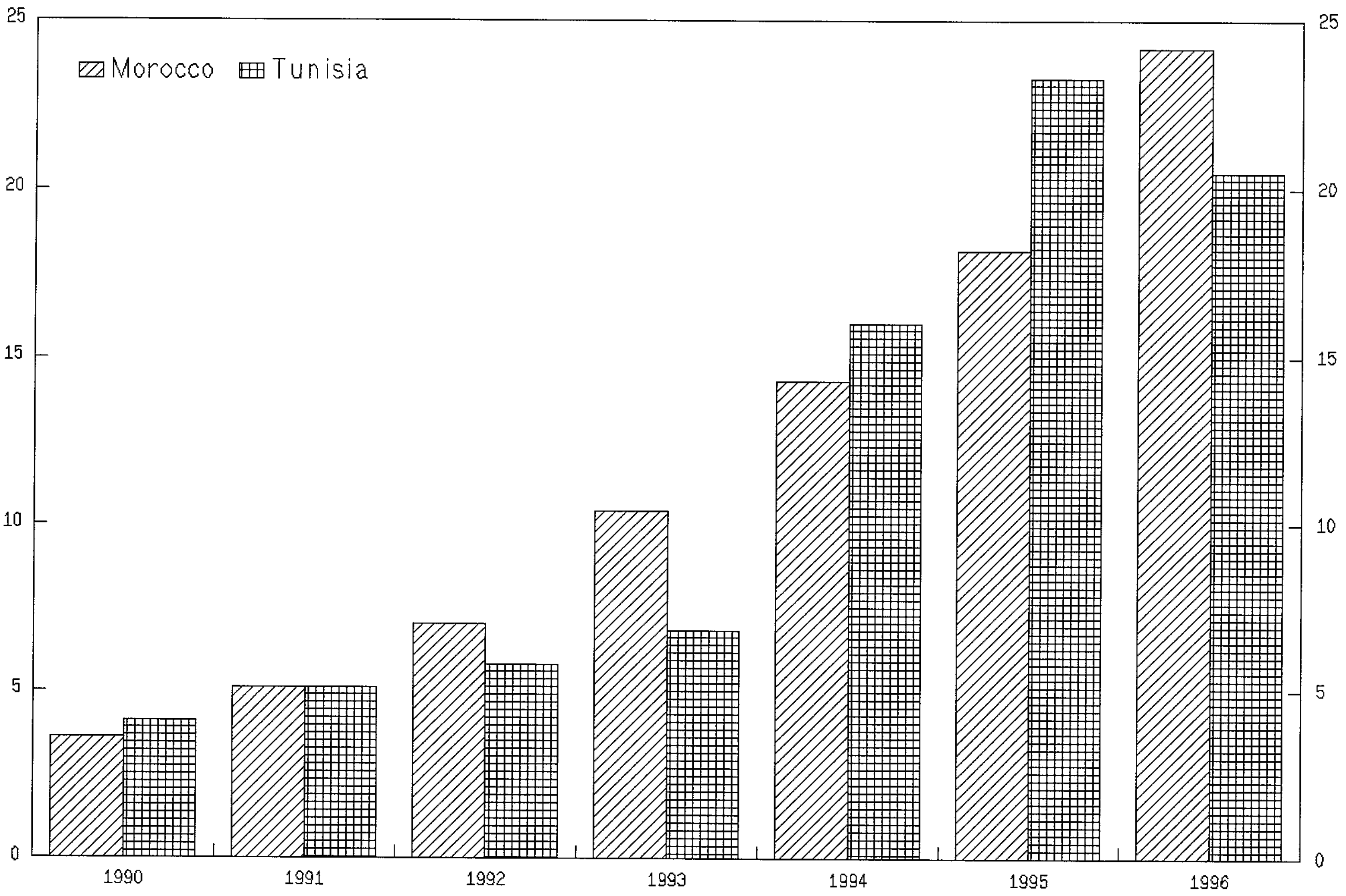
Real Interest Rates, 1970-96 1/



Source: IMF, International Financial Statistics; La Vie Economique; and staff estimates.

1/ Deflated by the CPI.
2/ Interest rate on 6-month treasury bills.
3/ Rediscount rate of the central bank.
4/ Repurchase rate. Estimate for 1996.

Chart 6
Market Capitalization, 1990-96
(In percent of GDP)



Source: IFC, Emerging Markets database; Bourse des Valeurs Mobilières de Tunis; and Moroccan authorities.

REFERENCES

Anderson, D., 1987, "Economic Growth and the Returns to Investment," World Bank Discussion Paper, No. 12. (Washington: World Bank).

Benazzou, Chaouki and T. Mouline, 1993, "*Panorama économique du Maroc* 1985-1990," *(*Rabat: *Collection Etudes et Recherches).*

Bisat, A., R.B., Johnson, and V. Sundararajan, 1982, "Issues in Managing and Sequencing Financial Sector Reforms: Lessons from Experiences in Five Developing Countries," IMF Working Paper 92/82. (Washington: International Monetary Fund).

Blejer, M. and S. Sagari, 1995, "Hungary: Financial Sector Reform in a Socialist Economy," World Bank Policy Paper, WPS 595. (Washington: World Bank).

Chalk, N., A. Jbili, V. Treichel, and J. Wilson. "Financial Structure and Reforms," in Building on Progress: Reform and Growth in the Middle East and North Africa. (Washington, D.C.: International Monetary Fund), 1996.

De Gregorio, J. and P. Guidotti, 1995, *Financial Development and Economic Growth,* 23:433-48. (UK: World Development Report).

El-Erian, Mohamed A. "Financial Market Development in the Middle East: The Main Issues," in Development of Financial Markets in the Arab Countries, Iran and Turkey. Economic Research Forum for the Arab Countries, Iran and Turkey, 1995.

Frenkel, J., 1982, "The order of Economic Liberalization: Lessons from Chile and Argentina: Comment," Carnegie-Rochester Conference Series on Public Policy No. 17 (North Holland Publishing Co.).

Galbis, V., 1994, "Sequencing of Financial Sector Reforms: A Review," IMF Working Paper 94/101 (Washington: International Monetary Fund).

Gallagher, M., 1991, Rent-Seeking and Economic Growth (Boulder, Colorado: West view Press).

Gelb, A. , 1989, "Cross-Section Analysis of Financial Policies, Efficiency and Growth," *Staff Working Paper Series, WPS 202* (Washington: World Bank).

Goldsbrough, et al., 1996, "Reinvigorating Growth in Developing Countries," Occasional Paper, No. 139 (Washington: International Monetary Fund).

Gurley, J.G. and E.S. Shaw, 1960, *Money in a Theory of Finance* (Washington: Brookings Institution).

Hadjimichael, M., D. Ghura, M. Muehleisen, R. Nord, and M. Ucer, 1992, *Sub-Saharan Africa: Growth, Savings, and Investment, 1986-93*, IMF Occasional Paper No. 118 (Washington: International Monetary Fund).

Johnston, B. and C. Pazarbasioglu, 1995, "Linkages between Financial Variables, Financial Sector Reform and Economic Growth and Efficiency," IMF Working Paper 95/103 (Washington: International Monetary Fund).

Khandker, Sh., B. Khalily, and Z. Khan, 1995, "Grameen Bank—Performance and Sustainability," *Discussion Paper No. 306* (Washington: World Bank).

King, R. and R. Levine, 1993, "Finance and Growth: Schumpeter might be Right," *Policy Research Working Paper, WPS 1083* (Washington: World Bank).

Lahiri, A., 1992, "Dynamics of Asian Saving: The Role of Growth and Age Structure," IMF Working Paper 88/49 (Washington: International Monetary Fund).

McKinnon, R., 1973, Money and Capital in Economic Development (Washington: Brookings Institution).

McKinnon, R., 1982, "The Order of Economic Liberalization: Lessons from Chile and Argentina," Carnegie-Rochester Conference Series on Public Policy, No. 17 (North Holland Publishing Co.).

Morrisson, Christian, and Bechiv Talbi, 1996, "Long-Term Growth in Tunisia," OECD Development Center Studies (Paris: OECD).

Nsouli, S., S. Eken, K. Enders, V. Thai, J. Decressin, and F. Cartaglia, 1995, Resilience and Growth through Structural Adjustment: The Moroccan Experience, IMF Occasional Paper No. 117 (Washington: International Monetary Fund).

Nsouli, S., S. Eken, P. Duran, G. Bell, and Z. Yücelik, 1993, The Path to Convertibility and growth: The Tunisian Experience, IMF Occasional Paper No. 109 (Washington: International Monetary Fund).

Odedokun, M., 1992, "Multi-Country Evidence on the Effects of Macroeconomic Financial and Trade Policies on Efficiency of Resource Utilization in the Developing Countries," IMF Working Paper 92/53 (Washington: International Monetary Fund).

Ogaki, M., J. Osty, and C. Reinhart, 1995, "Saving Behaviior in Low-and Middle-Income Development Countries. A Comparison," IMF Working Paper WP/95/3 (Washington: International Monetary Fund).

Shaw, E., 1973, Financial Deepening in Economic Development (New York: Oxford University Press).

Sundararajan, V., 1996, "The Role of Prudential Supervision and Financial Restructuring of Banks During Transition to Indirect Instruments of Monetary Control," IMF Working Paper 96/128 (Washington: International Monetary Fund).

Treichel, V., 1997, "Broad Money Demand and Monetary Policy in Tunisia," IMF Working Paper 97/22 (Washington: International Monetary Fund).

Villanueva, Delano, and Abbas Mirakhor, "Strategies of Financial Reforms," IMF Staff Papers 37, September 1990.

World Bank, 1995, "Republic of Tunisia: Towards the 21st Century," Report No. 14375-TUN.